



GENERATOR INTERCONNECTION AFFECTED SYSTEM IMPACT STUDY REPORT

ASGI-2017-005

Published June 2017

By SPP Generator Interconnections Dept.

REVISION HISTORY

Date	Author	Change Description
06/15/2017	SPP	Affected System Impact Study for ASGI-2017-005 Report Revision 0 Issued
06/16/2017	SPP	Affected System Impact Study for ASGI-2017-005 Report Revision 1 Issued for correction of table references

EXECUTIVE SUMMARY

An Affected System Interconnection Customer has requested an Affected System Impact Study (ASIS) consistent with Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT) for interconnection requests into the system of Associated Electric Cooperative Inc. (AECI). AECI request GI-52/SIS-23, 144 MW wind generating facility, has been assigned the SPP queue identifier ASGI-2017-005.

This ASIS addresses the effects to the SPP system of interconnecting the generators to the AECI transmission system for the system topology and requests included in SPP DISIS-2016-001. ASGI-2017-005 is requesting the interconnection of seventy-two (72) Vestas V110 2.0 MW wind turbines and associated facilities interconnecting to AECI at the Remington 138 kV substation in Osage County, OK.

The ASIS analysis has determined that the ASGI-2017-005 request can interconnect 144.0 MW of generation with Energy Resource Interconnection Service (ERIS) and Network Resource Interconnection Service (NRIS) with the study dispatch assumption listed in **Table 1** after the completion of the required Network Upgrades, listed within **Table 2** of this report.

It should be noted that although this ASIS analyzed many of the most probable contingencies, it is not an all-inclusive list that can account for every operational situation. Additionally, the generator may not be able to inject any power onto the Transmission System due to constraints that fall below the threshold of mitigation for a Generator Interconnection request. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to **0 MW** under certain system conditions to allow system operators to maintain the reliability of the transmission network.

Transient stability analysis for this ASIS has determined that no issues were observed for the transmission system for the thirty (30) selected faults for the interconnection of ASGI-2017-005 and the analysis shows that the generators will meet Low Voltage Ride-Through (LVRT) requirements of FERC Order #661A. As discussed above, this amount may be reduced further dependent upon system conditions.

Nothing in this study should be construed as a guarantee of delivery or transmission service. If the customer(s) wishes to move power across the facilities of SPP, a separate request for transmission service must be made on Southwest Power Pool's OASIS by the Customer(s).

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PURPOSE

An Affected System Interconnection Customer has requested an Affected System Impact Study (ASIS) consistent with the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT) for interconnection requests into the system of Associated Electric Cooperative Inc. (AECI).

The purpose of this study is to evaluate the impacts of interconnecting the AECI GI-52/SIS-23 request assigned the SPP queue identifier ASGI-2017-005. ASGI-2017-005 is requesting the interconnection of seventy-two (72) Vestas V110 2.0 MW wind turbines and associated facilities interconnecting to AECI at the Remington 138 kV substation in Osage County, OK.

The ASIS considers the Base Case as well as all Generating Facilities (and with respect to (b) below, any identified Network Upgrades associated with such higher queued interconnection) that, on the date the ASIS is commenced:

- a) are directly interconnected to the Transmission System;
- b) are interconnected to Affected Systems and may have an impact on the Interconnection Request;
- c) have a pending higher queued Interconnection Request to interconnect to the Transmission System listed in **Table 1**; or
- d) have no Queue Position but have executed an LGIA or requested that an unexecuted LGIA be filed with FERC.

Any changes to these assumptions, for example, one or more of the previously queued requests not included within this study execute an interconnection agreement and commencing commercial operation, may require a re-study of this ASIS at the expense of the Customer(s).

Nothing within this System Impact Study constitutes a request for transmission service or confers upon the Interconnection Customer(s) any right to receive transmission service rights. Should the Customer(s) require transmission service, those rights should be requested through SPP's Open Access Same-Time Information System (OASIS) or that of the applicable transmission provider.

This ASIS included prior queued generation interconnection requests. Those listed within **Table 1** are the generation interconnection requests that are assumed to have rights to either full or partial interconnection service prior to the requested in-service for this ASIS. Also listed in **Table 1** are both the amount of MW of interconnection service expected at the effective time of this study and the total MW requested of interconnection service, the fuel type, the Point of Interconnection (POI), and the current status of each particular prior queued request.

Table 1: Generation Requests Included within ASIS

Project	MW	Fuel Source	POI	Status
ASGI-2010-006	150	Wind	Remington 138kV	Commercial Operation
ASGI-2014-014	56.4	Thermal	Ferguson 69kV	Commercial Operation
ASGI-2015-004	56.36	Thermal	Coffeyville City 69kV	Commercial Operation
GEN-2002-004	200	Wind	Latham 345kV	Commercial Operation
GEN-2005-013	201	Wind	Caney River 345kV	Commercial Operation
GEN-2007-025	300	Wind	Viola 345kV	Commercial Operation
GEN-2008-013	300	Wind	Hunter 345kV	Commercial Operation
GEN-2008-021	42	Nuclear	Wolf Creek 345kV	Commercial Operation
GEN-2008-098	100.8	Wind	Waverly 345kV	Commercial Operation
GEN-2009-025	59.8	Wind	Nardins 69kV	Commercial Operation
GEN-2010-003	100.8	Wind	Waverly 345kV	Commercial Operation
GEN-2010-005	299.2	Wind	Viola 345kV	Commercial Operation
GEN-2010-055	4.5	Gas	Wekiwa 138kV	Commercial Operation
GEN-2011-057	150.4	Wind	Creswell 138kV	Commercial Operation
GEN-2012-032	300	Wind	Open Sky 345kV	Commercial Operation
GEN-2012-033	98.1	Wind	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	Commercial Operation
GEN-2012-041	121.5	CT	Ranch Road 345kV	Commercial Operation
GEN-2013-012	147	Gas	Redbud 345kV	Commercial Operation
GEN-2013-028	559.5	Gas	Tap N Tulsa - GRDA 1 345kV	IA Executed/On schedule for 2017 COD
GEN-2013-029	300	Wind	Renfrow 345kV	Commercial Operation
GEN-2014-001	200.6	Wind	Tap Wichita - Emporia Energy Center (GEN-2014-001 Tap) 345kV	IA Executed/On Suspension
GEN-2014-028	35	CC	Riverton 161kV	Commercial Operation
GEN-2014-064	248.4	Wind	Otter 138kV	IA Executed/On Suspension
GEN-2015-001	200	Wind	Ranch Road 345kV	Commercial Operation
GEN-2015-015	154.6	Wind	Tap Medford Tap - Coyote 138kV	IA Executed/On schedule for 2017 COD
GEN-2015-016	200	Wind	Tap Marmaton - Centerville 161kV	IA Executed/On schedule for 2018 COD
GEN-2015-024	220	Wind	Tap Thistle - Wichita 345kV Dbl CKT	Commercial Operation
GEN-2015-025	220	Wind	Tap Thistle - Wichita 345kV Dbl CKT	Commercial Operation
GEN-2015-030	200.1	Wind	Sooner 345kV	IA Executed/On Suspension
GEN-2015-034	200	Wind	Ranch Road 345kV	Facility Study Stage
GEN-2015-047	300	Wind	Sooner 345kV	Facility Study Stage
GEN-2015-052	300	Wind	Tap Open Sky - Rose Hill 345kV	Facility Study Stage
GEN-2015-062	4.5	Wind	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	Facility Study Stage
GEN-2015-063	300	Wind	Tap Woodring - Mathewson 345kV	Facility Study Stage
GEN-2015-066	248.4	Wind	Tap Cleveland - Sooner 345kV	Facility Study Stage

Table 1: Generation Requests Included within ASIS

Project	MW	Fuel Source	POI	Status
GEN-2015-067	150	Solar	Sooner 138kV	Facility Study Stage
GEN-2015-069	300	Wind	Union Ridge 230kV	Facility Study Stage
GEN-2015-073	200.1	Wind	Emporia Energy Center 345kV	Facility Study Stage
GEN-2015-083	125	Wind	Belle Plain 138kV	Facility Study Stage
GEN-2015-090	220	Wind	Tap Thistle - Wichita 345kV Dbl CKT	Facility Study Stage
GEN-2016-009	29	Thermal	Osage 69kV (514742)	Facility Study Stage
GEN-2016-022	151.8	Wind	Ranch Road 345kV (515576)	Facility Study Stage
GEN -2016-024	55.86	Wind	Midian 138kV (532990)	Facility Study Stage
GEN-2016-031	1.5MW uprate of GEN-2015- 001 (total = 201.3MW)	Wind	Ranch Road 345kV (515576)	Facility Study Stage
GEN-2016-032	200	Wind	Tap Marshall (514733)- Cottonwood Creek (514827) 138kV, (G16-032-TAP, 560077)	Facility Study Stage
GEN -2016-048	82.32	Solar	Sooner 138kV (514802)	Facility Study Stage
GEN-2016-060	25.3	Wind	Belle Plain 138kV (533063)	Facility Study Stage
GEN-2016-061	250.7	Wind	Tap Woodring (514715) – Sooner (514803) 345kV (G16- 061-TAP, 560084)	Facility Study Stage
GEN-2016-068	250	Wind	Woodring 345kV (514715)	Facility Study Stage
GEN-2016-071	200.1	Wind	Chilocco 138kV (521198)	Facility Study Stage
ASGI-2017-005	144	Wind	Remington (AECI) 138 kV	Current Study

This ASIS was required because the Affected System Interconnection Customer(s) are requesting interconnection at a location electrically close to the SPP system.

Table 2 below lists the higher queued required upgrade projects for which these requests have cost responsibility. DISIS-2016-001 Group 08 Impact Study was posted February 28, 2017.

DISIS-2016-001 reports can be located at the following Generation Interconnection Study URL:
<http://sppoasis.spp.org/documents/swpp/transmission/GenStudies.cfm?YearType=2016> Impact Studies

Table 2: Upgrade Projects Required for Interconnection Service

Upgrade Project	Type	Description	Status	Study Assignment
ERIS/NRIS Required: GEN-2015-063 Tap – Mathewson 345 kV CKT 1	Structure Replacements	Replace terminal equipment and structures to achieve conductor limit	IA Pending	DISIS-2015-002
ERIS/NRIS Required: Farber – Belle Plains 138kV CKT 1	Rebuild	Rebuild approximately 10 miles of 138kV from Farber – Belle Plains	Facility Study	DISIS-2016-001
Collinsville (GRDA)* – Skiatook Tap (AECI/KAMO)** 138kV CKT 1	Terminal Equipment	Replace terminal equipment to achieve at least 158MVA Summer Peak Emergency (Rate B)	Current Impact Study Assignment	ASGI-2017-005 (AECI GIA-052) cost allocation of \$250,000
ERIS/NRIS Required: Remington (AECI/KAMO) – Shidler (AEP)* 138kV CKT 1	Rebuild	Rebuild approximately 8.6 miles of 138kV	AECI Facility Study	Assigned to ASGI-2017-005 (AECI-052) per AECI Impact Study
ERIS/NRIS Required: Shidler – West Pawhuska – Pawhuska Tap – Domes – Mound Road – Bartlesville 138kV CKT 1*	Rebuild	Rebuild approximately 45 miles of 138kV from Shidler – Bartlesville 138kV to achieve at least 161MVA Summer Peak Normal (Rate A) and 234 Summer Peak Emergency (Rate B)	Current Impact Study Assignment	ASGI-2017-005 (AECI GIA-052) cost allocation of \$37,000,000

* Upgrades denoted will require an SPP Affected System Facilities Study agreement and deposit. These upgrades could require the need for a Construction Agreement (CA) as a result of the Affected System Facilities Study.

** Upgrades denoted also require AECI review for AECI facility mitigations.

Any changes to these assumptions may require a re-study of this ASIS at the expense of the Customer(s).

Nothing in this System Impact Study constitutes a request for transmission service or grants the Interconnection Customer(s) any rights to transmission service.

FACILITIES

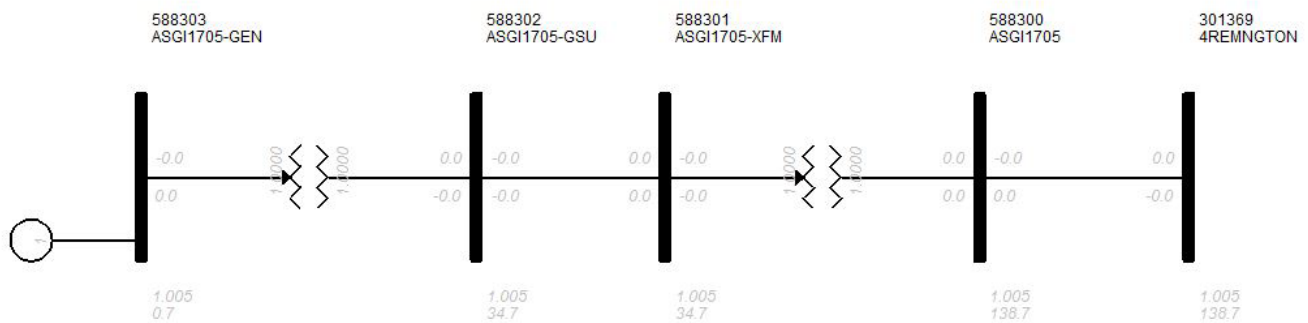
GENERATING FACILITY

The Affected System Interconnection Customers’ request is the interconnection of seventy-two (72) Vestas V110 2.0 MW wind turbines and associated facilities interconnecting to AECI at the Remington 138 kV substation in Osage County, OK.

INTERCONNECTION FACILITIES

The POI for ASGI-2017-005 Interconnection Customer connects to the Affected System Remington 138 kV substation in Osage County, OK. **Figure 1** depicts the one-line diagram for the POI and the Interconnection Request(s).

Figure 1: Proposed ASGI-2017-005 Configuration and Request Power Flow Model



BASE CASE NETWORK UPGRADES

The Network Upgrades included within the cases used for this Affected System Impact Study are those facilities that are a part of the SPP Transmission Expansion Plan or the Balanced Portfolio projects. These facilities have an approved Notification to Construct (NTC), or are in construction stages and expected to be in-service at the effective time of this study. No other upgrades were included for this ASIS. If for some reason, construction on these projects is delayed or discontinued, a restudy may be needed to determine the interconnection service availability of the Customer(s).

POWER FLOW ANALYSIS

Power flow analysis is used to determine if the transmission system can accommodate the injection from the request without violating thermal or voltage transmission planning criteria.

MODEL PREPARATION

Power flow analysis was performed using modified versions of the 2015 series of 2016 ITP Near-Term study models including these seasonal models:

- Year 1 (2016) Winter Peak (16WP)
- Year 2 (2017) Spring (17G)
- Year 2 (2017) Summer Peak (17SP)
- Year 5 (2020) Light (20L)
- Year 5 (2020) Summer (20SP)
- Year 5 (2020) Winter (20WP) peak
- Year 10 (2025) Summer (25SP) peak

To incorporate the Interconnection Customers' request, a re-dispatch of existing generation within SPP and AECl was performed with respect to the amount of the Customers' injection.

For Variable Energy Resources (VER) (solar/wind) in each power flow case, ERIS, is evaluated for the generating plants within a geographical area of the interconnection request(s) for the VERs dispatched at 100% nameplate of maximum generation. The VERs in the remote areas is dispatched at 20% nameplate of maximum generation. SPP projects are dispatched across the SPP footprint using load factor ratios. MISO projects are dispatched across the SPP footprint using load factor ratios.

Peaking units are not dispatched in the Year 2 spring and Year 5 light, or in the "High VER" summer and winter peaks. To study peaking units' impacts, the Year 1 winter peak, Year 2 summer peak, and Year 5 summer and winter peaks, and Year 10 summer peak models are developed with peaking units dispatched at 100% of the nameplate rating and VERs dispatched at 20% of the nameplate rating. Each interconnection request is also modeled separately at 100% nameplate for certain analyses.

All generators (VER and peaking) that requested Network Resource Interconnection Service (NRIS) are dispatched in an additional analysis into the interconnecting Transmission Owner's (T.O.) area at 100% nameplate with Energy Resource Interconnection Service (ERIS) only requests at 80% nameplate. This method allows for identification of network constraints that are common between regional groupings to have affecting requests share the mitigating upgrade costs throughout the cluster.

For this ASIS, only the previous queued requests listed in **Table 1** were assumed to be in-service at 100% dispatch.

STUDY METHODOLOGY AND CRITERIA

THERMAL OVERLOADS

Network constraints are found by using PSS/E AC Contingency Calculation (ACCC) analysis with PSS/E MUST First Contingency Incremental Transfer Capability (FCITC) analysis on the entire cluster grouping dispatched at the various levels previously mentioned.

For ERIS, thermal overloads are determined for system intact (n-0) (greater than or equal to 100% of Rate A - normal) and for contingency (n-1) (greater than or equal to 100% of Rate B - emergency) conditions.

The overloads are then screened to determine which of generator interconnection requests have at least

- 3% Distribution Factor (DF) for system intact conditions (n-0),
- 20% DF upon outage based conditions (n-1),
- or 3% DF on contingent elements that resulted in a non-converged solution.

Interconnection Requests that requested NRIS are also studied in a separate NRIS analysis to determine if any constraint measured greater than or equal to a 3% DF. If so, these constraints are also considered for transmission reinforcement under NRIS.

The contingency set includes all SPP control area branches and ties 69kV and above, first tier Non-SPP control area branches and ties 115 kV and above, any defined contingencies for these control areas, and generation unit outages for the SPP control areas with SPP reserve share program redispatch.

The monitored elements include all SPP control area branches, ties, and buses 69 kV and above, and all first tier Non-SPP control area branches and ties 69 kV and above. NERC Power Transfer Distribution Flowgates for SPP and first tier Non-SPP control area are monitored. Additional NERC Flowgates are monitored in second tier or greater Non-SPP control areas. Voltage monitoring was performed for SPP control area buses 69 kV and above.

VOLTAGE

For non-converged power flow solutions that are determined to be caused by lack of voltage support, appropriate transmission support will be determined to mitigate the constraint.

After all thermal overload and voltage support mitigations are determined; a full ACCC analysis is then performed to determine voltage constraints. The following voltage performance guidelines are used in accordance with the Transmission Owner local planning criteria.

SPP Areas (69kV+):

Transmission Owner	Voltage Criteria (System Intact)	Voltage Criteria (Contingency)
AEPW	0.95 – 1.05 pu	0.92 – 1.05 pu
GRDA	0.95 – 1.05 pu	0.90 – 1.05 pu
SWPA	0.95 – 1.05 pu	0.90 – 1.05 pu
OKGE	0.95 – 1.05 pu	0.90 – 1.05 pu
OMPA	0.95 – 1.05 pu	0.90 – 1.05 pu
WFEC	0.95 – 1.05 pu	0.90 – 1.05 pu
SWPS	0.95 – 1.05 pu	0.90 – 1.05 pu
MIDW	0.95 – 1.05 pu	0.90 – 1.05 pu
SUNC	0.95 – 1.05 pu	0.90 – 1.05 pu
KCPL	0.95 – 1.05 pu	0.90 – 1.05 pu
INDN	0.95 – 1.05 pu	0.90 – 1.05 pu
SPRM	0.95 – 1.05 pu	0.90 – 1.05 pu
NPPD	0.95 – 1.05 pu	0.90 – 1.05 pu
WAPA	0.95 – 1.05 pu	0.90 – 1.05 pu
WERE L-V	0.95 – 1.05 pu	0.93 – 1.05 pu
WERE H-V	0.95 – 1.05 pu	0.95 – 1.05 pu
EMDE L-V	0.95 – 1.05 pu	0.90 – 1.05 pu
EMDE H-V	0.95 – 1.05 pu	0.92 – 1.05 pu
LES	0.95 – 1.05 pu	0.90 – 1.05 pu
OPPD	0.95 – 1.05 pu	0.90 – 1.05 pu

SPP Buses with more stringent voltage criteria:

Bus Name/Number	Voltage Criteria (System Intact)	Voltage Criteria (Contingency)
TUCO 230kV 525830	0.925 – 1.05 pu	0.925 – 1.05 pu
Wolf Creek 345kV 532797	0.985 – 1.03 pu	0.985 – 1.03 pu
FCS 646251	1.001 – 1.047 pu	1.001 – 1.047 pu

Affected System Areas (115kV+):

Transmission Owner	Voltage Criteria (System Intact)	Voltage Criteria (Contingency)
AECI	0.95 – 1.05 pu	0.90 – 1.05 pu

EES-EAI	0.95 – 1.05 pu	0.90 – 1.05 pu
LAGN	0.95 – 1.05 pu	0.90 – 1.05 pu
EES	0.95 – 1.05 pu	0.90 – 1.05 pu
AMMO	0.95 – 1.05 pu	0.90 – 1.05 pu
CLEC	0.95 – 1.05 pu	0.90 – 1.05 pu
LAFB	0.95 – 1.05 pu	0.90 – 1.05 pu
LEPA	0.95 – 1.05 pu	0.90 – 1.05 pu
XEL	0.95 – 1.05 pu	0.90 – 1.05 pu
MP	0.95 – 1.05 pu	0.90 – 1.05 pu
SMMPA	0.95 – 1.05 pu	0.90 – 1.05 pu
GRE	0.95 – 1.05 pu	0.90 – 1.10 pu
OTP	0.95 – 1.05 pu	0.90 – 1.05 pu
OTP-H (115kV+)	0.97 – 1.05 pu	0.92 – 1.10 pu
ALTW	0.95 – 1.05 pu	0.90 – 1.05 pu
MEC	0.95 – 1.05 pu	0.90 – 1.05 pu
MDU	0.95 – 1.05 pu	0.90 – 1.05 pu
SPC	0.95 – 1.05 pu	0.95 – 1.05 pu
DPC	0.95 – 1.05 pu	0.90 – 1.05 pu
ALTE	0.95 – 1.05 pu	0.90 – 1.05 pu

The constraints identified through the voltage scan are then screened for the following for each interconnection request. 1) 3% DF on the contingent element and 2) 2% change in pu voltage. In certain conditions, engineering judgement was used to determine whether or not a generator had impacts to voltage constraints.

RESULTS

The ASIS ACCC analysis indicates that the Affected System Interconnection Customer(s) can interconnect their generation into the AECI transmission system at the available MW listed in the results tables after all required upgrades listed within the DISIS-2016-001 studies or latest iteration can be placed into service. ACCC results for the ASIS can be found in **Table 6**, **Table 7**, and **Table 8**.

Constraints listed in **Table 8** do not require additional transmission reinforcement for Interconnection Service, but could require Interconnection Customer to reduce generation in operational conditions. These transmission constraints occur when this study's generation is dispatched into the AECI footprint for ERIS and NRIS.

CURTAILMENT AND SYSTEM RELIABILITY

In no way does this study guarantee operation for all periods of time. It should be noted that although this study analyzed many of the most probable contingencies, it is not an all-inclusive list and cannot account for every operational situation. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to **0 MW** under certain system conditions to allow system operators to maintain the reliability of the transmission network.

STABILITY ANALYSIS

Transient stability analysis is used to determine if the transmission system can maintain angular stability and ensure bus voltages stay within planning criteria bandwidth during and after a disturbance while considering the addition of a generator interconnection request.

MODEL PREPARATION

Transient stability analysis was performed using modified versions of the 2015 series of Model Development Working Group (MDWG) dynamic study models including the 2016 winter, 2017 and 2025 summer peak dynamic cases. The cases were adapted to resemble the power flow study cases with regards to prior queued generation requests and topology. Finally the prior queued and study generation was dispatched into the SPP footprint. Initial simulations are then carried out for a no-disturbance run of twenty (20) seconds to verify the numerical stability of the model.

DISTURBANCES

The thirty (30) contingencies were identified for use in this ASIS. These faults are listed within **Table 3**. These contingencies included three-phase faults and single-phase line faults at locations defined by SPP. Single-phase line faults were simulated by applying fault impedance to the positive sequence network at the fault location to represent the effect of the negative and zero sequence networks on the positive sequence network. The fault impedance was computed to give a positive sequence voltage at the specified fault location of approximately 60% of pre-fault voltage. This method is in agreement with SPP current practice.

With the exception of transformers, the typical sequence of events for a three-phase and single-phase fault is as follows:

1. apply fault at particular location
2. continue fault for five (5) cycles, clear the fault by tripping the faulted facility
3. run for an additional twenty (20) cycles, reclose into fault
4. continue fault for five (5) cycles, clear the fault by tripping the faulted facility

Transformer faults are typically modeled as three-phase faults, unless otherwise noted. The sequence of events for a transformer fault is as follows:

1. apply fault for five (5) cycles
2. clear the fault by tripping the affected transformer facility (unless otherwise noted there will be no re-closing into a transformer fault)

Table 3: Contingencies Evaluated

Contingency Number and Name		Description
1	FLT_01_4REMINGTON_SHILDER4_138kV_3PH	Fault on the Remington (301369) to Shidler (510403) 138kV line, near Remington. a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
2	FLT_02_4REMINGTON_4FAIRFAX_138kV_3PH	Fault on the Remington (301369) to Fairfax (300139) 138kV line, near Remington. a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
3	FLT_03_SHILDER4_FAIRFXT4_138kV_3PH	Fault on the Shidler (510403) to Fairfax Tap (510377) 138kV line, near Shidler. a. Apply fault at the Shidler 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
4	FLT_04_SHILDER4_WPAWTHSK4_138kV_3PH	Fault on the Shidler (510403) to West Pawhuska (510382) 138kV line, near Shidler. a. Apply fault at the Shidler 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT_05_WEBBTAP4_OSAGE4_138kV_3PH	Fault on the Webber Tap (510376) to Osage (514743) 138kV line, near Webber Tap. a. Apply fault at the Webber Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
6	FLT_06_PAWHTP4_DOMES4_138kV_3PH	Fault on the Pawhuska Tap (510412) to Dome (510383) 138kV line, near Pawhuska Tap. a. Apply fault at the Pawhuska Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
7	FLT_07_4FAIRFAX_PAWNSW4_138kV_3PH	Fault on the Fairfax (300139) to Pawnee SW (512749) 138kV line, near Fairfax. a. Apply fault at the Fairfax 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3: Contingencies Evaluated

Contingency Number and Name		Description
8	FLT_08_PAWNSW4_4CLEVLND_138kV_3PH	Fault on the Pawnee SW (512749) to Cleveland (300138) 138kV line, near Pawnee SW. a. Apply fault at the Pawnee SW 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
9	FLT_09_PAWNSW4_4GLENCOE_138kV_3PH	Fault on the Pawnee SW (512749) to Glencoe (301425) 138kV line, near Pawnee SW. a. Apply fault at the Pawnee SW 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
10	FLT_10_4CLEVLND_4JAVINE_138kV_3PH	Fault on the Cleveland (300138) to Javine (300996) 138kV line, near Cleveland. a. Apply fault at the Cleveland 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
11	FLT_11_4SFORKKTP_4SFORKK_138kV_3PH	Fault on the South Fork Tap (301339) to South Fork (300165) 138kV line, near South Fork Tap. a. Apply fault at the Fork Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
12	FLT_12_MOUNDRD4_BVCOM4_138kV_3PH	Fault on the Mound Road (510395) to Bartlesville Comanche (510390) 138kV line, near Mound Road. a. Apply fault at the Mound Road 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
13	FLT_13_TNO4_SKIATOK4_138kV_3PH	Fault on the Tulsa North (509817) to Skiatook Tap (509884) 138kV line, near Tulsa North. a. Apply fault at the Tulsa North 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
14	FLT_14_TNO4_NES4_138kV_3PH	Fault on the Tulsa North (509817) to Northeastern (510396) 138kV line, near Tulsa North. a. Apply fault at the Tulsa North 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3: Contingencies Evaluated

Contingency Number and Name		Description
15	FLT_15_OSAGE4_SNRPMPT4_138kV_3PH	Fault on the Osage (514743) to Sooner Pump Tap (514798) 138kV line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
16	FLT_16_OSAGE4_MARLNDT4_138kV_3PH	Fault on the Osage (514743) to Marland Tap (514770) 138kV line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
17	FLT_17_OSAGE4_STDBEAR4_138kV_3PH	Fault on the Osage (514743) to Standing Bear (514758) 138kV line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
18	FLT_18_OSAGE4_WHEAGLE4_138kV_3PH	Fault on the Osage (514743) to White Eagle (514761) 138kV line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
19	FLT_19_4STILWTR_4RAMSEY_138kV_3PH	Fault on the Stillwater (300141) to Ramsey (300844) 138kV line, near Stillwater. a. Apply fault at the Stillwater 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
20	FLT_20_4STILWTR_NORTHTP4_138kV_3PH	Fault on the Stillwater (300141) to North Tap (512731) 138kV line, near Stillwater. a. Apply fault at the Stillwater 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
21	FLT_21A_4REMINGTON_SHILDER4PO_138kV_3PH	Prior outage on the Pawnee SW (512749) to Glencoe (301425) 138kV line: Fault on the Remington (301369) to Shidler (510403) 138kV line, near Remington. a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3: Contingencies Evaluated

Contingency Number and Name		Description
22	FLT_21B_4REMINGTON_SHILDER4PO_138kV_3PH	<p>Prior outage on the Pawnee SW (512749) to Cleveland (300138) 138kV line: Fault on the Remington (301369) to Shidler (510403) 138kV line, near Remington.</p> <p>a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.</p>
23	FLT_22A_4REMINGTON_4FAIRFAXPO_138kV_3PH	<p>Prior outage on the Shidler (510403) to Fairfax Tap (510377) 138kV line: Fault on the Remington (301369) to Fairfax (300139) 138kV line, near Remington.</p> <p>a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.</p>
24	FLT_22B_4REMINGTON_4FAIRFAXPO_138kV_3PH	<p>Prior outage on the Shidler (510403) to West Pawhuska (510382) 138kV line: Fault on the Remington (301369) to Fairfax (300139) 138kV line, near Remington.</p> <p>a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.</p>
25	FLT_23_OSAGE4_OSGE2_138_69kV_1PH	<p>Fault on the Osage (514743) 138kV to (514742) 69kV transformer circuit 1, near Osage 138kV.</p> <p>a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.</p>
26	FLT_24_4FAIRFAX_2FAIRFAX_138_69kV_3PH	<p>Fault on the Fairfax (300139) 138V to (300929) 69kV transformer circuit 1, near Fairfax 138kV.</p> <p>a. Apply fault at the Fairfax 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.</p>
27	FLT_25_4STILWTR_2WILLIAMS_138kV_1PH	<p>Fault on the Stillwater (300141) to Williams (301413) 138kV line, near Stillwater.</p> <p>a. Apply fault at the Stillwater 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.</p>
28	FLT_26_4CLEVLND_CLEVLND4_138kV_3PH	<p>Fault on the Cleveland (300138) to GRDA Cleveland (512729) 138kV line, near Cleveland.</p> <p>a. Apply fault at the Cleveland 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.</p>

Table 3: Contingencies Evaluated

Contingency Number and Name		Description
29	FLT_27_4CLEVLND_4SILVCTY_138kV_3PH	Fault on the Cleveland (300138) to Silver City (300140) 138kV line, near Cleveland. a. Apply fault at the Cleveland 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
30	FLT_28_4CLEVLND_4CLEVLNDXFMR_138kV_3PH	Fault on the Cleveland (300138) to Cleveland XFMR (301429) 138kV line, near Cleveland. a. Apply fault at the Cleveland 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

RESULTS

Results of the stability analysis are summarized in **Table 4**. These results are valid for ASGI-2017-005 interconnecting with a generation amount up to 144 MW.

Table 4: Fault Analysis Results

Contingency Number and Name		Single Phase			Three Phase		
		2016WP	2017SP	2025SP	2016WP	2017SP	2025SP
1	FLT_01_4REMINGTON_SHILDER4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
2	FLT_02_4REMINGTON_4FAIRFAX_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
3	FLT_03_SHILDER4_FAIRFXT4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
4	FLT_04_SHILDER4_WPAWTHSK4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
5	FLT_05_WEBBTAP4_OSAGE4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
6	FLT_06_PAWHTP4_DOMES4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
7	FLT_07_4FAIRFAX_PAWNSW4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
8	FLT_08_PAWNSW4_4CLEVLND_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
9	FLT_09_PAWNSW4_4GLENCOE_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
10	FLT_10_4CLEVLND_4JAVINE_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
11	FLT_11_4SFORKKTP_4SFORKK_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
12	FLT_12_MOUNDRD4_BVCOM4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
13	FLT_13_TNO4_SKIATOK4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
14	FLT_14_TNO4_NES4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
15	FLT_15_OSAGE4_SNRPMPT4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
16	FLT_16_OSAGE4_MARLNDT4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
17	FLT_17_OSAGE4_STDBEAR4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
18	FLT_18_OSAGE4_WHEAGLE4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
19	FLT_19_4STILWTR_4RAMSEY_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
20	FLT_20_4STILWTR_NORTHTP4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
21	FLT_21A_4REMINGTON_SHILDER4PO_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
22	FLT_21B_4REMINGTON_SHILDER4PO_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
23	FLT_22A_4REMINGTON_4FAIRFAXPO_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
24	FLT_22B_4REMINGTON_4FAIRFAXPO_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
25	FLT_23_OSAGE4_OSGE2_138_69kV_1PH	Stable	Stable	Stable	Stable	Stable	Stable
26	FLT_24_4FAIRFAX_2FAIRFAX_138_69kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
27	FLT_25_4STILWTR_2WILLIAMS_138kV_1PH	Stable	Stable	Stable	Stable	Stable	Stable
28	FLT_26_4CLEVLND_CLEVLND4_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable

Table 4: Fault Analysis Results

Contingency Number and Name		Single Phase			Three Phase		
		2016WP	2017SP	2025SP	2016WP	2017SP	2025SP
29	FLT_27_4CLEVLND_4SILVCTY_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable
30	FLT_28_4CLEVLND_4CLEVLNDXFMR_138kV_3PH	Stable	Stable	Stable	Stable	Stable	Stable

FERC LVRT COMPLIANCE

FERC Order #661A places specific requirements on wind farms through its Low Voltage Ride Through (LVRT) provisions. For Interconnection Agreements signed after December 31, 2006, wind farms shall stay on line for faults at the POI that draw the voltage down at the POI to 0.0 pu.

Fault contingencies were developed to verify that wind farms remain on line when the POI voltage is drawn down to 0.0 pu. These contingencies are shown in **Table 5**.

Table 5: LVRT Contingencies

Contingency Number and Name		Description
1	FLT_01_4REMINGTON_SHILDER4_138kV_3PH	Fault on the Remington (301369) to Shidler (510403) 138kV line, near Remington. a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
2	FLT_02_4REMINGTON_4FAIRFAX_138kV_3PH	Fault on the Remington (301369) to Fairfax (300139) 138kV line, near Remington. a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
3	FLT_21A_4REMINGTON_SHILDER4PO_138kV_3PH	Prior outage on the Pawnee SW (512749) to Glencoe (301425) 138kV line: Fault on the Remington (301369) to Shidler (510403) 138kV line, near Remington. a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
4	FLT_21B_4REMINGTON_SHILDER4PO_138kV_3PH	Prior outage on the Pawnee SW (512749) to Cleveland (300138) 138kV line: Fault on the Remington (301369) to Shidler (510403) 138kV line, near Remington. a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT_22A_4REMINGTON_4FAIRFAXPO_138kV_3PH	Prior outage on the Shidler (510403) to Fairfax Tap (510377) 138kV line: Fault on the Remington (301369) to Fairfax (300139) 138kV line, near Remington. a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 5: LVRT Contingencies

Contingency Number and Name		Description
6	FLT_22B_4REMINGTON_4FAIRFAXPO_138kV_3PH	<p>Prior outage on the Shidler (510403) to West Pawhuska (510382) 138kV line: Fault on the Remington (301369) to Fairfax (300139) 138kV line, near Remington.</p> <ol style="list-style-type: none"> a. Apply fault at the Remington 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

The required prior queued project wind farms remained online for the fault contingencies described in this section as well as the fault contingencies described in the Disturbances section of this report. ASGI-2017-005 is found to be in compliance with FERC Order #661A.

SHORT CIRCUIT ANALYSIS

A short circuit analysis was performed on the 2017 & 2025 Summer Peak power flow cases using the PSS/E ASCC program. Since the power flow model does not contain negative and zero sequence data, only three-phase symmetrical fault current levels were calculated at the point of interconnection up to and including five levels away. The results of the short circuit analysis are shown on the next page.

ASGI-2017-005 Short Circuit Analysis Results (2017SP)

PSS@E-32.2.0 ASCC SHORT CIRCUIT CURRENTS FRI, MAY 26 2017 11:31
 2015 MDWG FINAL WITH 2013 MMWG, UPDATED WITH 2014 SERC & MRO
 MDWG 17S WITH MMWG 15S, MRO 16W TOPO/16S PROF, SERC 16S

OPTIONS USED:

- FLAT CONDITIONS
- BUS VOLTAGES SET TO 1 PU AT 0 PHASE ANGLE
- GENERATOR P=0, Q=0
- TRANSFORMER TAP RATIOS=1.0 PU and PHASE ANGLES=0.0
- LINE CHARGING=0.0 IN +/-0 SEQUENCE
- LOAD=0.0 IN +/- SEQUENCE, CONSIDERED IN ZERO SEQUENCE
- LINE/FIXED/SWITCHED SHUNTS=0.0 AND MAGNETIZING ADMITTANCE=0.0 IN +/-0

SEQUENCE

- DC LINES AND FACTS DEVICES BLOCKED
- TRANSFORMER ZERO SEQUENCE IMPEDANCE CORRECTIONS IGNORED

THREE PHASE FAULT

X-----	BUS -----	X	/I+/	AN(I+)
301369	[4REMNGTON	138.00]	AMP	8843.3 -81.62
300139	[4FAIRFAX	138.00]	AMP	8015.5 -82.25
300919	[4RALSTNBND	138.00]	AMP	3264.5 -80.71
301379	[4OSAGEWIND	138.00]	AMP	7891.5 -81.46
510403	[SHIDLER4	138.00]	AMP	8729.5 -79.87
588300	[ASGI1705	138.00]	AMP	6167.2 -82.48
300929	[2FAIRFAX	69.000]	AMP	4971.7 -81.04
510377	[FAIRFXT4	138.00]	AMP	8253.1 -79.12
510382	[WPAWHSK4	138.00]	AMP	5932.2 -77.70
512749	[PAWNSW4	138.00]	AMP	10217.6 -83.75
300138	[4CLEVLND	138.00]	AMP	16832.1 -85.45
300922	[2BURBANK	69.000]	AMP	2684.6 -75.02
300937	[2NAVLRES	69.000]	AMP	3361.4 -72.59
301425	[4GLENCOE	138.00]	AMP	10138.1 -82.91
510376	[WEBBTAP4	138.00]	AMP	8201.1 -79.03
510412	[PAWH-TP4	138.00]	AMP	5938.4 -77.92
512758	[2GETTYTAP	69.000]	AMP	3779.7 -80.16
300140	[4SILVCTY	138.00]	AMP	15821.4 -82.23
300141	[4STILWTR	138.00]	AMP	13672.8 -81.35
300644	[2GETTY	69.000]	AMP	3708.9 -79.92
300939	[2PAWNEE	69.000]	AMP	3552.3 -78.25
300940	[2PAWYA	69.000]	AMP	2869.9 -69.69
300996	[4JAVINE	138.00]	AMP	6536.7 -82.68

301429 [4CLEVLNDXFMR138.00] AMP 16832.1 -85.45
510383 [DOMES 4 138.00] AMP 6332.2 -78.59
510432 [SHIDWFC4 138.00] AMP 5689.0 -76.02
510434 [HERITAGETRL4138.00] AMP 4315.6 -76.99
512729 [CLEVLND 4 138.00] AMP 16829.8 -85.47
514743 [OSAGE 4 138.00] AMP 16482.1 -81.55
300131 [4FISHERTP 138.00] AMP 14524.5 -80.87
300137 [4BRISTOW 138.00] AMP 7123.2 -79.76
300844 [4RAMSEY 138.00] AMP 10588.3 -79.79
300934 [2HALETP 69.000] AMP 4683.9 -80.55
300943 [2SILVCTY 69.000] AMP 10103.6 -79.23
301337 [2PRSHNGTP 69.000] AMP 2881.6 -69.52
301339 [4SFORKKTP 138.00] AMP 6825.4 -82.74
301413 [2WILLIAMS 69.000] AMP 20752.9 -76.60
301430 [2CLEVLNDXFMR69.000] AMP 10326.7 -83.69
510375 [WEBBCTY4 138.00] AMP 4350.1 -74.42
510395 [MOUNDRD4 138.00] AMP 9221.3 -79.05
512675 [PAWNEGR2 69.000] AMP 3312.8 -76.71
512694 [CLEVLND7 345.00] AMP 14981.6 -86.33
512726 [SILVCTYGR4 138.00] AMP 15665.0 -82.32
512731 [NORTHTP4 138.00] AMP 10987.1 -82.75
514742 [OSGE 2 69.000] AMP 15711.8 -84.42
514758 [STDBEAR4 138.00] AMP 13855.3 -81.48
514761 [WHEAGLE4 138.00] AMP 15789.5 -81.52
514770 [MARLNDT4 138.00] AMP 10889.3 -76.67
514798 [SNRPMPT4 138.00] AMP 20534.2 -85.49
529308 [OMPWHSK4 138.00] AMP 4086.8 -76.86

Short Circuit Analysis Results (2025SP)

PSS@E-32.2.0 ASCC SHORT CIRCUIT CURRENTS FRI, MAY 26 2017 11:31
 2015 MDWG FINAL WITH 2013 MMWG, UPDATED WITH 2014 SERC & MRO
 MDWG 2025S WITH MMWG 2024S, MRO & SERC 2025 SUMMER

OPTIONS USED:

- FLAT CONDITIONS
 - BUS VOLTAGES SET TO 1 PU AT 0 PHASE ANGLE
 - GENERATOR P=0, Q=0
 - TRANSFORMER TAP RATIOS=1.0 PU and PHASE ANGLES=0.0
 - LINE CHARGING=0.0 IN +/- /0 SEQUENCE
 - LOAD=0.0 IN +/- SEQUENCE, CONSIDERED IN ZERO SEQUENCE
 - LINE/FIXED/SWITCHED SHUNTS=0.0 AND MAGNETIZING ADMITTANCE=0.0 IN +/- /0 SEQUENCE
 - DC LINES AND FACTS DEVICES BLOCKED
 - TRANSFORMER ZERO SEQUENCE IMPEDANCE CORRECTIONS IGNORED

THREE PHASE FAULT

X-----	BUS -----X	/I+/	AN(I+)		
301369	[4REMNGTON	138.00]	AMP	8906.4	-81.63
300139	[4FAIRFAX	138.00]	AMP	8049.0	-82.25
300919	[4RALSTNBND	138.00]	AMP	3273.1	-80.71
301379	[4OSAGEWIND	138.00]	AMP	7940.7	-81.46
510403	[SHIDLER4	138.00]	AMP	8826.5	-79.89
588300	[ASGI1705	138.00]	AMP	6191.2	-82.48
300929	[2FAIRFAX	69.000]	AMP	4975.7	-81.04
510377	[FAIRFXT4	138.00]	AMP	8342.7	-79.12
510382	[WPAWHSK4	138.00]	AMP	6056.5	-77.88
512749	[PAWNSW4	138.00]	AMP	10245.9	-83.76
300138	[4CLEVLND	138.00]	AMP	16876.2	-85.45
300922	[2BURBANK	69.000]	AMP	2685.7	-75.01
300937	[2NAVLRES	69.000]	AMP	3362.9	-72.59
301425	[4GLENCOE	138.00]	AMP	10170.3	-82.95
510376	[WEBBTAP4	138.00]	AMP	8290.1	-79.03
510412	[PAWH-TP4	138.00]	AMP	6110.2	-78.22
512758	[2GETTYTAP	69.000]	AMP	3781.7	-80.16
300140	[4SILVCTY	138.00]	AMP	15901.2	-82.24
300141	[4STILWTR	138.00]	AMP	13741.3	-81.43
300644	[2GETTY	69.000]	AMP	3710.8	-79.93
300939	[2PAWNEE	69.000]	AMP	3553.8	-78.25
300940	[2PAWYA	69.000]	AMP	2870.8	-69.69
300996	[4JAVINE	138.00]	AMP	6543.2	-82.68
301429	[4CLEVLNDFMR	138.00]	AMP	16876.2	-85.45
510383	[DOMES 4	138.00]	AMP	6465.9	-78.77
510432	[SHIDWFC4	138.00]	AMP	5731.6	-75.99
510434	[HERITAGETRL4	138.00]	AMP	4481.5	-77.45
512729	[CLEVLND 4	138.00]	AMP	16873.7	-85.48

514743 [OSAGE 4 138.00] AMP 17374.5 -81.82
300131 [4FISHERTP 138.00] AMP 14580.5 -80.86
300137 [4BRISTOW 138.00] AMP 7200.0 -79.86
300844 [4RAMSEY 138.00] AMP 10602.6 -79.80
300934 [2HALETP 69.000] AMP 4686.0 -80.55
300943 [2SILVCTY 69.000] AMP 10120.0 -79.23
301337 [2PRSHNGTP 69.000] AMP 2882.4 -69.51
301339 [4SFORKKTP 138.00] AMP 6832.5 -82.73
301413 [2WILLIAMS 69.000] AMP 21533.6 -76.61
301430 [2CLEVLNDXFM69.000] AMP 10335.9 -83.69
510375 [WEBBCTY4 138.00] AMP 4374.9 -74.39
510395 [MOUNDRD4 138.00] AMP 9335.0 -79.14
512675 [PAWNEGR2 69.000] AMP 3314.1 -76.71
512694 [CLEVLND7 345.00] AMP 15036.8 -86.33
512726 [SILVCTYGR4 138.00] AMP 15743.0 -82.33
512731 [NORTHTP4 138.00] AMP 11007.3 -82.78
514742 [OSGE 2 69.000] AMP 18589.4 -84.61
514758 [STDBEAR4 138.00] AMP 14435.5 -81.66
514761 [WHEAGLE4 138.00] AMP 16434.3 -81.62
514770 [MARLNDT4 138.00] AMP 11216.6 -76.66
514798 [SNRPMPT4 138.00] AMP 20807.6 -85.54
529308 [OMPWHK4 138.00] AMP 4252.2 -77.35

CONCLUSION

An Affected System Interconnection Customer has requested an Affected System Impact Study (ASIS) under the Southwest Power Pool Open Access Transmission Tariff (OATT) for ASGI-2017-005. ASGI-2017-005 (144 MW) wind generating facilities is to be interconnected into the system of AECL. ASGI-2017-005 has requested this ASIS to determine the impacts of interconnecting to the transmission system with all required Network Upgrades identified in the DISIS-2016-001 Impact Study placed into service.

The ASIS analysis has determined that the ASGI-2017-005 request can interconnect 144 MW of generation with ERIS and NRIS with the study dispatch assumption listed in **Table 1** provided the Network Upgrades listed in **Table 2** are able to be placed in service.

It should be noted that although this ASIS analyzed many of the most probable contingencies, it is not an all-inclusive list that can account for every operational situation. Additionally, the generator may not be able to inject any power onto the Transmission System due to constraints that fall below the threshold of mitigation for a Generator Interconnection request. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to **0 MW** under certain system conditions to allow system operators to maintain the reliability of the transmission network.

Transient stability analysis for this ASIS has determined that no issues were observed for the transmission system for the twenty-eight (28) selected faults for the interconnection of ASGI-2017-005.

Any changes to these assumptions, for example, one or more of the previously queued requests not included within this study execute an interconnection agreement and commencing commercial operation, may require a re-study of this ASIS at the expense of the Customer.

Nothing in this System Impact Study constitutes a request for transmission service or confers upon the Interconnection Customer any right to receive transmission service.

THERMAL AND STEADY STATE VOLTAGE CONSTRAINTS TABLES

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	1	169.1952	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	1	168.5321	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	1	168.4882	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	1	168.2414	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	1	168.1235	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	1	150.647	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08NR	17G	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	1	150.1305	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	213	213	1	137.4102	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	213	213	1	137.3247	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84964	121.8839	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84964	121.8839	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84888	120.713	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84888	120.713	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84906	119.0266	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84906	119.0266	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84912	116.6683	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84912	116.6683	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84895	116.6427	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84895	116.6427	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84964	108.7934	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84964	108.7934	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	17G	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84888	108.0731	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	17G	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - SHIDLER 138KV CKT 1	174	174	0.84888	108.0731	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.28803	146.4688	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.28743	143.0354	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.28636	142.937	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.28744	127.1548	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.28636	125.8048	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.24339	125.4858	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.24339	125.4858	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.24481	122.2546	FAIRFAX - PAWNSW4 138.00 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.24481	122.2546	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.28791	118.9521	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	118.952	BARNSDALL PUMP STATION - MOUND ROAD 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.24431	118.9027	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.24431	118.9027	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	118.8969	P12:138:AEPW:MOUNDRD4:BARNSAL4
08ALL	16WP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.28811	116.4712	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	116.2894	BARNSDALL - BARNSDALL PUMP STATION 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.28744	115.3213	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	113.1902	BARNSDALL - SKIATOOK PUMP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	113.1866	P12:138:AEPW:BARNSAL4:T.NO.--4
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	112.6636	SKIATOOK PUMP - TULSA NORTH 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.24339	110.4446	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.24339	110.4446	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.16483	107.7897	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.16483	107.7897	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	104.6448	BARNSDALL PUMP STATION - MOUND ROAD 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	104.5891	P12:138:AEPW:MOUNDRD4:BARNSAL4
08ALL	25SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.2443	104.3808	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.2443	104.3808	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.16249	103.1208	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.16194	103.0894	BASE CASE

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.20768	101.9757	BARNSDALL - BARNSDALL PUMP STATION 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.16366	101.8258	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.28791	101.2293	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.24467	101.2219	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.24467	101.2219	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.16249	100.2423	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1	143	143	0.04952	110.2464	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1	143	143	0.04952	110.2464	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.40235	139.4529	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.40152	136.3571	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.3996	132.7416	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.40166	123.4473	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.22821	121.9421	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.22821	121.9421	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.23196	118.1815	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.23196	118.1815	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.3996	117.1758	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.34113	115.5351	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.34113	115.5351	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.33873	115.3203	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.33873	115.3203	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.2308	115.2836	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.2308	115.2836	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.40243	114.3861	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.40258	112.8199	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.34044	112.5271	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.34044	112.5271	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.40159	111.749	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.2212	109.9089	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22433	108.681	CLEVELAND - G15066_T 345.00 345KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.22821	107.6882	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.22821	107.6881	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.2212	106.1436	G15066_T 345.00 - SOONER 345KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22338	106.0764	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22433	104.4248	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22237	102.3741	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22237	102.3741	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22237	102.3736	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22237	102.3736	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22338	101.8912	G15066_T 345.00 - SOONER 345KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.33873	101.7733	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.33873	101.7733	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.22258	101.7599	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22469	101.3068	GEN511839 1-NORTHEASTERN STATION #2
08ALL	25SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.34056	100.9107	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.34056	100.9107	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22145	100.162	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22145	100.162	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22145	100.1616	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22145	100.1616	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22533	100.0979	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.21965	100.0654	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.21965	100.0654	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.21965	100.0647	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.21965	100.0647	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	152	152	0.22605	99.7	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.232	99.5	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.232	99.5	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.22277	99.5	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.22277	99.5	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.40235	143.6171	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.40152	140.6478	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.3996	133.7521	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.40166	127.5568	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22821	122.9464	CLEVELAND - TULSA NORTH 345KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22821	122.9464	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.23196	122.2577	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.23196	122.2577	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.34113	119.6388	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.34113	119.6388	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2308	119.4859	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2308	119.4859	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.3996	118.1748	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.34044	116.7544	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.34044	116.7544	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.40243	116.5537	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.33873	116.3266	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.33873	116.3266	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.40258	115.6712	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.40159	114.6106	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22433	112.71	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.2212	110.9071	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22338	110.2301	CLEVELAND - G15066_T 345.00 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22821	108.6837	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22821	108.6837	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22433	108.4627	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.2212	107.1332	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22237	106.465	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22237	106.465	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22237	106.4645	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22237	106.4645	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22338	106.0549	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22469	105.3786	GEN511839 1-NORTHEASTERN STATION #2
08ALL	25SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.34056	104.9663	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.34056	104.9663	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22145	104.378	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22145	104.378	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22145	104.3776	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22145	104.3776	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22533	104.1811	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22605	103.8129	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22378	103.2021	GEN511839 1-NORTHEASTERN STATION #2
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22524	102.8745	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.23096	102.8166	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.23096	102.8166	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.33873	102.765	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.33873	102.7649	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22258	102.76	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.23684	102.638	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22613	102.3953	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22442	101.7132	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.232	101.6847	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.232	101.6847	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22535	101.6482	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22535	101.6439	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22533	101.2215	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22504	101.132	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.21965	101.0524	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.21965	101.0524	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.21965	101.0518	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.21965	101.0518	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.21719	100.9801	NORTHEAST STATION - RICE CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22524	100.6287	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22277	100.5399	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22277	100.493	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.23585	100.4466	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22605	100.412	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22258	100.3061	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.24085	100.2496	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22514	100.242	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.21719	100.2393	BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2231	100.1863	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2231	100.1863	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2231	100.1604	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2231	100.1604	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22535	100.1447	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.40243	100.055	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.21719	100	P12:138:AEPW:N.E.S.-4:BV-SE--4
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.24967	100	CLEAVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.24967	100	CLEAVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.24085	99.9	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.22261	99.9	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.22429	99.6	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03311	123.7328	BASE CASE
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03286	122.2613	BASE CASE
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03747	116.385	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03331	115.8859	BASE CASE
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03749	114.6052	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03337	110.4306	SUMNER 4 - TIMBJCT4 138KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03747	108.3557	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03615	106.3013	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03615	106.0016	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03286	105.9609	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03615	105.8818	P12:069:WERE:BELL-CRSW_69::

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03337	105.7518	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03615	104.5707	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03998	104.5673	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	104.4071	TIMBER JUNCTION - UDALL 69KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	104.1555	P12:069:WERE:TIMJ-WEAV_69::
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	103.1345	RICHLAND - UDALL 69KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03998	102.699	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03277	102.053	DBL-G1524-WI
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	101.7797	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03615	101.015	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.04491	100.9044	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03747	100.278	OPENSKY7 345.00 - RANCHR07 345.00 345KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03269	100	P12:138:OKGE:3TERM2
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	99.9	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03264	99.9	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0323	99.6	EL PASO - ROSE HILL 138KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.03615	99.5	BELL - PECK 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05135	114.9936	BASE CASE
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05134	113.1274	BASE CASE
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05395	111.6001	BASE CASE
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05373	110.3904	BASE CASE
08NR	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0763	108.6197	SOONER - SPRING CREEK 345KV CKT 1
08NR	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0763	108.6073	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05084	106.9759	BASE CASE
08NR	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.08165	106.4218	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05094	105.5242	BASE CASE

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08NR	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.04796	104.9705	CLEVELAND - G15066_T 345.00 345KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.07605	103.9684	SOONER - SPRING CREEK 345KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.07605	103.7801	NORTHWEST - SPRING CREEK 345KV CKT 1
08NR	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05183	102.3315	CLEVELAND - G15066_T 345.00 345KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.04796	101.3759	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.40235	152.0275	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.40152	149.5222	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.3996	137.9988	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.40166	136.8496	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.23196	130.5352	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.23196	130.5352	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2308	128.2238	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2308	128.2238	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.34113	127.9355	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.34113	127.9355	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22821	127.1614	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22821	127.1614	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.34044	125.5093	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.34044	125.5093	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.3996	122.3505	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.40243	121.8845	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22433	120.9348	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.33873	120.5143	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.33873	120.5143	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.40258	119.6815	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22338	118.912	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.40159	118.7284	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22433	116.6762	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2212	115.0974	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22338	114.7277	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22237	114.7205	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22237	114.7205	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22237	114.7201	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22237	114.7201	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.34056	114.1543	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.34056	114.1543	FAIRFAX - PAWNSW4 138.00 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	113.6071	GEN511839 1-NORTHEASTERN STATION #2
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22145	113.0944	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22145	113.0944	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22145	113.094	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22145	113.094	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22821	112.8383	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22821	112.8382	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22533	112.4299	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22605	112.0664	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.23096	111.9814	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.23096	111.9814	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	111.902	GEN511839 1-NORTHEASTERN STATION #2
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2212	111.2771	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22524	111.1062	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.23684	110.891	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22613	110.6297	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22442	110.4204	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22535	109.9032	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22535	109.8997	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22504	109.8383	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22533	109.4412	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21719	109.3606	NORTHEAST STATION - RICE CREEK 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.23585	109.1616	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22524	108.8549	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22605	108.6451	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21719	108.597	BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.24085	108.4956	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22514	108.4777	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2231	108.4709	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2231	108.4709	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2231	108.4504	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2231	108.4504	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21719	108.3936	P12:138:AEPW:N.E.S.-4:BV-SE--4
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22535	108.3866	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22429	108.2706	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.24085	108.107	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22445	107.7059	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22445	107.7039	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21632	107.6669	NORTHEAST STATION - RICE CREEK 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22442	107.4754	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22514	107.4439	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22049	107.417	NORTHEAST STATION - WATOVA 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.25317	107.3046	CLEAVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.25317	107.3046	CLEAVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22585	107.1983	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22049	107.0283	NOWATA - WATOVA 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22744	106.9858	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.232	106.9491	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.232	106.9491	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22258	106.932	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	106.9225	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22591	106.9016	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.33873	106.8953	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.33873	106.8953	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22049	106.8843	P12:138:AEPW:NOWATA-4:N.E.S-4
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	106.8755	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21632	106.8667	BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.24035	106.7964	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22591	106.779	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	106.7634	GEN512688 2-GRDA1 GSU2 22

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22219	106.7629	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22219	106.7629	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22219	106.7449	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22219	106.7449	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22591	106.709	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22464	106.694	P12:138:OKGE:3TERM2
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	106.6834	GEN509394 1-FLINT CREEK
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22585	106.6589	EL PASO - FARBER 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21632	106.6528	P12:138:AEPW:N.E.S.-4:BV-SE--4
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22585	106.6479	P13:069-138:WERE:ELPA_TX-1::
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.23584	106.6386	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2246	106.6024	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22504	106.5972	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22533	106.541	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.24035	106.3925	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	106.3562	GEN511836 1-NORTHEASTERN STATION #1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21007	106.3036	SKIATOOK PUMP - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	106.259	GEN511840 1-NORTHEASTERN STATION #3
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22445	106.2497	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2242	106.2309	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22495	106.1984	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22495	106.1984	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22429	106.1745	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22522	106.1515	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22579	106.1278	CLEVELAND - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	106.0537	GEN513601 1-GRECCTG_1 20.000
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21007	106.0499	BARNSDALL - SKIATOOK PUMP 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21007	106.0387	P12:138:AEPW:BARNSAL4:T.NO.--4
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22657	105.9631	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22049	105.9259	BARTLESVILLE SOUTHEAST - NOWATA 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22472	105.8965	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22881	105.8382	FAIRFAX - NAVAL RESERVE 69KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22483	105.7691	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22579	105.7668	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2254	105.7628	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2254	105.7628	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22695	105.7387	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21959	105.6924	NORTHEAST STATION - WATOVA 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22692	105.5858	4SFORKKTP 138.00 - SKIATOOK TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	105.551	P12:138:OKGE:3TERM2
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	105.4554	GEN512688 2-GRDA1 GSU2 22
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22374	105.4507	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22552	105.3395	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.40243	105.3231	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21959	105.2821	NOWATA - WATOVA 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2242	105.2378	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.21965	105.1674	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.21965	105.1674	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.21965	105.1668	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.21965	105.1668	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	105.1632	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21959	105.1289	P12:138:AEPW:NOWATA-4:N.E.S-4
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.25158	105.1227	CLEAVELAND - PAWSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.25158	105.1227	CLEAVELAND - PAWSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	105.1157	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22351	105.0721	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	104.961	GEN509394 1-FLINT CREEK
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2246	104.8507	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22655	104.7916	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2092	104.7237	SKIATOOK PUMP - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22277	104.7148	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22277	104.6658	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22404	104.6656	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22404	104.6656	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22442	104.5925	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	104.5908	GEN511836 1-NORTHEASTERN STATION #1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	104.4987	GEN511840 1-NORTHEASTERN STATION #3
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2092	104.4721	BARNSDALL - SKIATOOK PUMP 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2092	104.4608	P12:138:AEPW:BARNAL4:T.NO.--4
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22258	104.442	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22553	104.3397	G15-015T 138.00 - MDFRDP4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22484	104.3299	CLEVELAND - JAVINE 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	104.2738	GEN513601 1-GRECCTG_1 20.000
08ALL	17G	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.34119	104.2368	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.34119	104.2368	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22381	104.2105	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.21959	104.1623	BARTLESVILLE SOUTHEAST - NOWATA 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22428	104.1421	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.24967	104.0962	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.24967	104.0962	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22261	104.0761	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22786	104.0403	FAIRFAX - NAVAL RESERVE 69KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22484	103.9588	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22599	103.8979	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	103.4962	BASE CASE
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22277	103.4633	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22342	103.2877	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2324	102.5112	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.23405	102.4703	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22261	102.3076	G15063_T 345.00 - WOODRING 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2212	102.1993	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22258	101.982	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22218	101.7259	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22218	101.7259	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22378	101.7044	BASE CASE
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22156	101.5141	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22156	101.5141	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22156	101.5139	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22156	101.5139	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22381	101.3913	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.23225	101.3566	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.23225	101.3566	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22405	101.3558	CLAREMORE TRANSOK - NORTHEAST STATION 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22405	101.3217	NORTHEAST STATION - OWASSO SOUTH 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22387	101.2278	GEN511839 1-NORTHEASTERN STATION #2
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22404	101.1964	CHELSEA - HAWTHORNE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.20982	101.1443	BARTLESVILLE COMANCHE - BARTLESVILLE SOUTHEAST 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22404	101.1381	HAWTHORNE - NORTHEAST STATION 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22807	101.1295	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	101.0898	GEN562429 1-G13-029 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22404	101.0188	P12:138:AEPW:VINTAJC4:N.E.S.-4
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22744	100.9739	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22351	100.9594	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22253	100.9541	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22807	100.9413	DMNCRKT4 - MILLER 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22253	100.841	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22807	100.8253	MILLER - SOONER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	100.8058	GEN562882 1-G15047_3 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	100.8049	GEN533141 1-SLATEGEN1 0.6900
08ALL	16WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.34133	100.7955	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.34133	100.7955	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.23088	100.7761	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.23088	100.7761	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22744	100.6856	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22413	100.5786	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22342	100.5312	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22206	100.5056	P12:138:OKGE:3TERM2
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2241	100.4919	4SFORKKTP 138.00 - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22201	100.4755	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	100.472	GEN562691 1-G15_015_3 0.6900
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22294	100.4507	VIOLA 7 345.00 - WICHITA 345KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22744	100.4281	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2241	100.4202	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2241	100.4202	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2388	100.3895	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2388	100.3895	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22744	100.2924	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2388	100.2831	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2241	100.1889	COLLINSVILLE (COLAUTO3) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2241	100.1889	COLLINSVILLE (COLAUTO3) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22255	100.1703	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22737	100.1622	P12:138:OKGE:3TERM47
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22362	100.1618	40OLOGAH 138.00 - CLAREMORE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22362	100.1618	CLAREMORE (CLRAUTO4) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22362	100.1618	CLAREMORE (CLRAUTO4) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	100.1354	GEN514806 1-SOONER UNIT 2
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22301	100.0962	CLEAVELAND - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	100	GEN563032 1-G15067_3 0.4180
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22362	100	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22362	100	P12:138:AECI-AEPW:CLARMR5:N.E.S.-4
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22404	100	SILVER CITY - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22385	100	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22301	100	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22938	99.8	KILDARE4 - WHITE EAGLE 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.3405	99.8	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.3405	99.8	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22469	99.7	GEN562611 1-G14_064_3 0.6900
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22609	99.7	FAIRFAX - NAVAL RESERVE 69KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22204	99.6	ALTOONA - BUTLER 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22204	99.6	P13:069-138:WERE:BTUL_TX-1::
08ALL	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.22076	99.6	P13:069-138:WERE:ALTO_TX-1OR3P::

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22715	99.52155	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22715	99.52155	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22315	99.5	NORTHEAST STATION - OWASSO SOUTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22314	99.5	CLAREMORE TRANSOK - NORTHEAST STATION 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.22313	99.5	CHELSEA - HAWTHORNE 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.20896	99.5	BARTLESVILLE COMANCHE - BARTLESVILLE SOUTHEAST 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.40235	153.4813	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.40152	151.0439	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.3996	138.3739	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.40166	138.2983	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23196	132.0164	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23196	132.0164	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2308	129.7722	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2308	129.7722	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.34113	129.4078	FAIRFAX - PAWSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.34113	129.4078	FAIRFAX - PAWSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22821	127.5564	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22821	127.5564	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.34044	127.0496	FAIRFAX - PAWSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.34044	127.0496	FAIRFAX - PAWSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.3996	122.7369	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.40243	122.6882	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22433	122.4363	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.33873	120.9102	FAIRFAX - PAWSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.33873	120.9102	FAIRFAX - PAWSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.40258	120.7423	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22338	120.4802	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.40159	119.7344	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22433	118.1702	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	117.3239	BASE CASE
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22338	116.2884	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22237	116.1971	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22237	116.1971	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22237	116.1967	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22237	116.1967	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.34056	115.6223	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.34056	115.6223	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2212	115.5229	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	115.396	BASE CASE
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	115.0857	GEN511839 1-NORTHEASTERN STATION #2
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22145	114.6378	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22145	114.6378	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22145	114.6373	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22145	114.6373	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22533	113.9108	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22605	113.5485	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23096	113.4538	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23096	113.4538	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	113.447	GEN511839 1-NORTHEASTERN STATION #2
08NR	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22821	113.2378	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22821	113.2378	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22524	112.5955	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23684	112.3569	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22613	112.1123	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22442	111.9683	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2212	111.7036	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22504	111.3886	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22535	111.3841	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22535	111.3807	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22533	110.9215	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21719	110.8296	NORTHEAST STATION - RICE CREEK 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23585	110.694	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22524	110.34	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22605	110.1254	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21719	110.0672	BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.24085	109.9613	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22514	109.9607	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2231	109.9449	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2231	109.9449	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2231	109.9241	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2231	109.9241	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22535	109.8667	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21719	109.8634	P12:138:AEPW:N.E.S.-4:BV-SE--4
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22429	109.8253	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.24085	109.573	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22445	109.2534	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22445	109.2514	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21632	109.2036	NORTHEAST STATION - RICE CREEK 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22442	109.0222	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22514	108.9262	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22049	108.89	NORTHEAST STATION - WATOVA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.25317	108.7931	CLEAVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.25317	108.7931	CLEAVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22585	108.6813	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22049	108.5018	NOWATA - WATOVA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22744	108.466	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21632	108.4044	BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	108.4006	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22591	108.3788	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22049	108.3576	P12:138:AEPW:NOWATA-4:N.E.S-4
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	108.3535	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.24035	108.3289	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22219	108.3029	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22219	108.3029	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22219	108.2848	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22219	108.2848	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22591	108.2563	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	108.2428	GEN512688 2-GRDA1 GSU2 22
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21632	108.1902	P12:138:AEPW:N.E.S.-4:BV-SE--4
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22464	108.1866	P12:138:OKGE:3TERM2
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22591	108.1863	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	108.1624	GEN509394 1-FLINT CREEK
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22504	108.1441	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22585	108.141	EL PASO - FARBER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22585	108.13	P13:069-138:WERE:ELPA_TX-1::
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23584	108.1179	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2246	108.095	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22533	108.0197	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.24035	107.9253	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	107.8341	GEN511836 1-NORTHEASTERN STATION #1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22445	107.7964	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2242	107.7808	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21007	107.7775	SKIATOOK PUMP - TULSA NORTH 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.232	107.7715	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.232	107.7715	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	107.7378	GEN511840 1-NORTHEASTERN STATION #3
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22429	107.7255	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22495	107.6772	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22495	107.6772	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22522	107.6281	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22579	107.603	CLEVELAND - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	107.5327	GEN513601 1-GRECCTG_1 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21007	107.5234	BARNSDALL - SKIATOOK PUMP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21007	107.5122	P12:138:AEPW:BARNSAL4:T.NO.--4
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22657	107.4444	G15-015T 138.00 - MDFRDT4 138.00 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22049	107.4003	BARTLESVILLE SOUTHEAST - NOWATA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22472	107.3758	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22258	107.3391	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22881	107.313	FAIRFAX - NAVAL RESERVE 69KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.33873	107.2977	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.33873	107.2977	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22483	107.2474	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22579	107.2421	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2254	107.2372	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2254	107.2372	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21959	107.2326	NORTHEAST STATION - WATOVA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22695	107.2132	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22491	107.164	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	107.1095	P12:138:OKGE:3TERM2
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22486	107.0964	SWISSVALE - WEST GARDNER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22692	107.0618	4SFORKKTP 138.00 - SKIATOOK TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22374	107.0091	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	107.0017	GEN512688 2-GRDA1 GSU2 22
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22552	106.8839	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21959	106.8228	NOWATA - WATOVA 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2242	106.7869	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	106.708	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.25158	106.6782	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.25158	106.6782	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21959	106.6696	P12:138:AEPW:NOWATA-4:N.E.S-4
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	106.6605	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22351	106.5601	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	106.5066	GEN509394 1-FLINT CREEK
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2246	106.3973	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22655	106.3383	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2092	106.2652	SKIATOOK PUMP - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22404	106.2115	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22404	106.2115	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22442	106.138	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	106.1358	GEN511836 1-NORTHEASTERN STATION #1
08NR	17G	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.40243	106.129	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	106.0442	GEN511840 1-NORTHEASTERN STATION #3
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2092	106.0134	BARNSDALL - SKIATOOK PUMP 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2092	106.002	P12:138:AEPW:BARNSAL4:T.NO.--4
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22553	105.8876	G15-015T 138.00 - MDFRDP4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22484	105.8722	CLEVELAND - JAVINE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	105.8194	GEN513601 1-GRECCTG_1 20.000
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22381	105.7566	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.21959	105.7043	BARTLESVILLE SOUTHEAST - NOWATA 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22428	105.6858	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.21965	105.5836	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.21965	105.5836	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.21965	105.5829	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.21965	105.5829	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22786	105.5817	FAIRFAX - NAVAL RESERVE 69KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22484	105.501	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.224	105.4766	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22599	105.4408	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22393	105.4297	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22597	105.2858	4SFORKKTP 138.00 - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22277	105.1226	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22277	105.0743	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.34119	105.0545	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.34119	105.0545	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22258	104.8562	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.24967	104.5103	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.24967	104.5103	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22261	104.4863	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22277	103.8664	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22342	103.6954	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22156	102.9821	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22156	102.9821	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22156	102.9818	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22156	102.9818	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2324	102.9255	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22404	102.9189	ALLUWE TAP - CHELSEA 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22387	102.8993	BASE CASE
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.23405	102.8806	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22405	102.8338	CLAREMORE TRANSOK - NORTHEAST STATION 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	102.8179	GEN587413 1-G16-061-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22405	102.7996	NORTHEAST STATION - OWASSO SOUTH 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22261	102.7186	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22387	102.6982	GEN511839 1-NORTHEASTERN STATION #2
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22404	102.6739	CHELSEA - HAWTHORNE 138KV CKT 1
08NR	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2212	102.6245	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.20982	102.6157	BARTLESVILLE COMANCHE - BARTLESVILLE SOUTHEAST 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22404	102.6156	HAWTHORNE - NORTHEAST STATION 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22807	102.6128	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22206	102.5974	BASE CASE
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	102.5664	GEN562429 1-G13-029 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22404	102.4964	P12:138:AEPW:VINTAJC4:N.E.S.-4
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22744	102.4479	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22351	102.4406	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.23225	102.4381	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.23225	102.4381	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22807	102.4248	DMNCRKT4 - MILLER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22258	102.3978	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22807	102.309	MILLER - SOONER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	102.2833	GEN562882 1-G15047_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	102.2806	GEN533141 1-SLATEGEN1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22744	102.1596	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22218	102.1353	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22218	102.1353	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	101.9481	GEN562691 1-G15_015_3 0.6900

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22744	101.9022	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.34133	101.8738	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.34133	101.8738	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.23088	101.8047	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.23088	101.8047	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22381	101.8029	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22744	101.7666	MIDLNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22737	101.6546	P12:138:OKGE:3TERM47
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22362	101.6407	40OLOGAH 138.00 - CLAREMORE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22362	101.6407	CLAREMORE (CLRAUTO4) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22362	101.6407	CLAREMORE (CLRAUTO4) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	101.6154	GEN514806 1-SOONER UNIT 2
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2252	101.5707	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2252	101.5707	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	101.4624	GEN563032 1-G15067_3 0.4180
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22362	101.4621	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22362	101.434	P12:138:AECI-AEPW:CLARMR5:N.E.S.-4
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22253	101.3624	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22938	101.2822	KILDARE4 - WHITE EAGLE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22253	101.249	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22314	101.2022	CLAREMORE TRANSOK - VERDIGRIS 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	101.1366	GEN562611 1-G14_064_3 0.6900
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.20896	101.0805	BARTLESVILLE COMANCHE - BARTLESVILLE SOUTHEAST 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22314	101.0677	CLAREMORE TRANSOK - NORTHEAST STATION 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22315	101.0399	NORTHEAST STATION - OWASSO SOUTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22715	101.0136	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22715	101.0136	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22313	100.9971	CHELSEA - HAWTHORNE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22413	100.989	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22342	100.9428	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22313	100.9393	HAWTHORNE - NORTHEAST STATION 138KV CKT 1

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22206	100.9253	P12:138:OKGE:3TERM2
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2241	100.9018	4SFORKKTP 138.00 - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22201	100.8952	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	100.8771	GEN562429 1-G13-029 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22294	100.8648	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23064	100.8407	OSAGE - SOONER PUMP TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2241	100.8302	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2241	100.8302	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22313	100.8177	P12:138:AEPW:VINTAJC4:N.E.S.-4
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2388	100.7991	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2388	100.7991	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.3405	100.7912	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.3405	100.7912	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	100.7579	GEN533141 1-SLATEGEN1 0.6900
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22655	100.7354	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2299	100.7171	P12:138:OKGE:3TERM7
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.23064	100.7142	SOONER - SOONER PUMP TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2388	100.6928	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22713	100.6921	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	100.6317	GEN562882 1-G15047_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2241	100.6001	COLLINSVILLE (COLAUTO3) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2241	100.6001	COLLINSVILLE (COLAUTO3) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22255	100.5801	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22713	100.513	DMNCRKT4 - MILLER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22301	100.5045	CLEVELAND - JAVINE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22385	100.4457	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22605	100.4451	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22404	100.4414	SILVER CITY - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22301	100.4088	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22713	100.3957	MILLER - SOONER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22655	100.3716	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22469	100.3164	GEN587483 1-G16-071-GEN10.6900

Table 6: Thermal Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	100.2767	GEN562691 1-G15_015_3 0.6900
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22655	100.1138	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22609	100.0816	FAIRFAX - NAVAL RESERVE 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22204	100	ALTOONA - BUTLER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22204	100	P13:069-138:WERE:BTUL_TX-1::
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22076	100	P13:069-138:WERE:ALTO_TX-1OR3P::
08ALL	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.22609	99.9	NAVAL RESERVE - PAWYA 69KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22852	99.9	KILDARE4 - WHITE EAGLE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22655	99.9	MIDLNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	99.9	GEN514806 1-SOONER UNIT 2
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22272	99.9	40OLOGAH 138.00 - CLAREMORE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22272	99.9	40OLOGAH 138.00 - CLAREMORE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22272	99.9	CLAREMORE (CLRAUTO4) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22272	99.9	CLAREMORE (CLRAUTO4) 161/138/13.8KV TRANSFORMER CKT 1
08NR	20L	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181	189	0.2212	99.9	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	99.8	GEN563032 1-G15067_3 0.4180
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22272	99.8	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22272	99.8	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22272	99.7	P12:138:AECI-AEPW:CLARMR5:N.E.S.-4
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22511	99.6	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22452	99.6	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2244	99.6	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.22378	99.5	GEN562611 1-G14_064_3 0.6900

Table 7: Voltage Constraints Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Max MW Available	Contingency
				Currently, None						

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0331	122.8379	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	17SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0334	122.1457	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	25SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0335	121.0858	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	17SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0321	117.8868	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	20SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0331	117.0882	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	20SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0317	116.7203	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	17SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0334	115.688	P12:138:AEPW:N.E.S.-4:CATOOSA4
0	25SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0335	113.635	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	25SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0322	110.7965	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0334	109.2876	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	20WP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	158	158	0.0333	103.835	P12:138:AEPW:N.E.S.-4:CATOOSA4
0	17SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0321	102.8095	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	20SP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	143	143	0.0317	102.6531	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1	158	158	0.034	101.3873	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	17SP	ASGI_17_05	FROM->TO	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1	212	212	0.4448	99.2	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1648	122.3435	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1648	122.3435	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	118.1054	GEN511839 1-NORTHEASTERN STATION #2
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1453	117.7467	NORTHEAST STATION - RICE CREEK 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1625	117.0374	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.167	115.9952	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.167	115.9952	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1629	115.417	GEN511839 1-NORTHEASTERN STATION #2
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1447	115.2371	NORTHEAST STATION - RICE CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1453	115.1397	BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1453	114.82	P12:138:AEPW:N.E.S.-4:BV-SE--4
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1637	114.2857	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.16	113.3745	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.16	113.3745	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1625	113.3294	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.16	113.2793	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.16	113.2793	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1653	113.2106	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1662	112.9437	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1662	112.8549	CLEVELAND - TULSA NORTH 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1662	112.8549	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1447	112.5188	BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1637	112.5174	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1447	112.1838	P12:138:AEPW:N.E.S.-4:BV-SE-4
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1626	112.1385	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1626	112.0566	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1642	111.7136	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1533	111.2149	NORTHEAST STATION - WATOVA 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1593	110.6835	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1593	110.6835	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1593	110.5994	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1593	110.5994	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1626	110.3926	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1533	109.8962	NOWATA - WATOVA 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1617	109.7795	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1645	109.6836	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1533	109.6315	P12:138:AEPW:NOWATA-4:N.E.S-4
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1625	109.5311	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1661	109.3594	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1661	109.3594	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1655	109.3582	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1637	109.3361	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1811	109.1755	CLEAVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1811	109.1755	CLEAVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1623	108.9481	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1636	108.7101	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1527	108.6371	NORTHEAST STATION - WATOVA 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1584	108.4814	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1584	108.4814	DELAWARE (DELAWARE) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.165	108.4313	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1584	108.4008	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1584	108.4008	COFFEYVILLE FARMLAND - DELAWARE 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1705	107.7977	FAIRFAX 138/69KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1617	107.7865	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1637	107.7863	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1691	107.658	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1593	107.3616	P13:069-138:WERE:ALTO_TX-10R3P::
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1609	107.3509	OWASSO NORTH TAP - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1623	107.2979	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	107.2709	ALTOONA - BUTLER 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	107.2689	P13:069-138:WERE:BUTL_TX-1::
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1527	107.2532	NOWATA - WATOVA 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1642	107.1736	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1653	107.1662	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1527	106.9726	P12:138:AEPW:NOWATA-4:N.E.S-4
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1609	106.8495	P12:138:AEPW:OWAS1094:T.NO.-4
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1609	106.7338	OWASSO 109TH STREET - OWASSO NORTH TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1623	106.717	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1637	106.7006	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1628	106.6749	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1623	106.6058	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1632	106.5732	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1641	106.5491	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1641	106.5453	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1638	106.4845	4SFORKKTP 138.00 - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1638	106.3923	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1638	106.3923	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1629	106.1767	CLEVELAND - JAVINE 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1624	106.1553	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1533	106.1162	BARTLESVILLE SOUTHEAST - NOWATA 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.161	106.1019	NORTHEAST STATION - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.161	106.1019	NORTHEAST STATION - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1638	106.0997	COLLINSVILLE (COLAUTO3) 161/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1638	106.0997	COLLINSVILLE (COLAUTO3) 161/138/13.8KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1592	106.078	ALTOONA - TAYLOR 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1629	106.0532	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1609	106.0415	NORTHEAST STATION - OWASSO 109TH STREET 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1609	106.0415	NORTHEAST STATION - OWASSO 109TH STREET 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1592	105.8821	MONTGOMERY - TAYLOR 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1592	105.8609	P12:138:WERE:ALTO-MONT_138::
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1592	105.6758	P13:069-138:WERE:MONT_TX-1::
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1737	105.6739	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1737	105.6739	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	105.5779	GEN562694 1-G15_016_3 0.6900
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1737	105.5689	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1722	105.506	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1654	105.4052	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1654	105.4052	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1639	105.3772	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1634	105.3694	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	105.2629	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	104.7911	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	104.6972	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1641	104.4869	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1636	104.2022	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1645	103.9608	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1446	103.8884	NORTHEAST STATION - RICE CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1639	103.8841	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	103.661	GEN511836 1-NORTHEASTERN STATION #1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1527	103.4274	BARTLESVILLE SOUTHEAST - NOWATA 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	103.2919	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	103.2918	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1639	103.2714	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1639	103.1625	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1634	103.1245	G15066_T 345.00 - SOONER 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1749	102.9483	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1715	102.8185	FAIRFAX 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1642	102.6697	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1639	102.6679	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1749	102.5578	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1627	102.4848	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.16	102.2919	COFFEYVILLE FARMLAND - SOUTH COFFEYVILLE CITY 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1645	102.1824	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1603	102.1778	NEOSHOS4 138.00 - TWIN VALLEY NO. 1 MOUND VALLEY 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1662	102.161	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1629	102.1012	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	25SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1628	102.0496	GEN511839 1-NORTHEASTERN STATION #2
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1629	102.0065	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1657	101.9499	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1603	101.8019	LIBERTY - TWIN VALLEY NO. 1 MOUND VALLEY 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1636	101.7699	ALTOONA - BUTLER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1636	101.7605	P13:069-138:WERE:BTUL_TX-1::
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1603	101.751	P12:138:WERE:LIBE-NSES_138::
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	101.7061	GEN509394 1-FLINT CREEK
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1632	101.6991	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1833	101.6491	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1833	101.6491	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	101.6341	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1646	101.6071	CLEVELAND - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1645	101.5859	P13:069-138:WERE:ELPA_TX-1::
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1645	101.5606	EL PASO - FARBER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1627	101.4402	NEOSHON4 138.00 - NORTHEAST PARSONS 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1653	101.3223	OPENSKY7 345.00 - RANCHR7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	101.3078	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1634	101.2869	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1644	101.2342	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1602	101.2262	P13:069-138:WERE:LIBE_TX-1::
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.16	101.2105	COFFEYVILLE TAP - SOUTH COFFEYVILLE CITY 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1446	101.176	BARTLESVILLE SOUTHEAST - RICE CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.164	101.1618	CHEROKEE DATA CENTER EAST TAP - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.164	101.1618	CHEROKEE DATA CENTER EAST TAP - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.16	101.1598	P12:138:GRDA-AEPW:FARML4:COFFEYT4
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	101.1182	GEN547649 1-ASBURY UNIT #1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1644	101.1145	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1646	101.1065	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1655	101.0818	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1713	101.0611	SOONER (SOONERS) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1637	101.0578	SWISSVALE - WEST GARDNER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1644	101.0474	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	101.0261	GEN542955 1-LACYGNE UNIT #1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1629	100.9611	GEN511836 1-NORTHEASTERN STATION #1
08ALL	17SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1635	100.9322	GEN562694 1-G15_016_3 0.6900
08ALL	25SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1446	100.848	P12:138:AEPW:N.E.S.-4:BV-SE-4
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1581	100.7808	BARTLESVILLE COMANCHE - BLUESTEM 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1632	100.7203	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1611	100.7094	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1606	100.6336	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1606	100.6336	40OLOGAH 138.00 - NORTHEAST STATION 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1606	100.6336	P12:138:AECI-AEPW:CLARMR5:N.E.S.-4
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1632	100.5389	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1627	100.3309	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1745	100.2922	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	100.1593	GEN562882 1-G15047_3 0.6900
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	100.1403	GEN514806 1-SOONER UNIT 2
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1585	100	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	99.9	GEN563032 1-G15067_3 0.4180

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1745	99.9	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1596	99.9	NEOSHOS4 138.00 - TWIN VALLEY NO. 1 MOUND VALLEY 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.166	99.8	P12:138:WERE:CRSW-OGE_138::
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1636	99.7	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	99.6	GEN562611 1-G14_064_3 0.6900
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1637	99.6	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1632	99.6	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1596	99.6	LIBERTY - TWIN VALLEY NO. 1 MOUND VALLEY 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1671	99.5	CLEVELAND - CLEVLDN 4 138.00 138KV CKT Z1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1671	99.5	CLEVELAND - CLEVLDN 4 138.00 138KV CKT Z1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1671	99.5	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1671	99.5	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1619	99.5	GEN587483 1-G16-071-GEN10.6900
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1632	99.5	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1596	99.5	P12:138:WERE:LIBE-NSES_138::
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1642	99.4	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1642	99.3	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1521	99.3	P13:069-138:WERE:DEAR_TX-1::
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1521	99.2	COFFEYVILLE TAP - DEARING 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1521	99.2	COFFEYVILLE TAP - DEARING 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1642	99.1	MIDLNTN4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.1642	99.1	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1629	99.1	GEN509394 1-FLINT CREEK
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1593	99.1	COFFEYVILLE FARMLAND - SOUTH COFFEYVILLE CITY 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	106	106	0.1596	99	P13:069-138:WERE:LIBE_TX-1::
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.2077	99	BARNSDALL - SKIATOOK PUMP 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1	131	131	0.2077	99	P12:138:AEPW:BARNSAL4:T.NO.--4
08ALL	20L	ASGI_17_05	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766	923	0.0397	110.8284	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766	923	0.0397	110.7866	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766	923	0.0397	106.0818	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766	923	0.0446	100	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766	923	0.0446	99.9	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766	923	0.0449	99.2	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766	923	0.0449	99.2	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	717	0.0415	103.9877	ARCADIA - SEMINOLE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	717	0.0381	103.4341	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	717	0.0304	103.2007	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	717	0.0381	100.1624	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	717	0.0388	99.7	GRACEMONT - MINCO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CIMARRON - DRAPER LAKE 345KV CKT 1	717	717	0.0304	99.6	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0605	145.6265	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0605	145.6265	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0631	124.4616	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0631	124.4616	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0626	121.1778	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0626	121.1778	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0621	119.0158	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0621	119.0158	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	213	213	0.0622	102.754	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	213	213	0.0622	102.754	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0624	102.7348	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	174	174	0.0624	102.7348	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	213	213	0.0629	100.6796	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	CLEVELAND - SILVER CITY 138KV CKT 1	213	213	0.0629	100.6796	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1472	107.1848	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1288	105.8136	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1372	105.5627	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1372	105.446	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1307	104.7511	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1312	103.8594	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1312	103.8222	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1288	102.6234	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.0309	102.5048	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.0309	102.5048	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.0309	102.4989	CLEVELAND - CLEVELND 4 138.00 138KV CKT Z1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.0309	102.4989	CLEVELAND - CLEVELND 4 138.00 138KV CKT Z1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1312	102.0419	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1307	101.7344	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.126	100.6706	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.126	100.6706	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1472	100.6155	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1288	99.4	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135	1195	0.1247	99	BASE CASE
08ALL	20L	ASGI_17_05	TO->FROM	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1	143	143	0.0495	123.5378	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	COLLINSVILLE - SKIATOOK TAP 138KV CKT 1	143	143	0.0495	123.5378	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.2226	99.3	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.2497	99	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	DOMES - MOUND ROAD 138KV CKT 1	189	189	0.2497	99	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.2228	99.3	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2251	99.2	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2532	99.1	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2532	99.1	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2205	99.1	NORTHEAST STATION - WATOVA 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.2234	99.1	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.3412	99	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	189	189	0.3412	99	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2259	99	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2245	99	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	DOMES - PAWHUSKA TAP 138KV CKT 1	152	152	0.2245	99	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.053	130.019	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0546	123.1015	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0544	119.6784	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0544	119.665	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0506	117.5071	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0544	115.0436	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0558	113.5497	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0558	113.5481	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0526	112.481	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0522	110.9076	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0512	110.2728	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0507	109.6241	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0558	108.9882	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0586	108.7897	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0586	108.7784	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	107.591	P13:115-345:WERE:LANG_TX-1::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	107.5909	LANG (LANG TX-1) 345/115/14.4KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	107.5893	EMPORIA ENERGY CENTER - LANG 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0489	106.9626	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0525	106.9	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0525	106.8807	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0436	106.7745	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0462	106.691	LACYGNE - WEST GARDNER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.058	106.3896	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0536	106.3644	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	105.9985	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0464	105.8131	MORRIS COUNTY - SWISSVALE 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.045	105.736	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0459	105.6128	LACYGNE - STILWELL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0423	104.8801	MORRIS COUNTY (MORR TX-1) 345/230/14.4KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0586	104.5103	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	104.5031	GEN542955 1-LACYGNE UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	104.4018	GEN542962 2-IATAN UNIT #2
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0523	104.3773	EMPORIA ENERGY CENTER - MORRIS COUNTY 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	103.8246	GEN542956 2-LACYGNE UNIT #2
08ALL	20WP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0548	103.7623	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0548	103.7582	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	103.675	GEN542951 5-HAWTHORN UNIT #5
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0421	103.6399	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.045	103.5677	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	103.4197	GEN542957 1-IATAN UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0459	103.0776	AXTELL - G16-050-TAP 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	103.0015	GEN300003 1-THOMAS HILL UNIT 3
08ALL	25SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0537	102.8183	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0537	102.8163	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0502	102.7721	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0502	102.7626	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0442	102.6959	LANG (LANG TX-1) 345/115/14.4KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0442	102.6959	P13:115-345:WERE:LANG_TX-1::
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0442	102.6943	EMPORIA ENERGY CENTER - LANG 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	102.6039	P12:115:WERE:LANG-TECH_115P::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	102.5267	P12:115:WERE:FOUR-LANG_115F::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0421	102.5071	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0459	102.4471	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	102.4258	LANG - READING LAKE 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0414	102.4009	87th STREET - STRANGER CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0525	102.3942	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	102.1368	OSAGE CITY JUNCTION SWITCHING STATION - READING LAKE 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	101.9732	GEN640009 1-COOPER NUCLEAR STATION
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	101.9192	GEN645012 2-NEBRASKA CITY 2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0469	101.8346	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0469	101.8346	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	101.7404	GEN645011 1-NEBRASKA CITY 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0409	101.6363	BENTON - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	101.5887	OSAGE CITY JUNCTION SWITCHING STATION - SCRNTJS3 115.00 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	101.5876	SCRANTON - SCRNTJS3 115.00 115KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0448	101.5538	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0408	101.5511	HUNTERS7 345.00 - WOODRING 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0475	101.4965	LACYGNE - WEST GARDNER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	101.4902	GEN541151 3-SIBLEY GENERATING UNIT #3
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	101.4802	DBL-THIS-G15
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	101.4734	HOYT (HOYT TX-1) 345/115/14.4KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.045	101.3204	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	101.2786	FOUR CORNERS - SCRNTJN3 115.00 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	101.2785	SCRANTON - SCRNTJN3 115.00 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	101.0488	DBL-SPRVL-IR
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0416	101.0119	87th STREET - CRAIG 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0435	100.9692	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	100.9335	P12:115:WERE:FOUR-TECH_115F::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	100.8784	CARB-KW 3 - FOUR CORNERS 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.8769	P12:138:WERE:BENT-NORT_138P::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.7031	GEN546702 1-NM GEN N1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.6917	GEN344225 1-1CAL G1 25.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	100.6751	RENO COUNTY - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0419	100.6658	SUMMIT - UNIONRG6 230.00 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	100.6525	CARB-KW 3 - SHAWNEE HEIGHTS 115KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0438	100.6336	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0444	100.5678	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.5568	GEN300007 1-NEW MADRID UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.5454	GEN300006 1-NEW MADRID UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.518	P12:069:WERE:64TH-NORT_69F::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.5158	P12:115:WERE:EMAN-KSU_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.4983	P12:069:WERE:COWS-HOOVS_69F::
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0462	100.4649	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.4434	GEN635024 4-WALTER SCOTT UNIT 4
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.381	GEN300002 1-THOMAS HILL UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0502	100.3739	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	100.357	P12:115:WERE:AUBN-SMAN_115F1::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	100.357	P12:115:WERE:AUBN-SMAN_115F2::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	100.357	P12:115:WERE:AUBN-SMAN_115F3::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0435	100.3424	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.3267	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0447	100.3189	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0477	100.3106	MORRIS COUNTY - SWISSVALE 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.3092	GEN659103 1-ANTELOPE VALLEY UNIT1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.3092	GEN659107 2-ANTELOPE VALLEY UNIT2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0432	100.2761	GRAND ISLAND - SWEETWATER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0472	100.2561	LACYGNE - STILWELL 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0435	100.2501	G13-010T 345.00 - POST ROCK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	100.2479	SMAN_W_3 115.00 - SOUTH MANHATTAN 115KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	100.2283	P12:138:WERE:GECT-HOOV_138::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.2239	P12:115:WERE:PHLP-SALM_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.2234	GEN635023 3-WALTER SCOTT UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0447	100.1933	MINGO - RED WILLOW 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0447	100.1933	MINGO - RED WILLOW 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.1902	GEN659111 2-LELAND OLDS UNIT2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.1884	P13:115-230:WERE:MCDO_TX-1::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0435	100.1806	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.1689	GEN541162 1-ARIES STEAM TURBINE
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	100.1681	SOUTH ALMA - SOUTH MANHATTAN 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.168	MCDOWELL CREEK - MORRIS COUNTY 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.1636	MCDOWELL CREEK (MCDO TX-1) 230/115/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.044	100.1457	SHAWNEE HEIGHTS - TECUMSEH HILL 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.1421	P12:138:WERE:HOOV-MURR_138::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0434	100.1396	AXTELL - PAULINE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0429	100.1354	P13:069-138:WERE:ALTO_TX-10R3P::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.0744	GEN542954 3-MONTROSE UNIT #3
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100.0708	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0437	100.0663	P12:161:WERE:MARM-KCPL_161::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0437	100.0661	CENTERVILLE - G15-016T 161.00 161KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	100.0544	G15088_T 345.00 - MOORE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	100	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100	GEN532662 1-LAWRENCE ENERGY CENTER UNIT 4
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100	GEN542953 2-MONTROSE UNIT #2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100	GEN562694 1-G15_016_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100	GEN590011 2-ERCOT EQUIVALENCE
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100	P12:069:WERE:MACA-PLAZ_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100	P12:115:WERE:3VAN-HEC_115P::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100	P12:115:WERE:EUR-WEMP_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	100	P12:138:WERE:HARR-WEAV_138::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	100	P12:115:WERE:LANG-WEMP_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0422	100	OVEXFRMCCOVE

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0419	100	P12:115:WERE:MOUN-WEMP_115P::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0406	100	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0434	100	MORRIS COUNTY (MORR TX-1) 345/230/14.4KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0435	99.9	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.9	GEN590010 1-ERCOT EQUIVALENCE
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.9	P12:069:WERE:MOUN-NEWT_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0438	99.8	MINGO - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0438	99.8	MINGO - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	99.8	G15088_T 345.00 - PAULINE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.8	DBL-HTCH-OTA
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.8	CONCORDIA - ELM CREEK 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.8	CONCORDIA - ELM CREEK 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.8	CONCORDIA (CONCORD6) 230/115/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.8	CONCORDIA (CONCORD6) 230/115/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.8	GEN300001 1-THOMAS HILL UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.8	GEN532672 1-TECUMSEH ENERGY CENTER UNIT 8
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.8	GEN542967 9-HAWTHORN UNIT #9
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.8	GEN636641 1-LOUISA UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.8	P12:069:WERE:HOOVN-RIPL_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.8	P12:138:WERE:COWS-WACO_138::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.74834	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.74834	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0441	99.7	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0441	99.7	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0437	99.7	CENTERVILLE - PAOLA 161KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0434	99.7	HOLCOMB - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0434	99.7	HOLCOMB - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	99.7	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0432	99.7	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.7	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.7	GEN541165 1-SHARPR#1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.7	GEN541166 2-SHARPR#2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.7	GEN542961 6-HAWTHORN COMBUSTION TURBINE #6

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.7	GEN543108 3-BULL CREEK COMBUSTION TURBINE #3
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.7	GEN543109 4-BULL CREEK COMBUSTION TURBINE #4
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.7	GEN546698 1-QN GEN2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.7	GEN600002 3-SHERBURNE CNTY G3
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.7	GEN635214 4-NEAL UNIT 4
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.7	P13:069-138:WERE:COWS_TX-1::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	99.61289	KEENE - SOUTH ALMA 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0444	99.6	FT SMITH - MUSKOGEE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.6	CLIFTON - CONCORDIA 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.6	CLIFTON - CONCORDIA 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	99.6	AUBURN ROAD - SWISSVALE 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	ALTOONA - BUTLER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	P13:069-138:WERE:BUTL_TX-1::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	GEN300011 1-ST FRANCIS UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	GEN505432 1-SIKESTON
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	GEN541163 1-ARIES COMBUSTION TURBINE #1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	GEN543106 1-BULL CREEK COMBUSTION TURBINE #1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	GEN543107 2-BULL CREEK COMBUSTION TURBINE #2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	GEN645025 5-NORTH OMAHA 5
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	P12:069:WERE:COWS-SUNS_69F::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	P12:069:WERE:MEAD-PLAZ_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.6	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.6	P13:069-138:WERE:HOOV_TX-3::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0417	99.6	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0411	99.6	7MCCREDIE 345.00 - 7OVERTON 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.041	99.6	DBL-THIS-WWR
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0408	99.6	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0437	99.5	RENO COUNTY - SUMMIT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0437	99.5	BROOKLINE - FLINT CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0437	99.5	BROOKLINE - FLINT CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.5	CLIFTON - GREENLEAF 115KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.5	P12:115:WERE:KNOB-MKEC_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.5	P12:115:WERE-MKEC:CLIFTON-KNOBHILL::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	99.5	5JASPER 161.00 - LAMAR 161KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	99.5	7JASPER 345.00 345/161KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0429	99.5	CIMARRON - DRAPER LAKE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0429	99.5	GRAND ISLAND - MCCOOL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.5	HAWTHORN - NASHUA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.5	IATAN - NASHUA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0427	99.5	P12:069:WERE:ALLE-TIOG_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	4SIOUX 1 138.00 138/18.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	ABILENE ENERGY CENTER 115/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN300010 1-ST FRANCIS UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN300012 1-HOLDEN UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN300013 1-HOLDEN UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN300015 1-1SGPDEL 18.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN344894 1-1LAB G1 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN344895 2-1LAB G2 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN344896 3-1LAB G3 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN344897 4-1LAB G4 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN549893 2-SOUTHWEST 2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN600000 1-SHERBURNECNTY G1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN645041 1-CASS COUNTY 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN645042 2-CASS COUNTY 2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	GEN659110 1-LELAND OLDS UNIT1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.5	P12:115:WERE:ANZI-FTJU_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.5	P12:138:WERE:NORT-WEAV_138::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.5	P12:138:WERE:17TH-CANA_138::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.5	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.5	P12:138:OKGE:3TERM2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0419	99.5	P12:115:WERE:SPCKJ-WEMP_115F::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.44393	FLINT CREEK - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.44393	FLINT CREEK - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0447	99.4	DELAWARE - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0447	99.4	DELAWARE - NEOSHO 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	99.4	DELL 500 - INDEPENDENCE 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	99.4	7JASPER 345.00 - MORGAN 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0433	99.4	AUBURN ROAD - OLDAUBU3 115.00 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0432	99.4	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0432	99.4	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.4	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.4	GREENLEAF - KNOB HILL 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	99.4	7SPORTSMAN - BLACKBERRY 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0429	99.4	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0429	99.4	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	P12:115:WERE:MCDO-WILD_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN532661 1-LAWRENCE ENERGY CENTER UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN532671 1-TECUMSEH ENERGY CENTER UNIT 7
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN541154 3-RALPH GREEN GENERATING UNIT #3
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN541170 4-LAKERD#4 13.800
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN542964 8-HAWTHORN COMBUSTION TURBINE #8
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN543078 1-PAOLA COMBUSTION TURBINES
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN600001 2-SHERBURNE CNTY G2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN600003 1-PRAIRIE ISLAND G1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN600004 2-PRAIRIE ISLAND G2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN600005 1-MONTICELLO
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN600006 1-AS KING
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	GEN635213 3-NEAL UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	P12:069:WERE:MIDI-MOBI_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	P12:069:WERE:MIDI-SKEL_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	P12:115:MIDW::RICE-WHEATLANDS
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.4	P12:115:WERE:WMCP-MWE_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	EAST STREET - LANG 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	P12:138:WERE:COWS-GECT_138::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	MAIZE - MAIZEE 4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	MAIZE - MAIZEW 4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	P12:138:WERE:CHIS-MAIZ_138::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	P12:138:WERE:GORD-MAIZ_138::

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	HOYT - NORTHLAND 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.4	P12:115:WERE:INDA-HOYT_115::
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0438	99.4	GEN542955 1-LACYGNE UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0434	99.3	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0434	99.3	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0431	99.3	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	99.3	ELMCREEK7 345.00 - SUMMIT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	99.3	ELMCREEK7 345.00 (ELMCREEK T1) 345/230/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.043	99.3	CLARK - LAMAR 161KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0428	99.3	DBL-BVR-G111
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0427	99.3	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0427	99.3	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	BIG STONE 230/24.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN300016 1-1G1GPEL 18.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN345670 1-1RUSH G1 18.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN345671 2-1RUSH G2 18.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN509394 1-FLINT CREEK
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN542963 7-HAWTHORN COMBUSTION TURBINE #7
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN547649 1-ASBURY UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN549890 1-SOUTHWEST 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN659118 1-LARAMIE RIVER UNIT1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN659353 1-DEERCREK CTG18.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	GEN659354 1-DEERCREK STG18.000
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	P12:069:WERE:17TH-RIPL_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	P12:069:WERE:ALLE-ATHE_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	P12:069:WERE:CANA-MIDL_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	P12:069:WERE:GLEN-OAKL_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	P12:069:WERE:MURR-MIDL_69::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	P12:115:WERE:SMOK-SUMM_115P::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.3	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.3	30TH & PRAIRIE - LANG 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0425	99.3	P12:115:WERE:COLI-HOYT_115::
08ALL	20SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0438	99.3	GEN542962 2-IATAN UNIT #2
08ALL	20WP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0548	99.3	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.2	P12:115:WERE:JARB-PENT_115::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.2	P12:115:WERE:3VAN-HEC_115F::
08ALL	17SP	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0426	99.1	P12:069:WERE:ARNO-KERE-WALN_69::
08ALL	20L	ASGI_17_05	FROM->TO	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1	717	717	0.0552	99	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1509	168.178	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1509	168.178	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1511	167.9986	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1511	167.9986	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1509	159.6611	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1509	159.6611	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	156.6481	2CLEVLNDXFMR69.000 - CLEVELAND 69KV CKT Z1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	156.5466	4CLEVLNDXFMR138.00 - CLEVELAND 138KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0675	153.7974	2CLEVLNDXFMR69.000 - CLEVELAND 69KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0675	153.7944	4CLEVLNDXFMR138.00 - CLEVELAND 138KV CKT Z1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1557	152.745	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1557	152.745	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1562	150.7038	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1562	150.7038	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1511	148.7103	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1511	148.7103	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	147.4672	2CLEVLNDXFMR69.000 - CLEVELAND 69KV CKT Z1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	147.3582	4CLEVLNDXFMR138.00 - CLEVELAND 138KV CKT Z1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	146.5441	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	146.2944	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	145.95	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1504	145.7514	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1504	145.7514	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1557	145.6292	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1557	145.6292	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	145.4631	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	145.2254	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	144.8969	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	144.5508	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	143.5661	DOMES - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	143.4681	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	142.496	DOMES - MOUND ROAD 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0706	142.4598	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.1509	142.3982	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.1509	142.3982	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.1511	141.7649	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.1511	141.7649	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0709	140.8365	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0706	138.8116	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0672	138.0488	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0709	137.3219	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0669	136.6228	4SFORKK 138.00 - 4SFORKKTP 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0669	136.6113	4SFORKK 138.00 138/69KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	136.1368	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0675	135.9945	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	135.8963	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0799	135.6788	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	135.5229	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0721	135.142	CLEVELAND - JAVINE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0799	135.0534	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0674	134.6946	CLEVELAND - HALLETT TAP 69KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0407	134.6348	HALLETT TAP - PAWNEE 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0671	134.551	4SFORKK 138.00 138/69KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0671	134.4982	4SFORKK 138.00 - 4SFORKKTP 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.08	134.0687	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	133.9854	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0721	133.8676	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0724	133.504	CLEVELAND - JAVINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.08	133.4612	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0888	133.045	DOMES - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0677	132.6694	CLEVELAND - HALLETT TAP 69KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0724	132.287	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0707	132.1957	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0701	132.0681	4CLEVLNDFMR138.00 138/69KV TRANSFORMER CKT 2
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0765	131.7968	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0765	131.7968	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0409	131.0589	HALLETT TAP - PAWNEE 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0768	130.2496	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0768	130.2496	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0703	130.1511	4CLEVLNDFMR138.00 138/69KV TRANSFORMER CKT 2
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1562	129.9512	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1562	129.9512	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	129.6633	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0707	128.4049	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0669	128.2668	4SFORKK 138.00 - 4SFORKKTP 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0669	128.2546	4SFORKK 138.00 138/69KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0799	127.1379	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0799	127.1379	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0799	126.4417	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0675	126.1943	CLEVELAND - HALLETT TAP 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0721	126.1334	CLEVELAND - JAVINE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0408	126.0827	HALLETT TAP - PAWNEE 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0721	124.8878	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0701	123.6659	4CLEVLNDFMR138.00 138/69KV TRANSFORMER CKT 2
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	123.1244	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	122.9634	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0676	122.7711	4CLEVLNDFMR138.00 - CLEVELAND 138KV CKT Z1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	122.7053	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0673	122.4105	4CLEVLNDFMR138.00 - CLEVELAND 138KV CKT Z1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0673	122.4013	2CLEVLNDFMR69.000 - CLEVELAND 69KV CKT Z1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0676	122.0884	2CLEVLNDFMR69.000 - CLEVELAND 69KV CKT Z1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.1557	121.9212	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.1557	121.9212	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	121.5429	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0676	121.4713	4CLEVLNDXFMR138.00 - CLEVELAND 138KV CKT Z1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0892	120.9295	DOMES - MOUND ROAD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0676	120.8441	2CLEVLNDXFMR69.000 - CLEVELAND 69KV CKT Z1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0709	120.4335	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0688	120.2619	RAMONA - WALMART2 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1552	120.136	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.1552	120.136	4REMNGTON 138.00 - SHIDLER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.069	118.9984	RAMONA - WALMART2 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0881	118.8288	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0881	118.7601	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0994	118.7441	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0994	118.6816	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0994	118.6735	FAIRFAX TAP - SHIDLER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0688	118.5882	RAMONA - SOUTH FORK 69KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0498	118.587	2PRSHNGTP 69.000 - TALLANT 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0881	118.5103	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	118.4532	BURBANK - FAIRFAX 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0723	117.694	P12:138:OKGE:3TERM47
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0881	117.5533	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0722	117.4575	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0722	117.4575	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0881	117.2869	DOMES - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0711	117.2173	BURBANK - FAIRFAX 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.069	117.1719	RAMONA - SOUTH FORK 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0888	117.0899	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0888	116.9081	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0699	116.8232	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0888	116.781	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0892	116.6474	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0996	116.4813	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0892	116.4529	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0996	116.4179	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0996	116.4099	FAIRFAX TAP - SHIDLER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0892	116.3472	P12:138:AEPW:MOUNDRD4:SHIDLER4

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.05	115.9915	2PRSHNGTP 69.000 - TALLANT 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0888	115.9409	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0707	115.8128	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0892	115.5382	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0709	115.4385	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0888	115.2257	DOMES - MOUND ROAD 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0994	115.0515	OSAGE - WEBB CITY TAP 138KV CKT 1
0	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	114.8803	2CLEVLNDXFMR69.000 - CLEVELAND 69KV CKT Z1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0892	114.8241	DOMES - MOUND ROAD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.071	114.7614	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	114.6119	4CLEVLNDXFMR138.00 - CLEVELAND 138KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0996	113.0338	OSAGE - WEBB CITY TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0688	111.9029	RAMONA - WALMART2 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0699	111.5923	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0707	111.5099	G15066_T 345.00 - SOONER 345KV CKT 1
0	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0675	110.8279	4CLEVLNDXFMR138.00 - CLEVELAND 138KV CKT Z1
0	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0675	110.8176	2CLEVLNDXFMR69.000 - CLEVELAND 69KV CKT Z1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0932	110.5413	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0932	110.5413	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.071	110.378	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0688	109.7749	RAMONA - SOUTH FORK 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0688	109.7749	RAMONA - SOUTH FORK 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0499	109.4886	2PRSHNGTP 69.000 - TALLANT 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0994	109.4678	OSAGE - WEBB CITY TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	109.2206	GEN588303 1-ASGI1705-GEN0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	109.2	BURBANK - FAIRFAX 69KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	109.0915	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0724	108.9767	CLEVELAND - JAVINE 138KV CKT 1
0	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0407	108.702	HALLETT TAP - PAWNEE 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0919	108.5945	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0919	108.5945	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0498	108.5244	2PRSHNGTP 69.000 - PAWYA 69KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0724	108.2529	4SFORKTTP 138.00 - JAVINE 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0675	108.2235	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	108.1154	GEN301382 1-1OSAGEWINDG10.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	107.9791	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.08	107.7528	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0673	107.7048	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0711	107.5319	GEN588303 1-ASGI1705-GEN0.6900
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0768	107.5274	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0768	107.5274	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0711	107.4028	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.08	107.3988	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
0	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	107.0554	4CLEVLNDXFMR138.00 - CLEVELAND 138KV CKT Z1
0	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0673	107.0512	2CLEVLNDXFMR69.000 - CLEVELAND 69KV CKT Z1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0799	106.8623	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0799	106.8623	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0685	106.7688	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0685	106.7688	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0685	106.7687	CLEVELAND - CLEVELND 4 138.00 138KV CKT Z1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0676	106.693	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.05	106.6922	2PRSHNGTP 69.000 - PAWYA 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0669	106.5663	4SFORKK 138.00 - 4SFORKKTP 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0672	106.5658	4SFORKK 138.00 - 4SFORKKTP 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0672	106.5632	4SFORKK 138.00 138/69KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0669	106.5595	4SFORKK 138.00 138/69KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0407	106.4807	2GETTYTAP 69.000 - PAWNEE 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0711	106.418	GEN301382 1-10SAGEWINDG10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0721	106.4037	CLEVELAND - JAVINE 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0799	106.3631	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0667	106.346	4CLEVLNDXFMR138.00 - CLEVELAND 138KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0711	106.2805	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0667	106.0948	2CLEVLNDXFMR69.000 - CLEVELAND 69KV CKT Z1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.08	105.9574	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.08	105.9574	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0933	105.8122	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0933	105.8122	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0672	105.576	4SFORKK 138.00 - 4SFORKKTP 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0672	105.563	4SFORKK 138.00 138/69KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.08	105.5002	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0721	105.4979	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0724	105.4253	CLEVELAND - JAVINE 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0675	105.2593	CLEVELAND - HALLETT TAP 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0926	104.6997	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0926	104.6997	CLEVELAND - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0765	104.6295	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0765	104.6295	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0499	104.5983	2PRSHNGTP 69.000 - PAWYA 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0682	104.5647	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0682	104.5647	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0682	104.5627	CLEVELAND - CLEVLND 4 138.00 138KV CKT Z1
08ALL	20WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0682	104.5627	CLEVELAND - CLEVLND 4 138.00 138KV CKT Z1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0724	104.5273	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0677	104.2243	CLEVELAND - HALLETT TAP 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0769	104.0742	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0769	104.0742	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
0	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0409	103.9663	HALLETT TAP - PAWNEE 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0685	103.8933	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0685	103.8933	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0685	103.889	CLEVELAND - CLEVLND 4 138.00 138KV CKT Z1
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0685	103.889	CLEVELAND - CLEVLND 4 138.00 138KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0409	103.7793	2GETTYTAP 69.000 - PAWNEE 69KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0498	103.6976	NAVAL RESERVE - PAWYA 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.05	102.0261	NAVAL RESERVE - PAWYA 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	101.2373	GEN588303 1-ASGI1705-GEN0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	101.0624	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	101.0624	ASGI1705 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0714	100.8273	CLEAVELAND - JAVINE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0714	100.582	4SFORKKTP 138.00 - JAVINE 138KV CKT 1
0	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0498	100.5406	SOUTH FORK - TALLANT 69KV CKT 1
0	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0408	100.4441	HALLETT TAP - PAWNEE 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0759	100.3947	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0759	100.3947	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0407	100.2474	2GETTYTAP 69.000 - FAIRFAX 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	100.1528	GEN301382 1-1OSAGEWINDG10.6900
0	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0672	100.0604	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	100	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0708	100	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0499	99.9	NAVAL RESERVE - PAWYA 69KV CKT 1
0	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0669	99.5	4SFORKK 138.00 - 4SFORKKTP 138.00 138KV CKT 1
0	20SP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0669	99.5	4SFORKK 138.00 138/69KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	56	56	0.0759	99.3	P12:138:AEPW:BV-COM-4:BV-SE--4
08ALL	16WP	ASGI_17_05	FROM->TO	FAIRFAX 138/69KV TRANSFORMER CKT 1	64	64	0.0711	99	BASE CASE
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0379	148.7292	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0375	147.8165	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0379	147.6761	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0375	146.0701	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0381	142.1749	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0334	138.8565	SUMNER 4 - TIMBJCT4 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0336	138.7548	SUMNER 4 - TIMBJCT4 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0382	138.3462	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0379	137.9492	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0375	137.1734	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	136.8122	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	136.482	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	136.3595	P12:069:WERE:BELL-CRSW_69::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0374	136.1486	TIMBER JUNCTION - UDALL 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0374	135.9186	P12:069:WERE:TIMJ-WEAV_69::
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	135.3562	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	135.1835	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0374	135.1582	RICHLAND - UDALL 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	135.058	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	134.935	P12:069:WERE:BELL-CRSW_69::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0402	134.9192	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	134.3156	TIMBER JUNCTION - UDALL 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	134.0686	P12:069:WERE:TIMJ-WEAV_69::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0336	134.0304	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0374	133.8534	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	133.5704	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	133.5623	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0338	133.0958	SUMNER 4 - TIMBJCT4 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	133.0608	RICHLAND - UDALL 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.04	132.8113	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0381	132.3547	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0374	132.277	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	131.7082	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	131.0856	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	130.6251	DBL-G1524-WI
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0336	130.4091	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	130.0361	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0452	129.9319	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0371	129.8913	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	129.8036	P12:138:OKGE:3TERM2
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	129.7333	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	129.7001	BELL - PECK 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	129.5746	P12:069:WERE:BELL-MURR_69::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0376	129.2557	TIMBER JUNCTION - UDALL 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	129.0946	DBL-G1524-WI
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0346	129.0067	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0346	129.0067	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0449	128.9087	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0376	128.8983	P12:069:WERE:TIMJ-WEAV_69::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0367	128.712	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.033	128.6145	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0336	128.4957	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	128.4831	BELL - PECK 69KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0338	128.3733	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	128.3544	P12:069:WERE:BELL-MURR_69::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0504	128.3374	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	128.193	P12:138:OKGE:3TERM2
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	128.1377	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0326	128.1107	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	127.9306	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0431	127.8898	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0431	127.836	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0344	127.8273	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0344	127.8273	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0431	127.6258	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0431	127.5658	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0375	127.5145	OPENSKY7 345.00 - RANCHR7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0431	127.4655	DOMES - MOUND ROAD 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0326	127.4044	EL PASO - ROSE HILL 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0379	127.3898	OPENSKY7 345.00 - RANCHR7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.033	127.327	G15066_T 345.00 - SOONER 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0376	127.2961	RICHLAND - UDALL 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	127.2952	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	126.7551	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	126.7517	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0501	126.5803	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0428	126.5703	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0428	126.5309	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0323	126.4552	EL PASO - ROSE HILL 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	126.4034	GEN542962 2-IATAN UNIT #2
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	126.4009	GEN542955 1-LACYGNE UNIT #1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0367	126.3731	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	126.3555	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0428	126.2557	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0367	126.2372	P12:069:WERE:BELL-CRSW_69::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	126.1821	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	126.163	GEN635024 4-WALTER SCOTT UNIT 4
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0428	126.1342	DOMES - MOUND ROAD 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0428	126.1336	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	126.1266	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0441	126.1118	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0441	126.1118	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0293	126.0885	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	126.0721	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	126.0687	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	126.0685	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	126.0673	GEN562902 1-G15052_3 0.6900
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	126.0377	GEN542956 2-LACYGNE UNIT #2
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	126.0274	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	125.9843	GEN542957 1-IATAN UNIT #1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0367	125.9467	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	125.9329	KINZE - MCELROY 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	125.9301	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0326	125.9193	P12:138:OKGE:3TERM47
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	125.9146	P12:138:WFEC:MSL15
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0339	125.8881	DELAWARE - NORTHEAST STATION 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0339	125.8881	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	125.8344	GEN635023 3-WALTER SCOTT UNIT 3
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	125.7912	P12:069:WERE:ARKA-OAK_69::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	125.745	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	125.7302	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	125.7287	GEN532720 1-CANEYWF1 0.6900
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	125.7007	GEN640009 1-COOPER NUCLEAR STATION
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	125.7	SOONER - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	125.6162	GEN542951 5-HAWTHORN UNIT #5
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0405	125.419	G15-015T 138.00 - MDFRTP4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0376	125.3067	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	124.8145	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0322	124.5409	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0367	124.5191	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0438	124.5176	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0438	124.5176	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0322	124.4918	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.033	124.4502	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.033	124.434	P12:138:WFEC:MSL15
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0336	124.4186	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0336	124.4186	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0322	124.31	KINZE - MCELROY 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0323	124.294	P12:138:OKGE:3TERM47
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.033	124.2635	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	124.2477	P12:069:WERE:ARKA-CRSW_69::
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	124.1641	P12:069:WERE:ARKA-OAK_69::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	124.0277	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0295	123.0244	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0376	122.7259	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0367	122.3596	BELL - PECK 69KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	122.2208	P12:138:OKGE:3TERM2
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0367	122.1805	P12:069:WERE:BELL-MURR_69::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	122.1269	MORISNT4 138.00 - STILLWATER 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0381	122.0615	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	121.9654	DBL-THIS-G15
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0338	121.8615	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0381	121.8561	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0381	121.6893	DMNCRKT4 - MILLER 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	121.6484	GEN562992 1-G15063_3 0.6900
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0381	121.5715	MILLER - SOONER 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	121.5317	GEN336821 1-GRAND GULF UNIT
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	121.4893	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0387	121.4601	OSAGE - SOONER PUMP TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	121.4531	GEN562882 1-G15047_3 0.6900
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0387	121.3847	SOONER - SOONER PUMP TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	121.2779	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	121.2779	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	121.2351	DBL-G1524-WI
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	121.1917	GEN562429 1-G13-029 0.6900
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	121.1367	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0345	121.1084	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	121.0919	GEN514806 1-SOONER UNIT 2
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0348	121.0889	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0348	121.0889	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	121.036	BOEING - STEARMAN 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0336	120.9062	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.039	120.8801	CHIKASKIA - KILDARE4 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.8334	GEN588303 1-ASGI1705-GEN0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	120.8239	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.6985	GEN301382 1-10SAGEWINDG10.6900
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	120.6063	DBL-THIS-G15
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.5495	GEN515483 1-BLKWLWD1 0.6900
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.4966	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.4966	ASGI1705 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	120.357	BOEING - CANAL 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.3456	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.3446	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.3243	GEN563032 1-G15067_3 0.4180
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0506	120.2808	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0433	120.1796	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0433	120.1201	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	120.1029	EL PASO - ROSE HILL 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	120.0787	GEN562611 1-G14_064_3 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0338	120.0272	G15063_T 345.00 - WOODRING 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0323	119.8731	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	119.87	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0367	119.854	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0433	119.7782	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	119.6736	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0433	119.6144	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0433	119.5979	DOMES - MOUND ROAD 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0323	119.5857	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0379	119.5619	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	119.4542	BOEING - STEARMAN 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	119.4482	GEN532722 1-EVANS ENERGY CENTER UNIT 2
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0388	119.4167	CHIKASKIA - KILDARE4 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0379	119.4056	DMNCRKT4 - MILLER 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0379	119.2932	MILLER - SOONER 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0402	119.2899	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0402	119.2829	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0385	119.2566	OSAGE - SOONER PUMP TAP 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0385	119.1848	SOONER - SOONER PUMP TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0454	119.1407	SOONER (SOONERS) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	119.0742	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	119.0684	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	118.9191	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.8595	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.8489	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.8485	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.7834	P12:069:WERE:ARKA-CRSW_69::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	118.769	59TH ST - EL PASO 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	118.7282	P12:138:WERE:ELPA-MURR_138::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.033	118.6845	BENTON - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.653	GEN542955 1-LACYGNE UNIT #1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0334	118.6416	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.5787	GEN542962 2-IATAN UNIT #2
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	118.3222	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.2849	GEN542956 2-LACYGNE UNIT #2
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0335	118.2675	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	118.2451	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0321	118.1844	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.034	118.1778	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.1772	P12:069:WERE:ARKA-OAK_69::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0342	118.166	P13:069-138:WERE:WEAV_TX-2::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.1626	GEN542957 1-IATAN UNIT #1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	118.1448	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.1305	GEN562902 1-G15052_3 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	118.1124	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0334	118.0974	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0334	118.0882	P12:138:WFEC:MSL15
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0341	118.0848	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0341	118.0848	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0335	118.0703	BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	118.0654	45TH ST4 138.00 - COWSKIN 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0335	118.0273	P12:069:WERE:MOBI-WEAV_69::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	118.0246	GEN635024 4-WALTER SCOTT UNIT 4
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	118.0231	P12:138:WERE:COWS-GECT_138::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0443	118.0213	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0443	118.0213	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0327	117.9568	KINZE - MCELROY 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	117.9486	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0334	117.9088	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	117.902	P12:138:OKGE:3TERM47
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0335	117.8832	BUTLER COUNTY NO. 10 BENTON - MOBIL 69KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	117.8232	GEN532720 1-CANEYWF1 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	117.8002	ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0324	117.3982	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.04	117.2745	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.04	117.2672	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0324	117.0484	59TH ST - EL PASO 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0324	117.008	P12:138:WERE:ELPA-MURR_138::
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0323	116.3052	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	115.8411	GEN562691 1-G15_015_3 0.6900
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0293	115.762	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	115.622	GEN514805 1-SOONER UNIT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0339	115.5153	P13:069-138:WERE:WEAV_TX-2::
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0321	114.9599	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	114.1279	BOEING - CANAL 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.032	114.0491	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.9865	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.9426	GEN335831 1-RIVERBEND UNIT#1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.8911	GEN587463 1-G16-068-GEN10.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	113.8345	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.8273	GEN562992 1-G15063_3 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.7544	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.7083	GEN336153 1-WATERFORD UNIT#3
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.6442	GEN562882 1-G15047_3 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0332	113.5876	EL PASO - SIXTY-FOURTH (64TH) 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	113.4961	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.4141	GEN562429 1-G13-029 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.377	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	113.3484	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.3208	GEN336821 1-GRAND GULF UNIT
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0331	113.174	BOEING - STEARMAN 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0318	113.1307	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0392	113.1182	CHIKASKIA - KILDARE4 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	113.0884	DBL-THIS-G15
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	112.9996	GEN588303 1-ASGI1705-GEN0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	112.9568	GEN514806 1-SOONER UNIT 2
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	112.8649	GEN301382 1-1OSAGEWINDG10.6900
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	112.837	59TH ST - EL PASO 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0383	112.809	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0329	112.7949	P12:138:WERE:ELPA-MURR_138::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	112.7138	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	112.6994	GEN515483 1-BLKWLWD1 0.6900
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0291	112.6023	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	112.5634	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0383	112.5568	DMNCRKT4 - MILLER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	112.5204	GEN563032 1-G15067_3 0.4180
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	112.4522	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0389	112.4334	OSAGE - SOONER PUMP TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0383	112.4037	MILLER - SOONER 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0389	112.3239	SOONER - SOONER PUMP TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	112.2781	GEN562611 1-G14_064_3 0.6900
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0321	111.7818	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.032	111.7682	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.032	111.7527	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0326	111.1152	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0347	110.5196	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0318	110.3677	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0318	110.3578	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0405	109.8405	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0405	109.8332	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	109.7699	SOONER (SOONERS) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	109.2683	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0318	109.0747	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0318	109.0589	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0318	108.8965	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0318	108.8571	DOMES - MOUND ROAD 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0318	108.8294	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0322	108.6876	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0369	108.6829	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0375	108.2159	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	108.0915	GEN562691 1-G15_015_3 0.6900
08ALL	25SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0324	107.8684	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0379	107.5735	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0344	106.9724	P13:069-138:WERE:WEAV_TX-2::
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	106.9705	GEN514805 1-SOONER UNIT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0322	106.6041	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0322	106.6021	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0325	106.1176	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0315	105.3427	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0365	105.313	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0315	105.3087	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0315	105.0451	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0315	104.921	DOMES - MOUND ROAD 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0315	104.908	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	20WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0364	103.7909	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0314	103.5219	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0323	103.5033	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0314	103.4841	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0314	103.3245	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0314	103.2702	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	20WP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0314	103.2059	DOMES - MOUND ROAD 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0291	102.5596	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0291	102.5524	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0363	101.2022	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0313	101.0118	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0313	100.9691	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0313	100.6905	DOMES - PAWHUSKA TAP 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0381	100.6158	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0313	100.5586	DOMES - MOUND ROAD 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0313	100.5397	P12:138:AEPW:MOUNDRD4:SHIDLER4
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0362	99.4	P12:069:WERE:BELL-MURR_69::
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0344	99.4	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0344	99.4	CLEVELAND - TULSA NORTH 345KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0333	99.4	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0293	99.2	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08NR	17G	ASGI_17_05	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.0328	99	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0716	149.8379	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0728	144.6	SOONER - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0728	144.5056	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0716	142.6235	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0763	140.1426	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0763	140.0046	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0798	139.3181	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0724	139.0988	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0817	136.6876	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0761	136.0678	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0761	135.8078	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.071	134.1923	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.071	133.9897	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0494	133.9257	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.048	133.5983	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0724	132.0008	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	131.132	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0799	129.4829	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0494	129.1733	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	129.1537	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.048	128.7721	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0706	128.5175	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0698	126.7966	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0698	126.7966	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	126.5008	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	126.4136	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0692	125.7557	CLEVELAND - TULSA NORTH 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0692	125.7557	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	124.6432	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0486	124.5784	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0424	124.5232	DBL-THIS-WWR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	124.1712	DBL-THIS-G15
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0722	124.0069	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0722	124.0069	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0432	123.168	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	123.155	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0692	122.3136	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0692	122.3136	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0395	122.0101	DBL-TGA-MATT
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0667	121.8903	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	121.6569	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	121.5176	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	121.496	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0706	121.4835	SOONER - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	121.0325	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	120.9913	P12:138:OKGE:3TERM2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	120.6129	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0703	120.5625	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	120.3175	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0339	120.2246	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0384	120.178	DBL-TGA-MATT
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0486	120.0733	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0562	120.0202	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	119.9235	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	119.8451	P12:138:OKGE:3TERM2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0557	119.535	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0338	119.0096	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	119.0058	P12:138:WFEC:MSL15
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0686	118.931	CLEVELAND - TULSA NORTH 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0686	118.931	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	118.7346	DBL-THIS-G15
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	118.6435	P12:138:OKGE:3TERM1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0462	118.6063	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	118.5211	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	118.5055	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	118.4602	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	118.4024	HENESSEY - WAUKOMIS 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	118.258	DOVER SW - HENESSEY 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	118.0852	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0432	117.9779	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0569	117.8515	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0569	117.84	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	117.7158	RENO COUNTY - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0562	117.6717	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	117.6599	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0296	117.6548	G16-061-TAP 345.00 - SOONER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	117.525	GEN501801 1-DOLET HILLS UNIT1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	117.5194	P12:138:WFEC:MSL15
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0474	117.5041	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	117.4804	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	117.4558	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0474	117.4481	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	117.4061	P12:138:OKGE:3TERM2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	117.3378	GEN336821 1-GRAND GULF UNIT
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	117.3158	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	117.3132	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	117.3129	COTTONWOOD CREEK - LIBERTY LAKE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	117.3101	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0572	117.2971	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0572	117.2432	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0474	117.242	KINZE - MCELROY 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	117.1977	LIBERTY LAKE - WATERLOO 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	117.1671	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	117.1442	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	117.1256	P12:138:OKGE:3TERM2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	117.1212	GEN336153 1-WATERFORD UNIT#3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	117.0716	MARSHALL - WOODRING 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	117.0683	GEN515040 1-SEMINOLE 1G
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	117.0482	P12:138:OKGE:3TERM1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0691	117.0282	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0691	117.0282	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	116.9964	WATERLOO - WHITESB4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	116.9955	P12:138:OKGE:3TERM47
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	116.9846	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0587	116.9597	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0432	116.9529	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	116.9205	P12:138:WERE:CRSW-OGE_138::
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.904	GEN509416 1-TURK GENERATION
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.8904	GEN335831 1-RIVERBEND UNIT#1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.031	116.8544	G16-061-TAP 345.00 - SOONER 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	116.8507	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	116.8267	SHDWLKE4 138.00 - WHITESB4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	116.8258	MITCHSB4 138.00 - SHDWLKE4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	116.7968	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0663	116.7841	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.7578	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	116.7351	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	116.6893	G14_001T 345.00 - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	116.6758	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	116.6747	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.6741	GEN525561 1-TOLK GEN #1 24 KV

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.6703	GEN525562 1-TOLK GEN #2 24 KV
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	116.6673	HENESSEY - WAUKOMIS 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	116.6589	GEN515040 1-SEMINOLE 1G
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.6538	GEN511848 1-SOUTHWESTERN STATION #3
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0569	116.6288	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.6034	GEN509403 1-PIRKEY GENERATION
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	116.5507	BYRON_138 138.00 - SANDY_CN_138138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	116.5217	ARCADIA - COTTONWOOD CREEK 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.4906	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.4651	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.463	GEN501813 1-RODEMACHER UNIT 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	116.4477	DOVER SW - HENESSEY 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	116.4358	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0436	116.4219	DBL-THIS-WWR
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	116.4164	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	116.4164	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0448	116.4037	DBL-THIS-WWR
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.3906	GEN509404 1-WELSH #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.3892	GEN509406 1-WELSH #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	116.3881	P12:138:WFEC:MSL14
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	116.375	BEARCAT 138.00 - MOORELAND 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0478	116.3705	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.3515	GEN515042 1-SEMINOLE 3G
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	116.3508	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.3353	GEN335206 1-NELSON UNIT 6
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	116.3202	P12:138:OKGE:3TERM11
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.3104	GEN520947 1-HUGO1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	116.3018	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	116.3018	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0669	116.2971	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.2874	GEN527903 1-HOBBS PLANT #3 (ST)
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0669	116.2805	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	116.2701	GEN515042 1-SEMINOLE 3G
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	116.269	BEARCAT 138.00 - NINE MILE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0669	116.2566	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.2548	GEN515041 1-SEMINOLE 2G

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	116.2542	LACYGNE - STILWELL 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0559	116.2308	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	116.2264	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	116.2251	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	116.2251	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0669	116.2171	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	116.2171	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.1941	GEN501812 1-RODEMACHER UNIT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.1911	GEN337653 1-WHITE BLUFF UNIT #2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0572	116.1866	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	116.1823	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0669	116.1773	DOMES - MOUND ROAD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	116.1765	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	116.1652	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	116.1652	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	116.1652	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	116.1652	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	116.1541	GEN515041 1-SEMINOLE 2G
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	116.1497	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	116.1392	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	116.1354	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	116.1351	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	116.1351	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	116.0956	MOREWOOD SW - NINE MILE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.0946	GEN337652 1-WHITE BLUFF UNIT #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0772	116.0928	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	116.0914	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	116.0441	BYRON_138 138.00 - C_CITY_138 138.00 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	116.0396	POTTER COUNTY INTERCHANGE (WAK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	116.0396	POTTER COUNTY INTERCHANGE (WAK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.0364	GEN514910 2-REDBUD GEN
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	116.0246	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	116.0246	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.016	GEN587387 1-G16-057-GEN20.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.0159	GEN587383 1-G16-045-GEN10.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.0132	GEN587303 1-G16-045-GEN10.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.0132	GEN587307 1-G16-045-GEN20.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	116.009	SWISSVALE - WEST GARDNER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	116.0067	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	116.0057	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	116.0007	DEWEY - SOUTHARD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.997	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	115.9956	COW CREEK - MORRISON 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.9834	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.9834	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	115.9786	MORISNT4 138.00 - MORRISON 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.9745	GEN514911 2-REDBUD GEN
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.9745	GEN514942 2-REDBUD4G
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.9709	GEN334440 1-SABINE UNIT 4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	115.9537	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	115.9416	C_CITY_138 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.9406	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0436	115.9172	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0436	115.9172	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.9137	GEN514940 1-REDBUD GEN
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0485	115.9122	OTTER - WARREN VALLEY 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0482	115.9095	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0482	115.9095	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0436	115.9094	CLEVELAND - CLEVELND 4 138.00 138KV CKT Z1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0436	115.9094	CLEVELAND - CLEVELND 4 138.00 138KV CKT Z1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.9082	DBL-SPRVL-IR
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.9072	GEN514900 1-REDBUD2S
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.907	GEN514899 1-REDBUD1S
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	115.9046	RENO COUNTY - SUMMIT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	115.9044	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	115.9044	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	115.9	P12:138:AEPW:OKMULGE4:R.S.S-4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8867	GEN336252 1-NINEMILE POINT UNIT#5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.8769	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.8769	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8708	GEN527901 1-HOBBS PLANT #1 (CT)
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8708	GEN527902 1-HOBBS PLANT #2 (CT)
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.8705	ROMAN NOSE - SOUTHARD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8552	GEN514905 1-REDBUD3S
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	115.855	CIMARRON - NORTHWEST 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	115.8547	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	115.8546	3TR3AR8EL7EL
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	115.8487	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8349	GEN509409 1-WILKES #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8345	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	115.8323	DBL-THIS-G15
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.829	P12:069:OKGE:3TERM4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8145	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.8079	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.8079	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0485	115.8012	COW CREEK - WARREN VALLEY 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8011	GEN523971 1-HARRINGTON GEN #1 24 KV
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8011	GEN523972 1-HARRINGTON GEN #2 24 KV
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.8011	GEN523973 1-HARRINGTON GEN #3 24 KV
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	115.7932	7JASPER 345.00 - MORGAN 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	115.7829	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	115.7829	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.7806	GEN336831 1-BAXTER WILSON SES
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.7778	DOVER SW (DOVER) 138/69/13.8KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	115.7769	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.7709	GEN335204 1-NELSON UNIT 4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.7644	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.7644	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.7515	GEN526331 1-JONES GEN #1 22 KV
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.7314	GEN334441 1-SABINE UNIT 5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.728	GEN511851 1-COMANCHE #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.7257	PECULIAR - STILWELL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	115.7239	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.7229	GEN334071 1-LEWIS CREEK 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.7207	GEN336251 1-NINEMILE POINT UNIT#4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.7171	GEN334070 1-LEWIS CREEK 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	115.7129	P13:069-138:WERE:ELPA_TX-1::
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	115.7062	EL PASO - FARBER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	115.7059	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	115.7059	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6923	GEN562587 1-G14_056_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6668	GEN338146 1-INDEPENDENCE UNIT #2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0562	115.6663	OPENSKY7 345.00 - RANCHR7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6651	GEN587233 1-G16-037-GEN10.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6626	GEN501811 1-RODEMACHER UNIT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6421	GEN521110 1-ORME1 13.800
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6421	GEN521111 1-ORME2 13.800
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.6408	DOVER SW - DOVER TAP 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.6406	DOVER TAP - TURCRKT2 69.000 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6368	GEN334433 1-SABINE UNIT 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6349	GEN303007 1-1BC2 U2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6338	GEN337041 1-GERALD ANDRUS
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6331	GEN303006 1-1BC2 U1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6276	GEN334031 1-FRONTIER UNIT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6242	GEN334030 1-FRONTIER UNIT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6228	GEN515602 1-KNGFSR12 0.7000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6218	CRESENT - TWIN LAKES 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6197	GEN336191 1-LITTLE GYPSY UNIT#3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6116	P12:161:AEPW:DYESS 5:HYLAND 5
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	115.608	P12:138:WFEC:MSL15
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.6076	FRONTIER - GRIMES 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0549	115.5994	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5994	GEN335614 1-WILLOW GLENN UNIT#4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.5966	WAUKOMIS TAP - WOODRING 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5877	GEN303008 1-1BC2 U3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.5835	BOWMAN - TURCRKT2 69.000 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5794	GEN520811 1-ANADRK4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5733	GEN336464 1-MICHOUD UNIT #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5708	GEN336170 1-GULF OXY U4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5705	GEN338143 1-INDEPENDENCE UNIT #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5702	P12:069:OKGE:3TERM3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5683	GEN515226 1-MUSKOGEE 6G
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	115.568	BRISTOW - SILVER CITY 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0364	115.5678	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	115.566	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5641	GEN527163 1-MUSTANG GEN #3 22 KV
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	115.558	WEBRE - WELLS 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5482	GEN515443 1-MNCOWND1 0.7000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5446	COTTONWOOD CREEK - CRESENT 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0463	115.5441	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0463	115.5425	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.5416	P12:138:WFEC:MSL10
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5387	GEN336801 1-BAXTER WILSON UNIT #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5362	GEN521112 1-ORME3 13.800
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.5351	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	115.5338	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	115.5306	EASTOWN7 345.00 - IATAN 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.5261	PHAROAH - WETUMKA4 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0676	115.5252	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0676	115.5252	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5251	GEN527161 1-MUSTANG GEN #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5251	GEN527162 1-MUSTANG GEN #2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.5199	PECULIAR - PLEASANT HILL 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5191	P12:138:WFEC:MSL13
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.519	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	115.5183	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	115.518	CLEVELAND - SILVER CITY 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	115.518	RENO COUNTY - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5106	GEN515225 1-MUSKOGEE 5G
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5104	GEN515223 1-MUSKOGEE 4G
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	115.5103	MUSKOGEE - SEMINOLE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5087	GEN511853 1-COMANCHE #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.5077	GEN501910 1-ACADIA UNIT ST1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.5044	PARAGON4 138.00 - WETUMKA4 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.5042	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.5042	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.5024	PARAGON4 138.00 - TRNCNDACV4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4939	GEN511852 1-COMANCHE #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.4925	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.4925	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4899	GEN520812 1-ANADRK5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4898	GEN520813 1-ANADRK6
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.048	115.4854	KILDARE4 - WHITE EAGLE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4782	GEN562590 1-G14_057_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4768	GEN526332 1-JONES GEN #2 21 KV
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0594	115.4757	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	115.4756	OKEENE - WATONGA SW 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.471	ESSEX UNIT 2 500/18.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4686	RODEMACHER 230/22.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	115.4667	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4651	GEN515606 1-CANDN11 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4651	GEN515607 1-CANDN12 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	115.4613	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	115.4531	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	115.4531	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.4497	ELDORADO EHV - SHERIDAN EHV 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	115.4321	CUSHING - GRNWOOD4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.4277	BOWMAN - KNGINDT2 69.000 69KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.427	GEN511848 1-SOUTHWESTERN STATION #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	115.4244	KETCH - KETCH TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4215	P12:138:WFEC:MSL09
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4195	P12:161:AEPW:EROGERS5:ECNTRTN5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4192	8CAJUN2 500/24.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4186	GEN511962 2-RKYRDGW2-1 0.7000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4174	GEN336222 1-LITTLE GYPSY UNIT#2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	115.4165	AXTELL - G16-050-TAP 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	115.415	P12:138:WERE:CRSW-SUMN_138::
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.4142	GEN337766 1-TRACTEBEL UNIT S1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	115.4134	7LUTESVIL 345.00 - 7ST FRAN 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.4094	KNGINDT2 69.000 - OKRCHET2 69.000 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.4093	P12:161:AEPW:DYESS5:ELMSPRNG:TONTITN5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.409	GEN501970 1-EVANGELINE UNIT 7
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	115.4076	CRESWELL - OXFORD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.4029	P12:138:AEPW:CATOOSA4:T.S.E.-4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	115.4007	NOEL_SW 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.4005	LACYGNE - WEST GARDNER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	115.3983	OXFORD - SUMNER 4 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3965	GEN336152 1-WATERFORD UNIT#2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3957	GEN336151 1-WATERFORD UNIT#1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.395	GEN563062 1-G15071_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.3946	CROMWELL - TRNCNDACV4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	115.3928	P12:138:GRDA:STILLWATER-VALLEY
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3918	NELSON 230/20.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.3918	P12:161:AEPW-SWPA:BEAVER5:EROGERS5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	115.3878	COTTONWOOD CREEK - LIBERTY LAKE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	115.3864	4WOODY 138.00 - BRISTOW 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3856	GEN509393 S1-ARSENAL HILL GENS #4 (STALL)
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.385	GEN506754 1-LEBROCK STEAM 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	115.3846	SAPULPA ROAD - WEKIWA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	115.3846	SAPULPA ROAD - WEKIWA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	115.3844	OKEENE (OKEENE) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3813	GEN334392 1-EXXON MOBIL IPP 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3809	ST FRANCIS - ST FRANCIS 1 161KV CKT Z1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3809	ST FRANCIS 161/16.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3789	GEN334393 1-EXXON MOBIL IPP 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3789	GEN334394 1-EXXON MOBIL IPP 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3752	GEN503909 1-FULTONU1 1 16.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.3741	CROMWELL - WEWOKA 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	115.3734	FULTON 115 - HOPE 115KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	115.3734	FULTON 115 - HOPE 115KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3725	P13:069-138:WERE:BTUL_TX-1::
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3715	ALTOONA - BUTLER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3685	GEN501972 1-EVANGELINE UNIT 7-2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3684	GEN501971 1-EVANGELINE UNIT 7-1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3671	DOVER - DOVER SW 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	115.3661	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	115.3661	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	115.3656	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	115.3656	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	115.3636	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3615	GEN336242 1-1NMIL ST1 18.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	115.3605	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	115.3602	WOODWARD - WWPAR4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	115.36	RAMSEY - VALLEY 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3593	GEN527882 1-CUNNINGHAM GEN #2 20 KV
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3581	GEN334432 1-SABINE UNIT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.358	GEN334431 1-SABINE UNIT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3578	GEN501912 1-ACADIA UNIT CT1B
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	115.3575	VALLEY 138/69KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3573	GEN501911 1-ACADIA UNIT CT1A
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	115.3547	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	115.3547	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3543	GEN514912 2-REDBUD GEN
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	115.3538	EL RENO - OKRCHET2 69.000 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3521	GEN337764 1-TRACTEBEL UNIT C1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3521	GEN337765 1-TRACTEBEL UNIT C2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.351	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3507	ESSEX UNIT 2 500/18.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	115.3492	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	115.3492	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	115.3492	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	115.3492	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	115.3439	4WOODY 138.00 - PHAROAH 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	115.3439	4WOODY 138.00 - PHAROAH 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	115.3405	6LAYFLD 230.00 - CARROLL 230KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3403	ST FRANCIS 2 161/16.0KV TRANSFORMER CKT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3403	ST FRANCIS 345/161KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	115.3391	HORSESHOE LAKE - KAMO MEMORIAL 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.338	DOVER - TWIN LAKES 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3351	GEN563272 1-G15093_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.3321	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.3321	CRAIG - WEST GARDNER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3316	GEN523461 1-BLACKHAWK GEN #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3316	GEN523462 1-BLACKHAWK GEN #2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3302	GEN560105 1-G08-22 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.3267	CYPRESS - HARTBURG 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3256	GEN337430 1-PERYVILLE UNIT #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.325	GEN337428 1-PERYVILLE UNIT #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	115.3246	MC NIEL 500/115KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.3234	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.3234	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	115.3201	ALVA - ALVA 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3166	GEN562602 1-G15_029_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	115.3129	GEN562550 1-G14_040_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	115.2897	FAIRMONT TAP - WOODRING 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	115.2074	LIBERTY LAKE - WATERLOO 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.1978	GEN514939 1-HORSESHOE LAKE 8G
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	115.1809	BYRON_138 138.00 - SANDY_CN_138138.00 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	115.1147	P12:138:OKGE:3TERM1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	115.1	GEN335831 1-RIVERBEND UNIT#1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0384	115.0967	DBL-G1151-TG
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	115.0277	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	115.0277	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0548	115.0175	DBL-THIS-G15
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	114.9909	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0569	114.9879	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	114.9843	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	114.9482	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.9167	WATERLOO - WHITESB4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	114.8773	HENESSEY - WAUKOMIS 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0395	114.8324	DBL-G1151-TG
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	114.7964	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	114.7429	DOVER SW - HENESSEY 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0559	114.7067	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.7	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6754	GEN300011 1-ST FRANCIS UNIT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6622	GEN541170 4-LAKERD#4 13.800
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6606	GEN300031 1-CHOUTEAU CTG 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6605	GEN300024 1-1CHOTST6 16.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.6573	SHDWLKE4 138.00 - WHITESB4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6567	7CALAWY 1 345.00 345/25.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.6567	MITCHSB4 138.00 - SHDWLKE4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6547	GEN600011 5-BLACK DOG GEN 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6535	GEN645024 4-NORTH OMAHA 4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6531	GEN672305 5-BOUNDARY DAM GENERATOR 5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.653	GEN672303 3-BOUNDARY DAM GENERATOR 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.653	GEN672304 4-BOUNDARY DAM GENERATOR 4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6507	GEN600014 4-BLACK DOG GEN 4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6497	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6497	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.6491	MCCLAIN - STHLAKE4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6467	GEN615032 2-PLEASANT VALLEY
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6379	GEN652460 4-GARRISON
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6378	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6371	GEN652461 5-GARRISON
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6365	FAIRVIEW - OKEENE 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6357	GEN652457 1-GARRISON
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6357	GEN652458 2-GARRISON
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6357	GEN652459 3-GARRISON
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	114.6342	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6334	BURLINGTON NO1 + NO 2 + NO 3 161/20.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.632	SARA - STHLAKE4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.6291	GEN501813 1-RODEMACHER UNIT 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.629	GEN652559 1-OAHE
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6277	GEN652556 2-OAHE
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6258	GEN600017 C-LS POWER CT
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6239	GEN505432 1-SIKESTON
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6238	GEN652557 5-OAHE
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.6208	CHISNEY - CLARKSVILLE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	114.618	BEARCAT 138.00 - MOORELAND 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6175	GEN629070 2-BEAVR CHANNEL GENERATORFOR UNIT NO 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	114.617	P12:138:WFEC:MSL14
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	114.6137	BYRON_138 138.00 - C_CITY_138 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.613	GEN509416 1-TURK GENERATION
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.6114	GEN541163 1-ARIES COMBUSTION TURBINE #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0463	114.6114	CWBOYHT4 138.00 - FNTANTP4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0587	114.6071	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.602	GEN659353 1-DEERCREK CTG18.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0463	114.6012	CWBOYHT4 138.00 - MARLAND TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	114.6	4LUTHERD 138.00 - LUTHER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	114.5994	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5976	GEN672392 1-NBECGT1G 18.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.5968	CHISHOLM7 345.00 (CHISHOLM) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5946	QUAIL CREEK - SKYLINE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5878	GEN590010 1-ERCOT EQUIVALENCE
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5865	GEN531447 1-HOLCOMB GENERATOR
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	114.5812	ARCADIA - SEMINOLE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	114.5775	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	114.5726	MARSHALL - WOODRING 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.571	GEN615021 1-GRE-ER 14G 16.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5694	GEN590011 2-ERCOT EQUIVALENCE
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5691	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.5676	P12:138:WFEC:MSL03
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.5671	CHISNEY - HIGHLAND 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	114.5664	TUPELO - TUPELO TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	114.5628	P12:138:WERE:CRSW-OGE_138::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.5624	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5593	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5554	GEN530594 1-SMKYP1G1 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	114.552	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5515	MORGAN - MUSTANG 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5467	GEN529252 1-OMPA-KAW
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	114.5435	P12:138:AECI:STROUD-LUTHER
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0463	114.5394	MARLAND TAP - OSAGE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	114.5391	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5382	GEN549893 2-SOUTHWEST 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	114.5358	KETCH TAP - NORTHWEST 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5316	MORGAN - XEROX 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5286	CZECH HALL - XEROX 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	114.5256	BEARCAT 138.00 - NINE MILE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5254	THOMAS HILL 161/22.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	114.5246	G13-010T 345.00 - POST ROCK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5218	GEN542954 3-MONTROSE UNIT #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	114.5197	OVEXFRMCCOVE

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.5187	CIMARRON - SARA 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	114.5183	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.511	GEN334440 1-SABINE UNIT 4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5094	GEN345671 2-1RUSH G2 18.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.508	GEN345670 1-1RUSH G1 18.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.5018	GEN645025 5-NORTH OMAHA 5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.4943	HIGHLAND - PINK SW 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	114.4908	DELAWARE - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	114.4908	DELAWARE - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.4867	GEN300001 1-THOMAS HILL UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.4863	GEN336252 1-NINEMILE POINT UNIT#5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.4801	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.4742	GEN335206 1-NELSON UNIT 6
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.4725	CIMARRON - CZECH HALL 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.4588	GEN337652 1-WHITE BLUFF UNIT #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	114.457	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	114.4538	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	114.4537	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	114.4534	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	114.4442	C_CITY_138 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.4426	GEN659110 1-LELAND OLDS UNIT1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.4365	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.4292	GEN520947 1-HUGO1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.4275	GEN336251 1-NINEMILE POINT UNIT#4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	114.4125	DELL 500 - INDEPENDENCE 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	114.4039	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	114.4029	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	114.4029	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.4025	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.4003	GEN337653 1-WHITE BLUFF UNIT #2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3999	GEN681522 3-GENOA 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.3991	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3944	GEN657749 1-YOUNG 1 GENERATOR

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3934	GEN641089 2-ENERGY CENTER 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	114.3895	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	114.3895	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0549	114.3876	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3805	G1524G1525 345.00 - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3805	G1524G1525 345.00 - WICHITA 345KV CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.375	GEN514998 1-MCCLAIN UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.3749	GEN514999 1-MCCLAIN UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.3745	GEN514936 1-HORSESHOE LAKE 7S
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3714	GEN562892 1-G15048_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3707	GEN344895 2-1LAB G2 20.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.3704	4MEMORAL 138.00 - LUTHER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.37	GEN547649 1-ASBURY UNIT #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	114.3695	DBL-HTCH-OTA
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	114.3693	MOREWOOD SW - NINE MILE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3664	4SIOUX 1 138.00 138/18.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.3569	P12:069:OKGE:3TERM4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	114.3564	CIMARRON - NORTHWEST 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.3526	GEN501812 1-RODEMACHER UNIT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0494	114.3524	FT SMITH - MUSKOGEE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3506	GEN344896 3-1LAB G3 20.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3495	GEN344894 1-1LAB G1 20.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3487	GEN344897 4-1LAB G4 20.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3358	GEN512689 1-GRDA1 GSU1 22
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0549	114.33	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	114.3261	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0433	114.3256	CLEVELAND - CLEVLND 4 138.00 138KV CKT Z1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0433	114.3256	CLEVELAND - CLEVLND 4 138.00 138KV CKT Z1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0433	114.3256	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0433	114.3256	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.317	GEN336831 1-BAXTER WILSON SES
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3154	GEN530690 1-PRWINDG1 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	114.3049	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0549	114.301	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.3	GEN509394 1-FLINT CREEK

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2986	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2986	ASGI1705 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.2971	GEN334441 1-SABINE UNIT 5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.2895	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	114.2869	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.283	GEN300006 1-NEW MADRID UNIT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2734	GEN300007 1-NEW MADRID UNIT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2731	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	114.2715	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	114.2715	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0549	114.2705	MIDLNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2699	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2686	GEN511840 1-NORTHEASTERN STATION #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.2677	P12:138:AEPW:CORNVL4:DUNCAN-4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	114.265	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	114.2638	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	114.2622	ARCADIA - NORTHWEST 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.2612	P12:138:AECI:LUTHER-JONES
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.252	GEN672321 1-SHAND GENERATOR 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.2501	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.2501	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2496	GEN300002 1-THOMAS HILL UNIT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	114.2455	P12:138:WFEC:MSL15
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.2382	GEN335204 1-NELSON UNIT 4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2346	GEN672310 1-POPLAR RIVER GENERATOR 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2346	GEN672311 2-POPLAR RIVER GENERATOR 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.2301	GEN515000 1-MCCLAIN UNIT 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2271	GEN672306 6-BOUNDARY DAM GENERATOR 6
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0663	114.2228	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.2226	FRANKLIN - PINK SW 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	114.2154	G15095_T 138.00 - ROSE_VALLEY 138.00 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.2153	ALMA 161 161/24.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0663	114.2073	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	114.1985	HUGO - VALLIANT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	114.1985	HUGO - VALLIANT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.192	GEN560248 1-G10_003_2 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.1906	GEN532957 1-WAVERGEN1 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.1859	GEN681542 6-JP MADGETT
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.1827	GEN509403 1-PIRKEY GENERATION
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.1751	GEN546702 1-NM GEN N1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.1701	GEN512688 2-GRDA1 GSU2 22
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0776	114.1697	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	114.1655	COW CREEK - MORRISON 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	114.1611	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	114.1611	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.1522	GEN511839 1-NORTHEASTERN STATION #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	114.1508	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	114.1508	LACYGNE - STILWELL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.1498	GEN334433 1-SABINE UNIT 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.1471	GEN337041 1-GERALD ANDRUS
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	114.1463	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	114.1463	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	114.1387	MORISNT4 138.00 - MORRISON 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.1347	GEN532605 1-ELKRVR-WTG1 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.1304	GEN509406 1-WELSH #3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.1301	GEN509404 1-WELSH #1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	114.1211	GEN532606 1-ELKRVR-WTG2 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0663	114.1159	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	114.112	P12:138:WERE:MURR-MKEC_138P::
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	114.1115	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	114.1115	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.1057	GEN336191 1-LITTLE GYPSY UNIT#3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0663	114.1052	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.1038	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	114.0999	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	114.0991	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0933	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.081	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.081	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0561	114.0801	RENO COUNTY - WICHITA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0384	114.0787	DBL-WWRD-G11
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	114.0765	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	114.0765	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0751	P12:161:AEPW:DYESS 5:HYLAND 5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0678	GEN335614 1-WILLOW GLENN UNIT#4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0589	GEN514910 2-REDBUD GEN
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0587	GEN514911 2-REDBUD GEN
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0586	GEN514942 2-REDBUD4G
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0663	114.0562	DOMES - MOUND ROAD 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	114.0475	P12:138:OKGE:3TERM11
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	114.0471	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	114.0464	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	114.0375	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0349	GEN514912 2-REDBUD GEN
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	114.0347	FRANKLIN - FRANKLIN SW 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0258	GEN336464 1-MICHOUD UNIT #3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0153	GEN338146 1-INDEPENDENCE UNIT #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0142	GEN587387 1-G16-057-GEN20.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0141	GEN587383 1-G16-045-GEN10.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0118	GEN587307 1-G16-045-GEN20.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	114.0117	GEN587303 1-G16-045-GEN10.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	114.0053	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	114.0035	P12:138:OKGE:3TERM2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.9978	GEN661015 1-COYOTE
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	113.9944	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	113.9944	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	113.9914	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	113.9845	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	113.9815	IMO TAP - MEN TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9762	GEN336801 1-BAXTER WILSON UNIT #1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.9754	GEN587333 1-G16-048-GEN10.5200
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	113.9706	LYDIA - WELSH 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	113.9706	LYDIA - WELSH 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.9704	P12:069:OKGE:3TERM3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	113.9672	SWISSVALE - WEST GARDNER 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	113.9626	DOVER SW (DOVER) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	113.9544	COTTONWOOD CREEK - LIBERTY LAKE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	113.9498	P12:138:AEPW:OKMULGE4:R.S.S-4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	113.9467	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9417	GEN514940 1-REDBUD GEN
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.9404	BIG STONE 230/24.0KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	113.9387	G14-074T 345.00 - OKLAUNION 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9361	GEN514905 1-REDBUD3S
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9355	GEN514899 1-REDBUD1S
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9355	GEN514900 1-REDBUD2S
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.9335	GEN620315 1-BIG STONE GEN
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.928	WAUKOMIS TAP - WOODRING 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	113.9256	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.9232	GEN587213 1-G16-032-GEN10.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9125	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	113.9085	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9085	P12:161:AEPW:DYESS5:ELMSPRNG:TONTITN5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9024	GEN334070 1-LEWIS CREEK 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.9024	GEN334071 1-LEWIS CREEK 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.9014	GEN657748 1-YOUNG 2 GENERATOR
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.9011	GEN515483 1-BLKWLWD1 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	113.8991	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8967	GEN338143 1-INDEPENDENCE UNIT #1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	113.8949	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	113.8888	NOEL_SW 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8833	GEN336222 1-LITTLE GYPSY UNIT#2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.8737	GEN659111 2-LELAND OLDS UNIT2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8636	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0499	113.8536	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8463	GEN336151 1-WATERFORD UNIT#1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8463	GEN336152 1-WATERFORD UNIT#2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8451	GEN511851 1-COMANCHE #1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	113.8449	LIBERTY LAKE - WATERLOO 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.84	CIMARRON (CIMARON2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.8395	GEN636641 1-LOUISA UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0486	113.8375	OTTER - WARREN VALLEY 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.8372	GEN600004 2-PRAIRIE ISLAND G2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.8353	GEN600003 1-PRAIRIE ISLAND G1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8341	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0395	113.8333	DBL-WWRD-G11
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.824	GEN600006 1-AS KING
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	113.8218	DOVER SW - DOVER TAP 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	113.8217	DOVER TAP - TURCRKT2 69.000 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	113.8165	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	113.8143	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.8117	GEN588303 1-ASGI1705-GEN0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	113.8078	FPL SWITCH - WOODWARD 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.8061	GEN541151 3-SIBLEY GENERATING UNIT #3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8028	GEN501811 1-RODEMACHER UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8021	GEN303007 1-1BC2 U2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.8005	GEN303006 1-1BC2 U1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	113.8001	7JASPER 345.00 - MORGAN 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.8001	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.8001	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7999	GEN515622 1-KAYWND11 0.7000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	113.7943	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.7898	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.7898	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.7867	JOHNSON COUNTY - PITTSBURG 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.7867	JOHNSON COUNTY - PITTSBURG 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	113.7843	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7827	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7702	GEN659103 1-ANTELOPE VALLEY UNIT1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7702	GEN659107 2-ANTELOPE VALLEY UNIT2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7689	GEN515623 1-KAYWND12 0.7000

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	113.7675	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	113.7675	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7604	GEN301382 1-1OSAGEWINDG10.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	113.7603	DOVER SW - OKEENE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.7519	GEN303008 1-1BC2 U3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.7517	P12:138:WFEC:MSL10
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.7421	GEN334030 1-FRONTIER UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.7407	GEN334031 1-FRONTIER UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7403	P12:161:AEPW:EROGERS5:ECNTRTN5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	113.735	BOWMAN - TURCRKT2 69.000 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.7344	PHAROAH - WETUMKA4 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	113.7327	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.7324	GEN336170 1-GULF OXY U4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	113.7317	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	113.7316	3TR3AR8EL7EL
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.7302	P12:138:AEPW:CATOOSA4:T.S.E.-4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7287	GEN635213 3-NEAL UNIT 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	113.7246	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.7238	GEN587233 1-G16-037-GEN10.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7197	GEN600005 1-MONTICELLO
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.7175	GEN562587 1-G14_056_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.7171	FRONTIER - GRIMES 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	113.717	FAIRMONT TAP - WOODRING 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	113.7162	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	113.7159	WOODWARD - WWPAR4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.7134	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.7134	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	113.7126	KNIFE 4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.7108	PARAGON4 138.00 - WETUMKA4 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.7095	PARAGON4 138.00 - TRNCNDACV4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	113.7088	KINZE - MCELROY 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.7049	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	113.6995	P12:138:MKEC:HARPER-CLEARWATER::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	113.6994	DBL-SPRVL-IR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	113.6982	P12:138:WERE:CLWA-MKEC_138F::

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.6969	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	113.6953	CLEARWATER - MILAN TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.6904	P12:161:AEPW-SWPA:BEAVERS5:EROGERS5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	113.6873	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0499	113.6848	G16-063-TAP 345.00 - HUGO 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6759	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	113.6759	KINZE - MCELROY 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6758	GEN511847 1-SOUTHWESTERN STATION #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	113.6751	KNIPE 4 138.00 - TRYON 4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6665	GEN520812 1-ANADRK5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6664	GEN520813 1-ANADRK6
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6628	GEN521110 1-ORME1 13.800
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6628	GEN521111 1-ORME2 13.800
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	113.6586	WATERLOO - WHITESB4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6565	GEN334432 1-SABINE UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6563	GEN334431 1-SABINE UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	113.656	EASTOWN7 345.00 - IATAN 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0486	113.6558	COW CREEK - WARREN VALLEY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0561	113.655	P12:138:OKGE:3TERM1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6526	GEN501910 1-ACADIA UNIT ST1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.651	GEN514883 1-SPRING CREEK UNIT 3 AND 4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0494	113.6499	MUSKOGEE - SEMINOLE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	113.6498	P13:069-138:WERE:ELPA_TX-1::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	113.6475	RENO COUNTY - SUMMIT 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6457	GEN514882 1-SPRING CREEK UNIT 1 AND 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	113.6431	FPL SWITCH - MOORELAND 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	113.6431	OKEENE (OKEENE) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	113.6431	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	113.6431	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	113.6429	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	113.6429	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	113.6417	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	113.6417	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6386	GEN515602 1-KNGFSR12 0.7000

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.633	GEN509409 1-WILKES #3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	113.6326	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	113.6326	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6297	GEN511853 1-COMANCHE #3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.6279	GEN563182 1-G15083_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6262	DEWEY - SOUTHARD 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6245	GEN511846 1-SOUTHWESTERN STATION #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	113.6222	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.622	GEN511849 1-SOUTHWESTERN STATION #4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6219	GEN511850 1-SOUTHWESTERN STATION #5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6207	GEN514890 1-SMITH 1G
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	113.6193	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	113.6158	EL PASO - FARBER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6149	GEN511852 1-COMANCHE #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.6136	ESSEX UNIT 2 500/18.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0682	113.6119	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0682	113.6119	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	113.6104	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.606	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	113.605	P12:138:WERE:CRSW-OGG_138::
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0563	113.6007	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0479	113.596	DBL-THIS-WWR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	113.5953	BRISTOW - SILVER CITY 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5952	GEN521112 1-ORME3 13.800
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.5942	CROMWELL - TRNCNDACV4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	113.5937	PECULIAR - STILWELL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5921	RODEMACHER 230/22.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5917	GEN509398 1-KNOXLEE #5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0469	113.5893	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.5878	GEN600001 2-SHERBURNE CNTY G2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0469	113.5875	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5838	GEN515443 1-MNCOWND1 0.7000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.5759	CROMWELL - WEWOKA 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	113.575	CLEAVELAND - SILVER CITY 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5743	GEN337757 1-DUKE HOTSPPRINGS STG1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5738	GEN337766 1-TRACTEBEL UNIT S1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5724	GEN520811 1-ANADRK4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	113.5723	LYDIA - VALLIANT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	113.5723	LYDIA - VALLIANT 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.571	GEN501823 1-TECHE UNIT 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5682	GEN336221 1-LITTLE GYPSY UNIT#1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.5657	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	113.562	P12:138:OKGE:3TERM47
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5577	GEN338388 1-1PLUM PT U1 23.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.5546	GEN563082 1-G15073_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	113.5534	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	113.5534	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5521	SABINE 230/24.0KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0563	113.5501	HENESSEY - WAUKOMIS 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	113.5462	TRYON 4 138.00 - WARWICK 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5438	GEN501970 1-EVANGELINE UNIT 7
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5437	8CAJUN2 500/24.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	113.5378	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	113.5362	LACYGNE - NEOSHO 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5348	GEN336446 1-MICHOUD UNIT #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.5328	ACORN 4 138.00 - JONESB4 138.00 138KV CKT 1 G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	113.5321	ALVA - ALVA 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.5315	ALVA - ALVA 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	113.5312	DRAPER LAKE - SEMINOLE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	113.5312	DRAPER LAKE - SEMINOLE 345KV CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.5309	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0479	113.5306	KILDARE4 - WHITE EAGLE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	113.5299	GOLTYTP2 69.000 - IMO 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5262	P12:138:WFEC:MSL09
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5257	GEN562590 1-G14_057_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5227	P12:69:AEPW:NROGERS2:ECNTRTN2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	113.522	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0577	113.5217	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0577	113.5217	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	113.519	WEBRE - WELLS 500KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0546	113.5181	ARCADIA - COTTONWOOD CREEK 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.5173	P12:138:WFEC:MSL13
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5171	ST FRANCIS - ST FRANCIS 1 161KV CKT Z1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5171	ST FRANCIS 161/16.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	113.5132	GOLTYTP2 69.000 - HELENA TAP 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.5127	P12:138:AEPW:MOHAWK4:T.NO--4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	113.5099	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5081	GEN334392 1-EXXON MOBIL IPP 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5074	GEN336242 1-1NMIL ST1 18.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5063	GEN337764 1-TRACTEBEL UNIT C1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5063	GEN337765 1-TRACTEBEL UNIT C2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	113.5061	P13:138-161:WERE:NSES_TX-4OR5::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5052	GEN338443 1-PANDA S1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.505	GEN511962 2-RKYRDGW2-1 0.7000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5049	GEN334393 1-EXXON MOBIL IPP 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5049	GEN334394 1-EXXON MOBIL IPP 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5028	GEN514897 1-SMITH 1S
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5022	GEN501971 1-EVANGELINE UNIT 7-1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5022	GEN501972 1-EVANGELINE UNIT 7-2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5018	GEN515607 1-CANDN12 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.5017	GEN515606 1-CANDN11 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.4982	FLINT CREEK - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.4982	FLINT CREEK - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4961	GEN501912 1-ACADIA UNIT CT1B
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.496	NELSON 230/22.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4957	GEN501911 1-ACADIA UNIT CT1A
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0577	113.4944	4GLENCOE 138.00 - STILLWATER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	113.4943	FULTON 115 - HOPE 115KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	113.4943	FULTON 115 - HOPE 115KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4896	P12:138:AEPW:BA_71ST4:T.S.E.-4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	113.4885	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.4882	LACYGNE - WEST GARDNER 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4878	SABINE 230/22.0KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0563	113.4874	DOVER SW - HENESSEY 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4873	GEN335612 1-WILLOW GLENN UNIT#2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0463	113.4871	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4855	ST FRANCIS 2 161/16.0KV TRANSFORMER CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4855	ST FRANCIS 345/161KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.4847	CRAIG - WEST GARDNER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.4829	GEN600000 1-SHERBURNECNTY G1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.4775	5LOCSTGV - MAID 161KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.4775	5LOCSTGV - MAID 161KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	113.4771	KETCH - KETCH TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.476	P12:138:AEPW:YARCH-S4:T.S.E.-4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	113.4744	PECULIAR - PLEASANT HILL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4737	GEN563062 1-G15071_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	113.4724	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4722	ESSEX UNIT 2 500/18.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.471	P12:138:WERE:HOOV-MURR_138::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.4703	5CDRCRST 161.00 - 5LOCSTGV 161KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4693	GEN337430 1-PERYVILLE UNIT #3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.4691	P12:161:GRDA:MAID-CEDARCREST
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4688	GEN337428 1-PERYVILLE UNIT #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	113.4649	MC NIEL 500/115KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0557	113.4624	MARSHALL - WOODRING 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	113.4572	CUSTER4 138.00 - ELLIS 4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.457	ESSEX UNIT 2 500/18.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.457	GEN509408 1-WILKES #2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	113.4569	P12:138:OKGE:3TERM47
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.452	P12:138:WERE:BENT-NORT_138P::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4509	ROMAN NOSE - SOUTHWARD 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4479	GEN336240 1-1NMIL CT1 18.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4479	GEN336241 1-1NMIL CT2 18.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.4478	GEN659118 1-LARAMIE RIVER UNIT1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	113.4314	GEN562602 1-G15_029_3 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	113.4044	SHDWLKE4 138.00 - WHITESB4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	113.4037	MITCHSB4 138.00 - SHDWLKE4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0557	113.3764	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.3637	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.3327	GEN344225 1-1CAL G1 25.000

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	113.3304	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.3294	GEN532720 1-CANEYWF1 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0332	113.3173	G16-061-TAP 345.00 - SOONER 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0559	113.3018	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.2792	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	113.2758	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0546	113.2649	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.2294	GEN562479 1-G14_001_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.2265	GEN635214 4-NEAL UNIT 4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	113.1804	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	113.1755	BYRON_138 138.00 - SANDY_CN_138138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	113.102	G14_001T 345.00 - WICHITA 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.0925	GEN600002 3-SHERBURNE CNTY G3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	113.0772	ARCADIA - NORTHWEST 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	113.0678	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	113.0457	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.042	GEN587163 1-G16-022-GEN10.6500
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	113.0348	GEN533141 1-SLATEGEN1 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	113.0249	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	113.0249	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	113.0217	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	113.0217	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	113.0126	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	113.008	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	113.008	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0559	113.0013	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.9975	GEN645011 1-NEBRASKA CITY 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0578	112.9806	ARCADIA - COTTONWOOD CREEK 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0695	112.9663	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.9572	GEN563032 1-G15067_3 0.4180
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0695	112.9539	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.924	GEN563242 1-G15090_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.924	GEN587503 1-G73-073-GEN10.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.9231	GEN562720 1-G15_025_3 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0546	112.9229	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.9223	GEN635023 3-WALTER SCOTT UNIT 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.9216	GEN562718 1-G15_024_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.8996	GEN563052 1-G15069_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.036	112.8939	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0695	112.8835	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.8764	GEN645012 2-NEBRASKA CITY 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0695	112.8722	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	112.8587	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.851	GEN514643 1-BRKWND11 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	112.8439	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0695	112.8429	DOMES - MOUND ROAD 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	112.828	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	112.828	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	112.826	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	112.8242	P12:138:OKGE:3TERM11
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0593	112.8235	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	112.8214	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	112.8193	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0594	112.8193	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	112.8154	BENTON - WOLF CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	112.8127	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	112.8127	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0462	112.8092	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	112.8066	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	112.8066	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.8009	7SPORTSMAN - BLACKBERRY 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	112.7937	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7911	GEN532702 1-BPU - CITY OF MCPHERSON GAS TURBINE 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	112.7903	KEO EHV - WHITE BLUFF 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7892	P12:138:AEPW:S.W.S.-4:L.E.S.-4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7891	GEN629069 1-EMERY STEAM TURBINE 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7888	BAXTER WILSON SES - RAY BRASWELL SES 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7887	LONEOK - NORTHWEST 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	112.7881	HIGHLAND - PINK SW 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	112.7802	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	112.7744	7MCCREDIE 345.00 - 7OVERTON 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7734	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7716	GEN539655 1-CLIFTON GENERATOR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7683	GEN657749 1-YOUNG 1 GENERATOR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	112.768	4LUTHERD 138.00 - 4WARWICK 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7644	GEN542963 7-HAWTHORN COMBUSTION TURBINE #7
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7635	GEN511941 1-OEC STEAM # 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.763	P12:138:AEPW:112GORE4:L.E.S.-4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.7626	GEN542951 5-HAWTHORN UNIT #5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7622	GEN652559 1-OAHE
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7621	GEN532694 1-HUTCHINSON ENERGY CENTER UNIT 4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7594	GEN511938 1-OEC STEAM # 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7594	GEN541154 3-RALPH GREEN GENERATING UNIT #3
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	112.7586	P12:138:WFEC:MSL14
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7552	GEN547643 1-RIVERTON GEN #13
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	112.7541	P12:138:WFEC:MSL03
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	112.7525	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.7516	QUAIL CREEK - SKYLINE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7511	GEN640028 1-COLUMCOGENERATION
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7508	GEN542964 8-HAWTHORN COMBUSTION TURBINE #8
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7493	GEN539670 4-JUDSON LARGE GENERATOR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7444	GEN645022 2-NORTH OMAHA 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7442	GEN546697 1-QN GEN1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7441	GEN300017 1-1G2GPDEL 18.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7439	GEN652556 2-OAHE
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7439	GEN652557 4-OAHE

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7439	GEN652558 6-OAHE
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.7438	GEN300003 1-THOMAS HILL UNIT 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7403	GEN539677 3-A. M. MULLERGREN GENERATOR
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	112.74	LACYGNE - STILWELL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7372	GEN659125 1-COVEY
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.7361	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0464	112.736	BLLNGTP4 138.00 - FNTANTP4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	112.7347	BEARCAT 138.00 - MOORELAND 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7329	GEN652460 4-GARRISON
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7329	GEN652461 5-GARRISON
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7319	GEN640005 1-CANADAY
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7316	GEN652457 1-GARRISON
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7316	GEN652458 2-GARRISON
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7316	GEN652459 3-GARRISON
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7292	GEN300016 1-1G1GPDEL 18.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7279	GEN543078 1-PAOLA COMBUSTION TURBINES
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7267	GEN640019 1-SHELDON STATION UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	112.7265	DOLET HILLS 345/230KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	112.7231	4LUTHERD 138.00 - LUTHER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7226	GEN532671 1-TECUMSEH ENERGY CENTER UNIT 7
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7211	GEN546723 1-NEARMAN CT4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	112.721	CROCKETT - GRIMES 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	112.721	CROCKETT - GRIMES 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.7203	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.719	GEN647418 8-FREMONT 8
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7189	GEN543106 1-BULL CREEK COMBUSTION TURBINE #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7157	P12:69:AEPW:L.E.S.-2:LAW WC2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.7144	MORGAN - MUSTANG 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7101	GEN543108 3-BULL CREEK COMBUSTION TURBINE #3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7101	GEN543109 4-BULL CREEK COMBUSTION TURBINE #4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.7088	GEN543107 2-BULL CREEK COMBUSTION TURBINE #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	112.7085	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	112.6986	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6914	GEN300012 1-HOLDEN UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.6889	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6884	GEN511836 1-NORTHEASTERN STATION #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.6878	MORGAN - XEROX 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	112.6844	P12:138:WERE:ELPA-SUMN_138::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.6836	CZECH HALL - XEROX 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6835	GEN672321 1-SHAND GENERATOR 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.6829	GEN640009 1-COOPER NUCLEAR STATION
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	112.6814	8HOLND BTM% 500.00 - KEO EHV 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6767	GEN659018 1-G14_003IS_3 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	112.6735	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	112.6735	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.6728	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6711	JENSEN ROAD - JENSEN TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	112.6704	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	112.6704	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6699	GEN344896 3-1LAB G3 20.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6694	GEN672306 6-BOUNDARY DAM GENERATOR 6
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6693	GEN344895 2-1LAB G2 20.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6689	GEN344897 4-1LAB G4 20.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6688	GEN344894 1-1LAB G1 20.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	112.6658	RIVERSIDE STATION - SAPULPA ROAD 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	112.6658	RIVERSIDE STATION - SAPULPA ROAD 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.662	GEN672310 1-POPLAR RIVER GENERATOR 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.662	GEN672311 2-POPLAR RIVER GENERATOR 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6615	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6615	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6614	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6599	P12:138:AEPW:SHERID4:112GORE4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.659	GEN511842 1-RIVERSIDE STATION #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.659	GEN645033 3-SARPY COUNTY 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6575	GEN511843 1-RIVERSIDE STATION #2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	112.6572	SWISSVALE - WEST GARDNER 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	112.6563	P12:138:AECI:STROUD-LUTHER
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	112.6562	BYRON_138 138.00 - C_CITY_138 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	112.6528	FT SMITH - MUSKOGEE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	112.6496	GEN501801 1-DOLET HILLS UNIT1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6494	GEN681522 3-GENOA 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	112.6482	CIMARRON - MINCO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	112.6476	GEN336821 1-GRAND GULF UNIT
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6471	GEN659289 1-DAYCNTYWND W0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	112.6454	KETCH TAP - NORTHWEST 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0464	112.6448	CWBOYHT4 138.00 - FNTANTP4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6396	GEN531447 1-HOLCOMB GENERATOR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.6381	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.6362	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	112.6342	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	112.6342	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	112.6337	FRANKLIN - PINK SW 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	112.6328	DELL 500 - INDEPENDENCE 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6317	P12:69:AEPW-OMPA:SNYDER-2:ALTUSJT2:OMALTUS2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6312	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0464	112.631	CWBOYHT4 138.00 - MARLAND TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6301	GEN532705 1-BPU - CITY OF MCPHERSON GAS TURBINE 4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	112.6295	BEARCAT 138.00 - NINE MILE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6272	GEN661015 1-COYOTE
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.6269	MIDLNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.6246	CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.6243	LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6221	GEN529252 1-OMPA-KAW
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6215	THOMAS HILL 161/22.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.62	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.6199	NORTHWEST (NORTWST4) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6161	P12:138:OKGE:3TERM10

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6138	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6104	GEN645024 4-NORTH OMAHA 4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0798	112.608	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.6046	GEN300015 1-1SGPDEL 18.00
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0587	112.6041	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.6009	GEN635024 4-WALTER SCOTT UNIT 4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.5986	CIMARRON - CZECH HALL 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	112.5969	OVEXFRMCCOVE
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	112.5948	C_CITY_138 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	112.5945	G15095_T 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5933	GEN659354 1-DEERCREK STG18.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5931	GEN659353 1-DEERCREK CTG18.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5873	PLUM POINT 500/23.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5863	GEN541167 3-SHARPR#3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5842	GEN300020 1-1CHOTCT4 16.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.584	GEN300021 1-1CHOTCT5 16.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5837	GEN300032 1-CHOUTEAU CTG 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5837	GEN300033 1-CHOUTEAU STG 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5815	GEN541165 1-SHARPR#1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5815	GEN541166 2-SHARPR#2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5807	GEN542961 6-HAWTHORN COMBUSTION TURBINE #6
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5775	GEN681542 6-JP MADGETT
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5604	GEN300024 1-1CHOTST6 16.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5604	GEN300031 1-CHOUTEAU CTG 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	112.5528	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5455	GEN532662 1-LAWRENCE ENERGY CENTER UNIT 4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.5435	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	112.5415	COW CREEK - MORRISON 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0464	112.5412	MARLAND TAP - OSAGE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0563	112.5408	RENO COUNTY - WICHITA 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0549	112.5378	CIMARRON - NORTHWEST 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5364	GEN300010 1-ST FRANCIS UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5351	4SIOUX 1 138.00 138/18.0KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.5327	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.5327	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	112.5254	MORISNT4 138.00 - MORRISON 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	112.525	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	112.525	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5223	GEN546698 1-QN GEN2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.5151	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.515	GEN542967 9-HAWTHORN UNIT #9
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.5146	GEN549890 1-SOUTHWEST 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	112.5136	OTTER - WARREN VALLEY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	112.5136	GEN515040 1-SEMINOLE 1G
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	112.509	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	112.509	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	112.5067	G13-010T 345.00 - POST ROCK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	112.5011	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	112.5011	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	112.4976	DEWEY - SOUTHARD 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4971	GEN532724 1-EVANS ENERGY CENTER GAS TURBINE 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4924	P12:138:AEPW:DUNCAN-4:L.E.S.-4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4908	GEN562892 1-G15048_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	112.4887	FRANKLIN - FRANKLIN SW 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	112.4878	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	112.4878	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	112.4867	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.481	GEN300011 1-ST FRANCIS UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4778	GEN620315 1-BIG STONE GEN
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4752	ALMA 161 161/24.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4733	GEN657748 1-YOUNG 2 GENERATOR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4719	GEN532723 1-EVANS ENERGY CENTER GAS TURBINE 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4686	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4686	ASGI1705 138.00 138/34.5KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0462	112.4628	CLEAVELAND - CLEV LND 4 138.00 138KV CKT Z1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0462	112.4626	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0462	112.4626	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4623	GEN505432 1-SIKESTON
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.462	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	112.4575	MOREWOOD SW - NINE MILE 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.4568	GEN542956 2-LACYGNE UNIT #2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	112.4557	DBL-SPRVL-IR
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	112.4542	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	112.4542	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	112.4487	GEN336153 1-WATERFORD UNIT#3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4418	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4415	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4352	GEN645041 1-CASS COUNTY 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4329	GEN645042 2-CASS COUNTY 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.427	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.427	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.427	GEN547656 1-STATE LINE UNIT #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4246	GEN547657 1-STATE LINE UNIT #3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	112.4239	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	112.4236	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.4135	GEN532672 1-TECUMSEH ENERGY CENTER UNIT 8
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	112.4116	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	112.4116	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	112.4081	P12:138:AEPW:OKMULGE4:R.S.S-4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.4049	GEN562772 1-G15034_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.404	GEN562658 1-G15_001_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	112.3982	4MEMORAL 138.00 - LUTHER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.3971	GEN300001 1-THOMAS HILL UNIT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.3945	GEN542957 1-IATAN UNIT #1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	112.3912	DOVER SW (DOVER) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.055	112.3873	RENO COUNTY - SUMMIT 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.3807	P12:069:OKGE:3TERM4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.3783	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.3782	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.371	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	112.3693	MARSHALL - WOODRING 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.366	GEN659110 1-LELAND OLDS UNIT1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	112.3645	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0554	112.3604	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	112.3597	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	112.3596	3TR3AR8EL7EL
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0485	112.3592	OTTER - WOODRING 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	112.359	COW CREEK - WARREN VALLEY 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	112.357	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	112.3567	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.3554	GEN641089 2-ENERGY CENTER 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	112.3528	ROMAN NOSE - SOUTHARD 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.3433	GEN600004 2-PRAIRIE ISLAND G2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.3396	GEN600003 1-PRAIRIE ISLAND G1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	112.3359	7JASPER 345.00 - MORGAN 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.3204	GEN600006 1-AS KING
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	112.3199	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	112.3199	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.3177	GEN547658 1-STATE LINE COMBINED CYCLE
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	112.3155	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	112.3125	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	112.3125	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	112.3119	P12:138:AECI:LUTHER-JONES
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0575	112.3096	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.3054	GEN513602 1-GRECSTG_1 17.500
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	112.3015	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.2898	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.2889	GEN532733 1-GILL ENERGY CENTER UNIT 3
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0554	112.2843	P13:069-138:WERE:ELPA_TX-1::

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.283	GEN532734 1-GILL ENERGY CENTER UNIT 4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	112.2817	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0554	112.2771	EL PASO - FARBER 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	112.2771	DOVER SW - DOVER TAP 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	112.2771	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	112.2771	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	112.2769	DOVER TAP - TURCRKT2 69.000 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.2767	BIG STONE 230/24.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	112.273	PECULIAR - STILWELL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	112.2694	GEN523971 1-HARRINGTON GEN #1 24 KV
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0556	112.2626	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.2612	GEN549893 2-SOUTHWEST 2
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	112.257	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.255	GEN635213 3-NEAL UNIT 3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	112.2434	ARCADIA - COTTONWOOD CREEK 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.243	GEN541163 1-ARIES COMBUSTION TURBINE #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.243	GEN636641 1-LOUISA UNIT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	112.2355	WEBRE - WELLS 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	112.2319	GEN335831 1-RIVERBEND UNIT#1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.231	GEN615001 1-COAL CREEK
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.2274	GEN615002 2-COAL CREEK
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	112.2224	BOWMAN - TURCRKT2 69.000 69KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	112.2173	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.2159	P12:161:AEPW:DYESS 5:HYLAND 5
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	112.2157	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.2129	GEN532742 5-EMPORIA ENERGY CENTER UNIT 5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.2073	GEN560248 1-G10_003_2 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.2072	FRONTIER - GRIMES 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.2065	GEN532957 1-WAVERGEN1 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	112.2041	WAUKOMIS TAP - WOODRING 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	112.2017	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.1989	CRESENT - TWIN LAKES 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	112.1964	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1932	GEN541162 1-ARIES STEAM TURBINE
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1923	GEN547649 1-ASBURY UNIT #1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.1857	GEN562723 1-G15_030_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	112.1856	COTTONWOOD CREEK - LIBERTY LAKE 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	112.1823	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0556	112.1821	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1805	GEN532743 6-EMPORIA ENERGY CENTER UNIT 6
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1805	GEN532744 7-EMPORIA ENERGY CENTER UNIT 7
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	112.1638	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1602	GEN600001 2-SHERBURNE CNTY G2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1598	GEN600005 1-MONTICELLO
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	112.1582	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	112.1582	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0562	112.1581	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	112.1455	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.1438	P12:069:OKGE:3TERM3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.142	GEN587483 1-G16-071-GEN10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	112.1377	LIBERTY LAKE - WATERLOO 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	112.1346	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1346	GEN532605 1-ELKRVR-WTG1 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	112.1305	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.1278	COTTONWOOD CREEK - CRESENT 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1202	GEN532606 1-ELKRVR-WTG2 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	112.1189	P13:138-161:WERE:NSES_TX-4OR5::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.1163	GEN600000 1-SHERBURNECNTY G1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.1145	GEN533124 1-FR2E2W1F 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	112.1139	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.1118	GEN533126 1-FR2W2W1F 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0702	112.1106	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0702	112.1106	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0485	112.1081	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0485	112.1081	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	112.1031	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	112.1031	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	112.1031	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	112.1031	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	112.0996	BRISTOW - SILVER CITY 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	112.0994	CLEVELAND - SILVER CITY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	112.0913	G14_001T 345.00 - WICHITA 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	112.0887	PECULIAR - PLEASANT HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	112.0859	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.0817	GEN533123 1-FR2E1WF1 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.079	GEN533125 1-FR2W1WF1 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	112.0695	GEN542955 1-LACYGNE UNIT #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.0633	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	112.0615	EASTOWN7 345.00 - IATAN 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0551	112.0569	CUSHING - GRNWOOD4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	112.0567	WATERLOO - WHITESB4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.0564	P12:161:AEPW:EROGERS5:ECNTRT5
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	112.0527	NOEL_SW 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0686	112.0515	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.0456	P12:161:AEPW:DYESS5:ELMSPRNG:TONTITN5
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0686	112.0439	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.0364	GEN300002 1-THOMAS HILL UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	112.0331	GEN587333 1-G16-048-GEN10.5200
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	112.0299	8CAJUN2 500/24.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	112.0198	ELDORADO EHV - SHERIDAN EHV 500KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0556	112.0188	IMO TAP - MEN TAP 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	112.0179	KETCH - KETCH TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.0159	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.0159	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.0159	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	112.0159	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	112.0126	P12:138:WERE:CRSW-SUMN_138::
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	112.0034	CRESWELL - OXFORD 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	112.001	BYRON_138 138.00 - SANDY_CN_138138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	111.9973	KILDARE4 - WHITE EAGLE 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9965	GEN590010 1-ERCOT EQUIVALENCE

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.9947	P12:138:WFEC:MSL10
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	111.9936	P12:138:AEPW:CATOOSA4:T.S.E.-4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	111.9935	OKEENE - WATONGA SW 69KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.9935	NELSON 230/20.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	111.9933	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	111.9933	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	111.9925	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	111.9925	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	111.9918	OXFORD - SUMNER 4 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9879	GEN515483 1-BLKWLWD1 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	111.985	OKEENE (OKEENE) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.9833	PHAROAH - WETUMKA4 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0584	111.9801	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0584	111.9801	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.98	BOWMAN - KINGINDT2 69.000 69KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	111.9749	4WOODY 138.00 - BRISTOW 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.9736	P13:069-138:WERE:BTUL_TX-1::
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.9728	ALTOONA - BUTLER 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.9718	ST FRANCIS - ST FRANCIS 1 161KV CKT Z1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.9717	P12:138:WFEC:MSL13
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0556	111.9695	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.055	111.9694	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0686	111.9667	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9657	GEN590011 2-ERCOT EQUIVALENCE
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.9631	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.9631	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0686	111.9627	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	111.9623	4WOODY 138.00 - PHAROAH 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	111.9623	4WOODY 138.00 - PHAROAH 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	111.9595	HORSESHOE LAKE - KAMO MEMORIAL 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.957	GEN645025 5-NORTH OMAHA 5
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	111.9528	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	111.9528	BLACKBERRY - NEOSHO 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.9527	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.9527	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.9526	KNGINDT2 69.000 - OKRCHET2 69.000 69KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	111.9508	GEN563022 1-G15066_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0686	111.9503	DOMES - MOUND ROAD 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.9457	P12:138:WFEC:MSL09
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	111.9454	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	111.9445	BRISTOW - GRNWOOD4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9438	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.9403	MC NIEL 500/115KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9357	GEN546702 1-NM GEN N1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	111.9353	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	111.9353	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	111.935	CIMARRON - MATHWSN7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	111.935	CIMARRON - MATHWSN7 345.00 345KV CKT 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.9327	ST FRANCIS 345/161KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9326	GEN562694 1-G15_016_3 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.9308	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9252	GEN509394 1-FLINT CREEK
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	111.9239	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	111.9146	FAIRMONT TAP - WOODRING 138KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	111.914	GEN542962 2-IATAN UNIT #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9129	GEN344225 1-1CAL G1 25.000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	111.9118	P12:138:WERE:CRSW-OGG_138::
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.9086	GEN529201 1-OMCDLEC1 13.800
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0478	111.9024	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.9015	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.9002	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.9002	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	111.8993	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	111.8993	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.8963	GEN635214 4-NEAL UNIT 4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	111.8954	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	111.8946	SHDWLKE4 138.00 - WHITESB4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	111.8938	MITCHSB4 138.00 - SHDWLKE4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	111.8788	CIMARRON (CIMARON2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	111.8597	GEN562691 1-G15_015_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.8542	GEN300006 1-NEW MADRID UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0496	111.8482	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.8458	GEN513601 1-GRECCTG_1 20.000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.8444	GEN300007 1-NEW MADRID UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.8423	GEN600002 3-SHERBURNE CNTY G3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.838	GEN532725 1-EVANS ENERGY CENTER GAS TURBINE 3
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.8241	GEN587213 1-G16-032-GEN10.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.8182	GEN511840 1-NORTHEASTERN STATION #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0333	111.8125	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.812	GEN532721 1-EVANS ENERGY CENTER UNIT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	111.8111	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	111.8111	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.793	GEN515622 1-KAYWND11 0.7000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.7917	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	111.7914	P12:138:OKGE:3TERM2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.7906	GEN588303 1-ASGI1705-GEN0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0469	111.7861	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.78	GEN511839 1-NORTHEASTERN STATION #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.7734	GEN515623 1-KAYWND12 0.7000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.7592	GEN509416 1-TURK GENERATION
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	111.7476	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.7454	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.7356	GEN301382 1-10SAGEWINDG10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	111.7268	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	111.7268	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.7188	P12:138:AEPW:CORNVL4:DUNCAN-4
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	111.718	GEN562902 1-G15052_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.7047	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	111.6983	TULSA NORTH - WEKIWA 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	111.6983	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.6887	GEN659111 2-LELAND OLDS UNIT2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	111.665	OTTER - WARREN VALLEY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.648	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	111.6324	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0799	111.6297	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.6278	GEN337652 1-WHITE BLUFF UNIT #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.6221	GEN335206 1-NELSON UNIT 6
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.6126	GEN337653 1-WHITE BLUFF UNIT #2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.6073	GEN509403 1-PIRKEY GENERATION
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	111.5942	COW CREEK - MORRISON 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0334	111.5893	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	111.5844	MORISNT4 138.00 - MORRISON 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.5716	GEN659103 1-ANTELOPE VALLEY UNIT1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.5716	GEN659107 2-ANTELOPE VALLEY UNIT2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.5624	GEN635023 3-WALTER SCOTT UNIT 3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.5595	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.5595	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.5365	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.5365	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.531	GEN563082 1-G15073_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	111.5125	BYRON_138 138.00 - C_CITY_138 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	111.5082	COW CREEK - WARREN VALLEY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.5021	GEN527901 1-HOBBS PLANT #1 (CT)
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.5001	GEN563182 1-G15083_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0499	111.4745	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.4711	GEN541151 3-SIBLEY GENERATING UNIT #3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0562	111.4629	SAPULPA ROAD - WEKIWA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0562	111.4629	SAPULPA ROAD - WEKIWA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	111.4617	SWISSVALE - WEST GARDNER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	111.4604	C_CITY_138 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.4577	GEN527903 1-HOBBS PLANT #3 (ST)

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	111.45	P12:138:OKGE:3TERM11
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.4411	GEN515449 1-CRSRDW11 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0488	111.393	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0488	111.393	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.055	111.3872	RENO COUNTY - SUMMIT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.3436	GEN587387 1-G16-057-GEN20.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.3435	GEN587383 1-G16-045-GEN10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.3413	GEN587307 1-G16-045-GEN20.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.3412	GEN587303 1-G16-045-GEN10.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.3261	GEN635024 4-WALTER SCOTT UNIT 4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.3205	GEN512688 2-GRDA1 GSU2 22
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.2962	GEN501813 1-RODEMACHER UNIT 3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	111.2884	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	111.2775	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.2737	GEN532720 1-CANEYWF1 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.2733	GEN501812 1-RODEMACHER UNIT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.2676	LACYGNE - STILWELL 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	111.2661	CWBOYHT4 138.00 - FNTANTP4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.2629	P12:138:AECI:STROUD-LUTHER
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.2615	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.2615	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	111.2567	CWBOYHT4 138.00 - MARLAND TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.2553	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.2553	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.2507	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.2507	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	111.25	GRACEMONT - MINCO 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.2498	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	111.2476	P12:138:WFEC:MSL14
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.2456	GEN659118 1-LARAMIE RIVER UNIT1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	111.2441	BEARCAT 138.00 - MOORELAND 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	111.2409	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	111.2409	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.2359	GEN562479 1-G14_001_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0456	111.2352	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0456	111.2352	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.2323	CHISNEY - CLARKSVILLE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	111.2292	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0456	111.2287	CLEAVELAND - CLEVELND 4 138.00 138KV CKT Z1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0456	111.2287	CLEAVELAND - CLEVELND 4 138.00 138KV CKT Z1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.2275	P12:69:AEPW-OMPA:SNYDER-2:ALTUSJT2:OMALTUS2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.2259	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.2116	QUAIL CREEK - SKYLINE 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	111.208	MARLAND TAP - OSAGE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.2051	CRESENT - TWIN LAKES 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	111.2031	DBL-SPRVL-IR
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	111.2028	OVEXFRMCCOVE
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.1976	MORGAN - MUSTANG 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.1946	CHISNEY - HIGHLAND 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.1895	GEN514910 2-REDBUD GEN
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.1872	GEN514911 2-REDBUD GEN
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.1872	GEN514942 2-REDBUD4G
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.184	TUPELO - TUPELO TAP 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.1817	P12:138:WFEC:MSL03
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.181	MORGAN - XEROX 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.1781	CZECH HALL - XEROX 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	111.178	4MEMORAL 138.00 - LUTHER 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.1775	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.1774	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.1774	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.1749	COTTONWOOD CREEK - CRESENT 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.1744	P12:138:AEPW:DUNCAN-4:L.E.S.-4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.1697	ARCADIA - SEMINOLE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.1688	CIMARRON - SARA 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.1655	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	111.1642	WEBRE - WELLS 500KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	111.1519	BEARCAT 138.00 - NINE MILE 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	111.15	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.1455	HIGHLAND - PINK SW 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.1442	GEN338146 1-INDEPENDENCE UNIT #2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.1429	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.1416	P12:230:AEPW:ELKCITY6:SWEETWT6
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	111.139	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	111.139	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0549	111.1384	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.1378	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	111.1373	CHISHOLM7 345.00 (CHISHOLM) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.1373	G13-010T 345.00 - POST ROCK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.1359	FAIRVIEW - OKEENE 69KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	111.1337	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.055	111.1323	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	111.1315	KETCH TAP - NORTHWEST 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0548	111.1289	CIMARRON - NORTHWEST 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	111.128	P12:138:AECI:LUTHER-JONES
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0554	111.1254	7JASPER 345.00 - MORGAN 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.1252	CIMARRON - CZECH HALL 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0566	111.1179	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	111.117	KNIFE 4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	111.1056	KNIFE 4 138.00 - TRYON 4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0897	GEN514905 1-REDBUD3S
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0706	111.0789	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0706	111.0789	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0575	111.0779	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	111.0693	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0667	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	111.061	DELAWARE - NEOSHO 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	111.061	DELAWARE - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.061	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	111.0596	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.0544	GEN563242 1-G15090_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.0544	GEN587503 1-G73-073-GEN10.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.054	GEN562720 1-G15_025_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.0536	GEN562718 1-G15_024_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0487	GEN338143 1-INDEPENDENCE UNIT #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.044	GEN560183 1-REDHIL-WTG1 12.000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	111.0409	KILDARE4 - WHITE EAGLE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0405	GEN587233 1-G16-037-GEN10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	111.0376	DEWEY - SOUTHARD 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	111.0373	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0371	GEN562587 1-G14_056_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	111.0354	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	111.0354	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0575	111.0343	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	111.0323	P13:069-138:WERE:ELPA_TX-1::
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0556	111.0201	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0556	111.0201	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0159	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0159	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	111.0109	P12:138:WERE:MURR-MKEC_138P::
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	111.0078	EL PASO - FARBER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0051	GEN524295 1-SPNSPUR_WND10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	111.0047	GEN521103 1-BLUE CANYON WIND FARM
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	111.0042	GEN587163 1-G16-022-GEN10.6500
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	110.9999	MOREWOOD SW - NINE MILE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9988	GEN334440 1-SABINE UNIT 4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0575	110.9941	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.993	DBL-HTCH-OTA
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.9867	GEN514643 1-BRKWND11 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.971	GEN524285 1-WILDORADO WIND GEN
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	110.9706	DOVER SW (DOVER) 138/69/13.8KV TRANSFORMER CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	110.9696	G1524G1525 345.00 - WICHITA 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	110.9696	G1524G1525 345.00 - WICHITA 345KV CKT 2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0575	110.9693	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.9693	ROMAN NOSE - SOUTHARD 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	110.9692	FRANKLIN - PINK SW 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9676	GEN525844 1-ELK_1 118.000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	110.9663	TRYON 4 138.00 - WARWICK 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9638	GEN515602 1-KNGFSR12 0.7000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.9607	GEN563032 1-G15067_3 0.4180
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	110.9589	DELL 500 - INDEPENDENCE 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	110.9587	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	110.9587	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0558	110.9568	CLEAVELAND - SILVER CITY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	110.9462	PECULIAR - STILWELL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9435	GEN336170 1-GULF OXY U4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	110.9346	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	110.9337	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	110.9319	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9302	GEN334030 1-FRONTIER UNIT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9301	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.929	GEN335204 1-NELSON UNIT 4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9287	GEN334031 1-FRONTIER UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.9279	GEN533141 1-SLATEGEN1 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9268	GEN336252 1-NINEMILE POINT UNIT#5
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	110.9247	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9238	GEN523461 1-BLACKHAWK GEN #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	110.9181	IMO TAP - MEN TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	110.917	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	110.9108	NOEL_SW 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9102	GEN336831 1-BAXTER WILSON SES
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	110.9085	P12:138:WFEC:MSL15
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	110.9084	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	110.9079	RIVERSIDE STATION - SAPULPA ROAD 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	110.9079	RIVERSIDE STATION - SAPULPA ROAD 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9077	P13:069-138:WERE: BUTL_TX-1::
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	110.9075	DOVER SW - DOVER TAP 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	110.9073	DOVER TAP - TURCRKT2 69.000 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.907	ALTOONA - BUTLER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0581	110.9062	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0581	110.9062	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.9023	GEN515443 1-MNCOWND1 0.7000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	110.8973	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	110.8972	40SAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.8933	GEN563052 1-G15069_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	110.8931	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0549	110.8904	G15095_T 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8885	FRONTIER - GRIMES 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	110.8845	BOWMAN - TURCRKT2 69.000 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.8844	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.8844	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.8831	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.8831	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.8828	WAUKOMIS TAP - WOODRING 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.8799	P13:069-138:WERE:ALTO_TX-10R3P::
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	110.879	KINZE - MCELROY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8746	GEN560105 1-G08-22 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8708	GEN562550 1-G14_040_3 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	110.8696	FT SMITH - MUSKOGEE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	110.8643	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	110.8634	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8614	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.8612	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.8612	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0581	110.8572	P12:138:AEPW:BV-COM-4:BV-SE--4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	110.8551	FRANKLIN - FRANKLIN SW 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8504	GEN587423 1-G16-062-GEN10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8425	GEN562590 1-G14_057_3 0.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	110.8324	P13:138-161:WERE:NSES_TX-4OR5::
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8302	GEN515223 1-MUSKOGEE 4G
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	110.8288	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	110.8264	ROSE HILL - WOLF CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0544	110.8222	PECULIAR - PLEASANT HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8199	GEN515606 1-CANDN11 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8199	GEN515607 1-CANDN12 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8175	GEN337041 1-GERALD ANDRUS
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	110.8151	NORTHEAST STATION - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	110.8151	NORTHEAST STATION - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8142	GEN514912 2-REDBUD GEN
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.8059	GEN511962 2-RKYRDGW2-1 0.7000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	110.7982	GEN562882 1-G15047_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	110.797	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	110.797	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	110.7941	ELDORADO EHV - SHERIDAN EHV 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0555	110.7876	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0551	110.7851	PECAN CREEK - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0551	110.7851	PECAN CREEK - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7847	GEN562270 1-G12-020-2 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7843	GEN563062 1-G15071_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7838	GEN335614 1-WILLOW GLENN UNIT#4
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.7809	HUGO - VALLIANT 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.7809	HUGO - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0557	110.778	7OVERTON 345.00 - SIBLEY 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0557	110.778	7OVERTON 345.00 - SIBLEY 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7749	GEN336191 1-LITTLE GYPSY UNIT#3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	110.7691	DBL-THIS-G15
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7678	GEN336464 1-MICHOUD UNIT #3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.7661	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7649	GEN334441 1-SABINE UNIT 5
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7638	GEN562269 1-G12-020-1 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	110.7615	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	110.761	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0551	110.7599	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0551	110.7597	WOODWARD - WWPAR4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.7567	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	110.7556	P12:138:GRDA:COLLINSVILLE-CLEVELAND
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.7536	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7536	GEN562602 1-G15_029_3 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.7535	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.7533	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7522	GEN334392 1-EXXON MOBIL IPP 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0546	110.7489	DOVER SW - OKEENE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7475	GEN303007 1-1BC2 U2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	110.7469	MCADAMS - WOLF CREEK 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0543	110.7468	EASTOWN7 345.00 - IATAN 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	110.7465	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	110.7465	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7457	GEN334393 1-EXXON MOBIL IPP 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7457	GEN334394 1-EXXON MOBIL IPP 3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.743	GEN336801 1-BAXTER WILSON UNIT #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7413	GEN303006 1-1BC2 U1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7399	GEN336242 1-1NMIL ST1 18.000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7396	DOVER - DOVER SW 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	110.7386	CLEVELAND - JAVINE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.055	110.7376	BRISTOW - SILVER CITY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	110.7361	4WOODY 138.00 - PHAROAH 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	110.7361	4WOODY 138.00 - PHAROAH 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	110.7341	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	110.7341	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0425	110.7331	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7322	GEN334433 1-SABINE UNIT 3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7295	NELSON 230/20.0KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7287	GEN524485 1-CAPROCK WIND GEN
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7282	GEN587373 1-G16-056-GEN10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.727	DOVER - TWIN LAKES 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	110.7239	CIMARRON - MATHWSN7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	110.7239	CIMARRON - MATHWSN7 345.00 345KV CKT 2

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	110.7226	KETCH - KETCH TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	110.7218	OKEENE - WATONGA SW 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7211	GEN515393 1-OGEWND2G
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7207	GEN528361 1-MADDOX GEN #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0542	110.7199	BOWMAN - KINGINDT2 69.000 69KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	110.7192	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	110.7192	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.7191	GEN336251 1-NINEMILE POINT UNIT#4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	110.7108	4SFORKTTP 138.00 - JAVINE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.6921	GEN563162 1-G15081_3 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	110.6409	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0553	110.6409	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0488	110.6166	CIMARRON - DRAPER LAKE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	110.6086	P12:138:AEPW:CORNVL4:DUNCAN-4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.5739	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	110.5711	P12:138:OKGE:3TERM1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	110.5576	LYDIA - WELSH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	110.5576	LYDIA - WELSH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	110.5172	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	110.5027	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	110.5	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	110.4946	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0539	110.494	CIMARRON (CIMARON2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.4917	GEN645011 1-NEBRASKA CITY 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	110.4489	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	110.4407	ARCADIA - NORTHWEST 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	110.4348	GEN514805 1-SOONER UNIT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	110.3882	GEN514806 1-SOONER UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.3866	GEN533124 1-FR2E2WF1 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0486	110.386	OTTER - WOODRING 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.3819	GEN533126 1-FR2W2WF1 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.3564	GEN533123 1-FR2E1WF1 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.3498	GEN533125 1-FR2W1WF1 0.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.3494	GEN562772 1-G15034_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.3465	GEN562658 1-G15_001_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.3403	GEN645012 2-NEBRASKA CITY 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	110.334	HENESSEY - WAUKOMIS 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.3221	GEN542951 5-HAWTHORN UNIT #5
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.322	GEN640009 1-COOPER NUCLEAR STATION
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	110.32	G16-063-TAP 345.00 - HUGO 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.317	GEN300003 1-THOMAS HILL UNIT 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	110.1986	DOVER SW - HENESSEY 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0489	110.1693	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	110.1641	DBL-THIS-G15
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.1599	GEN511840 1-NORTHEASTERN STATION #3
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	110.1461	LYDIA - VALLIANT 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	110.1461	LYDIA - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.1205	GEN590010 1-ERCOT EQUIVALENCE
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.1077	GEN590011 2-ERCOT EQUIVALENCE
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.095	GEN562723 1-G15_030_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	110.0888	GEN515484 1-CHSHMWV1 0.5750
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	110.0873	GEN515479 1-CHSHMVE1 0.5750
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	110.0863	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	110.0729	ARCADIA - SEMINOLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.0701	CIMARRON - SARA 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	110.0696	DRAPER LAKE - SEMINOLE 345KV CKT 3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0559	110.0676	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0559	110.0676	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	110.0571	CROCKETT - GRIMES 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	110.0571	CROCKETT - GRIMES 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.0566	GEN560768 1-MRWY-WG1 1.0000
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0391	110.0521	DBL-TGA-MATT
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.052	P12:138:WFEC:MSL03
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.049	P12:138:AEPW-OG:WELETK4:MAUD 4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.0409	GEN587483 1-G16-071-GEN10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	110.0273	HOLCOMB - SETAB 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	110.0273	HOLCOMB - SETAB 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	110.0234	KETCH TAP - NORTHWEST 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.0204	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.0199	GEN300007 1-NEW MADRID UNIT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.0193	P12:138:WFEC:MSL08
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	110.0191	G14-074T 345.00 - OKLAUNION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.0171	GEN300002 1-THOMAS HILL UNIT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	110.0128	UNITED CLAY - WEWOKA 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	110.0098	GEN530594 1-SMKYP1G1 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	110.0028	GEN532722 1-EVANS ENERGY CENTER UNIT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	109.994	HAZEL JCT - UNITED CLAY 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.99	GEN661015 1-COYOTE
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.9838	ALMA 161 161/24.0KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.9837	GEN657748 1-YOUNG 2 GENERATOR
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	109.9799	CLARKSVILLE - HAZEL JCT 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.9798	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	109.9756	TUPELO - TUPELO TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.9729	GEN344894 1-1LAB G1 20.000
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	109.9618	GEN562611 1-G14_064_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	109.9535	CHISNEY - CLARKSVILLE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	109.9468	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.9458	GEN529252 1-OMPA-KAW
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	109.9446	MINGO - SETAB 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	109.9446	MINGO - SETAB 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.9411	GEN641089 2-ENERGY CENTER 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.9394	GEN672306 6-BOUNDARY DAM GENERATOR 6
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	109.936	CHISNEY - HIGHLAND 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.9188	GEN562691 1-G15_015_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	109.9146	G15095_T 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	109.9103	DOLET HILLS 345/230KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	109.9087	HIGHLAND - PINK SW 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.9078	GEN659111 2-LELAND OLDS UNIT2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.905	GEN672310 1-POPLAR RIVER GENERATOR 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	109.9042	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0644	109.8855	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	109.877	DRAPER LAKE - SEMINOLE 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	109.8769	DRAPER LAKE - SEMINOLE 345KV CKT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	109.8723	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	109.8602	FT SMITH - MUSKOGEE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.8594	GEN542951 5-HAWTHORN UNIT #5
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.8583	4SIOUX 2 138.00 138/18.0KV TRANSFORMER CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0565	109.8496	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	109.8416	DELL 500 - INDEPENDENCE 500KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	109.8327	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	109.8236	P12:138:WERE:ELPA-SUMN_138::
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	109.8223	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	109.8182	FRANKLIN - PINK SW 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.8152	GEN563022 1-G15066_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.8037	GEN513601 1-GRECCTG_1 20.000
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	109.7958	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	109.7905	G13-010T 345.00 - POST ROCK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	109.7899	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	109.7899	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0417	109.787	DBL-THIS-WWR
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.7855	GEN562892 1-G15048_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.782	GEN645012 2-NEBRASKA CITY 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.774	GEN659103 1-ANTELOPE VALLEY UNIT1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.774	GEN659107 2-ANTELOPE VALLEY UNIT2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0538	109.7662	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.7619	GEN542956 2-LACYGNE UNIT #2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	109.7585	FRANKLIN - FRANKLIN SW 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.7551	GEN542957 1-IATAN UNIT #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	109.7538	HUGO - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	109.7538	HUGO - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.7493	GEN600006 1-AS KING
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.7451	G1524G1525 345.00 - WICHITA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.7451	G1524G1525 345.00 - WICHITA 345KV CKT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	109.7443	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.7377	GEN530690 1-PRWINDG1 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	109.7375	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	109.7374	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	109.7373	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	109.7259	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.7224	GEN659118 1-LARAMIE RIVER UNIT1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	109.7145	MINGO - RED WILLOW 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	109.7145	MINGO - RED WILLOW 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.7122	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	109.7073	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	109.7063	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.7036	CIMARRON (CIMARON2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.6958	P12:138:AEPW:CORNVL4:DUNCAN-4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.6845	GEN620315 1-BIG STONE GEN
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.6804	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.6666	GEN560248 1-G10_003_2 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.6635	GEN532957 1-WAVERGEN1 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.636	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	109.6316	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.626	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.626	ASGI1705 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	109.6051	P12:138:WFEC:MSL15
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.602	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	109.6014	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	109.6014	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.6014	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.5967	GEN600004 2-PRAIRIE ISLAND G2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.5953	GEN600003 1-PRAIRIE ISLAND G1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.5938	GEN562902 1-G15052_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.5862	BIG STONE 230/24.0KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	109.5528	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.5489	GEN562694 1-G15_016_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	109.5405	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	109.5266	LYDIA - WELSH 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	109.5266	LYDIA - WELSH 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.5133	GEN532605 1-ELKRVR-WTG1 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.4991	GEN532606 1-ELKRVR-WTG2 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	109.4846	DBL-BVR-G111
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.4844	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.4832	GEN635213 3-NEAL UNIT 3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.4809	GEN600000 1-SHERBURNECNTY G1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	109.4773	RENO COUNTY - WICHITA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.4648	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.4616	GEN636641 1-LOUISA UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0484	109.4257	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0484	109.4257	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.4235	GEN600001 2-SHERBURNE CNTY G2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.4213	GEN600005 1-MONTICELLO
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.3774	GEN615002 2-COAL CREEK
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.3498	GEN587333 1-G16-048-GEN10.5200
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	109.3462	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	109.3118	GEN501801 1-DOLET HILLS UNIT1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.3117	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	109.3102	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	109.3072	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.3069	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	109.2975	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	109.2975	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.2943	GEN515483 1-BLKWLWD1 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.2828	GEN542955 1-LACYGNE UNIT #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.2586	GEN600002 3-SHERBURNE CNTY G3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.2584	GEN635214 4-NEAL UNIT 4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	109.2114	LYDIA - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	109.2114	LYDIA - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.2101	GEN587213 1-G16-032-GEN10.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	109.207	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.2007	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.2004	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.1901	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.1816	GEN588303 1-ASGI1705-GEN0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.1616	GEN515622 1-KAYWND11 0.7000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	109.1596	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	109.1499	GEN336821 1-GRAND GULF UNIT
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	109.1393	GEN542962 2-IATAN UNIT #2
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	109.1386	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.1366	GEN301382 1-10SAGEWINDG10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.1294	GEN344225 1-1CAL G1 25.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0564	109.1238	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.1199	GEN515623 1-KAYWND12 0.7000
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	109.094	GEN563082 1-G15073_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	109.0908	GEN525562 1-TOLK GEN #2 24 KV
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	109.0851	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	109.0816	P12:138:OKGE:3TERM1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0587	109.0275	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	109.0105	G14-074T 345.00 - OKLAUNION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	109.01	G16-063-TAP 345.00 - HUGO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	109.0079	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.9757	COTTONWOOD CREEK - LIBERTY LAKE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.9683	GEN640009 1-COOPER NUCLEAR STATION
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.9509	GEN336153 1-WATERFORD UNIT#3
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	108.9474	OTTER - WOODRING 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	108.9137	MARSHALL - WOODRING 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.9098	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.8983	GEN525561 1-TOLK GEN #1 24 KV
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0484	108.8871	CIMARRON - DRAPER LAKE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.8835	GEN563182 1-G15083_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	108.8741	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.8681	LIBERTY LAKE - WATERLOO 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.8366	GEN635023 3-WALTER SCOTT UNIT 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	108.8256	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	108.8228	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.8132	GEN562479 1-G14_001_3 0.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	108.7889	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	108.7858	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.7851	GEN515040 1-SEMINOLE 1G
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.7466	GEN532720 1-CANEYWF1 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.7396	GEN335831 1-RIVERBEND UNIT#1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.7205	HENESSEY - WAUKOMIS 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	108.6868	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	108.6865	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	108.6865	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.684	WATERLOO - WHITESB4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.6715	GEN515042 1-SEMINOLE 3G
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0681	108.6667	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0681	108.6667	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	108.6532	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	108.6532	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	108.651	MUSKOGEE - SEMINOLE 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	108.6499	GEN562882 1-G15047_3 0.6900
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	108.646	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	108.646	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	108.6255	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	108.6081	CIMARRON - MATHWSN7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	108.6081	CIMARRON - MATHWSN7 345.00 345KV CKT 2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.6014	GEN635024 4-WALTER SCOTT UNIT 4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	108.5863	BYRON_138 138.00 - SANDY_CN_138138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.5723	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.5598	GEN563052 1-G15069_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.5447	GEN563242 1-G15090_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.5447	GEN587503 1-G73-073-GEN10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.5436	GEN562720 1-G15_025_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.5415	GEN562718 1-G15_024_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.5221	SHDWLKE4 138.00 - WHITESB4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.5215	MITCHSB4 138.00 - SHDWLKE4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.5214	GEN509416 1-TURK GENERATION
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	108.5042	P12:138:WERE:CRSW-OGE_138::

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	108.5036	RENO COUNTY - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.5033	DOVER SW - HENESSEY 138KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.4794	CIMARRON - MINCO 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.4683	GEN511848 1-SOUTHWESTERN STATION #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0304	108.4604	G16-061-TAP 345.00 - SOONER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	108.4529	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.4445	GEN527903 1-HOBBS PLANT #3 (ST)
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0532	108.4183	G14_001T 345.00 - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	108.3986	GEN515040 1-SEMINOLE 1G
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	108.3885	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.3825	GEN533141 1-SLATEGEN1 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.3746	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.3722	GEN587163 1-G16-022-GEN10.6500
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	108.3678	GEN336821 1-GRAND GULF UNIT
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	108.3635	LACYGNE - STILWELL 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	108.3543	DBL-HTCH-OTA
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.3537	GEN515041 1-SEMINOLE 2G
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.3519	GEN501813 1-RODEMACHER UNIT 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0641	108.3312	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.3312	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.3297	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.3268	GEN563032 1-G15067_3 0.4180
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	108.3034	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	108.3034	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	108.2945	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.2418	GEN509403 1-PIRKEY GENERATION
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0658	108.2276	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	108.2248	GEN501801 1-DOLET HILLS UNIT1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	108.2237	GEN514643 1-BRKWND11 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.2192	GEN335206 1-NELSON UNIT 6
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0658	108.2122	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0541	108.1907	ARCADIA - COTTONWOOD CREEK 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0658	108.1849	P12:138:AEPW:MOUNDRD4:SHIDLER4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	108.1728	COW CREEK - MORRISON 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	108.1553	MORISNT4 138.00 - MORRISON 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0658	108.1493	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	108.1489	GEN515484 1-CHSHMVW1 0.5750
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	108.1472	GEN515479 1-CHSHMVE1 0.5750
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	108.1471	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	108.1471	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	108.1425	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.077	108.1371	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0469	108.1224	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.1198	GEN509406 1-WELSH #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.1196	GEN509404 1-WELSH #1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	108.1144	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0524	108.1144	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0658	108.109	DOMES - MOUND ROAD 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.1082	GEN523971 1-HARRINGTON GEN #1 24 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.1082	GEN523972 1-HARRINGTON GEN #2 24 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.1082	GEN523973 1-HARRINGTON GEN #3 24 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.1004	GEN501812 1-RODEMACHER UNIT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	108.0984	P12:138:WFEC:MSL14
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.0923	OTTER - WOODRING 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	108.0853	BEARCAT 138.00 - MOORELAND 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.0802	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.0706	GEN337653 1-WHITE BLUFF UNIT #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	108.0703	GEN520947 1-HUGO1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	108.0681	DBL-G1524-WI
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	108.0404	BYRON_138 138.00 - C_CITY_138 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	108.04	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0469	108.0359	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	108.0317	GEN336153 1-WATERFORD UNIT#3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0481	108.03	OTTER - WARREN VALLEY 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	108.0235	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0428	108.023	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0428	108.023	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0428	108.0173	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0428	108.0173	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	108.0094	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	108.0068	GEN511848 1-SOUTHWESTERN STATION #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	108.0007	P12:138:OKGE:3TERM11
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9952	GEN527901 1-HOBBS PLANT #1 (CT)
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9952	GEN527902 1-HOBBS PLANT #2 (CT)
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	107.9937	BEARCAT 138.00 - NINE MILE 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.979	GEN334440 1-SABINE UNIT 4
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.977	GEN562611 1-G14_064_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9684	GEN337652 1-WHITE BLUFF UNIT #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9465	GEN526332 1-JONES GEN #2 21 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9463	GEN526331 1-JONES GEN #1 22 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9447	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9333	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.9308	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.9308	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	107.9301	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9119	GEN587387 1-G16-057-GEN20.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9118	GEN587383 1-G16-045-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9095	GEN587303 1-G16-045-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9095	GEN587307 1-G16-045-GEN20.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.9069	GEN514910 2-REDBUD GEN
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.9003	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.9003	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.8987	GEN336252 1-NINEMILE POINT UNIT#5
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0481	107.8985	COW CREEK - WARREN VALLEY 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	107.8983	C_CITY_138 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	107.8971	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	107.8971	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	107.8812	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	107.8812	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0445	107.8737	DBL-THIS-WWR
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	107.8592	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.8517	GEN514911 2-REDBUD GEN
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.8517	GEN514942 2-REDBUD4G

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	107.8514	RENO COUNTY - SUMMIT 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	107.8455	GEN587413 1-G16-061-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.8444	GEN526333 1-JONES GEN #3 21 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	107.8442	MOREWOOD SW - NINE MILE 138KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.8201	GEN533124 1-FR2E2WF1 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.8198	P12:138:AEPW:OKMULGE4:R.S.S-4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.8133	GEN533126 1-FR2W2WF1 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	107.8075	SWISSVALE - WEST GARDNER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	107.8063	7JASPER 345.00 - MORGAN 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7957	GEN514940 1-REDBUD GEN
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.7899	GEN533123 1-FR2E1WF1 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7899	GEN514900 1-REDBUD2S
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7897	GEN514899 1-REDBUD1S
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7818	GEN335204 1-NELSON UNIT 4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.7807	GEN533125 1-FR2W1WF1 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7788	GEN336251 1-NINEMILE POINT UNIT#4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7783	GEN336831 1-BAXTER WILSON SES
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.7738	GEN562772 1-G15034_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.7737	GEN562658 1-G15_001_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	107.7682	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.7653	GEN335831 1-RIVERBEND UNIT#1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7643	GEN334441 1-SABINE UNIT 5
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	107.7635	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	107.7634	3TR3AR8EL7EL
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	107.7567	CIMARRON - NORTHWEST 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	107.7516	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	107.7516	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7437	GEN514905 1-REDBUD3S
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7397	P12:069:OKGE:3TERM4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	107.7327	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	107.7327	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	107.7327	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	107.7327	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	107.727	COTTONWOOD CREEK - LIBERTY LAKE 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7258	DEWEY - SOUTHARD 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7245	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0469	107.7205	KINZE - MCELROY 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.7101	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7095	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.7095	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.7088	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.7088	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	107.707	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	107.707	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.6974	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.6974	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	107.6967	KNIFE 4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.695	DOVER SW (DOVER) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6847	GEN527163 1-MUSTANG GEN #3 22 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	107.6791	PECULIAR - STILWELL 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	107.6733	KNIFE 4 138.00 - TRYON 4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.6713	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.6713	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6704	GEN527882 1-CUNNINGHAM GEN #2 20 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0534	107.6689	TRYON 4 138.00 - WARWICK 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6663	GEN334071 1-LEWIS CREEK 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6663	GEN334433 1-SABINE UNIT 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6613	GEN334070 1-LEWIS CREEK 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6421	GEN525494 1-PLANT X GEN #4 20 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6419	GEN511851 1-COMANCHE #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6408	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6377	GEN336191 1-LITTLE GYPSY UNIT#3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6375	GEN527161 1-MUSTANG GEN #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6375	GEN527162 1-MUSTANG GEN #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6366	GEN337041 1-GERALD ANDRUS
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.6341	GEN514805 1-SOONER UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	107.6308	STILLWATER - UNRVSTY4 138.00 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.628	P12:161:AEPW:DYESS 5:HYLAND 5
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.6259	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	107.623	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	107.623	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6226	ROMAN NOSE - SOUTHARD 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	107.6223	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	107.6223	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6211	GEN509409 1-WILKES #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.613	GEN335614 1-WILLOW GLENN UNIT#4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	107.6112	MCELROY - UNVRSTY4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6093	GEN562587 1-G14_056_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.608	GEN514939 1-HORSESHOE LAKE 8G
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	107.6061	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.601	GEN527884 1-CUNNINGHAM GEN #4 22 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6009	GEN501811 1-RODEMACHER UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.6008	GEN587233 1-G16-037-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	107.5991	WEBRE - WELLS 500KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5984	GEN527883 1-CUNNINGHAM GEN #3 22 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.5963	DBL-SPRVL-IR
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.596	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.5919	WAUKOMIS TAP - WOODRING 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5884	GEN338146 1-INDEPENDENCE UNIT #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5853	GEN336464 1-MICHOUD UNIT #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	107.5837	EASTOWN7 345.00 - IATAN 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.578	GEN303007 1-1BC2 U2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5764	GEN303006 1-1BC2 U1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	107.574	ROSS TAP - WARWICK 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	107.5728	P12:138:WERE:MURR-MKEC_138P::
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	107.5662	P13:069-138:WERE:ELPA_TX-1::
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.565	GEN521110 1-ORME1 13.800
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5614	GEN334030 1-FRONTIER UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.56	GEN334031 1-FRONTIER UNIT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.558	GEN521111 1-ORME2 13.800
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.556	DOVER SW - DOVER TAP 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.5558	DOVER TAP - TURCKRT2 69.000 69KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.5553	GEN562723 1-G15_030_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	107.5503	LIBERTY LAKE - WATERLOO 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.546	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5435	GEN336801 1-BAXTER WILSON UNIT #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	107.5417	KINZE - MCELROY 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5395	GEN515602 1-KNGFSR12 0.7000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0677	107.5385	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0677	107.5385	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	107.5349	EL PASO - FARBER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5336	GEN303008 1-1BC2 U3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5335	FRONTIER - GRIMES 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	107.529	CIMARRON - MATHWSN7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	107.529	CIMARRON - MATHWSN7 345.00 345KV CKT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.5286	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.5286	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.5254	GEN509416 1-TURK GENERATION
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	107.5243	SAPULPA ROAD - WEKIWA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	107.5243	SAPULPA ROAD - WEKIWA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5182	GEN336170 1-GULF OXY U4
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.5125	GEN587483 1-G16-071-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.5109	CRESENT - TWIN LAKES 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	107.5089	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.5088	LACYGNE - WEST GARDNER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	107.5043	CLEAVELAND - SILVER CITY 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.5043	P12:138:WFEC:MSL13
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.5038	BOWMAN - TURCRKT2 69.000 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.5021	GEN338143 1-INDEPENDENCE UNIT #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	107.4984	LINCOLN - ROSS TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	107.4952	PECULIAR - PLEASANT HILL 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	107.4905	BRISTOW - SILVER CITY 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4895	GEN520811 1-ANADRK4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.4882	P12:138:WFEC:MSL10
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.4856	P12:069:OKGE:3TERM3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	107.4798	P13:138-161:WERE:NSES_TX-4OR5::
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0474	107.4779	KILDARE4 - WHITE EAGLE 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4769	GEN515443 1-MNCOWND1 0.7000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	107.476	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	107.4729	P12:138:WERE:CRSW-OGE_138::
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4654	GEN524023 1-NICHOLS GEN #3 22 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0464	107.4635	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0464	107.4615	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.4584	PHAROAH - WETUMKA4 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4569	GEN501910 1-ACADIA UNIT ST1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.454	ELDORADO EHV - SHERIDAN EHV 500KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	107.451	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4467	GEN523461 1-BLACKHAWK GEN #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4467	GEN523462 1-BLACKHAWK GEN #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4463	GEN336222 1-LITTLE GYPSY UNIT#2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4421	GEN511853 1-COMANCHE #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4419	P12:138:WFEC:MSL09
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.4394	COTTONWOOD CREEK - CRESENT 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4386	ESSEX UNIT 2 500/18.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.4381	PARAGON4 138.00 - WETUMKA4 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.4363	PARAGON4 138.00 - TRNCNDACV4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4296	GEN511852 1-COMANCHE #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.425	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	107.4235	LACYGNE - NEOSHO 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4227	GEN520812 1-ANADRK5
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4226	GEN520813 1-ANADRK6
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4215	GEN336152 1-WATERFORD UNIT#2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4209	GEN336151 1-WATERFORD UNIT#1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.4181	P12:161:AEPW-SWPA:BEAVERS:EROGERS5
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4177	P12:161:AEPW:DYESS5:ELMSPRNG:TONTITN5
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4175	GEN521112 1-ORME3 13.800
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.416	RODEMACHER 230/22.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4151	GEN562590 1-G14_057_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	107.4106	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	107.4102	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	107.4102	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	107.4094	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	107.4094	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	107.4071	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.4052	OKEENE (OKEENE) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.404	OKEENE - WATONGA SW 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	107.4039	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.4001	GEN528501 1-G14_012 24.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.3994	P12:161:AEPW:EROGERS5:ECNTRTN5
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3981	GEN515606 1-CANDN11 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3981	GEN515607 1-CANDN12 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.3946	P12:138:AEPW:CATOOSA4:T.S.E.-4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	107.3856	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.3829	FLINT CREEK - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.3829	FLINT CREEK - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	107.3827	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.3802	ALTOONA - BUTLER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.3801	P13:069-138:WERE:BTUL_TX-1::
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.3794	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.3794	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.3783	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3778	GEN511962 2-RKYRDGW2-1 0.7000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.376	GEN560105 1-G08-22 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0499	107.3754	P12:138:OKGE:3TERM47
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3715	GEN501823 1-TECHE UNIT 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3692	GEN562550 1-G14_040_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.368	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.368	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.3663	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.3663	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.366	8CAJUN2 500/24.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3656	ST FRANCIS - ST FRANCIS 1 161KV CKT Z1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3656	ST FRANCIS 161/16.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.364	GEN501970 1-EVANGELINE UNIT 7

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3621	GEN337766 1-TRACTEBEL UNIT S1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.3583	CRAIG - WEST GARDNER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.3571	KETCH - KETCH TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3561	GEN334432 1-SABINE UNIT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.356	GEN334431 1-SABINE UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3555	GEN563062 1-G15071_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.352	GEN514806 1-SOONER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.3509	GEN525561 1-TOLK GEN #1 24 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.3487	GEN525562 1-TOLK GEN #2 24 KV
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.3472	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.3467	GEN563022 1-G15066_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.3437	BOWMAN - KINGINDT2 69.000 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	107.3422	CROMWELL - TRNCNDACV4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	107.3418	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.3417	ALVA - ALVA 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	107.3416	NOEL_SW 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3396	GEN587423 1-G16-062-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3366	GEN334392 1-EXXON MOBIL IPP 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3327	NELSON 230/20.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3326	GEN334393 1-EXXON MOBIL IPP 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3326	GEN334394 1-EXXON MOBIL IPP 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3302	GEN562602 1-G15_029_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3265	GEN514912 2-REDBUD GEN
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	107.3264	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	107.3263	IMO TAP - MEN TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.3262	KINGINDT2 69.000 - OKRCHET2 69.000 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.326	GEN501972 1-EVANGELINE UNIT 7-2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3259	GEN501971 1-EVANGELINE UNIT 7-1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0571	107.3256	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0571	107.3256	4GLENCOE 138.00 - PAWNSW4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	107.3253	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0552	107.3253	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3244	GEN525844 1-ELK_1 118.000

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3226	ST FRANCIS 2 161/16.0KV TRANSFORMER CKT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3226	ST FRANCIS 345/161KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3196	GEN336242 1-1NMIL ST1 18.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3196	GEN524022 1-NICHOLS GEN #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.3181	DOVER - DOVER SW 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3165	GEN501912 1-ACADIA UNIT CT1B
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3161	GEN501911 1-ACADIA UNIT CT1A
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	107.3156	7LUTESVIL 345.00 - 7ST FRANC 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	107.3124	4WOODY 138.00 - BRISTOW 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.3107	GOLTYTP2 69.000 - IMO 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3072	GEN562270 1-G12-020-2 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	107.3054	FULTON 115 - HOPE 115KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	107.3054	FULTON 115 - HOPE 115KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3049	GEN337764 1-TRACTEBEL UNIT C1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3049	GEN337765 1-TRACTEBEL UNIT C2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.3048	ESSEX UNIT 2 500/18.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0496	107.3032	FAIRMONT TAP - WOODRING 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.3003	GOLTYTP2 69.000 - HELENA TAP 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	107.2956	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	107.2955	WOODWARD - WWPAR4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.066	107.2928	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.2915	GEN562691 1-G15_015_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.2896	GEN524295 1-SPNSPUR_WND10.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.2772	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	107.2436	WATERLOO - WHITESB4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	107.2241	MARSHALL - WOODRING 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.1913	GEN501813 1-RODEMACHER UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.1888	GEN520947 1-HUGO1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.1824	GEN515041 1-SEMINOLE 2G
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	107.1664	CIMARRON - MINCO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.156	GEN515042 1-SEMINOLE 3G
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	107.1432	BYRON_138 138.00 - SANDY_CN_138138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.1328	GEN509403 1-PIRKEY GENERATION
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	107.1186	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	107.107	GEN562902 1-G15052_3 0.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.0819	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	107.0814	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	107.0761	GRACEMONT - MINCO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	107.04	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.027	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.0101	GEN335206 1-NELSON UNIT 6
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	107.005	GEN337653 1-WHITE BLUFF UNIT #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.992	GEN337652 1-WHITE BLUFF UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	106.9912	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.9874	GEN509406 1-WELSH #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.9871	GEN509404 1-WELSH #1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.031	106.9709	G16-061-TAP 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.9541	GEN514998 1-MCCLAIN UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.9541	GEN514999 1-MCCLAIN UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	106.953	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.9351	GEN334440 1-SABINE UNIT 4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.9251	GEN336252 1-NINEMILE POINT UNIT#5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	106.9122	SHDWLKE4 138.00 - WHITESB4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	106.9116	MITCHSB4 138.00 - SHDWLKE4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	106.8913	P12:138:WFEC:MSL14
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.8879	GEN501812 1-RODEMACHER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0665	106.8868	SHIDLER - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	106.8811	GRDA1 - GREC TAP5 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	106.8707	BEARCAT 138.00 - MOORELAND 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0665	106.8693	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.8692	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.8692	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	106.8526	SWISSVALE - WEST GARDNER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.8359	GEN514936 1-HORSESHOE LAKE 7S
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.8195	GEN336251 1-NINEMILE POINT UNIT#4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0302	106.8042	G16-061-TAP 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.7947	GEN515000 1-MCCLAIN UNIT 3
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	106.7932	GEN562429 1-G13-029 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0665	106.7904	P12:138:AEPW:MOUNDRD4:SHIDLER4

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.7729	P12:069:OKGE:3TERM4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	106.7671	BEARCAT 138.00 - NINE MILE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0665	106.7661	DOMES - PAWHUSKA TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	106.7574	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.7556	GEN527903 1-HOBBS PLANT #3 (ST)
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	106.7539	BLACKBERRY - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.7535	GEN336831 1-BAXTER WILSON SES
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0594	106.7261	RANCHR7 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	106.7196	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	106.7166	OPENSKY7 345.00 - RANCHR7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.7151	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0665	106.7058	DOMES - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	106.697	CUSHING - PAYNESB4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.6914	GEN334441 1-SABINE UNIT 5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.6778	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.6778	BORDER 7345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.672	GEN300015 1-1SGPDEL 18.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0767	106.6551	4REMINGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.6549	MULLERGREN - SPEARVILLE 230KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.6549	MULLERGREN - SPEARVILLE 230KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6478	GEN546698 1-QN GEN2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	106.6454	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0432	106.6453	CLEAVELAND - CLEV LND 4 138.00 138KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0432	106.6453	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0432	106.6453	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6439	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6439	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6437	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6433	GEN659018 1-G14_0031S_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.6423	GEN514910 2-REDBUD GEN
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.642	GEN514911 2-REDBUD GEN

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.642	GEN514942 2-REDBUD4G
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0459	106.6406	CWBOYHT4 138.00 - FNTANTP4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.64	GEN300012 1-HOLDEN UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.64	GEN300013 1-HOLDEN UNIT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6393	GEN659031 1-G12_014IS_4 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.6361	FLATRDG3 - HARPER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.6361	FLATRDG3 - HARPER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	106.6339	ARCADIA - SEMINOLE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6323	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6323	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0459	106.6311	CWBOYHT4 138.00 - MARLAND TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6273	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6273	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6269	GEN659289 1-DAYCNTYWND W0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.625	GEN600067 9-HIGH BRIDGE
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.622	GEN335204 1-NELSON UNIT 4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	106.6214	DOLET HILLS 345/230KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	106.6201	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6165	GEN549890 1-SOUTHWEST 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.6142	GEN514912 2-REDBUD GEN
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6142	GEN659354 1-DEERCREK STG18.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	106.6141	BYRON_138 138.00 - C_CITY_138 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.614	GEN659353 1-DEERCREK CTG18.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.6051	GEN525845 1-ELK_2 118.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.6045	GEN525844 1-ELK_1 118.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.6039	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	106.6014	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	106.6014	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.5996	CHISNEY - CLARKSVILLE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	106.5979	MOREWOOD SW - NINE MILE 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.597	MCLLAIN - STHLAKE4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5939	GEN541163 1-ARIES COMBUSTION TURBINE #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5937	GEN300010 1-ST FRANCIS UNIT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5915	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0477	106.5896	P12:345:SPS:J07.1.FINN.HITCH
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	106.583	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	106.583	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5821	GEN530594 1-SMKYP1G1 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5819	GEN300020 1-1CHOTCT4 16.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5814	GEN300021 1-1CHOTCT5 16.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5809	GEN300032 1-CHOUTEAU CTG 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5809	GEN300033 1-CHOUTEAU STG 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5791	SARA - STHLAKE4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	106.5783	OVEXFRMCCOVE
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5705	GEN337041 1-GERALD ANDRUS
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	106.5686	CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	106.5675	LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.5657	4LUTHERD 138.00 - LUTHER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.5653	G14-074T 345.00 - OKLAUNION 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.565	GEN300024 1-1CHOTST6 16.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5649	GEN300031 1-CHOUTEAU CTG 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	106.5623	TUPELO - TUPELO TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5611	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	106.5583	LACYGNE - STILWELL 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	106.5581	DELL 500 - INDEPENDENCE 500KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.558	NORTHWEST (NORTWST4) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	106.5544	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5542	GEN300011 1-ST FRANCIS UNIT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5528	GEN345671 2-1RUSH G2 18.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0459	106.552	MARLAND TAP - OSAGE 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5514	GEN345670 1-1RUSH G1 18.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5481	QUAIL CREEK - SKYLINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	106.5469	COW CREEK - MORRISON 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.5469	CHISNEY - HIGHLAND 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5463	GEN587387 1-G16-057-GEN20.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5461	GEN587383 1-G16-045-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5439	GEN587307 1-G16-045-GEN20.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5438	GEN587303 1-G16-045-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5432	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5432	TULSA NORTH - WEKIWA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5409	GEN505432 1-SIKESTON
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5408	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5398	GEN338146 1-INDEPENDENCE UNIT #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.5359	P12:138:AECI:STROUD-LUTHER
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5314	GEN657749 1-YOUNG 1 GENERATOR
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.53	P12:138:WFEC:MSL03
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5252	GEN336191 1-LITTLE GYPSY UNIT#3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	106.5238	HOLCOMB - SETAB 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	106.5238	HOLCOMB - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5232	GEN334433 1-SABINE UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	106.5178	MORISNT4 138.00 - MORRISON 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5166	GEN645025 5-NORTH OMAHA 5
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	106.5159	GEN514805 1-SOONER UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5156	GEN542954 3-MONTROSE UNIT #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5129	MORGAN - MUSTANG 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.5118	CIMARRON - SARA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5102	GEN514940 1-REDBUD GEN
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0478	106.5088	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0478	106.5088	KINZE - STILLWATER KINZIE 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	106.5073	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5039	GEN514905 1-REDBUD3S
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5032	GEN514899 1-REDBUD1S
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.5032	GEN514900 1-REDBUD2S
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4953	MORGAN - XEROX 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4953	FAIRVIEW - OKEENE 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4923	CZECH HALL - XEROX 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	106.4857	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	106.4814	C_CITY_138 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4805	GEN527166 1-MUSTANG_6 118.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.4789	KETCH TAP - NORTHWEST 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4736	GEN335614 1-WILLOW GLENN UNIT#4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	106.4735	KEO EHV - WEST MEMPHIS 500 500KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.4716	HIGHLAND - PINK SW 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0477	106.4713	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0477	106.4713	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4642	GEN549893 2-SOUTHWEST 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0499	106.4636	MINGO - SETAB 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0499	106.4636	MINGO - SETAB 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	106.4618	P12:138:WERE:ELPA-SUMN_138::
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4616	GEN641089 2-ENERGY CENTER 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4613	GEN659110 1-LELAND OLDS UNIT1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	106.4605	DBL-SPRVL-IR
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4584	GEN681522 3-GENOA 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	106.4551	FT SMITH - MUSKOGEE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4532	THOMAS HILL 161/22.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	106.4518	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.449	GEN590010 1-ERCOT EQUIVALENCE
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.443	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4366	CIMARRON - CZECH HALL 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4359	GEN336464 1-MICHOUD UNIT #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4329	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	106.4309	G14_001T 345.00 - WICHITA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.429	4SIOUX 1 138.00 138/18.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.048	106.4281	OTTER - WARREN VALLEY 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4278	GEN344895 2-1LAB G2 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.4254	P12:138:AEPW:OKMULGE4:R.S.S-4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4246	GEN590011 2-ERCOT EQUIVALENCE
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4226	GEN338143 1-INDEPENDENCE UNIT #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.4177	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	106.4157	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4143	GEN300001 1-THOMAS HILL UNIT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0659	106.4115	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4111	GEN344896 3-1LAB G3 20.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.4103	GEN344897 4-1LAB G4 20.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.41	GEN344894 1-1LAB G1 20.000

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4088	GEN523971 1-HARRINGTON GEN #1 24 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4088	GEN523972 1-HARRINGTON GEN #2 24 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4088	GEN523973 1-HARRINGTON GEN #3 24 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.4048	GEN336801 1-BAXTER WILSON UNIT #1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	106.4026	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	106.4026	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3968	GEN672321 1-SHAND GENERATOR 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3927	GEN526333 1-JONES GEN #3 21 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3927	GEN526334 1-JONES_4 116.500
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	106.3925	GEN514806 1-SOONER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3883	BORDER 7345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.3854	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.3854	GRDA1 - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3837	DEWEY - SOUTHARD 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3836	GEN672311 2-POPLAR RIVER GENERATOR 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3835	GEN672310 1-POPLAR RIVER GENERATOR 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	106.3778	CIMARRON - NORTHWEST 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3768	GEN672306 6-BOUNDARY DAM GENERATOR 6
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3741	GEN562892 1-G15048_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	106.3707	P12:069:OKGE:3TERM3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3652	GEN509409 1-WILKES #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.363	GEN681542 6-JP MADGETT
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3616	GEN527901 1-HOBBS PLANT #1 (CT)
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3616	GEN527902 1-HOBBS PLANT #2 (CT)
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	106.3597	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	106.3597	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	106.3577	DOVER SW (DOVER) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0499	106.3523	MINGO - RED WILLOW 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0499	106.3523	MINGO - RED WILLOW 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3522	P12:161:AEPW:DYESS 5:HYLAND 5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3481	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	106.3383	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3376	GEN513602 1-GRECSTG_1 17.500
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3335	GEN334071 1-LEWIS CREEK 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3307	GEN530690 1-PRWINDG1 0.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3286	GEN514935 1-HORSESHOE LAKE 6G
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3276	GEN334070 1-LEWIS CREEK 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3274	GEN509398 1-KNOXLEE #5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3254	GEN526332 1-JONES GEN #2 21 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3252	GEN526331 1-JONES GEN #1 22 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	106.3218	RENO COUNTY - SUMMIT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0533	106.3195	ARCADIA - NORTHWEST 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.3182	GEN547649 1-ASBURY UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	106.3169	P12:138:AEPW:N.E.S.-4:CATOOSA4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.3123	GEN511851 1-COMANCHE #1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0557	106.3075	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2907	GEN303007 1-1BC2 U2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.289	GEN303006 1-1BC2 U1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2839	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2838	GEN336222 1-LITTLE GYPSY UNIT#2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	106.2801	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	106.2776	HUGO - VALLIANT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	106.2776	HUGO - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.048	106.2772	COW CREEK - WARREN VALLEY 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2771	GEN513601 1-GRECCTG_1 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2745	GEN501811 1-RODEMACHER UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	106.2701	4MEMORAL 138.00 - LUTHER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0458	106.2688	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0458	106.267	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	106.2566	7JASPER 345.00 - MORGAN 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2525	P12:138:AEPW:CORNVIL4:DUNCAN-4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0494	106.2492	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0494	106.2492	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.054	106.248	P12:138:OKGE:3TERM11
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2479	GEN509394 1-FLINT CREEK
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2476	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2476	ASGI1705 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2401	GEN336152 1-WATERFORD UNIT#2

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2398	GEN336151 1-WATERFORD UNIT#1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2365	GEN661015 1-COYOTE
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2347	GEN303008 1-1BC2 U3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	106.2277	DOVER SW - DOVER TAP 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	106.2276	DOVER TAP - TURCRKT2 69.000 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0547	106.2272	ARCADIA - COTTONWOOD CREEK 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	106.2226	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	106.2226	CLARKSVILLE - ONETA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2175	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2171	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2169	GEN562587 1-G14_056_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2165	WAUKOMIS TAP - WOODRING 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2148	GEN336170 1-GULF OXY U4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2145	GEN512688 2-GRDA1 GSU2 22
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.2099	FRANKLIN - PINK SW 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.2069	GEN509408 1-WILKES #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2033	GEN620315 1-BIG STONE GEN
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	106.2007	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2003	G1524G1525 345.00 - WICHITA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.2003	G1524G1525 345.00 - WICHITA 345KV CKT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1988	GEN334030 1-FRONTIER UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1976	GEN334031 1-FRONTIER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	106.1944	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	106.194	LYDIA - WELSH 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	106.194	LYDIA - WELSH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.192	P12:161:AEPW:DYESS5:ELMSPRNG:TONTITN5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1882	GEN587233 1-G16-037-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.1763	ROMAN NOSE - SOUTHARD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	106.1735	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	106.1735	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	106.1717	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	106.1715	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	106.1715	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	106.1712	P12:138:AECI:LUTHER-JONES
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	106.1673	EL PASO - FARBER 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.1662	GEN657748 1-YOUNG 2 GENERATOR
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.1655	GEN560248 1-G10_003_2 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.1639	GEN532957 1-WAVERGEN1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1599	GEN515225 1-MUSKOGEE 5G
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	106.1588	P13:069-138:WERE:ELPA_TX_1::
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1567	GEN515226 1-MUSKOGEE 6G
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	106.1558	G13-010T 345.00 - POST ROCK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1525	GEN521110 1-ORME1 13.800
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1522	GEN520812 1-ANADRK5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1522	GEN520813 1-ANADRK6
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1516	GEN515223 1-MUSKOGEE 4G
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1481	FRONTIER - GRIMES 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1463	GEN511847 1-SOUTHWESTERN STATION #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.1451	BIG STONE 230/24.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.144	GEN546702 1-NM GEN N1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	106.1422	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	106.1404	GEN562882 1-G15047_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1377	GEN520811 1-ANADRK4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1364	GEN515602 1-KNGFSR12 0.7000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	106.1352	PECULIAR - STILWELL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1348	GEN514883 1-SPRING CREEK UNIT 3 AND 4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1338	GEN527163 1-MUSTANG GEN #3 22 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	106.1327	3TR3AR8EL7EL
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	106.1327	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1317	GEN514882 1-SPRING CREEK UNIT 1 AND 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	106.126	BOWMAN - TURCRKT2 69.000 69KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.1223	GEN511840 1-NORTHEASTERN STATION #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	106.1221	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	106.1221	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	106.1221	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	106.1221	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1219	GEN527882 1-CUNNINGHAM GEN #2 20 KV

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.117	GEN600004 2-PRAIRIE ISLAND G2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.1154	GEN600003 1-PRAIRIE ISLAND G1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.1119	GEN501910 1-ACADIA UNIT ST1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.0994	GEN600006 1-AS KING
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0944	GEN525494 1-PLANT X GEN #4 20 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0925	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	106.0924	P12:138:AEPW:CATOOSA4:T.S.E.-4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0893	GEN514890 1-SMITH 1G
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.089	GEN532605 1-ELKRVR-WTG1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	106.083	P12:161:AEPW:EROGERS5:ECNTRTN5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0771	GEN511853 1-COMANCHE #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.0749	GEN532606 1-ELKRVR-WTG2 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	106.0691	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	106.0691	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	106.0674	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	106.0674	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0673	GEN527161 1-MUSTANG GEN #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0667	GEN511849 1-SOUTHWESTERN STATION #4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0667	GEN511850 1-SOUTHWESTERN STATION #5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0651	GEN515443 1-MNCOWND1 0.7000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.062	GEN527164 1-MUSTANG GEN #4 22 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0613	GEN511852 1-COMANCHE #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0611	GEN334431 1-SABINE UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0611	GEN334432 1-SABINE UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0592	GEN527165 1-Mustang Gen #5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0587	GEN527162 1-MUSTANG GEN #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	106.0523	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	106.0523	T.NO.2-4 138.00 - TULSA NORTH 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	106.0517	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	106.0517	TULSA NORTH (TULSA N) 345/138/34.5KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.0511	GEN300006 1-NEW MADRID UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0476	GEN587322 1-8GEN-2016-4713.800
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0476	GEN587323 1-9GEN-2016-4713.800
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0476	GEN587324 1-10GEN-2016-413.800
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0476	GEN587325 1-11GEN-2016-413.800

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0476	GEN587326 1-12GEN-2016-413.800
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.0452	GEN300007 1-NEW MADRID UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	106.0434	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	106.0434	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0491	106.0433	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0491	106.0433	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0428	GEN527884 1-CUNNINGHAM GEN #4 22 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0419	GEN527883 1-CUNNINGHAM GEN #3 22 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	106.0399	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	106.0399	ELK CITY - RED HILLS WIND 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0522	106.0396	BRISTOW - SILVER CITY 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.038	GEN337766 1-TRACTEBEL UNIT S1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	106.0368	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.0368	GEN300002 1-THOMAS HILL UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0672	106.0326	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0672	106.0326	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	106.0286	EASTOWN7 345.00 - IATAN 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	106.0274	FRANKLIN - FRANKLIN SW 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.053	106.0265	CLEAVELAND - SILVER CITY 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0235	GEN521111 1-ORME2 13.800
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.021	GEN635213 3-NEAL UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	106.0105	RODEMACHER 230/22.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	106.0085	GEN562694 1-G15_016_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9992	GEN511839 1-NORTHEASTERN STATION #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.998	GEN562590 1-G14_057_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	105.9966	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9955	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9954	GEN521112 1-ORME3 13.800
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.9954	GRACEMONT - MINCO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9946	GEN501970 1-EVANGELINE UNIT 7
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.9885	CRESENT - TWIN LAKES 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	105.9849	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	105.9849	CANADIAN RIVER - PITTSBURG 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	105.9833	P13:138-161:WERE:NSES_TX-4OR5::
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9828	GEN515606 1-CANDN11 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9828	GEN515607 1-CANDN12 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9758	P12:161:AEPW-SWPA:BEAVER5:EROGRS5

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9746	GEN338388 1-1PLUM PT U1 23.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	105.9732	PECULIAR - PLEASANT HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9715	ST FRANCIS - ST FRANCIS 1 161KV CKT Z1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	105.9661	P12:138:WERE:CRSW-SUMN_138:: G15095_T 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	105.9651	
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.964	GEN336221 1-LITTLE GYPSY UNIT#1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	105.9633	FAIRMONT TAP - WOODRING 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.962	GEN337764 1-TRACTEBEL UNIT C1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.962	GEN337765 1-TRACTEBEL UNIT C2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9592	8CAJUN2 500/24.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.9585	WEBRE - WELLS 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9576	GEN336242 1-1NMIL ST1 18.000
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	105.9551	CIMARRON - DRAPER LAKE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9513	GEN334392 1-EXXON MOBIL IPP 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	105.9505	CRESWELL - OXFORD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0517	105.9497	NOEL_SW 138.00 - SALT_PLAINS 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9493	GEN334393 1-EXXON MOBIL IPP 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9493	GEN334394 1-EXXON MOBIL IPP 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9492	GEN636641 1-LOUISA UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9489	GEN501972 1-EVANGELINE UNIT 7-2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9488	GEN501971 1-EVANGELINE UNIT 7-1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9472	GEN511962 2-RKYRDGW2-1 0.7000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	105.9434	LACYGNE - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.941	SABINE 230/24.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9406	GEN501912 1-ACADIA UNIT CT1B
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9405	GEN587333 1-G16-048-GEN10.5200
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9402	GEN509407 1-WILKES #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9401	GEN501911 1-ACADIA UNIT CT1A
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9364	GEN337757 1-DUKE HOTSPRINGS STG1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9355	ST FRANCIS 345/161KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	105.9352	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9343	GEN659111 2-LELAND OLDS UNIT2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9338	GEN336446 1-MICHOUD UNIT #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	105.9318	OKEENE (OKEENE) 138/69/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0476	105.9312	KILDARE4 - WHITE EAGLE 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9261	GEN501823 1-TECHE UNIT 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9243	GEN600001 2-SHERBURNE CNTY G2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9236	GEN600005 1-MONTICELLO
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0525	105.9216	OXFORD - SUMNER 4 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0512	105.9205	KETCH - KETCH TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9204	GEN563062 1-G15071_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.918	GEN337430 1-PERYVILLE UNIT #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9174	GEN337428 1-PERYVILLE UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9143	GEN503909 1-FULTONU1 1 16.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	105.9122	CUSHING - GRNWOOD4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9105	GEN509393 S1-ARSENAL HILL GENS #4 (STALL)
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9084	P12:138:WFEC:MSL13
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9057	GEN524023 1-NICHOLS GEN #3 22 KV
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	105.9044	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	105.9044	NORTHEAST STATION - ONETA 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.9041	GEN615001 1-COAL CREEK
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.9036	NELSON 230/20.0KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.901	GEN615002 2-COAL CREEK
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.9008	P12:138:AEPW:MOHAWK4:T.NO--4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8997	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8997	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0526	105.8991	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0516	105.8989	FPL SWITCH - WOODWARD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	105.8966	7LUTESVIL 345.00 - 7ST FRAN 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.892	GEN336241 1-1NMIL CT2 18.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8919	GEN336240 1-1NMIL CT1 18.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8883	GEN514897 1-SMITH 1S
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0554	105.8881	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0554	105.8881	BARTLESVILLE COMANCHE - MOUND ROAD 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8869	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8863	GEN506754 1-LEBROCK STEAM 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8857	P12:69:AEPW:NROGERS2:ECNTRTN2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8849	GEN335612 1-WILLOW GLENN UNIT#2

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8848	GEN335571 1-CARVILLE UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8846	GEN335570 1-CARVILLE CTG
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	105.884	FLINT CREEK - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	105.884	FLINT CREEK - SILOAM SPRINGS TAP 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8809	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8793	ALTOONA - BUTLER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8788	P13:069-138:WERE:BTUL_TX-1::
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8768	GEN336167 1-GULF OXY U1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8768	GEN336168 1-GULF OXY U2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8768	GEN336169 1-GULF OXY U3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8766	P12:138:WFEC:MSL10
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	105.8753	OKEENE - WATONGA SW 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8751	PHAROAH - WETUMKA4 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8743	P12:138:WFEC:MSL09
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8729	COTTONWOOD CREEK - CRESENT 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	105.8714	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	105.8708	BENTON - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.8702	FULTON 115 - HOPE 115KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.8702	FULTON 115 - HOPE 115KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8695	GEN515483 1-BLKWLWD1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8692	GEN338443 1-PANDA S1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8684	GEN337432 1-PERYVILLE UNIT #5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.867	P12:138:AEPW:YARCH-S4:T.S.E.-4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8661	SABINE 230/22.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8659	P12:138:AEPW:BA_71ST4:T.S.E.-4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8658	CIMARRON (CIMARON2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8608	GEN562550 1-G14_040_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	105.8602	CRAIG - WEST GARDNER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8599	GEN509392 G2-ARSENAL HILL GENS #3 (STALL)
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	105.8593	ALVA - ALVA 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8592	GEN563272 1-G15093_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8586	GEN521101 1-ANADRK7
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8586	GEN521102 1-ANADRK8
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	105.8573	8WNEWMADRID 500.00 - DELL 500 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.857	GEN560105 1-G08-22 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0528	105.8561	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8554	5LOCSTGV - MAID 161KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8541	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8524	PARAGON4 138.00 - WETUMKA4 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8516	GEN509391 G1-ARSENAL HILL GENS #2 (STALL)
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8514	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8513	GEN338500 1-MCCLELLAN UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8508	PARAGON4 138.00 - TRNCNDACV4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8491	GEN600000 1-SHERBURNECNTY G1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8485	CONCORDIA - ELM CREEK 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8485	CONCORDIA - ELM CREEK 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8483	5CDRCRST 161.00 - 5LOCSTGV 161KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8476	CONCORDIA (CONCORD6) 230/115/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8476	CONCORDIA (CONCORD6) 230/115/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8466	MC NIEL 500/115KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.8461	P12:161:GRDA:MAID-CEDARCREST
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.845	GEN335644 1-EXXON UNITS
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	105.8433	P12:138:GRDA:STILLWATER-VALLEY
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.8433	GEN562602 1-G15_029_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.843	GEN303024 1-1G3INTHB 18.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.843	GEN303026 1-1G4INTHB 18.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8384	GEN659103 1-ANTELOPE VALLEY UNIT1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.8384	GEN659107 2-ANTELOPE VALLEY UNIT2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	105.8223	LYDIA - VALLIANT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	105.8223	LYDIA - VALLIANT 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	105.7846	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	105.7846	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.7839	GEN541151 3-SIBLEY GENERATING UNIT #3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.7803	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.7772	GEN587213 1-G16-032-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	105.7755	G16-063-TAP 345.00 - HUGO 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.7641	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.7528	GEN588303 1-ASGI1705-GEN0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	105.7404	GEN587413 1-G16-061-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.7394	GEN515622 1-KAYWND11 0.7000

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	105.7203	DBL-HTCH-OTA
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.7087	GEN515623 1-KAYWND12 0.7000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.7	GEN301382 1-1OSAGEWINDG10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.6483	GEN635214 4-NEAL UNIT 4
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0464	105.6478	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.644	GEN659118 1-LARAMIE RIVER UNIT1
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	105.5977	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.5945	GEN563082 1-G15073_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.5597	GEN600002 3-SHERBURNE CNTY G3
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	105.5265	GEN515484 1-CHSHMWW1 0.5750
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	105.5248	GEN515479 1-CHSHMVE1 0.5750
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.5147	GEN344225 1-1CAL G1 25.000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0494	105.485	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.4676	GEN563182 1-G15083_3 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	105.4105	GEN562611 1-G14_064_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.3129	GEN635023 3-WALTER SCOTT UNIT 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	105.3114	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0492	105.3114	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.2927	GEN562479 1-G14_001_3 0.6900
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	105.283	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.2501	GEN532720 1-CANEYWF1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	105.2106	BROKEN ARROW NORTH - SOUTH TAP - ONETA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.2098	GEN520998 1-MORLND3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.2052	GEN511838 1-NORTHEASTERN STATION # 1-1B
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.2047	GEN529252 1-OMPA-KAW
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.2028	GEN543106 1-BULL CREEK COMBUSTION TURBINE #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.2021	GEN640028 1-COLUMCOGENERATION
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.2008	GEN511837 1-NORTHEASTERN STATION # 1-1A
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1958	GEN300020 1-1CHOTCT4 16.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1955	GEN543108 3-BULL CREEK COMBUSTION TURBINE #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1955	GEN543109 4-BULL CREEK COMBUSTION TURBINE #4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1954	GEN300021 1-1CHOTCT5 16.000

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1949	GEN300032 1-CHOUTEAU CTG 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1949	GEN300033 1-CHOUTEAU STG 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1945	P12:138:OKGE:3TERM21
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1939	GEN543107 2-BULL CREEK COMBUSTION TURBINE #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1932	GEN640019 1-SHELDON STATION UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.1929	P12:138:WFEC:MSL08
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1919	GEN600047 1-MECCT1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1918	GEN539677 3-A. M. MULLERGEN GENERATOR
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1906	P12:138:OKGE:3TERM14
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	105.1905	KEO EHV - WHITE BLUFF 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.19	LONEOAK - NORTHWEST 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	105.1899	4WARWICK 138.00 - STROUD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	105.1876	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	105.1876	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0459	105.1855	CWBOYHT4 138.00 - FNTANTP4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1839	GEN532671 1-TECUMSEH ENERGY CENTER UNIT 7
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1819	GEN300024 1-1CHOTST6 16.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1818	GEN300010 1-ST FRANCIS UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1817	GEN300031 1-CHOUTEAU CTG 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.1815	UNITED CLAY - WEWOKA 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	105.1811	DOLET HILLS 345/230KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1786	P12:138:AEPW:112GORE4:L.E.S.-4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	105.1777	MINGO - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	105.1777	MINGO - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	105.1774	ARCADIA - SEMINOLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.1768	P12:138:AEPW-OGE:WELET4:MAUD 4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.1756	7SPORTSMAN - BLACKBERRY 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	105.1753	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1712	EARLSBORO 4138.00 - FIXICO TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.171	BAXTER WILSON SES - RAY BRASWELL SES 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0459	105.1707	CWBOYHT4 138.00 - MARLAND TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0518	105.1705	7MCCREDIE 345.00 - 7OVERTON 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1688	GEN300012 1-HOLDEN UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1688	GEN300013 1-HOLDEN UNIT 2

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.1674	HOLCOMB - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.1674	HOLCOMB - SETAB 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1658	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1656	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1656	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1653	GEN659018 1-G14_003IS_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1652	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.1649	P12:138:OKGE:3TERM10
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	105.1641	CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	105.1628	LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.1558	HAZEL JCT - UNITED CLAY 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	105.155	HUGO - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	105.155	HUGO - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1537	P12:69:AEPW:L.E.S.-2:LAW WC2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1531	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1531	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1531	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1477	GEN645033 3-SARPY COUNTY 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	105.1463	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1432	GEN541163 1-ARIES COMBUSTION TURBINE #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1409	GEN541170 4-LAKERD#4 13.800
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1405	7CALAWY 1 345.00 345/25.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	105.1385	TUPELO - TUPELO TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1359	HAMMETT TAP - LINCOLN 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1355	GEN659289 1-DAYCNTYWND W0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	105.1351	ROSS TAP - WARWICK 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.1336	QUAIL CREEK - SKYLINE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1325	GEN645024 4-NORTH OMAHA 4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1307	GEN657749 1-YOUNG 1 GENERATOR
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.13	CLARKSVILLE - HAZEL JCT 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1281	EARLSBORO 4138.00 - MAUD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1281	EARLSBORO 4138.00 - MAUD 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1264	GEN600067 9-HIGH BRIDGE

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1248	GEN300011 1-ST FRANCIS UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1233	GEN629069 1-EMERY STEAM TURBINE 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1221	GEN539670 4-JUDSON LARGE GENERATOR
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	105.1185	4LUTHERD 138.00 - 4WARWICK 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0391	105.1171	DBL-G1151-TG
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1162	GEN505432 1-SIKESTON
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	105.116	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	105.116	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.1125	CIMARRON - CZECH HALL 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1092	P12:138:AEPW:SHERID4:112GORE4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0459	105.1087	MARLAND TAP - OSAGE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1086	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1084	GEN549890 1-SOUTHWEST 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1068	GEN541165 1-SHARPR#1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1068	GEN541166 2-SHARPR#2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.1059	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	105.1058	RIVERSIDE STATION - SAPULPA ROAD 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	105.1058	RIVERSIDE STATION - SAPULPA ROAD 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.1028	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0983	GEN344895 2-1LAB G2 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.0944	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.094	HAMMETT TAP - HORSESHOE LAKE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	105.0896	LINCOLN - ROSS TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.0891	P12:138:WFEC:MSL03
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0551	105.089	COTTONWOOD CREEK - PINE ST 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0886	GEN542961 6-HAWTHORN COMBUSTION TURBINE #6
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	105.0857	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	105.0857	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0849	GEN344896 3-1LAB G3 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0836	GEN344894 1-1LAB G1 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0834	GEN344897 4-1LAB G4 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	105.069	4LUTHERD 138.00 - LUTHER 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.069	GEN645011 1-NEBRASKA CITY 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0666	GEN546698 1-QN GEN2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0656	GEN659354 1-DEERCREK STG18.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0654	GEN659353 1-DEERCREK CTG18.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.0632	CHISNEY - CLARKSVILLE 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0626	GEN590010 1-ERCOT EQUIVALENCE
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.0626	GEN563242 1-G15090_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.0626	GEN587503 1-G73-073-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	105.062	8HOLND BTM% 500.00 - KEO EHV 500KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.0618	GEN562720 1-G15_025_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.0604	GEN562718 1-G15_024_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0596	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.0581	GEN635024 4-WALTER SCOTT UNIT 4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.0572	NORTHWEST (NORTWST3) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	105.0572	NORTHWEST (NORTWST4) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.0556	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0514	105.0546	GEN587463 1-G16-068-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0514	PLUM POINT 500/23.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0418	P12:69:AEPW-OMPA:SNYDER-2:ALTUSJ2:OMALTUS2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0416	GEN590011 2-ERCOT EQUIVALENCE
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0486	105.039	DELAWARE - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0486	105.039	DELAWARE - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0387	GEN547656 1-STATE LINE UNIT #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0374	GEN547657 1-STATE LINE UNIT #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0346	GEN542967 9-HAWTHORN UNIT #9
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0331	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0306	GEN532662 1-LAWRENCE ENERGY CENTER UNIT 4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	105.0227	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	105.022	CHISNEY - HIGHLAND 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0485	105.0161	CIMARRON - MINCO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	105.0132	DBL-BVR-G111
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0061	GEN532724 1-EVANS ENERGY CENTER GAS TURBINE 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0046	GEN672321 1-SHAND GENERATOR 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	105.0025	OVEXFRMCCOVE
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0022	GEN672310 1-POPLAR RIVER GENERATOR 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	105.0022	GEN672311 2-POPLAR RIVER GENERATOR 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0515	104.9932	P12:138:AECI:STROUD-LUTHER
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.9932	GEN563052 1-G15069_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	104.992	G13-010T 345.00 - POST ROCK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	104.9905	G16-063-TAP 345.00 - HUGO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	104.9876	G1524G1525 345.00 - WICHITA 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	104.9876	G1524G1525 345.00 - WICHITA 345KV CKT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9871	GEN531447 1-HOLCOMB GENERATOR
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9859	GEN672306 6-BOUNDARY DAM GENERATOR 6
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9858	GEN532723 1-EVANS ENERGY CENTER GAS TURBINE 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0503	104.9816	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	104.9816	LYDIA - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	104.9816	LYDIA - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9794	P12:138:AEPW:DUNCAN-4:L.E.S.-4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	104.9785	FAIRVIEW - OKEENE 69KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	104.9685	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.9674	HIGHLAND - PINK SW 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	104.961	KETCH TAP - NORTHWEST 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9553	GEN513602 1-GRECSTG_1 17.500
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	104.9553	GEN562429 1-G13-029 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.9538	GEN587163 1-G16-022-GEN10.6500
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.9538	GEN645012 2-NEBRASKA CITY 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	104.9499	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9491	GEN549893 2-SOUTHWEST 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9472	GEN681522 3-GENOA 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9466	GEN300001 1-THOMAS HILL UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	104.946	NORTHWEST (NORTWST2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9429	GEN645041 1-CASS COUNTY 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9408	GEN645042 2-CASS COUNTY 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	104.936	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.915	GEN562892 1-G15048_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	104.9107	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9079	GEN532672 1-TECUMSEH ENERGY CENTER UNIT 8
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.9079	GEN542953 2-MONTROSE UNIT #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.9053	GEN563032 1-G15067_3 0.4180
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	104.9015	ARCADIA - NORTHWEST 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	104.9	DELL 500 - INDEPENDENCE 500KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.8889	GEN533141 1-SLATEGEN1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8807	GEN542954 3-MONTROSE UNIT #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8779	GEN659110 1-LELAND OLDS UNIT1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8707	GEN532734 1-GILL ENERGY CENTER UNIT 4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8698	GEN532733 1-GILL ENERGY CENTER UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8687	4REMNGTON 138.00 - ASGI1705 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	104.8686	FT SMITH - MUSKOGEE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8641	GEN541162 1-ARIES STEAM TURBINE
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8636	GEN509394 1-FLINT CREEK
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8606	GEN645025 5-NORTH OMAHA 5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8589	4SIOUX 1 138.00 138/18.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	104.8572	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.8552	GEN514643 1-BRKWND11 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8484	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8444	GEN661015 1-COYOTE
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.841	GEN641089 2-ENERGY CENTER 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8403	GEN547649 1-ASBURY UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.8323	GEN681542 6-JP MADGETT
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0545	104.8295	MIDLNT4 138.00 - PECKHAM TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.8274	FRANKLIN - PINK SW 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.782	GEN657748 1-YOUNG 2 GENERATOR
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.7517	GEN542951 5-HAWTHORN UNIT #5
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	104.7497	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.7481	GEN640009 1-COOPER NUCLEAR STATION
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	104.7432	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.7195	GEN560248 1-G10_003_2 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.7185	GEN532957 1-WAVERGEN1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.7062	GEN511840 1-NORTHEASTERN STATION #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.7035	FRANKLIN - FRANKLIN SW 138KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.698	GEN532742 5-EMPORIA ENERGY CENTER UNIT 5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6963	GEN512688 2-GRDA1 GSU2 22
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6938	GEN300006 1-NEW MADRID UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6935	GEN532743 6-EMPORIA ENERGY CENTER UNIT 6
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6935	GEN532744 7-EMPORIA ENERGY CENTER UNIT 7
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6888	GEN620315 1-BIG STONE GEN
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6833	GEN300007 1-NEW MADRID UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0519	104.6678	G15095_T 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6637	GEN532605 1-ELKRVR-WTG1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6624	GEN529201 1-OMCDLEC1 13.800
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6503	GEN532606 1-ELKRVR-WTG2 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	104.63	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6112	GEN546702 1-NM GEN N1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0491	104.6065	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0491	104.6065	DELAWARE - NORTHEAST STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.6007	GEN513601 1-GRECCTG_1 20.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.598	GEN511839 1-NORTHEASTERN STATION #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	104.5952	DBL-HTCH-OTA
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0425	104.5943	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0501	104.5843	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.5826	GEN300002 1-THOMAS HILL UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.5653	GEN600004 2-PRAIRIE ISLAND G2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.5636	GEN600003 1-PRAIRIE ISLAND G1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.5602	GEN300003 1-THOMAS HILL UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	104.5538	4MEMORAL 138.00 - LUTHER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.551	GEN600006 1-AS KING
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0491	104.5482	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0491	104.5482	PITTSBURG - VALLIANT 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.5328	GEN562694 1-G15_016_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.5191	GEN587333 1-G16-048-GEN10.5200
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	104.5056	ARCADIA - NORTHWEST 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.4891	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.4744	GEN587213 1-G16-032-GEN10.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0481	104.4679	OTTER - WOODRING 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.4596	GEN600005 1-MONTICELLO

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.4595	BIG STONE 230/24.0KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	104.4593	P12:138:AECI:LUTHER-JONES
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0536	104.4582	4MEMORAL 138.00 - KAMO MEMORIAL 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0507	104.4513	CHISHOLM7 345.00 (CHISHOLM) 345/230/13.2KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.4341	GEN515483 1-BLKWLWD1 0.6900
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0511	104.4335	CIMARRON - DRAPER LAKE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.4284	GEN636641 1-LOUISA UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.421	GEN635213 3-NEAL UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.4125	CIMARRON (CIMARON1) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	104.3908	P12:230:AEPW:ELKCITY6:SWEETWT6
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3903	GEN615001 1-COAL CREEK
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3901	GEN532721 1-EVANS ENERGY CENTER UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.3887	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.3886	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3838	GEN615002 2-COAL CREEK
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.3805	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.3803	GEN542956 2-LACYGNE UNIT #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3754	GEN532725 1-EVANS ENERGY CENTER GAS TURBINE 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.3751	GEN542957 1-IATAN UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3708	CIMARRON (CIMARON2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3614	GEN588303 1-ASGI1705-GEN0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	104.3556	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	104.3556	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.3509	GEN533124 1-FR2E2WF1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3465	GEN600001 2-SHERBURNE CNTY G2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.3447	GEN533126 1-FR2W2WF1 0.6900
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	104.3379	MORISNT4 138.00 - STILLWATER 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3368	GEN515622 1-KAYWND11 0.7000
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	104.336	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0483	104.336	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.321	GEN533123 1-FR2E1WF1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3176	GEN515623 1-KAYWND12 0.7000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.3138	GEN301382 1-10SAGEWINDG10.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.3129	GEN533125 1-FR2W1WF1 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.2945	GEN562772 1-G15034_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.2934	GEN562658 1-G15_001_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	104.2896	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	104.2891	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0505	104.2888	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0458	104.2768	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0497	104.2754	P12:138:OKGE:3TERM2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	104.2743	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0521	104.2743	CLARKSVILLE - MUSKOGEE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.2609	GEN600000 1-SHERBURNECNTY G1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.2561	GEN344225 1-1CAL G1 25.000
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.2467	P12:138:AEPW:CORNVL4:DUNCAN-4
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.2108	GEN659111 2-LELAND OLDS UNIT2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.1619	GEN563182 1-G15083_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.1393	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.1289	GEN541151 3-SIBLEY GENERATING UNIT #3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	104.1031	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	104.1	G14-074T 345.00 - OKLAUNION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.0921	GEN659103 1-ANTELOPE VALLEY UNIT1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.0921	GEN659107 2-ANTELOPE VALLEY UNIT2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.0556	GEN562723 1-G15_030_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.0482	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	104.034	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.057	104.0306	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	104.0272	GEN563082 1-G15073_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	104.0071	CIMARRON - MATHWSN7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0502	104.0071	CIMARRON - MATHWSN7 345.00 345KV CKT 2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	104.0064	GEN587483 1-G16-071-GEN10.6900
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0329	104.0008	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0493	103.9992	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	103.9838	GEN542955 1-LACYGNE UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.9787	GEN635214 4-NEAL UNIT 4

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0296	103.975	G16-061-TAP 345.00 - WOODRING 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.9333	GEN600002 3-SHERBURNE CNTY G3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	103.882	GEN542962 2-IATAN UNIT #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	103.8676	GEN562691 1-G15_015_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.8668	GEN532720 1-CANEYWF1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0506	103.8539	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0485	103.8444	GRACEMONT - MINCO 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	103.7969	GEN563022 1-G15066_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.7066	GEN562479 1-G14_001_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.052	103.7061	DBL-G1524-WI
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.7059	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	103.7019	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.6604	GEN659118 1-LARAMIE RIVER UNIT1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.6255	GEN635023 3-WALTER SCOTT UNIT 3
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	103.5987	GEN562902 1-G15052_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.598	GEN587163 1-G16-022-GEN10.6500
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.5944	GEN533141 1-SLATEGEN1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0494	103.586	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.5823	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	103.5258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.513	GEN563032 1-G15067_3 0.4180
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.5123	GEN562718 1-G15_024_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.5107	GEN562720 1-G15_025_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.5106	GEN563242 1-G15090_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.5105	GEN587503 1-G73-073-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	103.4833	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0495	103.4833	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.4396	GEN514643 1-BRKWND11 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0481	103.4022	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0481	103.4022	PITTSBURG - SEMINOLE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.3669	GEN563052 1-G15069_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.3336	GEN635024 4-WALTER SCOTT UNIT 4
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0557	103.3111	G15052_T 345.00 - ROSE HILL 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0479	103.2882	CIMARRON - MINCO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	103.2054	GEN587413 1-G16-061-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.1246	GEN645011 1-NEBRASKA CITY 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.048	103.0474	OTTER - WOODRING 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.0359	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.0343	GEN300003 1-THOMAS HILL UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.0287	GEN542951 5-HAWTHORN UNIT #5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	103.0246	GEN640009 1-COOPER NUCLEAR STATION G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0642	103.0187	
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.9799	GEN645012 2-NEBRASKA CITY 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.9778	GEN562772 1-G15034_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.9751	GEN562658 1-G15_001_3 0.6900
08ALL	16WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.031	102.9739	G16-061-TAP 345.00 - WOODRING 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0378	102.9693	DBL-TGA-MATT
08ALL	25SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0513	102.9534	GEN587463 1-G16-068-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.8989	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	102.831	CIMARRON - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.05	102.831	CIMARRON - MATHWSN7 345.00 345KV CKT 2
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0498	102.7602	DBL-THIS-G15
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.742	GEN562723 1-G15_030_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.725	GEN532722 1-EVANS ENERGY CENTER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.7137	GEN533126 1-FR2W2WF1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.7083	GEN533124 1-FR2E2WF1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.7082	GEN587483 1-G16-071-GEN10.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.056	102.707	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.681	GEN533125 1-FR2W1WF1 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.6767	GEN533123 1-FR2E1WF1 0.6900 G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.069	102.6431	
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	102.6123	GEN562882 1-G15047_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.6019	GEN542956 2-LACYGNE UNIT #2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.5439	GEN542957 1-IATAN UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.5017	GEN563022 1-G15066_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	102.4737	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.049	102.4737	REDBUD - RIVERSIDE STATION 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	102.4405	GEN562429 1-G13-029 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.4301	GEN562691 1-G15_015_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	102.2603	GEN514805 1-SOONER UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.251	GEN562902 1-G15052_3 0.6900

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	102.1658	GEN542955 1-LACYGNE UNIT #1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	102.1326	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	102.1282	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	102.0963	GEN515484 1-CHSHMVW1 0.5750
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	102.0946	GEN515479 1-CHSHMVE1 0.5750
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	102.0513	GEN514806 1-SOONER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	101.9857	GEN542962 2-IATAN UNIT #2
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	101.9108	GEN562611 1-G14_064_3 0.6900
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0479	101.8991	GRACEMONT - MINCO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	101.794	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	101.7936	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	101.7824	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	101.5621	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	101.3914	P12:138:WFEC:MSL15
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	101.3626	GEN562882 1-G15047_3 0.6900
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0484	101.0399	CIMARRON - DRAPER LAKE 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	100.9612	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	100.9	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	100.8978	P12:138:OKGE:3TERM1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0557	100.8762	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	100.7145	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	100.6576	GEN515484 1-CHSHMVW1 0.5750
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	100.6562	GEN515479 1-CHSHMVE1 0.5750
08ALL	20WP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0535	100.6017	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	100.6007	GEN514805 1-SOONER UNIT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	100.5861	GEN515042 1-SEMINOLE 3G
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	100.5573	GEN562611 1-G14_064_3 0.6900
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0411	100.5359	DBL-THIS-WWR
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	100.5332	HENESSEY - WAUKOMIS 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	100.496	GEN514806 1-SOONER UNIT 2
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.048	100.4688	CIMARRON - DRAPER LAKE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0642	100.449	G16-072-TAP 345.00 - HUNTERS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	100.4245	GEN587463 1-G16-068-GEN10.6900
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0529	100.3203	DOVER SW - HENESSEY 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0527	100.227	RENO COUNTY - WICHITA 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0509	100.1267	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0523	100.0965	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0548	100.0619	DBL-G1524-WI
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	100	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	100	GEN336821 1-GRAND GULF UNIT
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.9	GEN501801 1-DOLET HILLS UNIT1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	99.8	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.8	GEN515040 1-SEMINOLE 1G
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.8	GEN525562 1-TOLK GEN #2 24 KV
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.7	GEN336153 1-WATERFORD UNIT#3
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.7	GEN511848 1-SOUTHWESTERN STATION #3
08ALL	20WSP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	99.7	GEN587413 1-G16-061-GEN10.6900
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.6	GEN525561 1-TOLK GEN #1 24 KV
08ALL	17G	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0332	99.5	G16-061-TAP 345.00 - WOODRING 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.4	GEN335831 1-RIVERBEND UNIT#1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.4	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
08ALL	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0537	99.3	DBL-G1524-WI
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0559	99.3	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	99.3	COTTONWOOD CREEK - LIBERTY LAKE 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0508	99.3	MORISNT4 138.00 - SOONER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0531	99.1	LIBERTY LAKE - WATERLOO 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99.1	GEN514939 1-HORSESHOE LAKE 8G
08NR	20L	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0395	99.1	DBL-TGA-MATT
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.051	99	BYRON_138 138.00 - SANDY_CN_138138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
08ALL	20SP	ASGI_17_05	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	956	956	0.0504	99	GEN509416 1-TURK GENERATION
08ALL	25SP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0716	118.7752	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0728	113.5	SOONER - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0728	113.3601	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0716	111.6506	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0763	109.0456	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0763	108.9096	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0798	108.1476	VIOLA 7 345.00 - WICHITA 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0724	108.1084	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0817	105.5552	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0761	105.0683	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0761	104.8071	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.071	103.1599	SOONER - SPRING CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.071	102.9576	NORTHWEST - SPRING CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0494	102.7227	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.048	102.3797	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0724	101.0884	SOONER - SPRING CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.0518	100	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.078	106.9997	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.0745	103.1119	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.078	102.732	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.0699	102.1934	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.0725	100.7722	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.0764	100.3539	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.0852	100.1713	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.0652	99.5	GEN542955 1-LACYGNE UNIT #1
08ALL	20L	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.0701	99.4	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.0745	99.1	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.078	106.9992	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.0745	103.1119	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.078	102.732	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.0699	102.1933	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.0725	100.7721	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.0764	100.3539	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.0852	100.1711	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
08ALL	16WP	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.0652	99.5	GEN542955 1-LACYGNE UNIT #1
08ALL	20L	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.0701	99.4	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	TO->FROM	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	1141	1195	0.0745	99.1	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	1076	0.0545	102.6692	SWISSVALE - WEST GARDNER 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1	1076	1076	0.0546	102.129	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	KINZE - MCELROY 138KV CKT 1	194	222	0.0485	106.2659	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17G	ASGI_17_05	TO->FROM	KINZE - MCELROY 138KV CKT 1	194	222	0.0488	102.0706	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	KINZE - MCELROY 138KV CKT 1	194	222	0.034	100.1992	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	KINZE - MCELROY 138KV CKT 1	194	222	0.034	100.1992	FAIRFAX - PAWNSW4 138.00 138KV CKT 1
08ALL	25SP	ASGI_17_05	TO->FROM	NORTHWEST - SPRING CREEK 345KV CKT 1	1039	1195	0.0688	101.6829	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2306	99.4	OSAGE - SOONER PUMP TAP 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2231	99.4	HAWTHORNE - NORTHEAST STATION 138KV CKT 1
08NR	20L	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189	189	0.2212	99.4	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2238	99.3	GEN562429 1-G13-029 0.6900
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2231	99.3	P12:138:AEPW:VINTAUC4:N.E.S.-4
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2306	99.2	SOONER - SOONER PUMP TAP 138KV CKT 1
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2299	99.2	P12:138:OKGE:3TERM7
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2266	99.2	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2238	99.2	GEN533141 1-SLATEGEN1 0.6900
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2271	99.1	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2238	99.1	GEN562882 1-G15047_3 0.6900
08ALL	17SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2261	99	RANCHRD7 345.00 - SOONER 345KV CKT 1
08ALL	20SP	ASGI_17_05	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	152	152	0.2271	99	DMNCRKT4 - MILLER 138KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.229	99.4	P12:138:OKGE:3TERM7
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2202	99	P13:069-138:WERE:DEAR_TX-1::
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2202	99	COFFEYVILLE TAP - DEARING 138KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	136	152	0.2202	99	COFFEYVILLE TAP - DEARING 138KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	194	222	0.0554	106.7891	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	194	222	0.0554	106.7891	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	194	222	0.0515	99.6	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	TO->FROM	SPVALLY4 138.00 - STILLWATER 138KV CKT 1	194	222	0.049	99.1	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0555	135.0422	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0508	131.9414	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0541	126.1674	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0541	126.1137	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0571	123.401	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0501	121.8535	HOYT - STRANGER CREEK 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	20L	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.055	121.6922	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.055	121.6324	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0521	121.3502	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0489	120.6746	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0489	120.6201	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0541	119.0327	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.058	118.0315	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0516	117.5899	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0516	117.5362	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0458	117.4218	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0539	116.1509	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0539	116.1173	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0529	116.1055	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0551	115.8932	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0551	115.8771	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.055	114.8666	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0558	114.1278	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	17G	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0489	113.5293	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0484	112.7407	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	20L	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0525	111.6566	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0509	111.0892	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	16WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0516	110.1714	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0551	108.8909	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	20WP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0539	108.7855	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0444	108.2506	LACYGNE - WEST GARDNER 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0545	107.6403	HOYT - STRANGER CREEK 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0497	107.2948	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0353	105.0394	87th STREET - STRANGER CREEK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0387	104.9992	GEN542955 1-LACYGNE UNIT #1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0387	103.8237	GEN542956 2-LACYGNE UNIT #2
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0415	103.772	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0348	103.4672	87th STREET - CRAIG 345KV CKT 1

Table 8: Thermal Constraints Not Requiring Additional Transmission Reinforcements

Dispatch Group	Season	Source	Flow	Monitored Element	RATEA (MVA)	RATEB (MVA)	TDF	TC% LOADING	Contingency
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0382	102.5514	CLEVELAND - G15066_T 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.042	102.3514	LACYGNE - STILWELL 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0526	100.972	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
08ALL	25SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0526	100.9527	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0415	100.9063	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0387	100.8618	GEN542951 5-HAWTHORN UNIT #5
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0382	100.8455	G15066_T 345.00 - SOONER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0423	100.4115	AXTELL - G16-050-TAP 345.00 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0395	100.3452	LAWRENCE HILL (LAWH TX-3) 230/115/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0387	100.3286	GEN300003 1-THOMAS HILL UNIT 3
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0387	100.1971	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0436	100	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0436	100	CLEVELAND - TULSA NORTH 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0423	99.7	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0397	99.5	SWISSVALE - TECUMSEH HILL 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0397	99.5	TECUMSEH HILL (TECH TX-3) 230/115/13.8KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0399	99.4	IATAN - NASHUA 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0454	99.4	LACYGNE - WEST GARDNER 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0391	99.3	AUBURN ROAD (AUBN TX-1) 230/115/14.4KV TRANSFORMER CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0373	99.3	SUMMIT - UNIONRG6 230.00 230KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0368	99.2	HUNTERS7 345.00 - WOODRING 345KV CKT 1
08ALL	17SP	ASGI_17_05	FROM->TO	SWISSVALE - WEST GARDNER 345KV CKT 1	717	717	0.0367	99	BENTON - WICHITA 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448	492.8	0.04	100.7896	VIOLA 7 345.00 - WICHITA 345KV CKT 1
08ALL	20SP	ASGI_17_05	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448	492.8	0.04	99.8	VIOLA 7 345.00 - WICHITA 345KV CKT 1