



INTERCONNECTION FACILITIES STUDY REPORT

GEN-2017-010

Published January 2022

SPP Generator Interconnections Dept.

REVISION HISTORY

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION
9/17/2021	SPP	Initial draft report issued.
1/7/2022	SPP	Final draft issued.

CONTENTS

Revision History	i
Summary.....	1
Introduction	1
Phase(s) of Interconnection Service	1
Compensation for Amounts Advanced for Network Upgrade(s).....	1
Interconnection Customer Interconnection Facilities.....	2
Transmission Owner Interconnection Facilities and Non-Shared Network Upgrade(s).....	3
Shared Network Upgrade(s).....	4
Contingent Network Upgrade(s)	5
Affected System Upgrade(s).....	6
Conclusion	7
Appendices.....	8
A: Transmission Owner’s Interconnection Facilities Study Report and Network Upgrades Report(s) ...	9

SUMMARY

INTRODUCTION

This Interconnection Facilities Study (IFS) for Interconnection Request GEN-2017-010 is for a 200.1 MW generating facility located in Bowman County, ND. The Interconnection Request was studied in the DISIS-2017-001 Impact Study for Energy Resource Interconnection Service (ERIS). The Interconnection Customer's requested in-service date is October 31st, 2022.

The interconnecting Transmission Owner, Basin Electric Power Cooperative (BEPC), performed a detailed IFS at the request of SPP. The full report is included in Appendix A. SPP has determined that full Interconnection Service will be available after the assigned Transmission Owner Interconnection Facilities (TOIF), Non-Shared Network Upgrades, Shared Network Upgrades, Contingent Network Upgrades, and Affected System Upgrades that are required for full interconnection service are completed.

The primary objective of the IFS is to identify necessary Transmission Owner Interconnection Facilities, Network Upgrades, other direct assigned upgrades, cost estimates, and associated upgrade lead times needed to grant the requested Interconnection Service.

PHASE(S) OF INTERCONNECTION SERVICE

It is not expected that Interconnection Service will occur in phases. However, full Interconnection Service will not be available until all Interconnection Facilities and Network Upgrade(s) can be placed in service.

COMPENSATION FOR AMOUNTS ADVANCED FOR NETWORK UPGRADE(S)

FERC Order ER20-1687-000 eliminated the use of Attachment Z2 revenue crediting as an option for compensation. The Incremental Long Term Congestion Right (ILTCR) process will be the sole process to compensate upgrade sponsors as of July 1st, 2020.

INTERCONNECTION CUSTOMER INTERCONNECTION FACILITIES

The Generating Facility is proposed to consist of seventy-one (71) GE 2.82 MW Wind Turbine Generation Systems for a total generating nameplate capacity of 200.1 MW.

The Interconnection Customer's Interconnection Facilities to be designed, procured, constructed, installed, maintained, and owned by the Interconnection Customer at its sole expense include:

- 34.5 kV underground cable collection circuits;
- 34.5 kV to 230 kV transformation substation with associated 34.5 kV and 230 kV switchgear;
- One 230/34.5 kV 135/180/224 MVA (ONAN/ONAF/ONAF) step-up transformer to be owned and maintained by the Interconnection Customer at the Interconnection Customer's substation;
- An approximately .8 mile overhead 230 kV line to connect the Interconnection Customer's substation to the Point of Interconnection ("POI") at the 230 kV bus at existing Transmission Owner substation ("Rhame 230kV Substation") that is owned and maintained by Transmission Owner;
- All transmission facilities required to connect the Interconnection Customer's substation to the POI;
- Equipment at the Interconnection Customer's substation necessary to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 95% lagging and 95% leading in accordance with Federal Energy Regulatory Commission (FERC) Order 827. The Interconnection Customer may use inverter manufacturing options for providing reactive power under no/reduced generation conditions. The Interconnection Customer will be required to provide documentation and design specifications demonstrating how the requirements are met; and,
- All necessary relay, protection, control and communication systems required to protect Interconnection Customer's Interconnection Facilities and Generating Facilities and coordinate with Transmission Owner's relay, protection, control and communication systems.

TRANSMISSION OWNER INTERCONNECTION FACILITIES AND NON-SHARED NETWORK UPGRADE(S)

To facilitate interconnection, the interconnecting Transmission Owner will perform work as shown below necessary for the acceptance of the Interconnection Customer's Interconnection Facilities.

Table 1 and **Table 2** lists the Interconnection Customer's estimated cost responsibility for Transmission Owner Interconnection Facilities (TOIF) and Non-Shared Network Upgrade(s) and provides an estimated lead time for completion of construction. The estimated lead time begins when the Generator Interconnection Agreement has been fully executed.

Table 1: Transmission Owner Interconnection Facilities (TOIF)

Transmission Owner Interconnection Facilities (TOIF)	Total Cost Estimate (\$)	Allocated Percent (%)	Allocated Cost Estimate (\$)	Estimated Lead Time
<u>Rhame 230 kV Substation GEN-2017-010 Interconnection (TOIF) (BEPC) (132948):</u> Construct one (1) 230 kV line terminal, line switches, dead end structure, line relaying, communications, revenue metering, line arrester, and all associated equipment and facilities necessary to accept transmission line from Interconnection Customer's Generating Facility.	\$1,674,744	100%	\$1,674,744	15 Months
Total	\$1,674,744		\$1,674,744	

Table 2: Non-Shared Network Upgrade(s)

Non-Shared Network Upgrades Description	ILTCR	Total Cost Estimate (\$)	Allocated Percent (%)	Allocated Cost Estimate (\$)	Estimated Lead Time
<u>Rhame 230 kV Substation GEN-2017-010 Interconnection (Non-Shared NU) (BEPC) (132949):</u> Construct one (1) 230kV breaker, one (1) 230kV breaker disconnect switch, one (1) set of line PTs, one (1) set of CTs, one (1) set of line surge arrestors and all other associated work and materials.	TBD	\$1,122,522	100%	\$1,122,522	15 Months
Total		\$1,122,522		\$1,122,522	

SHARED NETWORK UPGRADE(S)

The Interconnection Customer's share of costs for Shared Network Upgrades is estimated in **Table 3** below.

Table 3: Interconnection Customer Shared Network Upgrade(s)

Shared Network Upgrades Description	ILTCR	Total Cost Estimate (\$)	Allocated Percent (%)	Allocated Cost Estimate (\$)	Estimated Lead Time
Broadland 345/230kV Transformer Replacement (DISIS-2017-001) (143226): Replace the existing Broadland 345/230kV Transformer to achieve a minimum Summer/Normal rating of 471 MVA	Eligible	\$5,906,325	34.19%	\$2,019,128	33 Months
Total		\$5,906,325		\$2,019,128	

All studies have been conducted assuming that higher-queued Interconnection Request(s) and the associated Network Upgrade(s) will be placed into service. If higher-queued Interconnection Request(s) withdraw from the queue, suspend or terminate service, the Interconnection Customer's share of costs may be revised. Restudies, conducted at the customer's expense, will determine the Interconnection Customer's revised allocation of Shared Network Upgrades.

CONTINGENT NETWORK UPGRADE(S)

Certain Contingent Network Upgrades are **currently not the cost responsibility** of the Interconnection Customer but will be required for full Interconnection Service.

Table 4: Interconnection Customer Contingent Network Upgrade(s)

Contingent Network Upgrade(s) Description	Current Cost Assignment	Estimated In-Service Date
<u>Leland Olds 345 kV Substation Reconfiguration (122669)</u> : Build out of a new line terminal for relocation of LOS Unit 2 main transformer. This includes one (1) 345 kV power circuit breaker, two (2) 345 kV breaker disconnect switches, three (3) 345 kV PTs, three (3) 345 kV surge arrestors, and protection and control package.	\$0	12/31/2022
<u>Multi - Gentleman - Cherry Co. - Holt Co. 345 kV (NTC 200220)</u> : Build new 222 mile, 345 kV line from Gentleman - Cherry Co - Holt Co. Build new 345 kV substations at Cherry Co and Holt Co. Terminal upgrades at Gentleman.	\$0	04/01/2024

Depending upon the status of higher- or equally-queued customers, the Interconnection Request's in-service date is at risk of being delayed or Interconnection Service is at risk of being reduced until the in-service date of these Contingent Network Upgrades.

AFFECTED SYSTEM UPGRADE(S)

To facilitate interconnection, the Affected System Transmission Owner will be required to perform the facilities study work as shown below necessary for the acceptance of the Interconnection Customer's Interconnection Facilities. **Table 5** displays the current impact study costs provided by MISO as part of the Affected System Impact review. The Affected System facilities study could provide revised costs and will provide each Interconnection Customer's allocation responsibilities for the upgrades.

Table 5: Interconnection Customer Affected System Upgrade(s)

Affected System Upgrades Description	Total Cost Estimate (\$)	Allocated Percent (%)	Allocated Cost Estimate (\$)
<u>MISO AFS for DISIS-2017-001:</u> Montezuma 345 kV + 100 MVAR capacitor bank	\$6,000,000	12.6%	\$758,893
<u>MISO AFS for DISIS-2017-001:</u> Blackhawk 345 kV + 100 MVAR SVC/Statcom	\$30,000,000	15%	\$4,495,413
<u>AECI AFS for DISIS-2017-001:</u> Rebuild 4.4-mile-long Kidder to Mabel Tap 69 kV line to 336 ACSR at 100C	\$2,042,000	7.4%	\$151,059
<u>AECI AFS for DISIS-2017-001:</u> Rebuild 5.06-mile-long Mabel to Mabel Tap 69 kV line to 336 ACSR at 100C	\$2,348,000	7.4%	\$173,696
<u>AECI AFS for DISIS-2017-001:</u> Rebuild 9.6-mile-long Midway to Savannah 69 kV line to 336 ACSR at 100C	\$4,455,000	8.6%	\$381,664
<u>AECI AFS for DISIS-2017-001:</u> Replace Morley 69/161 kV transformer with 84/95 MVA transformer	\$2,929,000	8.4%	\$244,911
<u>AECI AFS for DISIS-2017-001:</u> Rebuild 2.9-mile-long Vanduser-Morley 69 kV line to 336 ACSR at 100C	\$1,022,000	8.2%	\$83,944
<u>AECI AFS for DISIS-2017-001:</u> Rebuild 9.76-mile-long Flag Springs-King City 69 kV line to 336 ACSR at 100C	\$4,530,000	8.6%	\$388,089
<u>AECI AFS for DISIS-2017-001:</u> Rebuild 6.69-mile-long Flag Springs-Savannah 69 kV line to 336 ACSR at 100C	\$3,105,000	8.6%	\$266,008
<u>AECI AFS for DISIS-2017-001:</u> Rebuild 7.68-mile-long Cameron-Turney 69 kV line to 336 ACSR at 100C	\$3,564,000	7.2%	\$254,973
Total	\$59,995,000		\$7,198,650

CONCLUSION

After all Interconnection Facilities and Network Upgrades have been placed into service, Interconnection Service for 200.1 MW can be granted. Full Interconnection Service will be delayed until the TOIF, Non-Shared NU, Shared NU, Contingent NU, Affected System Upgrades that are required for full interconnection service are completed. The Interconnection Customer's estimated cost responsibility for full interconnection service is summarized in the table below.

Table 6: Cost Summary

Description	Allocated Cost Estimate
Transmission Owner Interconnection Facilities Upgrade(s)	\$1,674,744
Non-Shared Network Upgrade(s)	\$1,122,522
Shared Network Upgrade(s)	\$2,019,128
Affected System Upgrade(s)	\$7,198,650
Total	\$12,015,044

Use the following link for Quarterly Updates on upgrades from this report: <https://spp.org/spp-documents-filings/?id=18641>

A draft Generator Interconnection Agreement will be provided to the Interconnection Customer consistent with the final results of this IFS report. The Transmission Owner and Interconnection Customer will have 60 days to negotiate the terms of the GIA consistent with the SPP Open Access Transmission Tariff (OATT).

APPENDICES

**A: TRANSMISSION OWNER'S INTERCONNECTION FACILITIES STUDY
REPORT AND NETWORK UPGRADES REPORT(S)**

See next page for the Transmission Owner's Interconnection Facilities Study Report and Network Upgrades Report(s).

Basin Electric Power Cooperative Facility Study Report GEN-2017-010

1. Background:

- 1.1** Per the Generator Interconnection Procedures (GIP), Attachment V, Section 8.11, SPP requests that Basin Electric Power Cooperative (BEPC) perform a facilities study in for the following Interconnection and/or Network Upgrade(s):

Interconnection	132949	Rhame 230 kV Substation GEN-2017-010 Interconnection (Non-Shared NU) (BEPC)	\$1,189,064	12 Months
Interconnection	132948	Rhame 230 kV Substation GEN-2017-010 Interconnection (TOIF) (BEPC)	\$1,608,232	12 Months

2. Study Requirements:

BEPC has performed this Facility Study report in accordance with the Generator Interconnection Procedures (GIP), Attachment V, Section 8.11 for the Interconnection and/or Network Upgrade(s) as described in Section 1.

2.1. The Facility Study report includes an evaluation of the following:

- 2.1.1.** Perform/develop a substation layout, perform a preliminary bus design, determine all electrical equipment requirements, and if required determine a suitable site location to accommodate the Request. Develop/compile cost estimates for all BEPC labor, overheads, equipment additions, modifications, etc. to accommodate the generator interconnection.
- 2.1.2.** Develop an overall construction schedule for completion of the necessary additions and/or modifications.
- 2.1.3.** Point Of Change of Ownership. For the purposes of this Facility Study report, the Point of Change of Ownership location is defined as the take-off structure(s) at the BEPC Substation/Switching Station where the Interconnection Customer's transmission line(s) connects to the take-off structure(s). Interconnection Customer will furnish and install the conductor jumper and insulator assembly to the take-off structure(s).
- 2.1.4.** Other Interconnection/Metering Requirements. Basic indication, metering, monitoring, control, and relaying requirements due to a generator interconnection are included in the cost estimate. BEPC's generation metering requirements, as an SPP Transmission Owner, must be met. A list of specific needs will be provided by BEPC once design has progressed.

3. Study Results for GEN-2017-010:

- 3.1.** The following results document the analysis of the required facilities for this Interconnection Request as outlined in Section 1 for a new 230kV line terminal at the Rhame 230kV Substation. BEPC has determined that the following additions and improvements are required to maintain a safe and reliable interconnection to BEPC's transmission system.

3.2 Substation/Switchyard

A 230kV terminal addition will be built to accommodate the new generation resource interconnection. This terminal will be added to the existing ring bus substation. Reference Figures A1 and A2. All equipment will follow BEPC's internal design standards for minimum BIL, ampacity, and fault capabilities.

The associated work for the new 230kV line terminal includes the following major additions:

- (1) 230kV Line Take-Off Structure
- (1) 230kV Breaker
- (1) 230kV Breaker Disconnect Switch
- (1) Set of Line Potential Transformers
- (1) Set of Current Transformers
- (1) Set of Line Surge Arrestors

Additional associated work will include a review and update to relay/protection schemes and SCADA RTU configurations at the current facility and the Leland Olds Unit 2 line terminal.

3.3 Environmental Requirements

Compliance with all applicable federal, state and local regulations will be strictly adhered to. Additionally, all applicable and required permits and approvals will be obtained prior to construction. For the purposes of this Facility Study report, it is anticipated that this new 230kV line terminal will require incidental minor local permitting.

3.4 Cost Estimate

GEN-2017-010 Estimated Costs Non Shared Network Upgrades	Current Year \$
Line Costs	
Engineering Labor	\$0
Construction Labor	\$0
Reactive Compensation (Labor & Materials)	\$0
Material	\$0
Right of Way	\$0
Line Sub Total	\$0
Station Costs	
Engineering Labor	\$231,000
Construction Labor	\$438,311
Site Property Rights	\$0
Reactive Compensation	\$0
Material	\$174,565
Right of Way	\$0
Station Sub Total	\$843,876
AFUDC	\$0
Contingency	\$278,676
Non - Shared Network Upgrades total	\$1,122,552

GEN-2017-010 Transmission Owner Interconnect Facilities	Current Year \$
Line Costs	
Engineering Labor	\$0
Construction Labor	\$0
Reactive Compensation (Labor & Materials)	\$0
Material	\$0
Right of Way	\$0
Line Sub Total	\$0
Station Costs	
Engineering Labor	\$200,000
Construction Labor	\$536,700
Site Property Rights	\$0
Reactive Compensation	\$0
Material	\$522,285
Right of Way	\$0
Station Sub Total	\$1,258,985
AFUDC	\$0
Contingency	\$415,759
TOIF Subtotal	\$1,674,744

Total Interconnection Cost	\$2,797,296
-----------------------------------	--------------------

3.5 Construction Schedule

The preliminary project schedule provided is for planning level purposes only and will be adjusted with additional project definition. If it is determined that NEPA and/or ROW condemnation is required, 12-18 months will be added to the In-Service date.

Activity	Duration	Estimated Start	Estimated Finish
Executed GIA-Notice To Proceed Letter	--	Month 0	--
Project Planning	1 Month	Month 0	Month 1
Engineering Design	4-6 Months	Month 1	Month 7
Equipment Procurement	8-10 Months	Month 2	Month 12
Advertise and Award Construction Contracts	2-3 Months	Month 7	Month 10
Construction	4 Months	Month 10	Month 14
Energize and In-Service Date	1 Month	Month 14	Month 15

Figure A1: Proposed Switching Diagram

FIGURE A1
GEN-2017-010

LEGEND:

- EXISTING EQUIPMENT
- NON SHARED NETWORK UPGRADES
- SHARED NETWORK UPGRADES
- TRANSMISSION OWNERS
INTERCONNECTION FACILITIES
- INTERCONNECTION CUSTOMER
INTERCONNECTION FACILITIES
- FUTURE

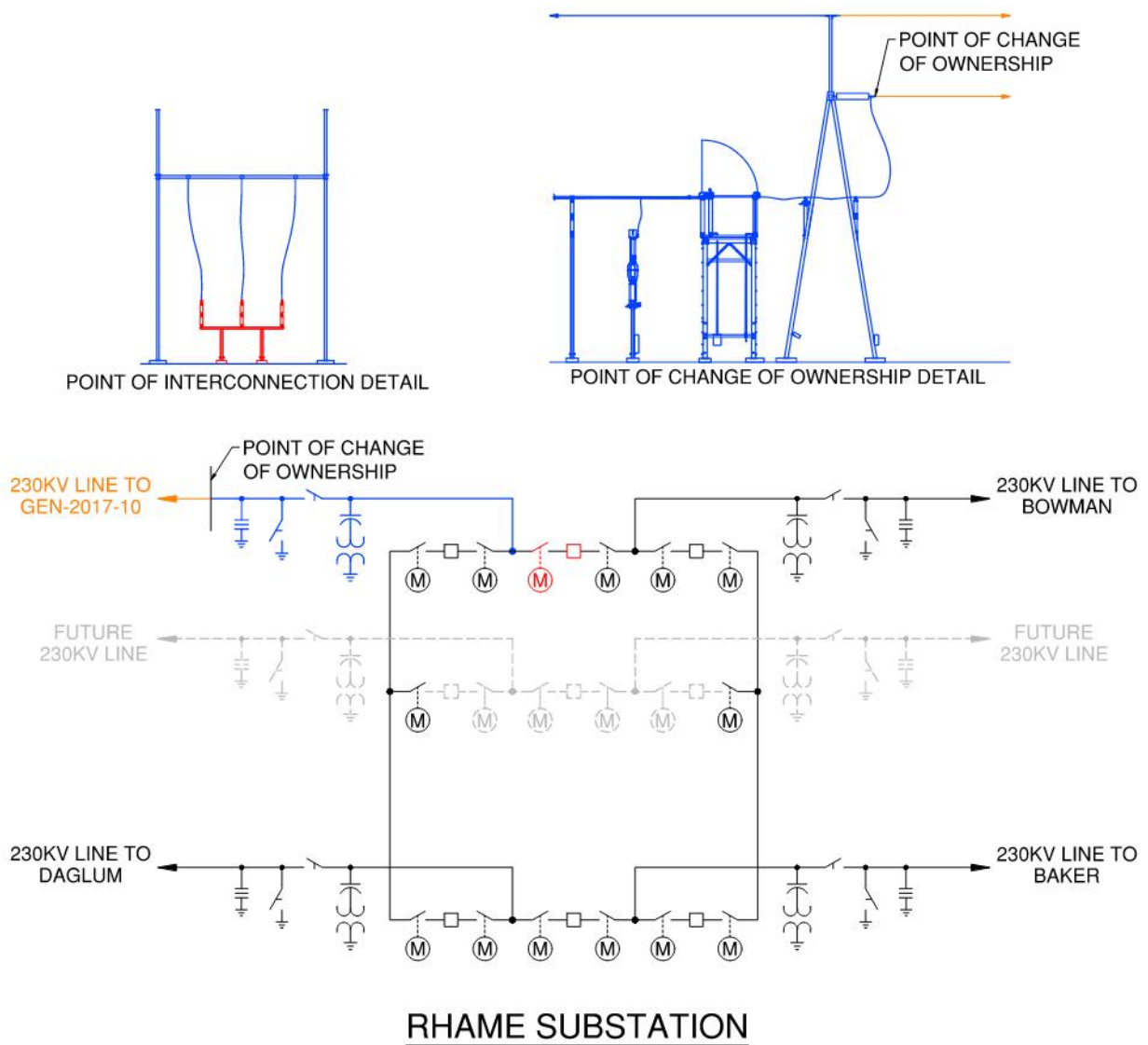
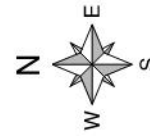
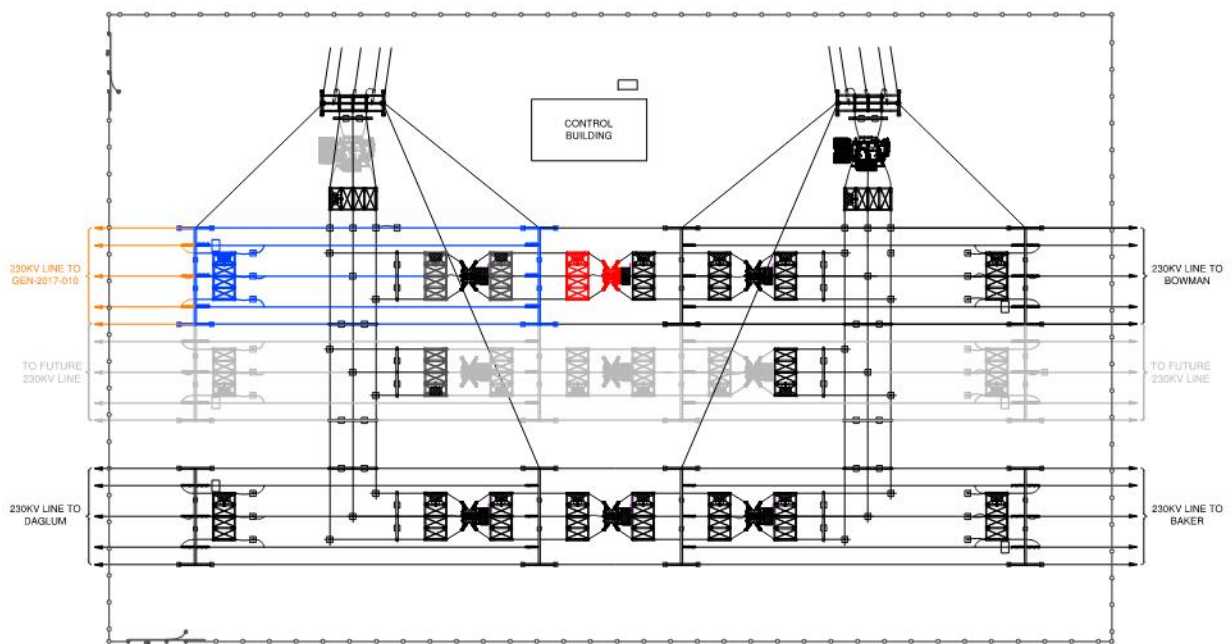
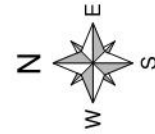


Figure A2: Proposed General Arrangement

FIGURE A2
GEN-2017-010

LEGEND:

- EXISTING EQUIPMENT
- NON SHARED NETWORK UPGRADES
- SHARED NETWORK UPGRADES
- TRANSMISSION OWNERS
INTERCONNECTION FACILITIES
- INTERCONNECTION CUSTOMER
INTERCONNECTION FACILITIES
- FUTURE



RHAME SUBSTATION

ATTACHMENT A
SPP INTERCONNECTION FACILITIES STUDY REQUEST LETTER

June 15, 2021

Subject: Facilities Study Request for DISIS-2017-001

Dear Mr. Severson:

Per the Generator Interconnection Procedures (GIP), SPP requests that Basin Electric Power Cooperative (BEPC) perform facilities study in accordance with Section 8.11 for the following Interconnection and/or Network Upgrade(s):

Upgrade Type	UID	Upgrade Name	DISIS Cost Estimate	DISIS Lead Time
Network Upgrade	143226	Broadland 345/230kV Transformer Replacement (DISIS-2017-001)	\$5,906,325	36 Months
Interconnection	132999	Neset 230 kV Substation GEN-2017-048 Interconnection (Non-Shared NU) (BEPC)	\$1,362,742	12 Months
Interconnection	132998	Neset 230 kV Substation GEN-2017-048 Interconnection (TOIF) (BEPC)	\$1,617,104	12 Months
Interconnection	132949	Rhame 230 kV Substation GEN-2017-010 Interconnection (Non-Shared NU) (BEPC)	\$1,189,064	12 Months
Interconnection	132948	Rhame 230 kV Substation GEN-2017-010 Interconnection (TOIF) (BEPC)	\$1,608,232	12 Months

** If the upgrade cost studied is higher than 20% of DISIS estimates, please provide justification in the facility report.*

The scope of the Facilities Study is to determine the cost estimates of equipment, engineering, procurement, and construction as well as the associated lead times.

For the completion of this Facilities Study request, please provide a Facilities Study report to SPP within ninety (90) calendar days to include all of the Interconnection and Network Upgrade(s) listed in the table above. Additionally, please provide an updated and completed Standardized Cost Estimate Report (SCERT) via the Transmission Reporting and Communication (TRAC) tool.

Sincerely,
SPP Generator Interconnection Department
201 Worthen Drive
Little Rock, AR 72223-4936

Basin Electric Power Cooperative Facility Study Report UID-143226

1. Background:

- 1.1 Per the Generator Interconnection Procedures (GIP), Attachment V, Section 8.11, SPP requests that Basin Electric Power Cooperative (BEPC) perform a facilities study in for the following Interconnection and/or Network Upgrade(s):

Network Upgrade	143226	Broadland 345/230kV Transformer Replacement (DISIS-2017-001)	\$5,906,325	36 Months
-----------------	--------	--	-------------	-----------

2. Study Requirements:

BEPC has performed this Facility Study report in accordance with the Generator Interconnection Procedures (GIP), Attachment V, Section 8.11 for the Interconnection and/or Network Upgrade(s) as described in Section 1.

2.1. The Facility Study report includes an evaluation of the following:

- 2.1.1. Perform/develop a substation layout, perform a preliminary design, determine all electrical equipment requirements, and if required determine a suitable site location to accommodate the Interconnection and/or Network Upgrade(s). Develop/compile cost estimates for all BEPC labor, overheads, equipment additions, modifications, etc. to accommodate the Interconnection and/or Network Upgrade(s).
- 2.1.2. Develop an overall construction schedule for completion of the necessary additions and/or modifications.

3. Study Results for UID-143226:

- 3.1. The following results document the analysis of the required facilities for this Upgrade Request as outlined in Section 1 for a replacement 345/230 kV 600 MVA transformer at the Broadland 345kV Substation.

3.2 Substation/Switchyard

A new 345/230 kV transformer will be purchased to replace the existing transformer. The foundation will be analyzed for compatibility with the new transformer and if required will be modified to accommodate the new transformer. Reference Figures A1 and A2. All equipment will follow BEPC's internal design standards for minimum BIL, MVA rating, and fault capabilities.

The associated work for the new 345kV line terminal includes the following major additions:

- (1) 345/230 kV 600 MVA Transformer
- (1) Transformer Foundation

Additional associated work will include a review and update to relay/protection schemes and SCADA RTU configurations at the current facility.

3.3 Environmental Requirements

Compliance with all applicable federal, state and local regulations will be strictly adhered to. Additionally, all applicable and required permits and approvals will be obtained prior to construction. For the purposes of this Facility Study report, it is anticipated that this Interconnection and/or Network Upgrade(s) will require incidental minor local permitting.

3.4 Cost Estimate

UID-143226 Estimated Costs Non Shared Network Upgrades	Current Year \$
Line Costs	
Engineering Labor	\$0
Construction Labor	\$0
Reactive Compensation (Labor & Materials)	\$0
Material	\$0
Right of Way	\$0
Line Sub Total	\$0
Station Costs	
Engineering Labor	\$270,300
Construction Labor	\$273,000
Site Property Rights	\$0
Reactive Compensation	\$0
Material	\$4,552,500
Right of Way	\$0
Station Sub Total	\$5,095,800
AFUDC	\$0
Contingency	\$810,525
Network Upgrades total	\$5,906,325

3.5 Construction Schedule

The preliminary project schedule provided is for planning level purposes only and will be adjusted with additional project definition. If it is determined that NEPA and/or ROW condemnation is required, 12-18 months will be added to the In-Service date.

Activity	Duration	Estimated Start	Estimated Finish
Executed GIA-Notice To Proceed Letter	--	Month 0	--
Project Planning	1 Month	Month 0	Month 1
Engineering Design	2-6 Months	Month 2	Month 7
Equipment Procurement	24-28 Months	Month 4	Month 32
Advertise and Award Construction Contracts	2-3 Months	Month 12	Month 15
Construction	3 Months	Month 29	Month 32
Energize and In-Service Date	1 Month	Month 32	Month 33

FIGURE A1
UID-143226

- EXISTING EQUIPMENT
- NON SHARED NETWORK UPGRADES
- SHARED NETWORK UPGRADES
- TRANSMISSION OWNERS
- INTERCONNECTION FACILITIES
- INTERCONNECTION CUSTOMER
- INTERCONNECTION FACILITIES
- FUTURE

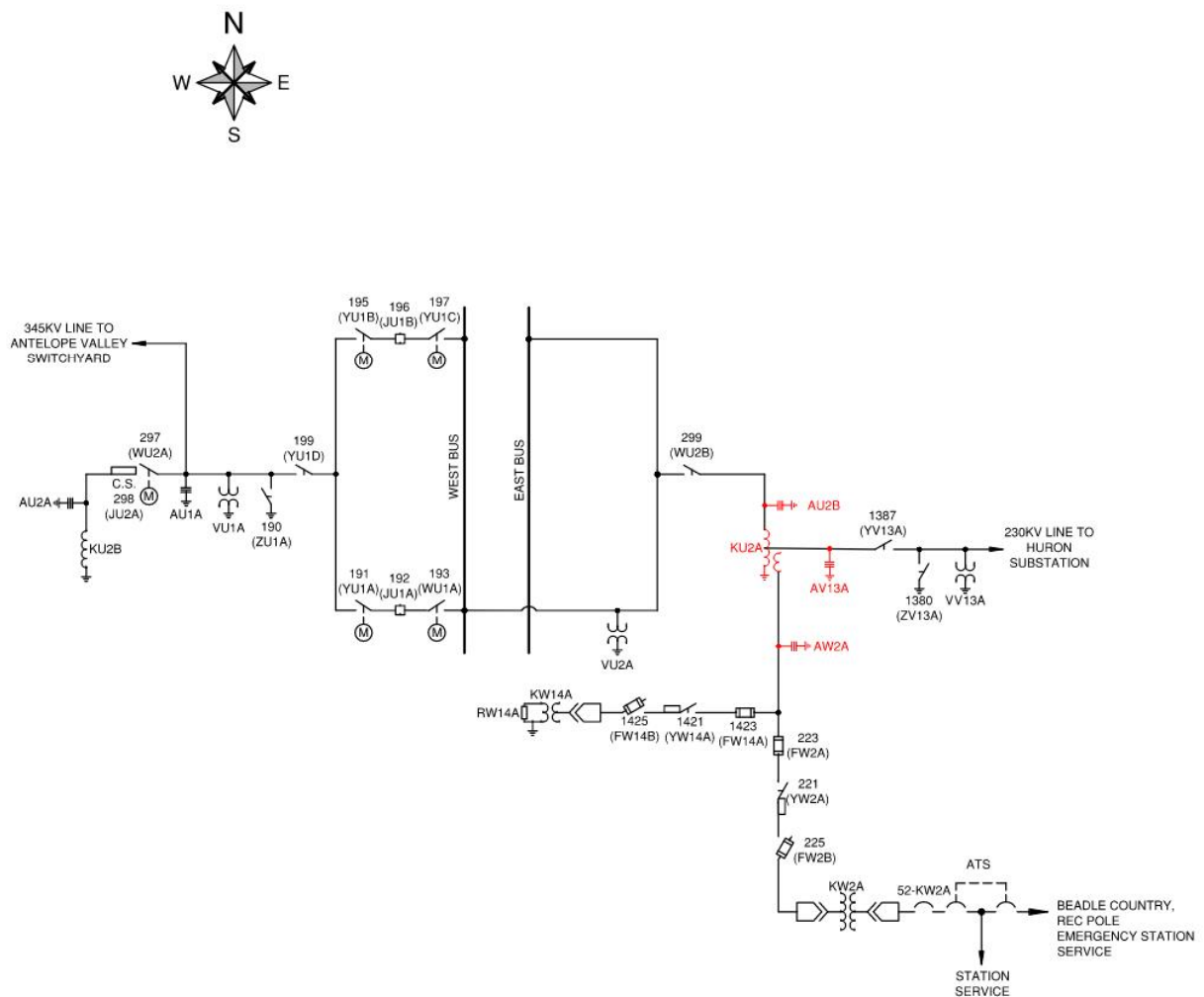
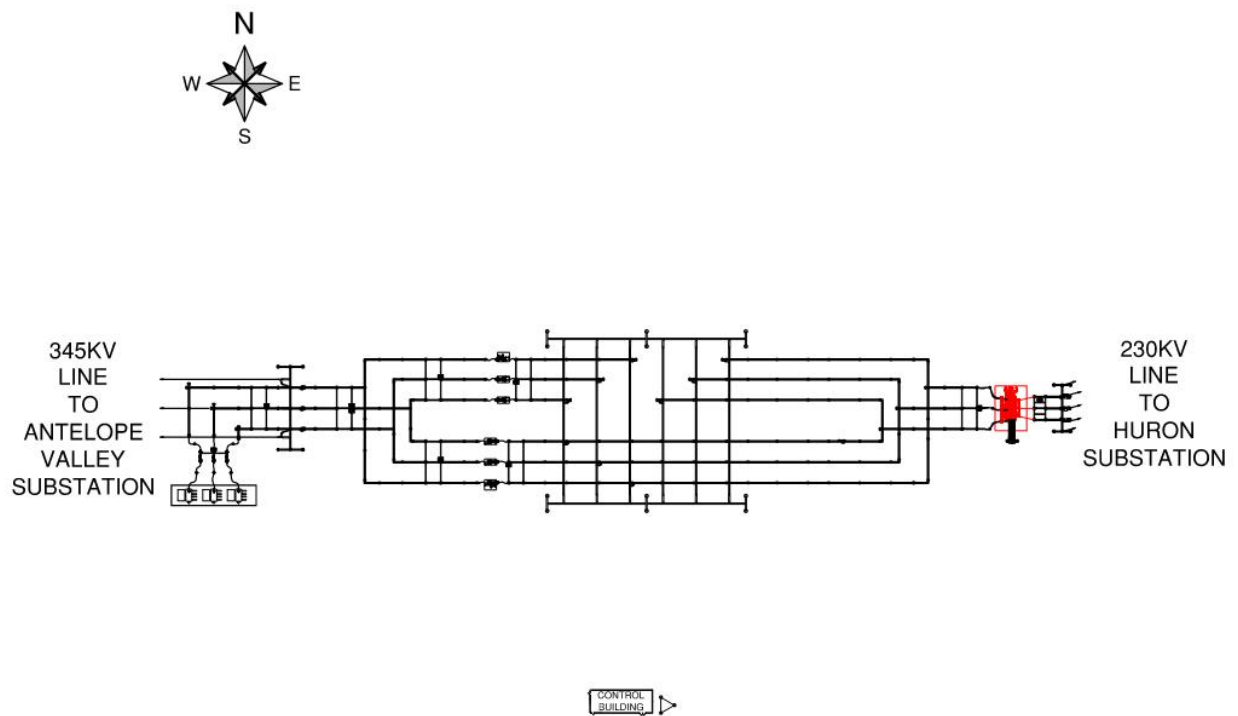


Figure A2: Proposed General Arrangement

FIGURE A2
UID-143226

LEGEND:

- EXISTING EQUIPMENT
- NON SHARED NETWORK UPGRADES
- SHARED NETWORK UPGRADES
- TRANSMISSION OWNERS
- INTERCONNECTION FACILITIES
- INTERCONNECTION CUSTOMER
- INTERCONNECTION FACILITIES
- FUTURE



ATTACHMENT A
SPP INTERCONNECTION FACILITIES STUDY REQUEST LETTER

June 15, 2021

Subject: Facilities Study Request for DISIS-2017-001

Dear Mr. Severson:

Per the Generator Interconnection Procedures (GIP), SPP requests that Basin Electric Power Cooperative (BEPC) perform facilities study in accordance with Section 8.11 for the following Interconnection and/or Network Upgrade(s):

Upgrade Type	UID	Upgrade Name	DISIS Cost Estimate	DISIS Lead Time
Network Upgrade	143226	Broadland 345/230kV Transformer Replacement (DISIS-2017-001)	\$5,906,325	36 Months
Interconnection	132999	Neset 230 kV Substation GEN-2017-048 Interconnection (Non-Shared NU) (BEPC)	\$1,362,742	12 Months
Interconnection	132998	Neset 230 kV Substation GEN-2017-048 Interconnection (TOIF) (BEPC)	\$1,617,104	12 Months
Interconnection	132949	Rhame 230 kV Substation GEN-2017-010 Interconnection (Non-Shared NU) (BEPC)	\$1,189,064	12 Months
Interconnection	132948	Rhame 230 kV Substation GEN-2017-010 Interconnection (TOIF) (BEPC)	\$1,608,232	12 Months

** If the upgrade cost studied is higher than 20% of DISIS estimates, please provide justification in the facility report.*

The scope of the Facilities Study is to determine the cost estimates of equipment, engineering, procurement, and construction as well as the associated lead times.

For the completion of this Facilities Study request, please provide a Facilities Study report to SPP within ninety (90) calendar days to include all of the Interconnection and Network Upgrade(s) listed in the table above. Additionally, please provide an updated and completed Standardized Cost Estimate Report (SCERT) via the Transmission Reporting and Communication (TRAC) tool.

Sincerely,
SPP Generator Interconnection Department
201 Worthen Drive
Little Rock, AR 72223-4936