Generation Interconnection System Impact Study Report

For

PJM Generation Interconnection Request Queue Position AC1-189

Chinquapin – Everetts 230kV 53.4 MW Capacity / 80 MW Energy

Revision 2 October / 2021

Revision 1 September / 2020

November / 2018

Introduction

This System Impact Study (SIS) has been prepared in accordance with the PJM Open Access Transmission Tariff, Section 205, as well as the System Impact Study Agreement between Pitt Solar, LLC, the Interconnection Customer (IC) and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is Virginia Electric and Power Company (VEPCO).

Preface

The intent of the System Impact Study is to determine a plan, with approximate cost and construction time estimates, to connect the subject generation interconnection project to the PJM network at a location specified by the IC. As a requirement for interconnection, the IC may be responsible for the cost of constructing Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system. All facilities required for interconnection of a generation interconnection project must be designed to meet the technical specifications (on PJM web site) for the appropriate transmission owner.

In some instances an IC may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g. another generation interconnection or merchant transmission upgrade, may also contribute to the need for the same network reinforcement. The possibility of sharing the reinforcement costs with other projects may be identified in the Feasibility Study, but the actual allocation will be deferred until the System Impact Study is performed.

The System Impact Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The IC is responsible for the right of way, real estate, and construction permit issues. For properties currently owned by Transmission Owners, the costs may be included in the study.

Revision 2 October 2021 Summary

The revision in October 2021 is being issued to incorporate the latest results of a re-tool.

General

The IC has proposed a solar generating facility located near Bethel, NC (Pitt County). The installed facilities will have a total capability of 80 MW with 53.4 MW of this output being recognized by PJM as capacity. The proposed in-service date for this project is 12/31/2020. **This study does not imply an ITO commitment to this in-service date.**

Point of Interconnection

AC1-189 will interconnect with the ITO transmission system via a new three breaker ring bus switching station that connects on the Chinquapin – Everetts 230kV line.

Cost Summary

The AC1-189 interconnection request will be responsible for the following costs:

Description	Total Cost
Attachment Facilities	$ 1,800,000
Direct Connection Network Upgrades	$ 6,500,000
Non Direct Connection Network Upgrades	$ 1,000,000
Allocation for New System Upgrades	$ 0
Contribution for Previously Identified Upgrades	$ 8,542
Total Costs	**$ 9,308,542**

Attachment Facilities

Generation Substation: Install metering and associated protection equipment. Estimated Cost $600,000.

Transmission: Build approximately 0.5 miles of 230 kV Line. Estimated Cost $1,200,000

The estimated total cost of the Attachment Facilities is $1,800,000. It is estimated to take 24-30 months to complete this work. These preliminary cost estimates are based on typical engineering costs. A more detailed engineering cost estimates are normally done when the IC provides an exact site plan location for the generation substation during the Facility Study phase. These costs do not include CIAC Tax Gross-up. The single line is shown below in Attachment 1.

Direct Connection Cost Estimate

Substation: Build a three breaker 230 kV Switching Station and install associated equipment. Estimated Cost $6,500,000 and it is estimated to take 24-30 months to complete this work. These preliminary cost estimates are based on typical engineering costs. A more detailed engineering cost estimates are normally done when the IC provides an exact site plan location for the generation substation during the Facility Study phase.

Non-Direct Connection Cost Estimate

Transmission: Re-arrange existing lines to accommodate new 230 kV Switching Station Estimated Cost $1,000,000.

Remote Terminal Work: During the Facilities Study, ITO's System Protection Engineering Department will review transmission line protection as well as anti-islanding required to accommodate the new generation and interconnection substation. System Protection Engineering will determine the minimal acceptable protection requirements to reliably interconnect the proposed generating facility with the transmission system. The review is based on maintaining system reliability by reviewing ITO's protection requirements with the known transmission system configuration which includes generating facilities in the area. This review may determine that transmission line protection and communication upgrades are required at remote substations.

New System Reinforcements

None

Contribution to Previously Identified System Reinforcements

Reinforcement: Battleboro – Rocky Mt 115kV: Replace Battleboro substation terminal equipment. Upgrading the breaker leads at Battleboro will bring the rating to 398 MVA. Estimated cost is $8,542.

Note: Duke/Progress Energy portion of this line will need to be studied under Duke's FERC tariff process.

IC needs to enter into an Affected System Facilities Study agreement with Duke / Progress Energy (DEP) to determine how to mitigate Battleboro - Rocky Mt.115kV overload. The upgrade will likely be a complete reconductor, probably replacing structures.

Outage scheduling and coordination will impact the actual completion dates for the various identified network upgrades.

Interconnection Customer Requirements

ITO's Facility Interconnection Requirements as posted on PJM's website
http://www.pjm.com/~/media/planning/plan-standards/private-dominion/facility-connection-requirements1.ashx

Voltage Ride Through Requirements - The Customer Facility shall be designed to remain in service (not trip) for voltages and times as specified for the Eastern Interconnection in Attachment 1 of NERC Reliability Standard PRC-024-1, and successor Reliability Standards, for both high and low voltage conditions, irrespective of generator size, subject to the permissive trip exceptions established in PRC-024-1 (and successor Reliability Standards).

Frequency Ride Through Requirements - The Customer Facility shall be designed to remain in service (not trip) for frequencies and times as specified in Attachment 2 of NERC Reliability Standard PRC-024-1, and successor Reliability Standards, for both high and low frequency condition, irrespective of generator size, subject to the permissive trip exceptions established in PRC-024-1 (and successor Reliability Standards).

Reactive Power - The Generation Interconnection Customer shall design its non-synchronous Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the generator's terminals.

Meteorological Data Reporting Requirement - The solar generation facility shall, at a minimum, be required to provide the Transmission Provider with site-specific meteorological data including:

- Temperature (degrees Fahrenheit)
- Atmospheric pressure (hectopascals)
- Irradiance
- Forced outage data

Revenue Metering and SCADA Requirements

PJM Requirements

The Interconnection Customer will be required to install equipment necessary to provide Revenue Metering (KWH, KVARH) and real time data (KW, KVAR) for IC's generating Resource. See PJM Manuals M-01 and M-14D, and PJM Tariff Sections 24.1 and 24.2.

Interconnected Transmission Owner Requirements

Metering and SCADA/Communication equipment must meet the requirements outlined in section 3.1.6 Metering and Telecommunications of ITO's Facility Connection Requirement NERC Standard FAC-001 which is publically available at www.dom.com.

Network Impacts

The Queue Project AC1-189 was evaluated as a 80.0 MW (Capacity 53.4 MW). AC1-189 will interconnect with the ITO transmission system via a new three breaker ring bus switching station that connects on the Chinquapin – Everetts 230kV line in the VAP area. Project AC1-189 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AC1-189 was studied with a commercial probability of 100%. Potential network impacts were as follows:

Contingency Descriptions

The following contingencies resulted in overloads:

Contingency Name	Description
246T2034_A	CONTINGENCY '246T2034_A' /* EARLEYS OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1 /* 246 OPEN BRANCH FROM BUS 314575 TO BUS 921571 CKT 1 /* 246 AA1-138 TAP OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1 /* 246 - NUCOR OPEN BRANCH FROM BUS 314569 TO BUS 314620 CKT 1 /* 2034 OPEN BRANCH FROM BUS 314620 TO BUS 314616 CKT 1 /* 2034 OPEN BRANCH FROM BUS 314616 TO BUS 314613 CKT 1 /* TROWBRIDGE TX #1&2 END
LN 2058-2181	CONTINGENCY 'LN 2058-2181' OPEN BUS 304226 /* ISLAND: 6PA-RMOUNT#4115.00 OPEN BRANCH FROM BUS 304226 TO BUS 314591 CKT 1 /* 6PA-RMOUNT#4230.00 - 6NASH 230.00 OPEN BRANCH FROM BUS 313845 TO BUS 314591 CKT 1 /* 6HATHAWAY 230.00 - 6NASH 230.00 OPEN BUS 314591 /* ISLAND: 6NASH 230.00 OPEN BRANCH FROM BUS 304222 TO BUS 313845 CKT 1 /* 6ROCKYMT230T230.00 - 6HATHAWAY 230.00 END
LN 563	CONTINGENCY 'LN 563' OPEN BRANCH FROM BUS 314902 TO BUS 314914 CKT 1 /* 8CARSON 500.00 - 8MDLTHAN 500.00 END
LN 2141	CONTINGENCY 'LN 2141' OPEN BRANCH FROM BUS 314561 TO BUS 314583 CKT 1 /* 6CAROLNA 230.00 - 6LAKEVEW 230.00 END

Summer Peak Analysis – 2020

Generator Deliverability

(Single or N-1 contingencies for the Capacity portion only of the interconnection)

None

Multiple Facility Contingency

(Double Circuit Tower Line, Fault with a Stuck Breaker, and Bus Fault contingencies for the full energy output).

Overload	Contingency				Bus				Loading %		Rating		MW	Flowgate
Number	Type	Name	Affected Area	Facility Description	From	To	Circuit	Power Flow	Initial	Final	Type	MVA	Contribution	Appendix
1	LFB	246T2034_A	DVP - DVP	AB2-100 TAP-6CLUBHSE 230 kV line	924510	314563	1	AC	96.06	99.26	-	459	15.1	1

Short Circuit

(Summary of impacted circuit breakers)

New circuit breakers found to be over-duty:

None

Contributions to previously identified circuit breakers found to be over-duty:

None

Contribution to Previously Identified Overloads

(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

Overload	Contingency				Bus				Loading %		Rating		MW	Flowgate
Number	Type	Name	Affected Area	Facility Description	From	To	Circuit	Power Flow	Initial	Final	Type	MVA	Contribution	Appendix
2	DCTL	LN 2058-2181	DVP - CPLE	3BTLEBRO-3ROCKYMT115T 115 kV line	314554	304223	1	AC	138.8	142.72	ER	164	7.92	2

Steady-State Voltage Requirements

(Summary of the VAR requirements based upon the results of the steady-state voltage studies)

None

Stability and Reactive Power Requirement for Low Voltage Ride Through

(Summary of the VAR requirements based upon the results of the dynamic studies)

No mitigations were found to be required.

New System Reinforcements

(Upgrades required to mitigate reliability criteria violations, i.e. Network Impacts, initially caused by the addition of this interconnection request)

None

Contribution to Previously Identified System Reinforcements

(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which is calculated and reported for in the Impact Study)

<table>
<tr><th>Violation #</th><th>Overloaded Facility</th><th>Upgrade Description</th><th>Network Upgrade Number</th><th>Upgrade Cost</th><th>AC1-189 Allocation</th></tr>
<tr><td># 2</td><td>3BTLEBRO-3ROCKYMT115T 115 kV line</td><td>Replace Battleboro substation terminal equipment. Upgrading the breaker leads at Battleboro will bring the rating to 398 MVA.

<table><tr><th>Queue</th><th>Impact (MW)</th><th>Cost</th></tr><tr><td>AC1-034</td><td>27.14</td><td>$29,271</td></tr><tr><td>AC1-086</td><td>21.64</td><td>$23,339</td></tr><tr><td>AC1-099</td><td>17.47</td><td>$18,842</td></tr><tr><td>AC1-189</td><td>7.92</td><td>$8,542</td></tr><tr><td>AC1-208</td><td>18.55</td><td>$20,006</td></tr></table>
Note: Duke/Progress Energy portion of this line will need to be studied under Duke’s FERC tariff process</td><td>n6118</td><td>$100,000</td><td>$8,542</td></tr>
<tr><td colspan="5">Total Network Upgrades</td><td>$8,542</td></tr>
</table>

Potential Congestion due to Local Energy Deliverability

PJM also studied the delivery of the energy portion of this interconnection request. Any problems identified below are likely to result in operational restrictions to the project under study. The IC can proceed with network upgrades to eliminate the operational restriction at their discretion by submitting a Merchant Transmission Interconnection request.

Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full delivery of energy for this interconnection request by addressing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which shall study all overload conditions associated with the overloaded element(s) identified.

Overload	Contingency				Bus				Loading %		Rating		MW
Number	Type	Name	Affected Area	Facility Description	From	To	Circuit	Power Flow	Initial	Final	Type	MVA	Contribution
3	N-1	LN 563	DVP - DVP	6CHSTF B-6BASIN 230 kV line	314287	314276	1	AC	107.07	108.01	ER	449	4.97
4	N-1	LN 2141	DVP - DVP	AB2-100 TAP-6CLUBHSE 230 kV line	924510	314563	1	AC	116.23	118.35	ER	375	8.17

Light Load Analysis in 2020

Not required

ITO Analysis

ITO assessed the impact of the proposed Queue Project #AC1-189 interconnection of 80 MW of energy (Capacity 53.4 MW) for compliance with reliability criteria on ITO's Transmission System. The system was assessed using the summer 2020 RTEP case provided to ITO by PJM. When performing a generation analysis, ITO's main analysis will be load flow study results under single contingency and multiple facility contingency (both normal and stressed system conditions). ITO Criteria considers a transmission facility overloaded if it exceeds 94% of its emergency rating under normal and stressed system conditions. A full listing of ITO's Planning Criteria and interconnection requirements can be found in the ITO's Facility Connection Requirements which are publicly available at: http://www.dom.com.

The results of these studies evaluate the system under a limited set of operating conditions and do not guarantee the full delivery of the capacity and associated energy of this proposed interconnection request under all operating conditions. NERC Planning and Operating Reliability Criteria allow for the re-dispatch of generating units to resolve projected and actual deficiencies in real time and planning studies. Specifically NERC Category C Contingency Conditions (Bus Fault, Tower Line, N-1-1, and Stuck Breaker scenarios) allow for re-dispatch of generating units to resolve potential

reliability deficiencies. For ITO Planning Criteria the re-dispatch of generating units for these contingency conditions is allowed as long as the projected loading does not exceed 100% of a facility Load Dump Rating.

As part of its generation impact analysis ITO routinely evaluates the impact that a proposed new generation resource will have under maximum generation conditions, stress system conditions and import/export system conditions (greater than 20 MW). The results of these studies are discussed in more detail below.

Category B Analysis (Single Contingency):

- System Normal – No deficiencies identified
- Critical System Condition (No Surry 230 kV Unit) OR (Possum Point Unit #6 (230kV Unit) – No deficiencies identified.

Category C Analysis: (Multiple Facility Contingency)

- Bus Fault - No deficiencies identified
- Line Stuck Breaker - No deficiencies identified
- Tower Line – No deficiencies identified

As part of its generation impact analysis ITO routinely evaluates the impact that a proposed new generation resource (greater than 20 MW) will have under maximum generation conditions, stress system conditions and import/export system conditions. The results of these studies are discussed in Table A and B below.

Table A: Import Study Results

Import Study Results			
Area	Summer 2020	Summer 2020 with AC1-189	Limiting Element
AEP	2000+	2000+	None
APS	2000+	2000+	None
CPL	2000+	2000+	None
PJM	2000+	2000+	None

Table B: Export Study Results

Export Study Results			
Area	Summer 2020	Summer 2020 with AC1-189	Limiting Element
AEP	2000+	2000+	None
APS	2000+	2000+	None
CPL	2000+	2000+	None
PJM	2000+	2000+	None

ITO's Planning Criteria indicates a need to have approximately 2000 MW of import and export capability. The results of these import and export studies indicate that the proposed AC1-189 (Transfer) will not impact ITO's import or export capability

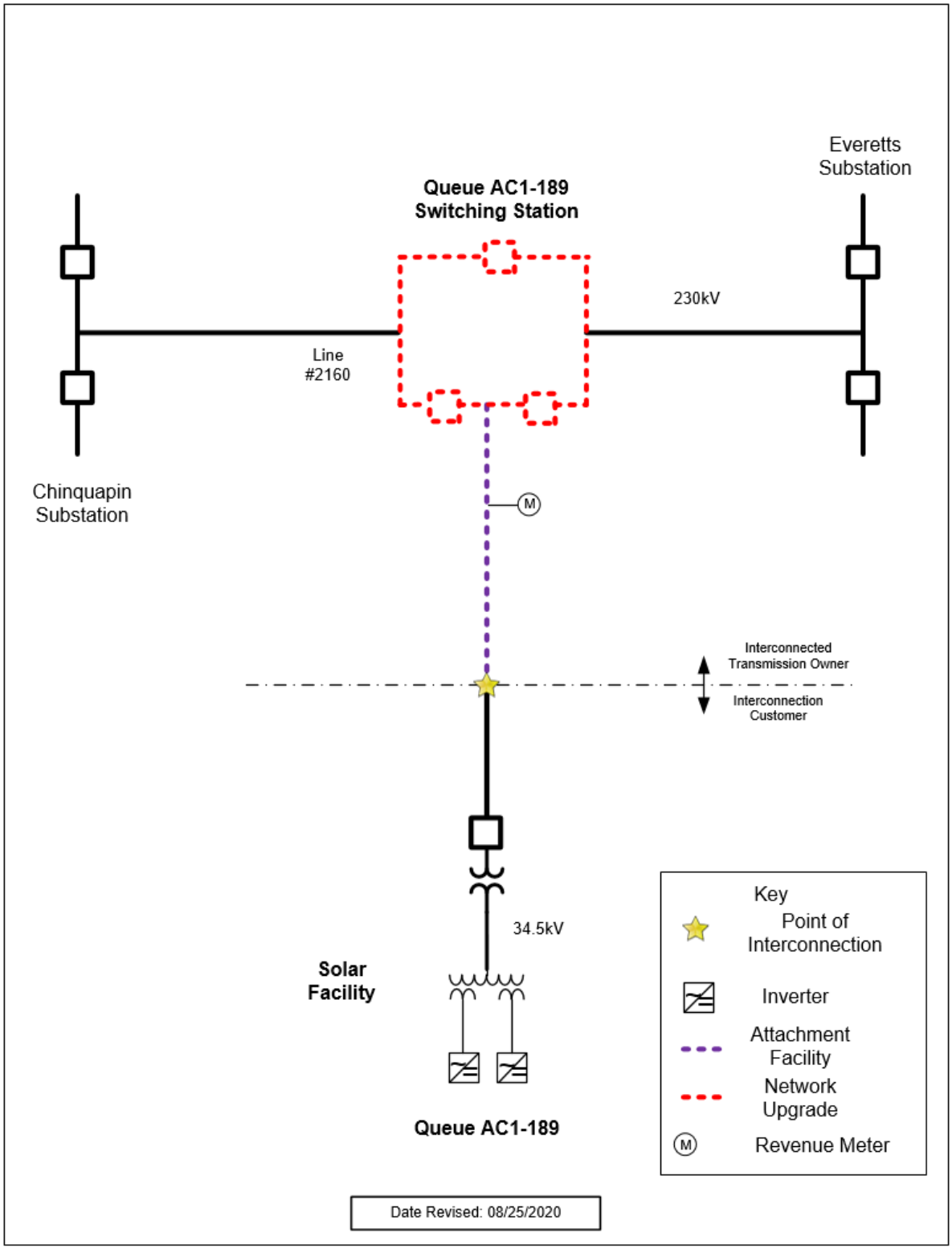
Affected System Analysis & Mitigation

Duke Energy:

Enter into an Affected System Facilities Study agreement with Duke / Progress Energy (DEP) to determine how to mitigate Battleboro – Rocky Mt.115kV overload. The upgrade will likely be a complete reconductor, probably replacing structures.

Attachment 1.

System Configuration



Appendices

The following appendices contain additional information about each flowgate presented in the body of the report. For each appendix, a description of the flowgate and its contingency was included for convenience. However, the intent of the appendix section is to provide more information on which projects/generators have contributions to the flowgate in question. All New Service Queue Requests, through the end of the Queue under study, that are contributors to a flowgate will be listed in the Appendices. Please note that there may be contributors that are subsequently queued after the queue under study that are not listed in the Appendices. Although this information is not used "as is" for cost allocation purposes, it can be used to gage the impact of other projects/generators.

It should be noted the project/generator MW contributions presented in the body of the report and appendices sections are full contributions, whereas the loading percentages reported in the body of the report, take into consideration the commercial probability of each project as well as the ramping impact of "Adder" contributions.

Appendix 1

(DVP - DVP) The AB2-100 TAP-6CLUBHSE 230 kV line (from bus 924510 to bus 314563 ckt 1) loads from 96.06% to 99.26% (AC power flow) of its load dump rating (459 MVA) for the line fault with failed breaker contingency outage of '246T2034_A'. This project contributes approximately 15.1 MW to the thermal violation.

```
CONTINGENCY '246T2034_A'                                    /* EARLEYS
  OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1           /* 246
  OPEN BRANCH FROM BUS 314575 TO BUS 921571 CKT 1           /* 246 AA1-138
TAP
  OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1           /* 246 - NUCOR
  OPEN BRANCH FROM BUS 314569 TO BUS 314620 CKT 1           /* 2034
  OPEN BRANCH FROM BUS 314620 TO BUS 314616 CKT 1           /* 2034
  OPEN BRANCH FROM BUS 314616 TO BUS 314613 CKT 1           /* TROWBRIDGE
TX #1&2
  END
```

Bus Number	*Bus Name*	*Full Contribution*
315131	*1EDGECMA*	*10.03*
315132	*1EDGECMB*	*10.03*
315139	*1GASTONA*	*7.88*
315141	*1GASTONB*	*7.88*
315126	*1ROARAP2*	*1.87*
315128	*1ROARAP4*	*1.8*
315136	*1ROSEMG1*	*5.3*
315138	*1ROSEMG2*	*2.48*
315137	*1ROSEMS1*	*3.29*
314784	*1WEYRHSB*	*1.23*
900671	*V4-068 C*	*0.13*
900672	*V4-068 E*	*0.41*
917331	*Z2-043 C*	*0.59*
917332	*Z2-043 E*	*1.42*
917341	*Z2-044 C*	*0.29*

917342	*Z2-044 E*	*0.7*
917511	*Z2-088 C OP1*	*1.04*
917512	*Z2-088 E OP1*	*9.48*
918411	*AA1-050*	*0.87*
921162	*AA1-063AC*	*10.98*
921163	*AA1-063AE*	*5.18*
918511	*AA1-065 C OP*	*2.53*
918512	*AA1-065 E OP*	*6.96*
921182	*AA1-067 C*	*0.35*
921183	*AA1-067 E*	*0.84*
918561	*AA1-072 C*	*0.09*
918562	*AA1-072 E*	*0.24*
921752	*AA2-053 C*	*11.51*
921753	*AA2-053 E*	*4.94*
921762	*AA2-057 C*	*8.89*
921763	*AA2-057 E*	*4.45*
LTF	*AA2-074*	*2.48*
921982	*AA2-088 C*	*8.51*
921983	*AA2-088 E*	*13.88*
922442	*AA2-165 C*	*1.21*
922443	*AA2-165 E*	*0.59*
922512	*AA2-174 C*	*0.53*
922513	*AA2-174 E*	*0.57*
922922	*AB1-081 C OP*	*10.79*
922923	*AB1-081 E OP*	*4.62*
923262	*AB1-132 C OP*	*33.63*

923263	*AB1-132 E OP*	*14.41*
923851	*AB2-025 C*	*-2.5*
924151	*AB2-059 C*	*12.71*
924152	*AB2-059 E*	*6.55*
924501	*AB2-099 C*	*0.86*
924502	*AB2-099 E*	*0.37*
924511	*AB2-100 C*	*44.09*
924512	*AB2-100 E*	*21.72*
925121	*AB2-169 C*	*0.89*
925122	*AB2-169 E*	*4.45*
926331	*AC1-034 C*	*8.23*
926332	*AC1-034 E*	*6.21*
926531	*AC1-054 C OP*	*4.83*
926532	*AC1-054 E OP*	*2.23*
926851	*AC1-086 C*	*49.52*
926852	*AC1-086 E*	*22.54*
926981	*AC1-099 C*	*10.85*
926982	*AC1-099 E*	*6.44*
927991	*AC1-189 C*	*10.08*
927992	*AC1-189 E*	*5.02*
928191	*AC1-208 C O1*	*11.55*
928192	*AC1-208 E O1*	*5.13*

Appendix 2

(DVP - CPLE) The 3BTLEBRO-3ROCKYMT115T 115 kV line (from bus 314554 to bus 304223 ckt 1) loads from 138.8% to 142.72% (AC power flow) of its emergency rating (164 MVA) for the tower line contingency outage of 'LN 2058-2181'. This project contributes approximately 7.92 MW to the thermal violation.

CONTINGENCY 'LN 2058-2181'
OPEN BUS 304226 /* ISLAND: 6PA-RMOUNT#4115.00
OPEN BRANCH FROM BUS 304226 TO BUS 314591 CKT 1 /* 6PA-RMOUNT#4230.00 - 6NASH 230.00
OPEN BRANCH FROM BUS 313845 TO BUS 314591 CKT 1 /* 6HATHAWAY 230.00 - 6NASH 230.00
OPEN BUS 314591 /* ISLAND: 6NASH 230.00
OPEN BRANCH FROM BUS 304222 TO BUS 313845 CKT 1 /* 6ROCKYMT230T230.00 - 6HATHAWAY 230.00
END

Bus Number	*Bus Name*	*Full Contribution*
315131	*1EDGECMA*	*11.76*
315132	*1EDGECMB*	*11.76*
315139	*1GASTONA*	*2.37*
315141	*1GASTONB*	*2.37*
315126	*1ROARAP2*	*1.02*
315128	*1ROARAP4*	*0.98*
315136	*1ROSEMG1*	*1.91*
315138	*1ROSEMG2*	*0.89*
315137	*1ROSEMS1*	*1.18*
900671	*V4-068 C*	*0.06*
900672	*V4-068 E*	*0.19*
917331	*Z2-043 C*	*0.36*
917332	*Z2-043 E*	*0.86*
917341	*Z2-044 C*	*0.53*

917342	*Z2-044 E*	*1.26*
917511	*Z2-088 C OP1*	*0.68*
917512	*Z2-088 E OP1*	*6.23*
918411	*AA1-050*	*0.58*
921162	*AA1-063AC*	*5.75*
921163	*AA1-063AE*	*2.71*
918512	*AA1-065 E OP*	*2.03*
921183	*AA1-067 E*	*0.33*
918561	*AA1-072 C*	*0.05*
918562	*AA1-072 E*	*0.14*
921752	*AA2-053 C*	*5.83*
921753	*AA2-053 E*	*2.5*
921762	*AA2-057 C*	*13.09*
921763	*AA2-057 E*	*6.55*
921982	*AA2-088 C*	*4.16*
921983	*AA2-088 E*	*6.79*
922442	*AA2-165 C*	*1.79*
922443	*AA2-165 E*	*0.86*
922512	*AA2-174 C*	*0.27*
922513	*AA2-174 E*	*0.29*
922922	*AB1-081 C OP*	*20.26*
922923	*AB1-081 E OP*	*8.68*
923262	*AB1-132 C OP*	*10.1*
923263	*AB1-132 E OP*	*4.33*
923572	*AB1-173 C OP*	*1.29*
923573	*AB1-173 E OP*	*0.6*

923582	*AB1-173AC OP*	*1.29*
923583	*AB1-173AE OP*	*0.6*
923911	*AB2-031 C OP*	*1.28*
923912	*AB2-031 E OP*	*0.63*
923991	*AB2-040 C OP*	*4.21*
923992	*AB2-040 E OP*	*3.45*
924151	*AB2-059 C*	*23.88*
924152	*AB2-059 E*	*12.3*
924501	*AB2-099 C*	*0.35*
924502	*AB2-099 E*	*0.15*
924511	*AB2-100 C*	*5.54*
924512	*AB2-100 E*	*2.73*
925171	*AB2-174 C O1*	*3.85*
925172	*AB2-174 E O1*	*3.48*
926331	*AC1-034 C*	*15.47*
926332	*AC1-034 E*	*11.67*
926851	*AC1-086 C*	*14.87*
926852	*AC1-086 E*	*6.77*
926981	*AC1-099 C*	*10.96*
926982	*AC1-099 E*	*6.51*
927991	*AC1-189 C*	*5.29*
927992	*AC1-189 E*	*2.63*
928191	*AC1-208 C O1*	*12.85*
928192	*AC1-208 E O1*	*5.7*