



DISIS 2020-001

Incremental Long-Term Congestion Rights Study Report

GEN-2020-065

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By SPP Generation Interconnections Dept.

REVISION HISTORY

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION
10/1/2025	SPP	Updated ILTCR Values

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INTRODUCTION

Incremental Long-Term Congestion Rights (ILTCRs) were made available by FERC 685 Guideline 3 as a reimbursement mechanism for sponsors of transmission upgrades. The guideline specifies that long-term firm transmission rights made feasible by transmission upgrades or expansions must be available upon request to any party that pays for such upgrades or expansions in accordance with the transmission organization's prevailing cost allocation methods for upgrades or expansions. Effective July 1, 2020, ILTCR is the default cost recovery mechanism for eligible Network Upgrades (NU) with Directly Assigned Upgrade Cost (DAUC) as a result of a Generation Interconnection Study (GIS), Aggregate Transmission Service Study (ATSS), or a Sponsored Upgrade Study in SPP.

The objective of the ILTCR analysis is to determine the incremental Available Transfer Capability (ATC) created on each of the Upgrade Sponsor submitted source-to-sink paths over a ten-year period resulting from the construction of the Network Upgrade. The Upgrade Sponsor may then have the option to use the results of this study to obtain candidate ILTCRs on the path selected.

The ILTCR study process was completed for GEN-2020-065 (the Customer) that has Directly Assigned Upgrade Costs (DAUC) for the following network upgrades from DISIS 2020-001 Studies.

- Build New Andrews to Road Runner 345 kV Line (DISIS-2020-001)
- Build New Tolk to Potter County 345 kV Line (DISIS-2020-001)
- Build New G17-151-Tap to Border 345 kV Line (DISIS-2020-001)
- Hobbs to Andrews Voltage Conversion (DISIS-2020-001)
- Sidewinder to Andrews 345 kV Lidar Clearance Correction (DISIS-2020-001)
- Sidewinder to Hobbs 345 kV Lidar Clearance Correction (DISIS-2020-001)

STUDY INPUTS

MODEL BASIS

The 2024 ITP Transmission Services (TS) cases were the starting point for the analysis. The following details specify the particular models utilized for this evaluation.

- Model years 2029, 2034
 - Summer Peak (2029SP, 2034SP)
 - Winter Peak (2029WP, 2034WP)
 - Light Load (2029 LP, 2034LP)

MONITORED FACILITIES

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 100 kV and above. NERC Power Transfer Distribution Flowgates for SPP and first tier Non-SPP control areas are monitored. Additional NERC Flowgates are monitored in second tier or greater Non-SPP control areas.

- All branches and ties within the following areas:
 - SPP Internal Areas for 60kV – 999kV facilities:
 - 506– 546, 640 – 659, 998, 999
 - SPP External Areas for 100kV – 999kV facilities:
 - 327, 330, 351, 356, 502, 600, 615, 620, 627, 635, 661, 680
- NERC, SPP, and Tier 1 Permanent Monitor Flowgates (thermal)

CONTINGENCY EVENTS

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.

- All branches, ties, shunts, and generators within the following areas:
 - SPP Internal Areas for 60kV – 999kV facilities: o
 - 515 – 546, 640, 641, 642, 645, 650, 652, 659, 998, 999
 - SPP External Areas for 100kV – 999kV facilities:
 - 327, 330, 351, 356, 502, 600, 615, 620, 627, 635, 661, 680
- NERC, SPP, and Tier 1 Permanent Contingent Flowgates
- SPP T.O. Specific P1, P2, P4, and P5 TPL-005-1 Contingencies
- SPP T.O. Specific Op Guide Implementation

NETWORK UPGRADES

The Network Upgrades were sorted based on construction lead-time in order to reflect the sequence of in-service dates for the upgrades. Each Network Upgrade was evaluated sequentially and as a standalone addition. Sequentially, the first Network Upgrade was evaluated in comparison to the TS Case. The second Network Upgrade was evaluated on top of the previously added Network Upgrade. The process was repeated until all Network Upgrades were evaluated. Network

Upgrades that share the same construction lead-time were evaluated as incremental upgrades to the final set of Network Upgrades with the same lead-times. The studied Network Upgrades and associated lead time for the Customer is listed in Table 0-1.

Table 0-1: Network Upgrades

Upgrade ID	Upgrade Name	Estimated Lead-Time (months)
170627	Build New Andrews to Road Runner 345 kV Line	36
170628	Build New Tolk to Potter County 345 kV Line	36
170609	Build New G17-151-Tap to Border 345 kV Line	36
170630	Hobbs to Andrews Voltage Conversion	36
170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	36

CONTINGENT UPGRADES

Contingent upgrades are not yet in-service. These facilities have been assigned to higher queued interconnection customers. These facilities were included in the models respective of their estimated lead-time for this study prior to determining the incremental transfer amount that each Network Upgrade provided. The list of contingent upgrades and their associated lead-time for the participating Customers is listed in Table 0-2.

Table 0-2: Contingent Upgrade Sequence

Upgrade ID	Upgrade Name	Estimated Lead-Time (months)
NTC 220773	Line - Anadarko - Gracemont 138 kV double Ckt 2 & 3	36
NTC 220812	Build New Beckham to Potter 345 kV Line	36
NTC 220889	Build New Phantom to Crossroads to Potter 765 kV Line	36

CUSTOMER TRANSFER PATHS

The Customer is eligible to select up to three (3) source-to-sink transfer paths per Network Upgrade. The list of valid source-to-sink paths is posted on the SPP OASIS site under Source/Sink Summary and were available to Customers with a valid OASIS certificate.

Customers may select paths for ILTCR studies using their new generator that was studied as a source. The generator must be registered in the Marketplace before it is able to participate in the Congestion Hedging process.

Each source-to-sink transfer path was collected by SPP for the Customer and those submissions are captured in the Results section.

STUDY METHODOLOGY

TRANSFER ANALYSIS

A DC transfer analysis was conducted using PowerGEM TARA to determine the limiting flowgates in each applicable case for the respective transfer paths provided by the Customer. Constraints were defined as any overloaded facility in which the transfer had three (3) percent or more TDF or OTDF impact for system intact or contingency conditions respectively. AC Contingency Analysis was performed on each case to identify existing overloaded flowgates that were not caused by the Customer, Network Upgrade, or the source-to-sink transfer path. These flowgates were filtered out of the transfer analysis results for the respective case in which they were reported in the AC Contingency Analysis.

Once the initial DC limiting flowgates were filtered to valid results, the top five (5) limiting flowgates in each applicable case for the respective transfer paths provided by the Customer were AC verified. If the AC verified results reported a non-converged condition and all other AC verified transfers were not zero, then the AC non-converged condition was reviewed for appropriate adjustments until an AC transfer limit was established. If no adjustments were found to resolve the AC non-converged condition, then the AC transfer limit was reported as 0 MW to reflect the condition in which no transfer could be achieved.

With the transfer limits AC verified, the deltas between the minimum AC transfer amounts across all analyzed cases for each path with and without the associated Network Upgrade were determined as follows:

- If $ATC_{pre-NU} < 0$ and $ATC_{post-NU} < 0$, then individual increment = 0
- If $ATC_{pre-NU} < 0$ and $ATC_{post-NU} > 0$, then individual increment = $ATC_{post-NU}$
- If $ATC_{pre-NU} > 0$ and $ATC_{post-NU} > 0$, then individual increment = $ATC_{post-NU} - ATC_{pre-NU}$

If the Network Upgrade costs were shared between multiple Customers, then the minimum delta was allocated to each participating Customer in the same proportion as the pro-rata share of the total cost of the upgrade allocated. The lowest amount of candidate MWs that can be awarded is 0.1 MW. Therefore, any candidate MWs below 0.1 MWs is reported as 0.0 MWs.

ILTCR STUDY RESULTS

Table 0-1 summarizes the minimum incremental ATC created across all seasons for each of the source-to-sink paths provided by the Customer for the Network Upgrades.

Appendix A includes the detailed results of the top five (5) most limiting flowgates for each transfer path as submitted by the Customer.

Table 0-1: GEN-2020-065 Candidate ILTCRs

NU #	NU	Source	Sink	Min Delta (MW)	Cost Allocation (%)	cILTCR (MW)
170609	Build New G17-151-Tap to Border 345 kV Line	LAM345	SPS	3.9	41.61%	1.6
170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HALE.WND	SPS	11.7	41.61%	4.9
170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HARRNGTN2	SPS	1.3	41.61%	0.5
170627	Build New Andrews to Road Runner 345 kV Line	SPS.BONITA.LRZ	SPS	0	100.00%	0
170627	Build New Andrews to Road Runner 345 kV Line	SPS.JONES3	SPS	0	100.00%	0
170627	Build New Andrews to Road Runner 345 kV Line	SPS.TOLK1	SPS	19.5	100.00%	19.5
170628	Build New Talk to Potter County 345 kV Line	LAM345	SPS	51.1	50.65%	25.9
170628	Build New Talk to Potter County 345 kV Line	SPS.HALE.WND	SPS	17.7	50.65%	9
170628	Build New Talk to Potter County 345 kV Line	SPS.SAGAMORE.WND	SPS	0	50.65%	0
170630	Hobbs to Andrews Voltage Conversion	SPS.BONITA.LRZ	SPS	0	100.00%	0
170630	Hobbs to Andrews Voltage Conversion	SPS.JONES3	SPS	0	100.00%	0
170630	Hobbs to Andrews Voltage Conversion	SPS.TOLK1	SPS	29.5	100.00%	29.5
170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	0	100.00%	0
170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.JONES4	SPS	0	100.00%	0
170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.TOLK2	SPS	0	100.00%	0
170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	0	100.00%	0
170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.JONES2	SPS	0	100.00%	0
170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.TOLK1	SPS	0	100.00%	0

CONCLUSION

The ILTCR analysis determined the incremental ATC created on the Customer submitted source-to-sink paths as provided by the associated Network Upgrade. The Customer may choose the one source-to-sink path in which to receive candidate ILTCRs based on the ATC results presented. If a source-to-sink path that reported no incremental ATC (0 MW) is chosen, then the Customer will not receive any candidate ILTCRs for the Network Upgrade. This data will be included in the applicable agreement(s) and executed before filing with FERC.

The Customer must notify SPP 45 days in advance of energization of the associated Network Upgrade via RMS ticket. Tracking of the Network Upgrade progress can be achieved by utilizing the SPP Quarterly Project Tracking workbooks posted on the SPP website. Once the Network Upgrade is energized, SPP will make available TCR MWs for the candidate ILTCR until the end of that TCR year in the next feasible monthly TCR auction.

APPENDIX A

IC	NU	Network Upgrade Name	Source	Sink	Limit	Case	Monitored Facility	Contingency Name	Base FCITC	Upgrade FCITC	ATC Increase
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	LAM345	SPS	1	29WP0	524043 NICHOLS 3 115 524058 WHITAKER 3 115 1	523977 HARRNG_WST 6 230 524163 EAST_PLANT 6 230 1	54.3	58.2	3.9
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	LAM345	SPS	2	34SP0	524058 WHITAKER 3 115 524138 CENTERPORT 3 115 1	Base Case	66.3	61.4	0
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	LAM345	SPS	3	29LP0	530592 SMOKYHL6 230 532873 SUMMIT 6 230 1	P42:345:NPPD:BKR-AXT-3306:::	120.1	127.5	7.4
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	LAM345	SPS	4	34SP0	524043 NICHOLS 3 115 524058 WHITAKER 3 115 1	Base Case	204.5	200.1	0
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	LAM345	SPS	5	29SP0	524058 WHITAKER 3 115 524138 CENTERPORT 3 115 1	523977 HARRNG_WST 6 230 524163 EAST_PLANT 6 230 1	239.9	242.8	2.9
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HALE.WND	SPS	1	34SP0	526524 WOLFFORTH 3 115 526736 TERRY_CNTY 3 115 1	P12:230:SPS:K02:1:SUNDO WN_WOLFFORTH__:HV:	49	60.7	11.7
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HALE.WND	SPS	2	29SP0	525531 TOLK 6 230 997063 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	116.2	115	0
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HALE.WND	SPS	3	29SP0	997063 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	210.4	209.7	0
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HALE.WND	SPS	4	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 1	P12:230:SPS:K14:2:LUBBC KSTH_JONES__:HV:	260	261.3	1.3
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HALE.WND	SPS	5	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 2	P12:230:SPS:K08:1:LUBBC KSTH_JONES__:HV:	260	261.3	1.3
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HARRNGTN2	SPS	1	29LP0	523978 HARRNG_MID 6 230 523977 HARRNG_WST 6 230 @1	523959 POTTER_CO 6 230 523979 HARRNG_EST 6 230 1	19.7	21	1.3
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HARRNGTN2	SPS	2	29SP0	524322 GEORGIA 3 115 524325 WESTERN 3 115 1	P12:115:SPS:T74.1:OWENS EAMASTH:::HV:	25.6	25.6	0
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HARRNGTN2	SPS	3	29SP0	524162 EAST_PLANT 3 115 524185 PIERCE_TP 3 115 1	524415 AMA_SOUTH 6 230 3W XFMR ABB 801466 1	38.8	39.3	0.5
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HARRNGTN2	SPS	4	29WP0	524043 NICHOLS 3 115 524058 WHITAKER 3 115 1	523977 HARRNG_WST 6 230 524163 EAST_PLANT 6 230 1	53.6	57.4	3.8

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IC	NU	Network Upgrade Name	Source	Sink	Limit	Case	Monitored Facility	Contingency Name	Base FCITC	Upgrade FCITC	ATC Increase
GEN-2020-065	170609	Build New G17-151-Tap to Border 345 kV Line	SPS.HARRNGTN2	SPS	5	34LP0	523959 POTTER_CO 6 230 997114 UPDATE LATER 230 2	Base Case	130.2	127	0
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.BONITA.LRZ	SPS	1	34SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	32.2	31.3	0
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.BONITA.LRZ	SPS	2	29SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	39	80.3	41.3
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.BONITA.LRZ	SPS	3	34LP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:115:SPS:T69.1.LUBBE. CROSBY__:HV:	77.7	94.6	16.9
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.BONITA.LRZ	SPS	4	34SP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:230:SPS:K10:1:LUBBC KSTH_WOLFFORTH__:HV:	94.5	95.6	1.1
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.BONITA.LRZ	SPS	5	29LP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:115:SPS:T69.1.LUBBE. CROSBY__:HV:	95.9	95.9	0
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.JONES3	SPS	1	34SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	11.7	11.4	0
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.JONES3	SPS	2	29SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	28.5	29.1	0.6
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.JONES3	SPS	3	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 1	P12:230:SPS:K14:2:LUBBC KSTH_JONES__:HV:	38	35.6	0
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.JONES3	SPS	4	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 2	P12:230:SPS:K08:1:LUBBC KSTH_JONES__:HV:	38	35.6	0
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.JONES3	SPS	5	34SP0	526524 WOLFFORTH 3 115 526736 TERRY_CNTY 3 115 1	P12:230:SPS:K02:1:SUNDO WN_WOLFFORTH__:HV:	40.8	37.9	0
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.TOLK1	SPS	1	34LP0	527891 HOBBS_INT 3 115 528355 MADDOX 3 115 1	528604 ANDREWS 6 345 3WXFMR ANDREWS 6 1	26	45.5	19.5
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.TOLK1	SPS	2	29SP0	525531 TOLK 6 230 997063 ABB XNL8445- 230 2	525549 TOLK 7 345 3WXFMR ABBXNL844501 1	28.3	47.3	19
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.TOLK1	SPS	3	29SP0	997063 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3WXFMR ABBXNL844501 1	38.7	76.5	37.8

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IC	NU	Network Upgrade Name	Source	Sink	Limit	Case	Monitored Facility	Contingency Name	Base FCITC	Upgrade FCITC	ATC Increase
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.TOLK1	SPS	4	34SP0	525531 TOLK 6 230 997058 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	45.5	190.7	145.2
GEN-2020-065	170627	Build New Andrews to Road Runner 345 kV Line	SPS.TOLK1	SPS	5	34SP0	997058 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	67.6	201.5	133.9
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	LAM345	SPS	1	29WP0	524043 NICHOLS 3 115 524058 WHITAKER 3 115 1	523977 HARRNG_WST 6 230 524163 EAST_PLANT 6 230 1	7.1	58.2	51.1
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	LAM345	SPS	2	34SP0	524058 WHITAKER 3 115 524138 CENTERPORT 3 115 1	Base Case	34.1	61.4	27.3
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	LAM345	SPS	3	29LP0	530592 SMOKYHL6 230 532873 SUMMIT 6 230 1	P42:345:NPPD:BKR-AXT-3306:::	119.6	127.5	7.9
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	LAM345	SPS	4	34SP0	524043 NICHOLS 3 115 524058 WHITAKER 3 115 1	Base Case	169.9	200.1	30.2
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	LAM345	SPS	5	29SP0	524058 WHITAKER 3 115 524138 CENTERPORT 3 115 1	523977 HARRNG_WST 6 230 524163 EAST_PLANT 6 230 1	250.8	242.8	0
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	SPS.HALE.WND	SPS	1	34SP0	526524 WOLFFORTH 3 115 526736 TERRY_CNTY 3 115 1	P12:230:SPS:K02:1:SUNDO WN_WOLFFORTH__:HV:	43	60.7	17.7
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	SPS.HALE.WND	SPS	2	29SP0	525531 TOLK 6 230 997063 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	135.6	115	0
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	SPS.HALE.WND	SPS	3	29SP0	997063 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	180.9	209.7	28.8
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	SPS.HALE.WND	SPS	4	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 1	P12:230:SPS:K14:2:LUBBC KSTH_JONES__:HV:	234.7	261.3	26.6
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	SPS.HALE.WND	SPS	5	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 2	P12:230:SPS:K08:1:LUBBC KSTH_JONES__:HV:	234.7	261.3	26.6
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	SPS.SAGAMORE.WND	SPS	1	29LP0	528223 CHINA_DRAW 7 345 996962 HY01063400-2 115 1	528185 N_LOVING 7 345 3W XFMR HY01063400-1 1	48.9	37.2	0
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	SPS.SAGAMORE.WND	SPS	2	34LP0	527891 HOBBS_INT 3 115 528355 MADDOX 3 115 1	528604 ANDREWS 6 345 3W XFMR ANDREWS 6 1	102.5	99.5	0
GEN-2020-065	170628	Build New Tolk to Potter County 345 kV Line	SPS.SAGAMORE.WND	SPS	3	29SP0	997096 ABB 801466 115 524414 AMA_SOUTH 3 115 1	524322 GEORGIA 3 115 524364 RANDALL 3 115 1	270.6	279	8.4

Southwest Power Pool, Inc.

IC	NU	Network Upgrade Name	Source	Sink	Limit	Case	Monitored Facility	Contingency Name	Base FCITC	Upgrade FCITC	ATC Increase
GEN-2020-065	170628	Build New Talk to Potter County 345 kV Line	SPS.SAGAMORE.WND	SPS	4	29LP0	996963 HYO1063400-1 115 528182 NORTH_LOVNG3 115 1	528223 CHINA_DRAW 7 345 3W XFMR HYO1063400-2 1	316.2	306	0
GEN-2020-065	170628	Build New Talk to Potter County 345 kV Line	SPS.SAGAMORE.WND	SPS	5	29LP0	996962 HYO1063400-2 115 528222 CHINA_DRAW 3 115 1	528185 N_LOVING 7 345 3W XFMR HYO1063400-1 1	621.8	392.9	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.BONITA.LRZ	SPS	1	34SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	83.6	32.6	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.BONITA.LRZ	SPS	2	29SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	95.8	81.4	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.BONITA.LRZ	SPS	3	34SP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:230:SPS:K10:1:LUBBC KSTH_WOLFFORTH__:HV:	98.5	95.7	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.BONITA.LRZ	SPS	4	29LP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:115:SPS:T69.1:LUBBE. CROSBY__:HV:	104.7	95.8	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.BONITA.LRZ	SPS	5	29SP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:230:SPS:K10:1:LUBBC KSTH_WOLFFORTH__:HV:	109.7	98.8	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.JONES3	SPS	1	34SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	30.2	11.8	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.JONES3	SPS	2	29SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	38.3	29.4	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.JONES3	SPS	3	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 1	P12:230:SPS:K14:2:LUBBC KSTH_JONES__:HV:	38.3	34.3	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.JONES3	SPS	4	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 2	P12:230:SPS:K08:1:LUBBC KSTH_JONES__:HV:	97	34.3	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.JONES3	SPS	5	34SP0	526524 WOLFFORTH 3 115 526736 TERRY_CNTY 3 115 1	P12:230:SPS:K02:1:SUNDO WN_WOLFFORTH__:HV:	97	40.8	0
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.TOLK1	SPS	1	29SP0	525531 TOLK 6 230 997063 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	20.9	50.4	29.5
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.TOLK1	SPS	2	29SP0	997063 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	49.5	74.9	25.4

Southwest Power Pool, Inc.

IC	NU	Network Upgrade Name	Source	Sink	Limit	Case	Monitored Facility	Contingency Name	Base FCITC	Upgrade FCITC	ATC Increase
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.TOLK1	SPS	3	34SP0	525531 TOLK 6 230 997058 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	130.9	161.1	30.2
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.TOLK1	SPS	4	34SP0	997058 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	136	171.5	35.5
GEN-2020-065	170630	Hobbs to Andrews Voltage Conversion	SPS.TOLK1	SPS	5	29LP0	996963 HY01063400-1 115 528182 NORTH_LOVNG3 115 1	528223 CHINA_DRAW 7 345 3W XFMR HY01063400-2 1	149.3	379.9	230.6
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	1	34SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	31.3	31.3	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	2	29SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	80.3	80.3	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	3	34LP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:115:SPS:T69.1.LUBBE. CROSBY__:HV:	94.6	94.6	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	4	34SP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:230:SPS:K10:1:LUBBC KSTH_WOLFFORTH__:HV:	95.6	95.6	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	5	29LP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:115:SPS:T69.1.LUBBE. CROSBY__:HV:	95.9	95.9	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.JONES4	SPS	1	34SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	11.4	11.4	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.JONES4	SPS	2	29SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	29.1	29.1	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.JONES4	SPS	3	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 1	P12:230:SPS:K14:2:LUBBC KSTH_JONES__:HV:	35.6	35.6	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.JONES4	SPS	4	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 2	P12:230:SPS:K08:1:LUBBC KSTH_JONES__:HV:	35.6	35.6	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.JONES4	SPS	5	34SP0	526524 WOLFFORTH 3 115 526736 TERRY_CNTY 3 115 1	P12:230:SPS:K02:1:SUNDO WN_WOLFFORTH__:HV:	37.9	37.9	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.TOLK2	SPS	1	29SP0	525531 TOLK 6 230 997063 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	47.4	47.4	0

IC	NU	Network Upgrade Name	Source	Sink	Limit	Case	Monitored Facility	Contingency Name	Base FCITC	Upgrade FCITC	ATC Increase
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.TOLK2	SPS	2	29SP0	997063 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	76.5	76.5	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.TOLK2	SPS	3	34LP0	527891 HOBBS_INT 3 115 528355 MADDOX 3 115 1	528604 ANDREWS 6 345 3W XFMR ANDREWS 6 1	98.3	98.3	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.TOLK2	SPS	4	34SP0	525531 TOLK 6 230 997058 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	192	192	0
GEN-2020-065	170631	Sidewinder to Andrews 345 kV Lidar Clearance Correction	SPS.TOLK2	SPS	5	34SP0	997058 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	201.7	201.7	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	1	34SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	31.3	31.3	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	2	29SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	80.3	80.3	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	3	34LP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:115:SPS:T69.1.LUBBE. CROSBY:::HV:	94.6	94.6	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	4	34SP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:230:SPS:K10:1:LUBBC KSTH_WOLFFORTH__:HV:	95.6	95.6	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.BONITA.LRZ	SPS	5	29LP0	525803 BLANCO 3 115 525780 FLOYD_CNTY 3 115 1	P12:115:SPS:T69.1.LUBBE. CROSBY:::HV:	95.9	95.9	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.JONES2	SPS	1	34SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	11.4	11.4	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.JONES2	SPS	2	29SP0	526269 LUBBCK_STH 6 230 526525 WOLFFORTH 6 230 1	P12:230:SPS:K07:1:TUCOI NT_JONES__:HV:	29.1	29.1	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.JONES2	SPS	3	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 1	P12:230:SPS:K14:2:LUBBC KSTH_JONES__:HV:	35.6	35.6	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.JONES2	SPS	4	34WP0	526337 JONES 6 230 526269 LUBBCK_STH 6 230 2	P12:230:SPS:K08:1:LUBBC KSTH_JONES__:HV:	35.6	35.6	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.JONES2	SPS	5	34SP0	526524 WOLFFORTH 3 115 526736 TERRY_CNTY 3 115 1	P12:230:SPS:K02:1:SUNDO WN_WOLFFORTH__:HV:	37.9	37.9	0

IC	NU	Network Upgrade Name	Source	Sink	Limit	Case	Monitored Facility	Contingency Name	Base FCITC	Upgrade FCITC	ATC Increase
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.TOLK1	SPS	1	29SP0	525531 TOLK 6 230 997063 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	47.3	47.3	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.TOLK1	SPS	2	29SP0	997063 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	76.5	76.5	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.TOLK1	SPS	3	34LP0	527891 HOBBS_INT 3 115 528355 MADDOX 3 115 1	528604 ANDREWS 6 345 3W XFMR ANDREWS 6 1	98.3	98.3	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.TOLK1	SPS	4	34SP0	525531 TOLK 6 230 997058 ABB XNL8445- 230 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	190.7	190.7	0
GEN-2020-065	170632	Sidewinder to Hobbs 345 kV Lidar Clearance Correction	SPS.TOLK1	SPS	5	34SP0	997058 ABB XNL8445- 230 525549 TOLK 7 345 2	525549 TOLK 7 345 3W XFMR ABBXNL844501 1	201.5	201.5	0