



**Generation Interconnection
Feasibility Study Report
for
Queue Project AF2-081
MOYOCK 230 KV
56 MW Capacity / 80 MW Energy**

July 2020

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1 Introduction

This Feasibility Study has been prepared in accordance with the PJM Open Access Transmission Tariff, 36.2, as well as the Feasibility Study Agreement between the Interconnection Customer (IC), and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is Dominion.

2 Preface

The intent of the feasibility study is to determine a plan, with ballpark cost and construction time estimates, to connect the subject generation to the PJM network at a location specified by the Interconnection Customer. The Interconnection Customer may request the interconnection of generation as a capacity resource or as an energy-only resource. As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing: (1) Direct Connections, which are new facilities and/or facilities upgrades needed to connect the generator to the PJM network, and (2) Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system.

In some instances a generator interconnection may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g. another generation interconnection, may also contribute to the need for the same network reinforcement. Cost allocation rules for network upgrades can be found in PJM Manual 14A, Attachment B. 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 impact study is performed.

The Interconnection Customer seeking to interconnect a wind or solar generation facility shall maintain meteorological data facilities as well as provide that meteorological data which is required per Schedule H to the Interconnection Service Agreement and Section 8 of Manual 14D.

The Feasibility Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The project developer 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.

3 General

The Interconnection Customer (IC), has proposed a Solar generating facility located in North Carolina. The installed facilities will have a total capability of 80 MW with 56 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is December 01, 2023. This study does not imply a TO commitment to this in-service date.

Queue Number	AF2-081
Project Name	MOYOCK 230 KV
State	North Carolina
Transmission Owner	Dominion
MFO	80
MWE	80
MWC	56
Fuel	Solar
Basecase Study Year	2023

Any new service customers who can feasibly be commercially operable prior to June 1st of the basecase study year are required to request interim deliverability analysis.

4 Point of Interconnection

4.1 Primary Point of Interconnection

AF2-081 “Moyock 230 kV” will interconnect with the Dominion’s transmission system via an existing substation Moyock 230 kV substation. This is the primary Point of Interconnection (POI) chose by the IC with the ITO’s transmission system. The IC is responsible for securing right-of-way, permits and constructing the proposed attachment line from the battery energy storage facility site to the existing switching station. Attachment 1 shows a one-line diagram of the proposed interconnection facilities. The IC may not install any facilities on Dominion’s right-of-way without first obtaining the necessary approval from Dominion Energy.

4.2 Secondary Point of Interconnection

The IC requested that a secondary POI of a single line tap between Fentress 230 kV substation and Sligo 230 kV substation be reviewed for network impacts. This report does not provide costs for the physical interconnection of the secondary point of interconnection. It was just analyzed for network impacts. Results are shown in the Network Impacts – Secondary Point of Interconnection section of this report.

5 Cost Summary

The AF2-081 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$ 3,300,000
Total System Network Upgrade Costs	\$ 90,965,000
Total Costs	\$ 94,265,000

This cost excludes a Federal Income Tax Gross Up charges. This tax may or may not be charged based on whether this project meets the eligibility requirements of IRS Notice 88-129. If at a future date it is determined that the Federal Income Tax Gross charge is required, the Transmission Owner shall be reimbursed by the Interconnection Customer for such taxes.

Cost allocations for any System Upgrades will be provided in the System Impact Study Report.

6 Transmission Owner Scope of Work

Dominion assessed the impact of the proposed Queue Project AE2-081 was evaluated as a 56 MW Capacity (80.0 MW Energy) injection at the Moyock 230 kV substation in the Dominion Transmission System, for compliance with NERC Reliability Criteria on Dominion Transmission System. The system was assessed using the summer 2023 AF2 case provided to Dominion by PJM. When performing a generation analysis, Dominion's main analysis will be load flow study results under single contingency (both normal and stressed system conditions). Dominion Criteria considers a transmission facility overloaded if it exceeds 94% of its emergency rating under normal and stressed system conditions. A full listing of Dominion's Planning Criteria and interconnection requirements can be found in the Company's Facility Connection Requirements which are publicly available at: <http://www.dominionenergy.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 generation facility 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, in Planning Studies, NERC Planning Event 3 and 6 Contingency Conditions (Loss of generator, transmission circuit, transformer, shunt device, or Single Pole of a DC line followed by the loss of a generator, transmission circuit, transformer, shunt device or single pole of a DC line) allow for re-dispatch of generating units to resolve potential reliability deficiencies. For Dominion 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.

The required Attachment Facilities, Direct Connection and Non-Direct Connection work for the interconnection of the AF2-081 generation project to the Dominion Transmission System is detailed in the following sections. The associated one-line with the generation project attachment facilities and primary direct and non-direct connection are shown in Attachment 1.

Note that the ITO findings were made from a conceptual review of this project. A more detailed review of the connection facilities and their cost will be identified in a future study phases. Further note that the cost estimate data contained in this document should be considered high level estimates since it was produced without a detailed engineering review. The applicant will be responsible for the actual cost of construction. ITO herein reserves the right to return to any issues in this document and, upon appropriate justification, request additional monies to complete any reinforcements to the transmission systems.

The total physical interconnection costs is given in the table below:

Description	Total Cost
Attachment Facility Substation (Metering)	\$ 600,000
Install one span of overhead 230 kV Transmission to POI	\$ 1,500,000
Additional Substation Breakers (1) and Associated Equipment	\$ 1,200,000
Total Physical Interconnection Costs	\$ 3,300,000

To accommodate the proposed AF2-081 Project, Dominion Energy will install one span of overhead 230 kV line to the point of interconnection (“POI”) including 230 kV interconnection metering, and will add one new 230 kV breakers to the existing Moyock 230 kV substation to allow for the proposed interconnection.

It is estimated to take 24-30 months to complete this work upon execution of an Interconnection Construction Service Agreement (ICSA). 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. See Attachment One.

7 Schedule

The schedule for the required Network Impact Reinforcements will be more clearly identified in future study phases. The estimate elapsed time to complete each of the required reinforcements is identified in the “System Reinforcements” section of the report.

8 Transmission Owner Analysis

8.1 Power Flow Analysis

PJM performed a power flow analysis of the transmission system using a 2023 summer peak load flow model and the results were verified by Dominion. Additionally, Dominion performed an analysis of its transmission system and no further deficiencies were identified.

9 Interconnection Customer Requirements

9.1 System Protection

The IC must design its Customer Facilities in accordance with all applicable standards, including the standards in Dominion’s “Dominion Energy Electric Transmission Generator Interconnection Requirements” documented in Dominion’s Facility Interconnection Requirements “Exhibit C” located at:

<https://www.dominionenergy.com/company/moving-energy/electric-transmission-access>. Preliminary Protection requirements will be provided as part of the Facilities Study. Detailed Protection Requirements will be provided once the project enters the construction phase.

9.2 Compliance Issues and Interconnection Customer Requirements

The proposed Customer Facilities must be designed in accordance with Dominion’s “Dominion’s Facility Interconnection Requirements” document located at: <https://www.dominionenergy.com/company/moving-energy/electric-transmission-access>. In particular, the IC is responsible for the following:

1. The purchase and installation of a fully rated protection device (circuit breaker, circuit switcher, fuse) to protect the IC’s GSU transformer(s).
2. The purchase and installation of the minimum required Dominion generation interconnection relaying and control facilities as described in the System Protection noted above. This includes over/under voltage protection, over/under frequency protection, and zero sequence voltage protection relays.
3. The purchase and installation of supervisory control and data acquisition (“SCADA”) equipment to provide information in a compatible format to the Dominion Transmission System Control Center.
4. Compliance with the Dominion and PJM generator power factor and voltage control requirements.

The GSU(s) associated with the IC queue request shall meet the grounding requirements as noted in Dominion’s “Dominion’s Facility Interconnection Requirements” document located at: <https://www.dominionenergy.com/company/moving-energy/electric-transmission-access>.

The IC will also be required to meet all PJM, SERC, and NERC reliability criteria and operating procedures for standards compliance. For example, the IC will need to properly locate and report the over and under voltage and over and under frequency system protection elements for its units as well as the submission of the generator model and protection data required to satisfy the PJM and SERC audits. Failure to comply with

these requirements may result in a disconnection of service if the violation is found to compromise the reliability of the Dominion system.

9.3 Power Factor Requirements

The IC shall design its non-synchronous Customer Facility with the ability to maintain a power factor of at least 0.95 leading (absorbing VARs) to 0.95 lagging (supplying VARs) measured at the high-side of the facility substation transformer(s) connected to the Dominion transmission system.

10 Revenue Metering and SCADA Requirements

10.1 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 Section 8 of Attachment O.

10.2 Meteorological Data Reporting Requirements

The solar generation facility shall provide the Transmission Provider with site-specific meteorological data including:

- Back panel temperature (Fahrenheit)
- Irradiance (Watts/meter²)
- Ambient air temperature (Fahrenheit) - (Accepted, not required)
- Wind speed (meters/second) – (Accepted, not required)
- Wind direction (decimal degrees from true north) – (Accepted, not required)

10.3 Interconnected Transmission Owner Requirements

See Section 3.4.6 “Metering and telecommunications” of Dominion’s “Dominion’s Facility Interconnection Requirements” document located at: <https://www.dominionenergy.com/company/moving-energy/electric-transmission-access>.

11 Summer Peak - Load Flow Analysis - Primary POI

The Queue Project AF2-081 was evaluated as a 80.0 MW (Capacity 56.0 MW) injection at the Moyock 230 kV substation in the Dominion area. Project AF2-081 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-081 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

11.1 Generation Deliverability

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

None

11.2 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
97721160	314647	6SHAWBR O	230.0	DVP	938530	AE1-072 TAP	230.0	DVP	1	DVP_P4-2: 246T247	breaker	699.0	98.5	101.71	DC	22.46

11.3 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)

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
97916615	314209	6SKIFF CREEK	230.0	DVP	314386	6KINGS M	230.0	DVP	1	DVP_P1-2: LN 567	single	441.799987793	147.83	148.88	DC	4.6
97916656	314296	6PENNNIMAN	230.0	DVP	314415	6WALR209	230.0	DVP	1	DVP_P1-2: LN 567	single	441.799987793	136.42	137.48	DC	4.6
97916636	314386	6KINGS M	230.0	DVP	314296	6PENNNIMAN	230.0	DVP	1	DVP_P1-2: LN 567	single	441.799987793	140.07	141.12	DC	4.6
97916724	314415	6WALR209	230.0	DVP	314391	6LIGH209	230.0	DVP	1	DVP_P1-2: LN 567	single	441.799987793	121.3	122.36	DC	4.6
97720986	314466	6FENTRES	230.0	DVP	314508	6THRASHERR	230.0	DVP	1	DVP_P4-2: 231T2026	breaker	830.0	133.0	136.09	DC	25.58
97721095	314466	6FENTRES	230.0	DVP	934060	AD1-033 TAP	230.0	DVP	1	DVP_P4-2: 2110T2128	breaker	830.0	113.29	115.86	DC	21.31
97721116	314481	6LANDSTN	230.0	DVP	314486	6LYNHAVN	230.0	DVP	1	DVP_P4-2: 231T2128	breaker	830.0	110.49	112.13	DC	13.62
97721155	314486	6LYNHAVN	230.0	DVP	314504	6THALIA	230.0	DVP	1	DVP_P4-2: 231T2128	breaker	906.0	101.91	103.14	DC	11.16
97721061	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 246T247	breaker	699.0	114.43	121.12	DC	46.79

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPACT
97721062	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 26922	breaker	699.0	101.57	109.63	DC	56.38
97721122	314645	6SLIGO L269	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 246T247	breaker	699.0	107.66	110.88	DC	22.46
96848355	314927	8YADKIN	500.0	DVP	314928	8SUFFOLK	500.0	DVP	1	DVP_P7-1: LN 579-2110	tower	3637.0	100.36	100.93	DC	47.52
97721073	934060	AD1-033 TAP	230.0	DVP	314481	6LANDSTN	230.0	DVP	1	DVP_P4-2: 2110T2128	breaker	830.0	117.64	120.21	DC	21.31
97721111	938530	AE1-072 TAP	230.0	DVP	314645	6SLIGO L269	230.0	DVP	1	DVP_P4-2: 246T247	breaker	699.0	108.8	112.02	DC	22.46

11.4 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 developer 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 project by fixing 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.

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPACT
97916610	314209	6SKIFF CREEK	230.0	DVP	314386	6KINGS M	230.0	DVP	1	DVP_P1-2: LN 567	operation	441.799987793	237.58	237.97	DC	6.57
97916651	314296	6PENNIM AN	230.0	DVP	314415	6WALR209	230.0	DVP	1	DVP_P1-2: LN 567	operation	441.799987793	226.17	226.56	DC	6.57
97916631	314386	6KINGS M	230.0	DVP	314296	6PENNIM AN	230.0	DVP	1	DVP_P1-2: LN 567	operation	441.799987793	229.82	230.2	DC	6.57
97916719	314415	6WALR209	230.0	DVP	314391	6LIGH209	230.0	DVP	1	DVP_P1-2: LN 567	operation	441.799987793	211.05	211.44	DC	6.57
97916843	314466	6FENTRES	230.0	DVP	314508	6THRASH ER	230.0	DVP	1	DVP_P1-2: LN 271-8	operation	678.679992676	158.25	162.65	DC	29.85
97916848	314466	6FENTRES	230.0	DVP	314508	6THRASH ER	230.0	DVP	1	Base Case	operation	678.679992676	96.78	100.05	DC	22.2
97917054	314466	6FENTRES	230.0	DVP	934060	AD1-033 TAP	230.0	DVP	1	DVP_P1-2: LN 2128	operation	678.679992676	132.87	136.23	DC	22.78
97917124	314481	6LANDST N	230.0	DVP	314486	6LYNHAV N	230.0	DVP	1	314295 6BIRDNE CK 230 941280 AE2-122 TAP 230 1	operation	678.679992676	130.95	131.4	DC	6.81

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
97917078	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	314645 6SLIGO L269 230 938530 AE1-072 TAP 230 1	operation	571.520019531	123.86	133.83	DC	56.97
97917086	314645	6SLIGO L269	230.0	DVP	314466	6FENTRES	230.0	DVP	1	314550 6HICKORY 230 937220 AD2-160 TAP 230 1	operation	571.520019531	124.85	133.52	DC	49.51
97917199	314647	6SHAWBRO	230.0	DVP	938530	AE1-072 TAP	230.0	DVP	1	314550 6HICKORY 230 937220 AD2-160 TAP 230 1	operation	571.520019531	109.85	118.52	DC	49.51
96847931	314903	8CHCKAH M	500.0	DVP	314908	8ELMONT	500.0	DVP	1	DVP_P1- 2: LN 563	operation	2442.12011719	174.9	174.92	DC	24.83
96848033	314927	8YADKIN	500.0	DVP	314928	8SUFFOLK	500.0	DVP	1	DVP_P1- 2: LN 579	operation	2442.12011719	126.35	127.08	DC	40.41
96848087	314927	8YADKIN	500.0	DVP	314923	8SEPTA	500.0	DVP	1	DVP_P1- 2: LN 565	operation	2442.12011719	115.55	116.19	DC	36.04
96848105	314928	8SUFFOLK	500.0	DVP	314924	8SURRY	500.0	DVP	1	DVP_P1- 2: LN 579	operation	2442.12011719	103.24	103.7	DC	25.53
97917036	934060	AD1-033 TAP	230.0	DVP	314481	6LANDST N	230.0	DVP	1	DVP_P1- 2: LN 2128	operation	678.679992676	136.85	140.21	DC	22.78
97917060	938530	AE1-072 TAP	230.0	DVP	314645	6SLIGO L269	230.0	DVP	1	314550 6HICKORY 230 937220 AD2-160 TAP 230 1	operation	571.520019531	126.24	134.9	DC	49.51

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
97721116	8	6LANDSTN 230.0 kV - 6LYNHAVN 230.0 kV Ckt 1	<u>DVP</u> dom-116 (1205) : Rebuild 5.88 miles of 230 kV Line 2026 from Landstown to Lynnhaven with 2-636 ACSR. Project Type : FAC Cost : \$14,700,000 Time Estimate : 30-36 Months	\$14,700,000
97721073	13	AD1-033 TAP 230.0 kV - 6LANDSTN 230.0 kV Ckt 1	<u>DVP</u> dom-234 (1356) : Rebuild 7.4 miles of 230 kV Line 271 from AD1-033 Tap to Landstown with 2-636 ACSR. Replace Relays (CT) at both terminals and Line Lead at Landstown 230 kV. Project Type : FAC Cost : \$11,340,000 Time Estimate : 30-36 Months	\$11,340,000
97916724	5	6WALR209 230.0 kV - 6LIGH209 230.0 kV Ckt 1	<u>DVP</u> b3056 (1087) : PJM Baseline Upgrade b3056. Partial Rebuild 230 kV Line #2113 Waller to Lightfoot. The baseline project has a projected in-service date of 12/30/2024. Project Type : FAC Cost : \$0	\$0
97916636	4	6KINGS M 230.0 kV - 6PENNIMAN 230.0 kV Ckt 1	<u>DVP</u> b3057 (1088) : PJM Baseline Upgrade b3057. Rebuild 6.1 miles of Waller-Skiffess Creek 230 kV Line (#2154) between Waller and Kings Mill to current standards with a minimum summer emergency rating of 1047 MVA utilizing single circuit steel structures. Remove this 6.1 mile section of Line #58 between Waller and Kings Mill. Rebuild the 1.6 miles of Line #2154 and #19 between Kings Mill and Skiffes Creek to current standards with a minimum summer emergency rating of 1047 MVA at 230 kV for Line #2154 and 261 MVA at 115 kV for Line #19, utilizing double circuit steel structures. The baseline project has a projected in-service date of 12/30/2024. Project Type : CON Cost : \$0	\$0
97916656	3	6PENNIMAN 230.0 kV - 6WALR209 230.0 kV Ckt 1		
97720986	6	6FENTRES 230.0 kV - 6THRASHER 230.0 kV Ckt 1	<u>DVP</u> dom-213 (1335) : Rebuild 5.86 miles of 230 kV Line 2128 from Fentress to Thrasher with 2-636 ACSR. Replace Line Lead at Fentress 230 kV. Project Type : FAC Cost : \$8,790,000 Time Estimate : 30-36 Months	\$8,790,000

ID	Idx	Facility	Upgrade Description	Cost
97721095	7	6FENTRES 230.0 kV - AD1-033 TAP 230.0 kV Ckt 1	<u>DVP</u> dom-214 (1336) : Rebuild 1.5 miles of 230 kV Line 271 from Fentress to AD1-033 Tap with 2-636 ACSR. Replace Relays (CT) at both terminals and Line Lead at Fentress 230 kV. Project Type : FAC Cost : \$2,490,000 Time Estimate : 30-36 Months	\$2,490,000
97721111	14	AE1-072 TAP 230.0 kV - 6SLIGO L269 230.0 kV Ckt 1	<u>DVP</u> dom-239 (1361) : Rebuild 1.7 miles of 230 kV line 269 from AE1-072 Tap to Sligo with 2-636 ACSR. Project Type : FAC Cost : \$2,550,000 Time Estimate : 30-36 Months	\$2,550,000
97916615	2	6SKIFF CREEK 230.0 kV - 6KINGS M 230.0 kV Ckt 1	<u>DVP</u> dom-066 (1155) : Rebuild 1.55 miles of 230 kV Line 2154 from Skiffes Creek to Kings Mill with 2-636 ACSR. Project Type : FAC Cost : \$3,875,000 Time Estimate : 30-36 Months	\$3,875,000
97721160	1	6SHAWBRO 230.0 kV - AE1-072 TAP 230.0 kV Ckt 1	<u>DVP</u> dom-226 (1348) : Rebuild 2 miles of 230 kV Line 269 from Shawboro to AE1-072 Tap with 2-636 ACSR. Project Type : FAC Cost : \$3,000,000 Time Estimate : 30-36 Months	\$3,000,000
97721122	11	6SLIGO L269 230.0 kV - 6FENTRES 230.0 kV Ckt 1	<u>DVP</u> dom-225 (1347) : Rebuild 21.64 miles of 230 kV Line 269 from Sligo to Fentress with 2-636 ACSR. Project Type : FAC Cost : \$32,460,000 Time Estimate : 36-40 Months	\$32,460,000
96848355	12	8YADKIN 500.0 kV - 8SUFFOLK 500.0 kV Ckt 1	<u>DVP</u> dom-182 (1256) : Replace Wave Trap at Suffolk Project Type : FAC Cost : \$300,000 Time Estimate : 43817.0 Months	\$300,000
97721062,97721061	10	6HICKORY 230.0 kV - 6FENTRES 230.0 kV Ckt 1	<u>DVP</u> dom-218 (1340) : Rebuild 4.27 miles of 230 kV Line 2087 from Hickory to Fentress with 2-636 ACSR. Project Type : FAC Cost : \$6,405,000 Time Estimate : 30-36 Months	\$6,405,000

ID	Idx	Facility	Upgrade Description	Cost
97721155	9	6LYNHAVN 230.0 kV - 6THALIA 230.0 kV Ckt 1	<u>DVP</u> dom-215 (1337) : Rebuild 3.37 miles of 230 kV Line 2007 from Lynnhaven to Thalia with 2-636 ACSR. Project Type : FAC Cost : \$5,055,000 Time Estimate : 30-36 Months	\$5,055,000
			TOTAL COST	\$90,965,000

11.6 Flow Gate Details - Primary POI

The following indices contain additional information about each facility presented in the body of the report. For each index, a description of the flowgate and its contingency was included for convenience. The intent of the indices is to provide more details 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 indices. Please note that there may be contributors that are subsequently queued after the queue under study that are not listed in the indices. 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 are Full MW Impact contributions which are also noted in the indices column named "Full MW Impact", whereas the loading percentages reported in the body of the report, take into consideration the PJM Generator Deliverability Test rules such as commercial probability of each project as well as the ramping impact of "Adder" contributions. The MW Impact found and used in the analysis is shown in the indices column named "Gendeliv MW Impact".

11.6.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721160	314647	6SHAWBRO	DVP	938530	AE1-072 TAP	DVP	1	DVP_P4-2: 246T247	breaker	699.0	98.5	101.71	DC	22.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.4967	50/50	0.4967
314639	6TANGLEW	0.8729	50/50	0.8729
314643	3O INLET	1.0656	50/50	1.0656
315294	1DOMTR10	8.8062	Adder	10.36
315603	6AA1-139SOLA	4.0686	50/50	4.0686
315605	6W1-029WIND	1.5347	50/50	1.5347
315611	6Z1-036WIND	11.5545	50/50	11.5545
315614	AA2-178 C	2.1779	50/50	2.1779
901082	W1-029 E	59.6431	50/50	59.6431
913392	Y1-086 E	4.6979	50/50	4.6979
916042	Z1-036 E (Suspended)	77.4154	50/50	77.4154
917122	Z2-027 E	2.1688	50/50	2.1688
917332	Z2-043 E	0.4426	Adder	0.52
917512	Z2-088 E OP1	1.2591	Adder	1.48
918512	AA1-065 E OP	2.0333	Adder	2.39
918532	AA1-067 E	0.3014	Adder	0.35
919152	AA1-139 E	10.1088	50/50	10.1088
920692	AA2-178 E	5.4110	50/50	5.4110
923831	AB2-022 C	4.9252	50/50	4.9252
923832	AB2-022 E	2.6520	50/50	2.6520
924501	AB2-099 C (Suspended)	0.2252	Adder	0.26
924502	AB2-099 E (Suspended)	0.0965	Adder	0.11
925122	AB2-169 E	3.9865	Adder	4.69
926201	AC1-098 C	1.8393	Adder	2.16
926202	AC1-098 E	1.0958	Adder	1.29
926211	AC1-099 C	0.6164	Adder	0.73
926212	AC1-099 E	0.3620	Adder	0.43
927021	AC1-189 C	3.0543	Adder	3.59
927022	AC1-189 E	1.5214	Adder	1.79
932631	AC2-084 C	2.6220	Adder	3.08
932632	AC2-084 E	1.2914	Adder	1.52
933991	AD1-023 C	12.5555	50/50	12.5555
933992	AD1-023 E	6.8353	50/50	6.8353
934521	AD1-076 C	58.8485	50/50	58.8485
934522	AD1-076 E	29.9656	50/50	29.9656
936401	AD2-051 C O1	4.3765	Adder	5.15
936402	AD2-051 E O1	1.8792	Adder	2.21
937221	AD2-160 C O1	6.2104	50/50	6.2104
937222	AD2-160 E O1	3.2566	50/50	3.2566
938171	AE1-026 C O1	24.0460	Adder	28.29
938172	AE1-026 E O1	6.3439	Adder	7.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938221	AE1-035 C	1.1352	Adder	1.34
938222	AE1-035 E	0.5591	Adder	0.66
940491	AE2-034 C	9.4693	50/50	9.4693
940492	AE2-034 E	4.0583	50/50	4.0583
941501	AE2-147 C	29.6568	50/50	29.6568
941502	AE2-147 E	19.7712	50/50	19.7712
941541	AE2-151 C	0.4642	Adder	0.55
941542	AE2-151 E	0.2499	Adder	0.29
942401	AE2-253 C	6.5322	50/50	6.5322
942402	AE2-253 E	2.9348	50/50	2.9348
942851	AE2-304 C	1.1364	50/50	1.1364
942852	AE2-304 E	0.4419	50/50	0.4419
943171	AE2-346 C	0.5406	Adder	0.64
943172	AE2-346 E	0.2317	Adder	0.27
944871	AF1-152 C	9.8856	50/50	9.8856
944872	AF1-152 E	6.5904	50/50	6.5904
945711	AF1-236 C O1	103.6665	50/50	103.6665
945712	AF1-236 E O1	169.1401	50/50	169.1401
957531	AF2-047 C	22.5009	50/50	22.5009
957532	AF2-047 E	11.3181	50/50	11.3181
957861	AF2-080 C	1.4702	Adder	3.26
957862	AF2-080 E	0.6518	Adder	1.45
957871	AF2-081 C O1	15.7248	50/50	15.7248
957872	AF2-081 E O1	6.7392	50/50	6.7392
959511	AF2-242	2.4593	Adder	5.46
959731	AF2-264 C	0.3991	Adder	0.89
959732	AF2-264 E	0.1966	Adder	0.44
960831	AF2-374 C	0.2499	Adder	0.55
960832	AF2-374 E	0.4078	Adder	0.91
WEC	WEC	0.0885	Confirmed LTF	0.0885
LGEE	LGEE	0.1660	Confirmed LTF	0.1660
CPL	CPL	1.0961	Confirmed LTF	1.0961
CBM-W2	CBM-W2	3.5381	Confirmed LTF	3.5381
NY	NY	0.1012	Confirmed LTF	0.1012
CBM-W1	CBM-W1	3.3151	Confirmed LTF	3.3151
TVA	TVA	0.7406	Confirmed LTF	0.7406
O-066	O-066	1.4650	Confirmed LTF	1.4650
CBM-S2	CBM-S2	6.5950	Confirmed LTF	6.5950
CBM-S1	CBM-S1	4.1322	Confirmed LTF	4.1322
G-007	G-007	0.2288	Confirmed LTF	0.2288
MADISON	MADISON	0.2076	Confirmed LTF	0.2076
MEC	MEC	0.5355	Confirmed LTF	0.5355

11.6.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97916615	314209	6SKIFF CREEK	DVP	314386	6KINGS M	DVP	1	DVP_P1-2: LN 567	single	441.8	147.83	148.88	DC	4.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0216	80/20	0.0216
314421	6WINCHST	0.1174	80/20	0.1174
314491	3PENDLTN	0.1610	80/20	0.1610
314507	3THOMPSN	0.1616	80/20	0.1616
315092	1YORKTN3	21.6871	80/20	21.6871
315098	1CHESPKA	0.2137	80/20	0.2137
315099	1CHESPKB (Deactivation : 31/05/2019)	1.3850	80/20	1.3850
315108	1ELIZAR1	1.5744	80/20	1.5744
315109	1ELIZAR2	1.5470	80/20	1.5470
315110	1ELIZAR3	1.5945	80/20	1.5945
315233	1SURRY 2	15.7051	80/20	15.7051
315260	1GOSPORTA	0.1706	80/20	0.1706
315261	1GOSPORTB	0.2179	80/20	0.2179
315262	1GOSPORTC	0.1849	80/20	0.1849
315294	1DOMTR10	3.3373	Adder	3.93
315603	6AA1-139SOLA	1.1905	80/20	1.1905
315611	6Z1-036WIND	2.4670	Adder	2.9
923801	AB2-015 C OP	2.7115	Adder	3.19
923831	AB2-022 C	0.8832	Adder	1.04
924501	AB2-099 C (Suspended)	0.1652	Adder	0.19
925061	AB2-161 C O1 (Suspended)	0.8266	Adder	0.97
925861	AC1-065 C	-2.2607	Adder	-2.66
926661	AC1-147 C	1.0474	80/20	1.0474
926751	AC1-161 C O1	15.6813	80/20	15.6813
926781	AC1-164 C	-14.4570	Adder	-17.01
932041	AC2-012 C	4.7384	80/20	4.7384
932501	AC2-070 C	-0.4125	Adder	-0.49
932591	AC2-079 C O1	1.6890	Adder	1.99
932831	AC2-110 C	-0.9043	Adder	-1.06
933261	AC2-137 C	-0.6062	Adder	-0.71
933271	AC2-138 C	-0.5379	Adder	-0.63
933291	AC2-141 C	15.6813	80/20	15.6813
933731	AC2-196 C	0.8356	80/20	0.8356
933991	AD1-023 C	4.1258	Adder	4.85
934061	AD1-033 C	3.5087	80/20	3.5087
934191	AD1-046 C	-2.7204	Adder	-3.2
934521	AD1-076 C	17.4570	Adder	20.54
934571	AD1-082 C	1.8837	Adder	2.22
935111	AD1-144 C	0.8444	80/20	0.8444
936151	AD2-021	-0.0691	Adder	-0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936301	AD2-039 C	-0.9043	Adder	-1.06
936341	AD2-044 C	-0.1681	Adder	-0.2
936401	AD2-051 C O1	2.5659	Adder	3.02
936661	AD2-085 C	1.0055	Adder	1.18
937221	AD2-160 C O1	2.7080	80/20	2.7080
937251	AD2-164 (Withdrawn : 06/30/2020)	3.8843	80/20	3.8843
937541	AD2-215 C	0.8531	80/20	0.8531
938031	AE1-004 C	-0.9043	Adder	-1.06
938171	AE1-026 C O1	9.9367	Adder	11.69
938221	AE1-035 C	0.6610	Adder	0.78
938531	AE1-072 C O1	8.0586	80/20	8.0586
938771	AE1-103 C O1	1.1652	Adder	1.37
938961	AE1-124 C	-1.1785	Adder	-1.39
939311	AE1-162 C	0.7760	Adder	0.91
939411	AE1-173 C	26.8994	Adder	31.65
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.1971	80/20	0.1971
939431	AE1-175 C	1.3107	80/20	1.3107
940061	AE2-000BC O1	3.9153	Adder	4.61
940251	AE2-007 O1	80.6978	80/20	80.6978
940491	AE2-034 C	2.4240	Adder	2.85
940641	AE2-051 C O1	4.5686	Adder	5.37
940891	AE2-078 C	1.1039	80/20	1.1039
940901	AE2-079 C	1.1039	80/20	1.1039
941031	AE2-094 C	8.8183	Adder	10.37
941101	AE2-104 C O1	1.2070	Adder	1.42
941281	AE2-122 C O1	13.2491	80/20	13.2491
941291	AE2-123 C O1	13.6160	80/20	13.6160
941301	AE2-124 C O1	12.3849	80/20	12.3849
941501	AE2-147 C	5.9708	Adder	7.02
941541	AE2-151 C	0.3058	Adder	0.36
941591	AE2-156 O1	8.3250	80/20	8.3250
942131	AE2-225 C	0.9862	80/20	0.9862
942171	AE2-229 C	0.9862	80/20	0.9862
942341	AE2-247 C	0.4344	Adder	0.51
942401	AE2-253 C	2.8483	80/20	2.8483
942851	AE2-304 C	0.2332	Adder	0.27
943171	AE2-346 C	0.3965	Adder	0.47
943461	AF1-017 C	0.3930	Adder	0.46
943611	AF1-032 C	0.8054	80/20	0.8054
943621	AF1-033 C	1.1039	80/20	1.1039
944011	AF1-069 C	2.8813	Adder	3.39
944501	AF1-115 C O1	3.3619	80/20	3.3619
944581	AF1-123 C O1	22.7964	80/20	22.7964
944591	AF1-124 C O1	22.7964	80/20	22.7964
944601	AF1-125 C O1	22.7964	80/20	22.7964
944871	AF1-152 C	1.9903	Adder	2.34
945361	AF1-201 C O1	5.6136	Adder	6.6
945711	AF1-236 C O1	26.5374	Adder	31.22
957491	AF2-043 C	0.9862	80/20	0.9862
957521	AF2-046 C	2.5169	Adder	5.59
957531	AF2-047 C	3.0528	Adder	6.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957631	AF2-057	1.6626	80/20	1.6626
957791	AF2-073 C (Withdrawn : 07/02/2020)	1.8633	Adder	4.14
957801	AF2-074 C (Withdrawn : 07/02/2020)	0.8282	Adder	1.84
957821	AF2-076 C O1	1.0901	Adder	2.42
957871	AF2-081 C O1	4.6010	80/20	4.6010
958161	AF2-110 C	0.2637	Adder	0.59
959511	AF2-242	1.1642	Adder	2.58
959731	AF2-264 C	0.3365	Adder	0.75
960101	AF2-301 C	1.5672	80/20	1.5672
960831	AF2-374 C	0.1789	Adder	0.4
961091	AF2-400 C	0.0776	Adder	0.17
961111	AF2-402 C O1	0.1519	Adder	0.34
WEC	WEC	0.1269	Confirmed LTF	0.1269
LGEE	LGEE	0.2436	Confirmed LTF	0.2436
CPL	CPL	1.8952	Confirmed LTF	1.8952
CBM-W2	CBM-W2	6.0197	Confirmed LTF	6.0197
NY	NY	0.3661	Confirmed LTF	0.3661
CBM-W1	CBM-W1	4.6037	Confirmed LTF	4.6037
TVA	TVA	1.3314	Confirmed LTF	1.3314
CBM-S2	CBM-S2	12.4848	Confirmed LTF	12.4848
CBM-S1	CBM-S1	7.2676	Confirmed LTF	7.2676
MADISON	MADISON	0.4536	Confirmed LTF	0.4536
MEC	MEC	0.8342	Confirmed LTF	0.8342

11.6.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97916656	314296	6PENNIMAN	DVP	314415	6WALR209	DVP	1	DVP_P1-2: LN 567	single	441.8	136.42	137.48	DC	4.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0216	80/20	0.0216
314421	6WINCHST	0.1174	80/20	0.1174
314491	3PENDLTN	0.1610	80/20	0.1610
314507	3THOMPSN	0.1616	80/20	0.1616
315092	1YORKTN3	21.6871	80/20	21.6871
315098	1CHESPKA	0.2137	80/20	0.2137
315099	1CHESPKB (Deactivation : 31/05/2019)	1.3850	80/20	1.3850
315108	1ELIZAR1	1.5744	80/20	1.5744
315109	1ELIZAR2	1.5470	80/20	1.5470
315110	1ELIZAR3	1.5945	80/20	1.5945
315233	1SURRY 2	15.7051	80/20	15.7051
315260	1GOSPORTA	0.1706	80/20	0.1706
315261	1GOSPORTB	0.2179	80/20	0.2179
315262	1GOSPORTC	0.1849	80/20	0.1849
315294	1DOMTR10	3.3373	Adder	3.93
315603	6AA1-139SOLA	1.1905	80/20	1.1905
315611	6Z1-036WIND	2.4670	Adder	2.9
923801	AB2-015 C OP	2.7115	Adder	3.19
923831	AB2-022 C	0.8832	Adder	1.04
924501	AB2-099 C (Suspended)	0.1652	Adder	0.19
925061	AB2-161 C O1 (Suspended)	0.8266	Adder	0.97
925861	AC1-065 C	-2.2607	Adder	-2.66
926661	AC1-147 C	1.0474	80/20	1.0474
926751	AC1-161 C O1	15.6813	80/20	15.6813
926781	AC1-164 C	-14.4570	Adder	-17.01
932041	AC2-012 C	4.7384	80/20	4.7384
932501	AC2-070 C	-0.4125	Adder	-0.49
932591	AC2-079 C O1	1.6890	Adder	1.99
932831	AC2-110 C	-0.9043	Adder	-1.06
933261	AC2-137 C	-0.6062	Adder	-0.71
933271	AC2-138 C	-0.5379	Adder	-0.63
933291	AC2-141 C	15.6813	80/20	15.6813
933731	AC2-196 C	0.8356	80/20	0.8356
933991	AD1-023 C	4.1258	Adder	4.85
934061	AD1-033 C	3.5087	80/20	3.5087
934191	AD1-046 C	-2.7204	Adder	-3.2
934521	AD1-076 C	17.4570	Adder	20.54
934571	AD1-082 C	1.8837	Adder	2.22
935111	AD1-144 C	0.8444	80/20	0.8444
936151	AD2-021	-0.0691	Adder	-0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936301	AD2-039 C	-0.9043	Adder	-1.06
936341	AD2-044 C	-0.1681	Adder	-0.2
936401	AD2-051 C O1	2.5659	Adder	3.02
936661	AD2-085 C	1.0055	Adder	1.18
937221	AD2-160 C O1	2.7080	80/20	2.7080
937251	AD2-164 (Withdrawn : 06/30/2020)	3.8843	80/20	3.8843
937541	AD2-215 C	0.8531	80/20	0.8531
938031	AE1-004 C	-0.9043	Adder	-1.06
938171	AE1-026 C O1	9.9367	Adder	11.69
938221	AE1-035 C	0.6610	Adder	0.78
938531	AE1-072 C O1	8.0586	80/20	8.0586
938771	AE1-103 C O1	1.1652	Adder	1.37
938961	AE1-124 C	-1.1785	Adder	-1.39
939311	AE1-162 C	0.7760	Adder	0.91
939411	AE1-173 C	26.8994	Adder	31.65
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.1971	80/20	0.1971
939431	AE1-175 C	1.3107	80/20	1.3107
940061	AE2-000BC O1	3.9153	Adder	4.61
940251	AE2-007 O1	80.6978	80/20	80.6978
940491	AE2-034 C	2.4240	Adder	2.85
940641	AE2-051 C O1	4.5686	Adder	5.37
940891	AE2-078 C	1.1039	80/20	1.1039
940901	AE2-079 C	1.1039	80/20	1.1039
941031	AE2-094 C	8.8183	Adder	10.37
941101	AE2-104 C O1	1.2070	Adder	1.42
941281	AE2-122 C O1	13.2491	80/20	13.2491
941291	AE2-123 C O1	13.6160	80/20	13.6160
941301	AE2-124 C O1	12.3849	80/20	12.3849
941501	AE2-147 C	5.9708	Adder	7.02
941541	AE2-151 C	0.3058	Adder	0.36
941591	AE2-156 O1	8.3250	80/20	8.3250
942131	AE2-225 C	0.9862	80/20	0.9862
942171	AE2-229 C	0.9862	80/20	0.9862
942341	AE2-247 C	0.4344	Adder	0.51
942401	AE2-253 C	2.8483	80/20	2.8483
942851	AE2-304 C	0.2332	Adder	0.27
943171	AE2-346 C	0.3965	Adder	0.47
943461	AF1-017 C	0.3930	Adder	0.46
943611	AF1-032 C	0.8054	80/20	0.8054
943621	AF1-033 C	1.1039	80/20	1.1039
944011	AF1-069 C	2.8813	Adder	3.39
944501	AF1-115 C O1	3.3619	80/20	3.3619
944581	AF1-123 C O1	22.7964	80/20	22.7964
944591	AF1-124 C O1	22.7964	80/20	22.7964
944601	AF1-125 C O1	22.7964	80/20	22.7964
944871	AF1-152 C	1.9903	Adder	2.34
945361	AF1-201 C O1	5.6136	Adder	6.6
945711	AF1-236 C O1	26.5374	Adder	31.22
957491	AF2-043 C	0.9862	80/20	0.9862
957521	AF2-046 C	2.5169	Adder	5.59
957531	AF2-047 C	3.0528	Adder	6.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957631	AF2-057	1.6626	80/20	1.6626
957791	AF2-073 C (Withdrawn : 07/02/2020)	1.8633	Adder	4.14
957801	AF2-074 C (Withdrawn : 07/02/2020)	0.8282	Adder	1.84
957821	AF2-076 C O1	1.0901	Adder	2.42
957871	AF2-081 C O1	4.6010	80/20	4.6010
958161	AF2-110 C	0.2637	Adder	0.59
959511	AF2-242	1.1642	Adder	2.58
959731	AF2-264 C	0.3365	Adder	0.75
960101	AF2-301 C	1.5672	80/20	1.5672
960831	AF2-374 C	0.1789	Adder	0.4
961091	AF2-400 C	0.0776	Adder	0.17
961111	AF2-402 C O1	0.1519	Adder	0.34
WEC	WEC	0.1269	Confirmed LTF	0.1269
LGEE	LGEE	0.2436	Confirmed LTF	0.2436
CPLE	CPLE	1.8952	Confirmed LTF	1.8952
CBM-W2	CBM-W2	6.0197	Confirmed LTF	6.0197
NY	NY	0.3661	Confirmed LTF	0.3661
CBM-W1	CBM-W1	4.6037	Confirmed LTF	4.6037
TVA	TVA	1.3314	Confirmed LTF	1.3314
CBM-S2	CBM-S2	12.4848	Confirmed LTF	12.4848
CBM-S1	CBM-S1	7.2676	Confirmed LTF	7.2676
MADISON	MADISON	0.4536	Confirmed LTF	0.4536
MEC	MEC	0.8342	Confirmed LTF	0.8342

11.6.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97916636	314386	6KINGS M	DVP	314296	6PENNINGMAN	DVP	1	DVP_P1-2: LN 567	single	441.8	140.07	141.12	DC	4.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0216	80/20	0.0216
314421	6WINCHST	0.1174	80/20	0.1174
314491	3PENDLTN	0.1610	80/20	0.1610
314507	3THOMPSN	0.1616	80/20	0.1616
315092	1YORKTN3	21.6871	80/20	21.6871
315098	1CHESPKA	0.2137	80/20	0.2137
315099	1CHESPKB (Deactivation : 31/05/2019)	1.3850	80/20	1.3850
315108	1ELIZAR1	1.5744	80/20	1.5744
315109	1ELIZAR2	1.5470	80/20	1.5470
315110	1ELIZAR3	1.5945	80/20	1.5945
315233	1SURRY 2	15.7051	80/20	15.7051
315260	1GOSPORTA	0.1706	80/20	0.1706
315261	1GOSPORTB	0.2179	80/20	0.2179
315262	1GOSPORTC	0.1849	80/20	0.1849
315294	1DOMTR10	3.3373	Adder	3.93
315603	6AA1-139SOLA	1.1905	80/20	1.1905
315611	6Z1-036WIND	2.4670	Adder	2.9
923801	AB2-015 C OP	2.7115	Adder	3.19
923831	AB2-022 C	0.8832	Adder	1.04
924501	AB2-099 C (Suspended)	0.1652	Adder	0.19
925061	AB2-161 C O1 (Suspended)	0.8266	Adder	0.97
925861	AC1-065 C	-2.2607	Adder	-2.66
926661	AC1-147 C	1.0474	80/20	1.0474
926751	AC1-161 C O1	15.6813	80/20	15.6813
926781	AC1-164 C	-14.4570	Adder	-17.01
932041	AC2-012 C	4.7384	80/20	4.7384
932501	AC2-070 C	-0.4125	Adder	-0.49
932591	AC2-079 C O1	1.6890	Adder	1.99
932831	AC2-110 C	-0.9043	Adder	-1.06
933261	AC2-137 C	-0.6062	Adder	-0.71
933271	AC2-138 C	-0.5379	Adder	-0.63
933291	AC2-141 C	15.6813	80/20	15.6813
933731	AC2-196 C	0.8356	80/20	0.8356
933991	AD1-023 C	4.1258	Adder	4.85
934061	AD1-033 C	3.5087	80/20	3.5087
934191	AD1-046 C	-2.7204	Adder	-3.2
934521	AD1-076 C	17.4570	Adder	20.54
934571	AD1-082 C	1.8837	Adder	2.22
935111	AD1-144 C	0.8444	80/20	0.8444
936151	AD2-021	-0.0691	Adder	-0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936301	AD2-039 C	-0.9043	Adder	-1.06
936341	AD2-044 C	-0.1681	Adder	-0.2
936401	AD2-051 C O1	2.5659	Adder	3.02
936661	AD2-085 C	1.0055	Adder	1.18
937221	AD2-160 C O1	2.7080	80/20	2.7080
937251	AD2-164 (Withdrawn : 06/30/2020)	3.8843	80/20	3.8843
937541	AD2-215 C	0.8531	80/20	0.8531
938031	AE1-004 C	-0.9043	Adder	-1.06
938171	AE1-026 C O1	9.9367	Adder	11.69
938221	AE1-035 C	0.6610	Adder	0.78
938531	AE1-072 C O1	8.0586	80/20	8.0586
938771	AE1-103 C O1	1.1652	Adder	1.37
938961	AE1-124 C	-1.1785	Adder	-1.39
939311	AE1-162 C	0.7760	Adder	0.91
939411	AE1-173 C	26.8994	Adder	31.65
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.1971	80/20	0.1971
939431	AE1-175 C	1.3107	80/20	1.3107
940061	AE2-000BC O1	3.9153	Adder	4.61
940251	AE2-007 O1	80.6978	80/20	80.6978
940491	AE2-034 C	2.4240	Adder	2.85
940641	AE2-051 C O1	4.5686	Adder	5.37
940891	AE2-078 C	1.1039	80/20	1.1039
940901	AE2-079 C	1.1039	80/20	1.1039
941031	AE2-094 C	8.8183	Adder	10.37
941101	AE2-104 C O1	1.2070	Adder	1.42
941281	AE2-122 C O1	13.2491	80/20	13.2491
941291	AE2-123 C O1	13.6160	80/20	13.6160
941301	AE2-124 C O1	12.3849	80/20	12.3849
941501	AE2-147 C	5.9708	Adder	7.02
941541	AE2-151 C	0.3058	Adder	0.36
941591	AE2-156 O1	8.3250	80/20	8.3250
942131	AE2-225 C	0.9862	80/20	0.9862
942171	AE2-229 C	0.9862	80/20	0.9862
942341	AE2-247 C	0.4344	Adder	0.51
942401	AE2-253 C	2.8483	80/20	2.8483
942851	AE2-304 C	0.2332	Adder	0.27
943171	AE2-346 C	0.3965	Adder	0.47
943461	AF1-017 C	0.3930	Adder	0.46
943611	AF1-032 C	0.8054	80/20	0.8054
943621	AF1-033 C	1.1039	80/20	1.1039
944011	AF1-069 C	2.8813	Adder	3.39
944501	AF1-115 C O1	3.3619	80/20	3.3619
944581	AF1-123 C O1	22.7964	80/20	22.7964
944591	AF1-124 C O1	22.7964	80/20	22.7964
944601	AF1-125 C O1	22.7964	80/20	22.7964
944871	AF1-152 C	1.9903	Adder	2.34
945361	AF1-201 C O1	5.6136	Adder	6.6
945711	AF1-236 C O1	26.5374	Adder	31.22
957491	AF2-043 C	0.9862	80/20	0.9862
957521	AF2-046 C	2.5169	Adder	5.59
957531	AF2-047 C	3.0528	Adder	6.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957631	AF2-057	1.6626	80/20	1.6626
957791	AF2-073 C (Withdrawn : 07/02/2020)	1.8633	Adder	4.14
957801	AF2-074 C (Withdrawn : 07/02/2020)	0.8282	Adder	1.84
957821	AF2-076 C O1	1.0901	Adder	2.42
957871	AF2-081 C O1	4.6010	80/20	4.6010
958161	AF2-110 C	0.2637	Adder	0.59
959511	AF2-242	1.1642	Adder	2.58
959731	AF2-264 C	0.3365	Adder	0.75
960101	AF2-301 C	1.5672	80/20	1.5672
960831	AF2-374 C	0.1789	Adder	0.4
961091	AF2-400 C	0.0776	Adder	0.17
961111	AF2-402 C O1	0.1519	Adder	0.34
WEC	WEC	0.1269	Confirmed LTF	0.1269
LGEE	LGEE	0.2436	Confirmed LTF	0.2436
CPL	CPL	1.8952	Confirmed LTF	1.8952
CBM-W2	CBM-W2	6.0197	Confirmed LTF	6.0197
NY	NY	0.3661	Confirmed LTF	0.3661
CBM-W1	CBM-W1	4.6037	Confirmed LTF	4.6037
TVA	TVA	1.3314	Confirmed LTF	1.3314
CBM-S2	CBM-S2	12.4848	Confirmed LTF	12.4848
CBM-S1	CBM-S1	7.2676	Confirmed LTF	7.2676
MADISON	MADISON	0.4536	Confirmed LTF	0.4536
MEC	MEC	0.8342	Confirmed LTF	0.8342

11.6.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97916724	314415	6WALR209	DVP	314391	6LIGH209	DVP	1	DVP_P1-2: LN 567	single	441.8	121.3	122.36	DC	4.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0216	80/20	0.0216
314421	6WINCHST	0.1174	80/20	0.1174
314491	3PENDLTN	0.1610	80/20	0.1610
314507	3THOMPSN	0.1616	80/20	0.1616
315092	1YORKTN3	21.6871	80/20	21.6871
315098	1CHESPKA	0.2137	80/20	0.2137
315099	1CHESPKB (Deactivation : 31/05/2019)	1.3850	80/20	1.3850
315108	1ELIZAR1	1.5744	80/20	1.5744
315109	1ELIZAR2	1.5470	80/20	1.5470
315110	1ELIZAR3	1.5945	80/20	1.5945
315233	1SURRY 2	15.7051	80/20	15.7051
315260	1GOSPORTA	0.1706	80/20	0.1706
315261	1GOSPORTB	0.2179	80/20	0.2179
315262	1GOSPORTC	0.1849	80/20	0.1849
315294	1DOMTR10	3.3373	Adder	3.93
315603	6AA1-139SOLA	1.1905	80/20	1.1905
315611	6Z1-036WIND	2.4670	Adder	2.9
923801	AB2-015 C OP	2.7115	Adder	3.19
923831	AB2-022 C	0.8832	Adder	1.04
924501	AB2-099 C (Suspended)	0.1652	Adder	0.19
925061	AB2-161 C O1 (Suspended)	0.8266	Adder	0.97
925861	AC1-065 C	-2.2607	Adder	-2.66
926661	AC1-147 C	1.0474	80/20	1.0474
926751	AC1-161 C O1	15.6813	80/20	15.6813
926781	AC1-164 C	-14.4570	Adder	-17.01
932041	AC2-012 C	4.7384	80/20	4.7384
932501	AC2-070 C	-0.4125	Adder	-0.49
932591	AC2-079 C O1	1.6890	Adder	1.99
932831	AC2-110 C	-0.9043	Adder	-1.06
933261	AC2-137 C	-0.6062	Adder	-0.71
933271	AC2-138 C	-0.5379	Adder	-0.63
933291	AC2-141 C	15.6813	80/20	15.6813
933731	AC2-196 C	0.8356	80/20	0.8356
933991	AD1-023 C	4.1258	Adder	4.85
934061	AD1-033 C	3.5087	80/20	3.5087
934191	AD1-046 C	-2.7204	Adder	-3.2
934521	AD1-076 C	17.4570	Adder	20.54
934571	AD1-082 C	1.8837	Adder	2.22
935111	AD1-144 C	0.8444	80/20	0.8444
936151	AD2-021	-0.0691	Adder	-0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936301	AD2-039 C	-0.9043	Adder	-1.06
936341	AD2-044 C	-0.1681	Adder	-0.2
936401	AD2-051 C O1	2.5659	Adder	3.02
936661	AD2-085 C	1.0055	Adder	1.18
937221	AD2-160 C O1	2.7080	80/20	2.7080
937251	AD2-164 (Withdrawn : 06/30/2020)	3.8843	80/20	3.8843
937541	AD2-215 C	0.8531	80/20	0.8531
938031	AE1-004 C	-0.9043	Adder	-1.06
938171	AE1-026 C O1	9.9367	Adder	11.69
938221	AE1-035 C	0.6610	Adder	0.78
938531	AE1-072 C O1	8.0586	80/20	8.0586
938771	AE1-103 C O1	1.1652	Adder	1.37
938961	AE1-124 C	-1.1785	Adder	-1.39
939311	AE1-162 C	0.7760	Adder	0.91
939411	AE1-173 C	26.8994	Adder	31.65
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.1971	80/20	0.1971
939431	AE1-175 C	1.3107	80/20	1.3107
940061	AE2-000BC O1	3.9153	Adder	4.61
940251	AE2-007 O1	80.6978	80/20	80.6978
940491	AE2-034 C	2.4240	Adder	2.85
940641	AE2-051 C O1	4.5686	Adder	5.37
940891	AE2-078 C	1.1039	80/20	1.1039
940901	AE2-079 C	1.1039	80/20	1.1039
941031	AE2-094 C	8.8183	Adder	10.37
941101	AE2-104 C O1	1.2070	Adder	1.42
941281	AE2-122 C O1	13.2491	80/20	13.2491
941291	AE2-123 C O1	13.6160	80/20	13.6160
941301	AE2-124 C O1	12.3849	80/20	12.3849
941501	AE2-147 C	5.9708	Adder	7.02
941541	AE2-151 C	0.3058	Adder	0.36
941591	AE2-156 O1	8.3250	80/20	8.3250
942131	AE2-225 C	0.9862	80/20	0.9862
942171	AE2-229 C	0.9862	80/20	0.9862
942341	AE2-247 C	0.4344	Adder	0.51
942401	AE2-253 C	2.8483	80/20	2.8483
942851	AE2-304 C	0.2332	Adder	0.27
943171	AE2-346 C	0.3965	Adder	0.47
943461	AF1-017 C	0.3930	Adder	0.46
943611	AF1-032 C	0.8054	80/20	0.8054
943621	AF1-033 C	1.1039	80/20	1.1039
944011	AF1-069 C	2.8813	Adder	3.39
944501	AF1-115 C O1	3.3619	80/20	3.3619
944581	AF1-123 C O1	22.7964	80/20	22.7964
944591	AF1-124 C O1	22.7964	80/20	22.7964
944601	AF1-125 C O1	22.7964	80/20	22.7964
944871	AF1-152 C	1.9903	Adder	2.34
945361	AF1-201 C O1	5.6136	Adder	6.6
945711	AF1-236 C O1	26.5374	Adder	31.22
957491	AF2-043 C	0.9862	80/20	0.9862
957521	AF2-046 C	2.5169	Adder	5.59
957531	AF2-047 C	3.0528	Adder	6.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957631	AF2-057	1.6626	80/20	1.6626
957791	AF2-073 C (Withdrawn : 07/02/2020)	1.8633	Adder	4.14
957801	AF2-074 C (Withdrawn : 07/02/2020)	0.8282	Adder	1.84
957821	AF2-076 C O1	1.0901	Adder	2.42
957871	AF2-081 C O1	4.6010	80/20	4.6010
958161	AF2-110 C	0.2637	Adder	0.59
959511	AF2-242	1.1642	Adder	2.58
959731	AF2-264 C	0.3365	Adder	0.75
960101	AF2-301 C	1.5672	80/20	1.5672
960831	AF2-374 C	0.1789	Adder	0.4
961091	AF2-400 C	0.0776	Adder	0.17
961111	AF2-402 C O1	0.1519	Adder	0.34
WEC	WEC	0.1269	Confirmed LTF	0.1269
LGEE	LGEE	0.2436	Confirmed LTF	0.2436
CPL	CPL	1.8952	Confirmed LTF	1.8952
CBM-W2	CBM-W2	6.0197	Confirmed LTF	6.0197
NY	NY	0.3661	Confirmed LTF	0.3661
CBM-W1	CBM-W1	4.6037	Confirmed LTF	4.6037
TVA	TVA	1.3314	Confirmed LTF	1.3314
CBM-S2	CBM-S2	12.4848	Confirmed LTF	12.4848
CBM-S1	CBM-S1	7.2676	Confirmed LTF	7.2676
MADISON	MADISON	0.4536	Confirmed LTF	0.4536
MEC	MEC	0.8342	Confirmed LTF	0.8342

11.6.6 Index 6

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97720986	314466	6FENTRES	DVP	314508	6THRASHER	DVP	1	DVP_P4-2: 231T2026	breaker	830.0	133.0	136.09	DC	25.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314491	3PENDLTN	0.2227	50/50	0.2227
314638	6ELIZ CT	0.3016	50/50	0.3016
314639	6TANGLEW	0.4711	50/50	0.4711
314643	3O INLET	0.7667	50/50	0.7667
315603	6AA1-139SOLA	4.6330	50/50	4.6330
315605	6W1-029WIND	0.5152	50/50	0.5152
315611	6Z1-036WIND	4.4503	50/50	4.4503
901082	W1-029 E	20.0240	50/50	20.0240
913392	Y1-086 E	2.8526	50/50	2.8526
916042	Z1-036 E (Suspended)	29.8169	50/50	29.8169
916192	Z1-068 E	0.7963	Adder	0.94
917122	Z2-027 E	1.1705	50/50	1.1705
919152	AA1-139 E	11.5110	50/50	11.5110
920692	AA2-178 E	1.5985	Adder	1.88
923831	AB2-022 C	2.9906	50/50	2.9906
923832	AB2-022 E	1.6103	50/50	1.6103
925522	AC1-027 E	0.7376	50/50	0.7376
926661	AC1-147 C	-1.1355	Adder	-1.34
933731	AC2-196 C	3.7660	50/50	3.7660
933732	AC2-196 E	2.5082	50/50	2.5082
934061	AD1-033 C	14.8218	50/50	14.8218
934062	AD1-033 E	9.8812	50/50	9.8812
934521	AD1-076 C	15.5843	Adder	18.33
934522	AD1-076 E	7.9355	Adder	9.34
937221	AD2-160 C O1	11.0238	50/50	11.0238
937222	AD2-160 E O1	5.7807	50/50	5.7807
938531	AE1-072 C O1	29.8413	50/50	29.8413
938532	AE1-072 E O1	15.5562	50/50	15.5562
939311	AE1-162 C	-0.6348	Adder	-0.75
940491	AE2-034 C	2.7975	Adder	3.29
940492	AE2-034 E	1.1989	Adder	1.41
941281	AE2-122 C O1	23.4393	50/50	23.4393
941282	AE2-122 E O1	94.5834	50/50	94.5834
941291	AE2-123 C O1	24.0884	50/50	24.0884
941292	AE2-123 E O1	93.9344	50/50	93.9344
941301	AE2-124 C O1	35.4336	50/50	35.4336
941302	AE2-124 E O1	155.4783	50/50	155.4783
941501	AE2-147 C	9.9567	50/50	9.9567
941502	AE2-147 E	6.6378	50/50	6.6378
941592	AE2-156 BAT	10.1900	50/50	10.1900
942401	AE2-253 C	11.5951	50/50	11.5951

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942402	AE2-253 E	5.2094	50/50	5.2094
942851	AE2-304 C	0.4460	50/50	0.4460
942852	AE2-304 E	0.1735	50/50	0.1735
944581	AF1-123 C O1	32.6724	50/50	32.6724
944582	AF1-123 E O1	74.8107	50/50	74.8107
944591	AF1-124 C O1	32.6724	50/50	32.6724
944592	AF1-124 E O1	74.8107	50/50	74.8107
944601	AF1-125 C O1	32.6724	50/50	32.6724
944602	AF1-125 E O1	74.8107	50/50	74.8107
944871	AF1-152 C	3.3189	50/50	3.3189
944872	AF1-152 E	2.2126	50/50	2.2126
945711	AF1-236 C O1	30.6254	Adder	36.03
945712	AF1-236 E O1	49.9678	Adder	58.79
957531	AF2-047 C	3.5231	Adder	7.82
957532	AF2-047 E	1.7721	Adder	3.93
957632	AF2-057 BAT	2.1204	50/50	2.1204
957871	AF2-081 C O1	17.9060	50/50	17.9060
957872	AF2-081 E O1	7.6740	50/50	7.6740
WEC	WEC	0.0321	Confirmed LTF	0.0321
LGEE	LGEE	0.0599	Confirmed LTF	0.0599
CPL	CPL	0.2686	Confirmed LTF	0.2686
CBM-W2	CBM-W2	1.1384	Confirmed LTF	1.1384
NY	NY	0.0050	Confirmed LTF	0.0050
CBM-W1	CBM-W1	1.2385	Confirmed LTF	1.2385
TVA	TVA	0.2268	Confirmed LTF	0.2268
O-066	O-066	0.1142	Confirmed LTF	0.1142
CBM-S2	CBM-S2	1.7513	Confirmed LTF	1.7513
CBM-S1	CBM-S1	1.2865	Confirmed LTF	1.2865
G-007	G-007	0.0187	Confirmed LTF	0.0187
MADISON	MADISON	0.0504	Confirmed LTF	0.0504
MEC	MEC	0.1843	Confirmed LTF	0.1843

11.6.7 Index 7

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721095	314466	6FENTRES	DVP	934060	AD1-033 TAP	DVP	1	DVP_P4-2: 2110T2128	breaker	830.0	113.29	115.86	DC	21.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.2648	50/50	0.2648
314639	6TANGLEW	0.4272	50/50	0.4272
314643	3O INLET	0.6457	50/50	0.6457
315294	1DOMTR10	3.3004	Adder	3.88
315603	6AA1-139SOLA	3.8597	50/50	3.8597
315605	6W1-029WIND	0.5452	50/50	0.5452
315611	6Z1-036WIND	4.5548	50/50	4.5548
901082	W1-029 E	21.1879	50/50	21.1879
913392	Y1-086 E	2.5047	50/50	2.5047
916042	21-036 E (Suspended)	30.5172	50/50	30.5172
917122	Z2-027 E	1.0613	50/50	1.0613
919152	AA1-139 E	9.5897	50/50	9.5897
920692	AA2-178 E	1.7734	Adder	2.09
923831	AB2-022 C	2.6259	50/50	2.6259
923832	AB2-022 E	1.4139	50/50	1.4139
926661	AC1-147 C	-1.8982	Adder	-2.23
933731	AC2-196 C	3.0719	50/50	3.0719
933732	AC2-196 E	2.0459	50/50	2.0459
933991	AD1-023 C	3.9475	Adder	4.64
933992	AD1-023 E	2.1490	Adder	2.53
934521	AD1-076 C	18.8718	Adder	22.2
934522	AD1-076 E	9.6095	Adder	11.31
937221	AD2-160 C O1	9.1220	50/50	9.1220
937222	AD2-160 E O1	4.7835	50/50	4.7835
938531	AE1-072 C O1	25.0552	50/50	25.0552
938532	AE1-072 E O1	13.0613	50/50	13.0613
939311	AE1-162 C	-0.8246	Adder	-0.97
940491	AE2-034 C	3.1034	Adder	3.65
940492	AE2-034 E	1.3300	Adder	1.56
941501	AE2-147 C	10.5354	50/50	10.5354
941502	AE2-147 E	7.0236	50/50	7.0236
941592	AE2-156 BAT	16.0800	50/50	16.0800
942401	AE2-253 C	9.5948	50/50	9.5948
942402	AE2-253 E	4.3107	50/50	4.3107
942851	AE2-304 C	0.4499	50/50	0.4499
942852	AE2-304 E	0.1750	50/50	0.1750
944581	AF1-123 C O1	20.1136	Adder	23.66
944582	AF1-123 E O1	46.0545	Adder	54.18
944591	AF1-124 C O1	20.1136	Adder	23.66
944592	AF1-124 E O1	46.0545	Adder	54.18
944601	AF1-125 C O1	20.1136	Adder	23.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944602	AF1-125 E O1	46.0545	Adder	54.18
944871	AF1-152 C	3.5118	50/50	3.5118
944872	AF1-152 E	2.3412	50/50	2.3412
945711	AF1-236 C O1	33.9749	Adder	39.97
945712	AF1-236 E O1	55.4327	Adder	65.21
957531	AF2-047 C	3.9084	Adder	8.68
957532	AF2-047 E	1.9659	Adder	4.36
957632	AF2-057 BAT	3.5448	50/50	3.5448
957871	AF2-081 C O1	14.9173	50/50	14.9173
957872	AF2-081 E O1	6.3931	50/50	6.3931
WEC	WEC	0.0573	Confirmed LTF	0.0573
LGEE	LGEE	0.1061	Confirmed LTF	0.1061
CPL	CPL	0.4922	Confirmed LTF	0.4922
CBM-W2	CBM-W2	2.0229	Confirmed LTF	2.0229
NY	NY	0.0111	Confirmed LTF	0.0111
CBM-W1	CBM-W1	2.1893	Confirmed LTF	2.1893
TVA	TVA	0.4046	Confirmed LTF	0.4046
O-066	O-066	0.2352	Confirmed LTF	0.2352
CBM-S2	CBM-S2	3.1501	Confirmed LTF	3.1501
CBM-S1	CBM-S1	2.2919	Confirmed LTF	2.2919
G-007	G-007	0.0374	Confirmed LTF	0.0374
MADISON	MADISON	0.0907	Confirmed LTF	0.0907
MEC	MEC	0.3257	Confirmed LTF	0.3257

11.6.8 Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721116	314481	6LANDSTN	DVP	314486	6LYNHAVN	DVP	1	DVP_P4-2: 231T2128	breaker	830.0	110.49	112.13	DC	13.62

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314491	3PENDLTN	0.2368	50/50	0.2368
314638	6ELIZ CT	0.1644	50/50	0.1644
314639	6TANGLEW	0.2606	50/50	0.2606
314643	3O INLET	0.4102	50/50	0.4102
315603	6AA1-139SOLA	2.4667	50/50	2.4667
315611	6Z1-036WIND	2.2164	Adder	2.61
901082	W1-029 E	10.1387	Adder	11.93
913392	Y1-086 E	1.5548	50/50	1.5548
916042	Z1-036 E (Suspended)	14.8499	Adder	17.47
917122	Z2-027 E	0.6475	50/50	0.6475
919152	AA1-139 E	6.1286	50/50	6.1286
923831	AB2-022 C	1.6301	50/50	1.6301
923832	AB2-022 E	0.8777	50/50	0.8777
925522	AC1-027 E	0.7845	50/50	0.7845
926661	AC1-147 C	-0.9964	Adder	-1.17
933731	AC2-196 C	1.9866	50/50	1.9866
933732	AC2-196 E	1.3231	50/50	1.3231
934061	AD1-033 C	9.7205	50/50	9.7205
934062	AD1-033 E	6.4803	50/50	6.4803
937221	AD2-160 C O1	5.8518	50/50	5.8518
937222	AD2-160 E O1	3.0687	50/50	3.0687
938531	AE1-072 C O1	15.9426	50/50	15.9426
938532	AE1-072 E O1	8.3109	50/50	8.3109
941281	AE2-122 C O1	26.4902	50/50	26.4902
941282	AE2-122 E O1	106.8945	50/50	106.8945
941291	AE2-123 C O1	27.2237	50/50	27.2237
941292	AE2-123 E O1	106.1609	50/50	106.1609
941301	AE2-124 C O1	57.8482	50/50	57.8482
941302	AE2-124 E O1	253.8308	50/50	253.8308
941501	AE2-147 C	5.0413	Adder	5.93
941502	AE2-147 E	3.3609	Adder	3.95
941592	AE2-156 BAT	8.2640	Merchant Transmission	8.2640
942401	AE2-253 C	6.1551	50/50	6.1551
942402	AE2-253 E	2.7654	50/50	2.7654
942851	AE2-304 C	0.2206	Adder	0.26
942852	AE2-304 E	0.0858	Adder	0.1
944581	AF1-123 C O1	13.9790	Adder	16.45
944582	AF1-123 E O1	32.0080	Adder	37.66
944591	AF1-124 C O1	13.9790	Adder	16.45
944592	AF1-124 E O1	32.0080	Adder	37.66
944601	AF1-125 C O1	13.9790	Adder	16.45

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944602	AF1-125 E O1	32.0080	Adder	37.66
944871	AF1-152 C	1.6805	Adder	1.98
944872	AF1-152 E	1.1203	Adder	1.32
957632	AF2-057 BAT	0.9861	Merchant Transmission	0.9861
957871	AF2-081 C O1	9.5334	50/50	9.5334
957872	AF2-081 E O1	4.0858	50/50	4.0858
WEC	WEC	0.0265	Confirmed LTF	0.0265
LGEE	LGEE	0.0491	Confirmed LTF	0.0491
CPL	CPL	0.2209	Confirmed LTF	0.2209
CBM-W2	CBM-W2	0.9337	Confirmed LTF	0.9337
NY	NY	0.0033	Confirmed LTF	0.0033
CBM-W1	CBM-W1	1.0133	Confirmed LTF	1.0133
TVA	TVA	0.1848	Confirmed LTF	0.1848
O-066	O-066	0.0874	Confirmed LTF	0.0874
CBM-S2	CBM-S2	1.4277	Confirmed LTF	1.4277
CBM-S1	CBM-S1	1.0565	Confirmed LTF	1.0565
G-007	G-007	0.0135	Confirmed LTF	0.0135
MADISON	MADISON	0.0403	Confirmed LTF	0.0403
MEC	MEC	0.1510	Confirmed LTF	0.1510

11.6.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721155	314486	6LYNHAVN	DVP	314504	6THALIA	DVP	1	DVP_P4-2: 231T2128	breaker	906.0	101.91	103.14	DC	11.16

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0916	50/50	0.0916
314491	3PENDLTN	0.5631	50/50	0.5631
314638	6ELIZ CT	0.1345	50/50	0.1345
314643	3O INLET	0.3359	50/50	0.3359
315603	6AA1-139SOLA	2.0204	50/50	2.0204
315611	6Z1-036WIND	1.8100	Adder	2.13
901082	W1-029 E	8.2741	Adder	9.73
913392	Y1-086 E	1.2725	50/50	1.2725
916042	Z1-036 E (Suspended)	12.1269	Adder	14.27
916192	Z1-068 E	3.7155	50/50	3.7155
917122	Z2-027 E	0.4502	Adder	0.53
919152	AA1-139 E	5.0198	50/50	5.0198
923831	AB2-022 C	1.3341	50/50	1.3341
923832	AB2-022 E	0.7183	50/50	0.7183
925522	AC1-027 E	1.8655	50/50	1.8655
926661	AC1-147 C	-0.7477	Adder	-0.88
933731	AC2-196 C	1.6277	50/50	1.6277
933732	AC2-196 E	1.0840	50/50	1.0840
934061	AD1-033 C	7.9661	50/50	7.9661
934062	AD1-033 E	5.3108	50/50	5.3108
937221	AD2-160 C O1	4.7937	50/50	4.7937
937222	AD2-160 E O1	2.5138	50/50	2.5138
938531	AE1-072 C O1	13.0566	50/50	13.0566
938532	AE1-072 E O1	6.8064	50/50	6.8064
941281	AE2-122 C O1	54.0927	50/50	54.0927
941282	AE2-122 E O1	218.2773	50/50	218.2773
941291	AE2-123 C O1	55.5906	50/50	55.5906
941292	AE2-123 E O1	216.7795	50/50	216.7795
941301	AE2-124 C O1	47.4339	50/50	47.4339
941302	AE2-124 E O1	208.1341	50/50	208.1341
941501	AE2-147 C	4.1142	Adder	4.84
941502	AE2-147 E	2.7428	Adder	3.23
941592	AE2-156 BAT	6.3840	Merchant Transmission	6.3840
942401	AE2-253 C	5.0422	50/50	5.0422
942402	AE2-253 E	2.2653	50/50	2.2653
942851	AE2-304 C	0.1801	Adder	0.21
942852	AE2-304 E	0.0701	Adder	0.08
944581	AF1-123 C O1	11.4165	Adder	13.43
944582	AF1-123 E O1	26.1406	Adder	30.75
944591	AF1-124 C O1	11.4165	Adder	13.43
944592	AF1-124 E O1	26.1406	Adder	30.75

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944601	AF1-125 C O1	11.4165	Adder	13.43
944602	AF1-125 E O1	26.1406	Adder	30.75
944871	AF1-152 C	1.3714	Adder	1.61
944872	AF1-152 E	0.9143	Adder	1.08
957632	AF2-057 BAT	0.7400	Merchant Transmission	0.7400
957871	AF2-081 C O1	7.8086	50/50	7.8086
957872	AF2-081 E O1	3.3466	50/50	3.3466
WEC	WEC	0.0208	Confirmed LTF	0.0208
LGEE	LGEE	0.0382	Confirmed LTF	0.0382
CPL	CPL	0.1760	Confirmed LTF	0.1760
CBM-W2	CBM-W2	0.7289	Confirmed LTF	0.7289
NY	NY	0.0033	Confirmed LTF	0.0033
CBM-W1	CBM-W1	0.7881	Confirmed LTF	0.7881
TVA	TVA	0.1470	Confirmed LTF	0.1470
O-066	O-066	0.0806	Confirmed LTF	0.0806
CBM-S2	CBM-S2	1.1329	Confirmed LTF	1.1329
CBM-S1	CBM-S1	0.8350	Confirmed LTF	0.8350
G-007	G-007	0.0125	Confirmed LTF	0.0125
MADISON	MADISON	0.0323	Confirmed LTF	0.0323
MEC	MEC	0.1192	Confirmed LTF	0.1192

11.6.10 Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721061	314550	6HICKORY	DVP	314466	6FENTRES	DVP	1	DVP_P4-2: 246T247	breaker	699.0	114.43	121.12	DC	46.79

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.5186	50/50	0.5186
314639	6TANGLEW	0.9114	50/50	0.9114
314643	3O INLET	1.1127	50/50	1.1127
315294	1DOMTR10	9.1912	Adder	10.81
315603	6AA1-139SOLA	8.4750	50/50	8.4750
315605	6W1-029WIND	1.6024	50/50	1.6024
315611	6Z1-036WIND	12.0639	50/50	12.0639
315614	AA2-178 C	2.2736	50/50	2.2736
901082	W1-029 E	62.2749	50/50	62.2749
913392	Y1-086 E	4.9053	50/50	4.9053
916042	Z1-036 E (Suspended)	80.8279	50/50	80.8279
917122	Z2-027 E	2.2645	50/50	2.2645
917332	Z2-043 E	0.4615	Adder	0.54
918512	AA1-065 E OP	2.1212	Adder	2.5
918532	AA1-067 E	0.3144	Adder	0.37
919152	AA1-139 E	21.0568	50/50	21.0568
920692	AA2-178 E	5.6489	50/50	5.6489
923831	AB2-022 C	5.1427	50/50	5.1427
923832	AB2-022 E	2.7691	50/50	2.7691
924501	AB2-099 C (Suspended)	0.2349	Adder	0.28
924502	AB2-099 E (Suspended)	0.1007	Adder	0.12
925122	AB2-169 E	4.1602	Adder	4.89
933991	AD1-023 C	13.1041	50/50	13.1041
933992	AD1-023 E	7.1339	50/50	7.1339
934521	AD1-076 C	61.4269	50/50	61.4269
934522	AD1-076 E	31.2785	50/50	31.2785
936401	AD2-051 C O1	4.5653	Adder	5.37
936402	AD2-051 E O1	1.9603	Adder	2.31
937221	AD2-160 C O1	22.7304	50/50	22.7304
937222	AD2-160 E O1	11.9196	50/50	11.9196
938171	AE1-026 C O1	25.0968	Adder	29.53
938172	AE1-026 E O1	6.6211	Adder	7.79
938221	AE1-035 C	1.1843	Adder	1.39
938222	AE1-035 E	0.5833	Adder	0.69
938531	AE1-072 C O1	38.7587	50/50	38.7587
938532	AE1-072 E O1	20.2048	50/50	20.2048
940491	AE2-034 C	9.8855	50/50	9.8855
940492	AE2-034 E	4.2367	50/50	4.2367
941501	AE2-147 C	30.9654	50/50	30.9654
941502	AE2-147 E	20.6436	50/50	20.6436
941541	AE2-151 C	0.4841	Adder	0.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941542	AE2-151 E	0.2607	Adder	0.31
942401	AE2-253 C	23.9085	50/50	23.9085
942402	AE2-253 E	10.7415	50/50	10.7415
942851	AE2-304 C	1.1865	50/50	1.1865
942852	AE2-304 E	0.4614	50/50	0.4614
943171	AE2-346 C	0.5637	Adder	0.66
943172	AE2-346 E	0.2416	Adder	0.28
944871	AF1-152 C	10.3218	50/50	10.3218
944872	AF1-152 E	6.8812	50/50	6.8812
945711	AF1-236 C O1	108.2231	50/50	108.2231
945712	AF1-236 E O1	176.5746	50/50	176.5746
957531	AF2-047 C	23.4899	50/50	23.4899
957532	AF2-047 E	11.8156	50/50	11.8156
957871	AF2-081 C O1	32.7550	50/50	32.7550
957872	AF2-081 E O1	14.0378	50/50	14.0378
959511	AF2-242	2.5659	Adder	5.7
960831	AF2-374 C	0.2607	Adder	0.58
960832	AF2-374 E	0.4253	Adder	0.94
WEC	WEC	0.0885	Confirmed LTF	0.0885
LGEE	LGEE	0.1660	Confirmed LTF	0.1660
CPL	CPL	1.1365	Confirmed LTF	1.1365
CBM-W2	CBM-W2	3.5954	Confirmed LTF	3.5954
NY	NY	0.1128	Confirmed LTF	0.1128
CBM-W1	CBM-W1	3.3026	Confirmed LTF	3.3026
TVA	TVA	0.7560	Confirmed LTF	0.7560
O-066	O-066	1.6128	Confirmed LTF	1.6128
CBM-S2	CBM-S2	6.8146	Confirmed LTF	6.8146
CBM-S1	CBM-S1	4.2004	Confirmed LTF	4.2004
G-007	G-007	0.2517	Confirmed LTF	0.2517
MADISON	MADISON	0.2157	Confirmed LTF	0.2157
MEC	MEC	0.5387	Confirmed LTF	0.5387

11.6.11 Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721122	314645	6SLIGO L269	DVP	314466	6FENTRES	DVP	1	DVP_P4-2: 246T247	breaker	699.0	107.66	110.88	DC	22.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.4967	50/50	0.4967
314639	6TANGLEW	0.8729	50/50	0.8729
314643	3O INLET	1.0656	50/50	1.0656
315294	1DOMTR10	8.8062	Adder	10.36
315603	6AA1-139SOLA	4.0686	50/50	4.0686
315605	6W1-029WIND	1.5347	50/50	1.5347
315611	6Z1-036WIND	11.5545	50/50	11.5545
315614	AA2-178 C	2.1779	50/50	2.1779
901082	W1-029 E	59.6431	50/50	59.6431
913392	Y1-086 E	4.6979	50/50	4.6979
916042	Z1-036 E (Suspended)	77.4154	50/50	77.4154
917122	Z2-027 E	2.1688	50/50	2.1688
917332	Z2-043 E	0.4426	Adder	0.52
917512	Z2-088 E OP1	1.2591	Adder	1.48
918512	AA1-065 E OP	2.0333	Adder	2.39
918532	AA1-067 E	0.3014	Adder	0.35
919152	AA1-139 E	10.1088	50/50	10.1088
920692	AA2-178 E	5.4110	50/50	5.4110
923831	AB2-022 C	4.9252	50/50	4.9252
923832	AB2-022 E	2.6520	50/50	2.6520
924501	AB2-099 C (Suspended)	0.2252	Adder	0.26
924502	AB2-099 E (Suspended)	0.0965	Adder	0.11
925122	AB2-169 E	3.9865	Adder	4.69
926201	AC1-098 C	1.8393	Adder	2.16
926202	AC1-098 E	1.0958	Adder	1.29
926211	AC1-099 C	0.6164	Adder	0.73
926212	AC1-099 E	0.3620	Adder	0.43
927021	AC1-189 C	3.0543	Adder	3.59
927022	AC1-189 E	1.5214	Adder	1.79
932631	AC2-084 C	2.6220	Adder	3.08
932632	AC2-084 E	1.2914	Adder	1.52
933991	AD1-023 C	12.5555	50/50	12.5555
933992	AD1-023 E	6.8353	50/50	6.8353
934521	AD1-076 C	58.8485	50/50	58.8485
934522	AD1-076 E	29.9656	50/50	29.9656
936401	AD2-051 C O1	4.3765	Adder	5.15
936402	AD2-051 E O1	1.8792	Adder	2.21
937221	AD2-160 C O1	6.2104	50/50	6.2104
937222	AD2-160 E O1	3.2566	50/50	3.2566
938171	AE1-026 C O1	24.0460	Adder	28.29
938172	AE1-026 E O1	6.3439	Adder	7.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938221	AE1-035 C	1.1352	Adder	1.34
938222	AE1-035 E	0.5591	Adder	0.66
938531	AE1-072 C O1	44.8847	50/50	44.8847
938532	AE1-072 E O1	23.3983	50/50	23.3983
940491	AE2-034 C	9.4693	50/50	9.4693
940492	AE2-034 E	4.0583	50/50	4.0583
941501	AE2-147 C	29.6568	50/50	29.6568
941502	AE2-147 E	19.7712	50/50	19.7712
941541	AE2-151 C	0.4642	Adder	0.55
941542	AE2-151 E	0.2499	Adder	0.29
942401	AE2-253 C	6.5322	50/50	6.5322
942402	AE2-253 E	2.9348	50/50	2.9348
942851	AE2-304 C	1.1364	50/50	1.1364
942852	AE2-304 E	0.4419	50/50	0.4419
943171	AE2-346 C	0.5406	Adder	0.64
943172	AE2-346 E	0.2317	Adder	0.27
944871	AF1-152 C	9.8856	50/50	9.8856
944872	AF1-152 E	6.5904	50/50	6.5904
945711	AF1-236 C O1	103.6665	50/50	103.6665
945712	AF1-236 E O1	169.1401	50/50	169.1401
957521	AF2-046 C	2.4827	Adder	5.51
957522	AF2-046 E	1.2488	Adder	2.77
957531	AF2-047 C	22.5009	50/50	22.5009
957532	AF2-047 E	11.3181	50/50	11.3181
957861	AF2-080 C	1.4702	Adder	3.26
957862	AF2-080 E	0.6518	Adder	1.45
957871	AF2-081 C O1	15.7248	50/50	15.7248
957872	AF2-081 E O1	6.7392	50/50	6.7392
959511	AF2-242	2.4593	Adder	5.46
959731	AF2-264 C	0.3991	Adder	0.89
959732	AF2-264 E	0.1966	Adder	0.44
960831	AF2-374 C	0.2499	Adder	0.55
960832	AF2-374 E	0.4078	Adder	0.91
WEC	WEC	0.0885	Confirmed LTF	0.0885
LGEE	LGEE	0.1660	Confirmed LTF	0.1660
CPL	CPL	1.0961	Confirmed LTF	1.0961
CBM-W2	CBM-W2	3.5381	Confirmed LTF	3.5381
NY	NY	0.1012	Confirmed LTF	0.1012
CBM-W1	CBM-W1	3.3151	Confirmed LTF	3.3151
TVA	TVA	0.7406	Confirmed LTF	0.7406
O-066	O-066	1.4650	Confirmed LTF	1.4650
CBM-S2	CBM-S2	6.5950	Confirmed LTF	6.5950
CBM-S1	CBM-S1	4.1322	Confirmed LTF	4.1322
G-007	G-007	0.2288	Confirmed LTF	0.2288
MADISON	MADISON	0.2076	Confirmed LTF	0.2076
MEC	MEC	0.5355	Confirmed LTF	0.5355

11.6.12 Index 12

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96848355	314927	8YADKIN	DVP	314928	8SUFFOLK	DVP	1	DVP_P7-1: LN 579-2110	tower	3637.0	100.36	100.93	DC	47.52

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.1793	50/50	0.1793
314491	3PENDLTN	1.3352	50/50	1.3352
315098	1CHESPKA	1.7702	50/50	1.7702
315099	1CHESPKB (Deactivation : 31/05/2019)	11.4753	50/50	11.4753
315108	1ELIZAR1	13.2311	50/50	13.2311
315109	1ELIZAR2	13.0013	50/50	13.0013
315110	1ELIZAR3	13.4004	50/50	13.4004
315611	6Z1-036WIND	7.9603	Adder	9.37
901082	W1-029 E	36.7225	Adder	43.2
913392	Y1-086 E	4.6482	Adder	5.47
916042	Z1-036 E (Suspended)	53.3341	Adder	62.75
916192	Z1-068 E	7.2747	50/50	7.2747
917122	Z2-027 E	1.9451	Adder	2.29
919152	AA1-139 E	18.1749	Adder	21.38
920692	AA2-178 E	3.5159	Adder	4.14
923831	AB2-022 C	4.8732	Adder	5.73
923832	AB2-022 E	2.6240	Adder	3.09
924812	AB2-134 E OP	10.5654	Adder	12.43
925331	AB2-190 C	15.9289	Adder	18.74
925332	AB2-190 E	6.8267	Adder	8.03
925522	AC1-027 E	4.4232	50/50	4.4232
926661	AC1-147 C	7.3767	Adder	8.68
926662	AC1-147 E	4.3324	Adder	5.1
927222	AC1-216 E O1	6.4500	Adder	7.59
932041	AC2-012 C	39.2599	50/50	39.2599
932042	AC2-012 E	64.0556	50/50	64.0556
933731	AC2-196 C	6.9089	50/50	6.9089
933732	AC2-196 E	4.6013	50/50	4.6013
934011	AD1-025 C	14.0971	Adder	16.58
934012	AD1-025 E	8.3505	Adder	9.82
934061	AD1-033 C	29.0325	50/50	29.0325
934062	AD1-033 E	19.3550	50/50	19.3550
935161	AD1-151 C O1	12.8000	Adder	15.06
935162	AD1-151 E O1	8.5333	Adder	10.04
936041	AD2-007 C	0.6734	Adder	0.79
936042	AD2-007 E	0.4639	Adder	0.55
936051	AD2-008 C	2.4543	Adder	2.89
936052	AD2-008 E	5.3425	Adder	6.29
937221	AD2-160 C O1	17.3363	Adder	20.4
937222	AD2-160 E O1	9.0910	Adder	10.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938531	AE1-072 C O1	47.3359	Adder	55.69
938532	AE1-072 E O1	24.6761	Adder	29.03
939311	AE1-162 C	4.3056	Adder	5.07
939312	AE1-162 E	2.8704	Adder	3.38
940251	AE2-007 O1	676.9039	50/50	676.9039
940491	AE2-034 C	6.1529	Adder	7.24
940492	AE2-034 E	2.6370	Adder	3.1
940891	AE2-078 C	2.5143	Adder	2.96
940892	AE2-078 E	1.2952	Adder	1.52
940901	AE2-079 C	2.5143	Adder	2.96
940902	AE2-079 E	1.2952	Adder	1.52
941281	AE2-122 C O1	110.1002	50/50	110.1002
941282	AE2-122 E O1	444.2811	50/50	444.2811
941291	AE2-123 C O1	113.1489	50/50	113.1489
941292	AE2-123 E O1	441.2323	50/50	441.2323
941301	AE2-124 C O1	102.9075	50/50	102.9075
941302	AE2-124 E O1	451.5457	50/50	451.5457
941501	AE2-147 C	18.2598	Adder	21.48
941502	AE2-147 E	12.1732	Adder	14.32
941591	AE2-156 O1	69.3970	50/50	69.3970
942401	AE2-253 C	18.2349	Adder	21.45
942402	AE2-253 E	8.1925	Adder	9.64
942551	AE2-270	22.5497	Adder	26.53
942851	AE2-304 C	0.7916	Adder	0.93
942852	AE2-304 E	0.3078	Adder	0.36
943621	AF1-033 C	2.5143	Adder	2.96
943622	AF1-033 E	1.2952	Adder	1.52
944501	AF1-115 C O1	7.6572	Adder	9.01
944502	AF1-115 E O1	3.7714	Adder	4.44
944581	AF1-123 C O1	205.5069	50/50	205.5069
944582	AF1-123 E O1	470.5531	50/50	470.5531
944591	AF1-124 C O1	205.5069	50/50	205.5069
944592	AF1-124 E O1	470.5531	50/50	470.5531
944601	AF1-125 C O1	205.5069	50/50	205.5069
944602	AF1-125 E O1	470.5531	50/50	470.5531
944871	AF1-152 C	6.0866	Adder	7.16
944872	AF1-152 E	4.0577	Adder	4.77
945711	AF1-236 C O1	67.3596	Adder	79.25
945712	AF1-236 E O1	109.9024	Adder	129.3
957531	AF2-047 C	7.7488	Adder	17.2
957532	AF2-047 E	3.8977	Adder	8.65
957631	AF2-057	6.2058	Adder	13.78
957711	AF2-065 C	6.0952	Adder	13.53
957712	AF2-065 E	5.8561	Adder	13.0
957871	AF2-081 C O1	14.9842	Adder	33.26
957872	AF2-081 E O1	6.4218	Adder	14.25
960101	AF2-301 C	1.1729	Adder	2.6
960102	AF2-301 E	0.7819	Adder	1.74
960132	AF2-304 E O1	4.8190	Adder	10.7
NEWTON	NEWTON	0.4395	Confirmed LTF	0.4395
FARMERCITY	FARMERCITY	0.0230	Confirmed LTF	0.0230
CALDERWOOD	CALDERWOOD	0.2112	Confirmed LTF	0.2112

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
NY	NY	0.2151	Confirmed LTF	0.2151
PRAIRIE	PRAIRIE	1.0616	Confirmed LTF	1.0616
O-066	O-066	2.5670	Confirmed LTF	2.5670
CHEOAH	CHEOAH	0.2132	Confirmed LTF	0.2132
EDWARDS	EDWARDS	0.1428	Confirmed LTF	0.1428
TILTON	TILTON	0.2570	Confirmed LTF	0.2570
G-007	G-007	0.3973	Confirmed LTF	0.3973
GIBSON	GIBSON	0.2233	Confirmed LTF	0.2233
BLUEG	BLUEG	0.7083	Confirmed LTF	0.7083
TRIMBLE	TRIMBLE	0.2271	Confirmed LTF	0.2271
CATAWBA	CATAWBA	0.1582	Confirmed LTF	0.1582

11.6.13 Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721073	934060	AD1-033 TAP	DVP	314481	6LANDSTN	DVP	1	DVP_P4-2: 2110T2128	breaker	830.0	117.64	120.21	DC	21.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.2648	50/50	0.2648
314639	6TANGLEW	0.4272	50/50	0.4272
314643	3O INLET	0.6457	50/50	0.6457
315294	1DOMTR10	3.3004	Adder	3.88
315603	6AA1-139SOLA	3.8597	50/50	3.8597
315605	6W1-029WIND	0.5452	50/50	0.5452
315611	6Z1-036WIND	4.5548	50/50	4.5548
901082	W1-029 E	21.1879	50/50	21.1879
913392	Y1-086 E	2.5047	50/50	2.5047
916042	Z1-036 E (Suspended)	30.5172	50/50	30.5172
917122	Z2-027 E	1.0613	50/50	1.0613
919152	AA1-139 E	9.5897	50/50	9.5897
920692	AA2-178 E	1.7734	Adder	2.09
923831	AB2-022 C	2.6259	50/50	2.6259
923832	AB2-022 E	1.4139	50/50	1.4139
926661	AC1-147 C	-1.8982	Adder	-2.23
933731	AC2-196 C	3.0719	50/50	3.0719
933732	AC2-196 E	2.0459	50/50	2.0459
933991	AD1-023 C	3.9475	Adder	4.64
933992	AD1-023 E	2.1490	Adder	2.53
934061	AD1-033 C	15.0637	50/50	15.0637
934062	AD1-033 E	10.0425	50/50	10.0425
934521	AD1-076 C	18.8718	Adder	22.2
934522	AD1-076 E	9.6095	Adder	11.31
937221	AD2-160 C O1	9.1220	50/50	9.1220
937222	AD2-160 E O1	4.7835	50/50	4.7835
938171	AE1-026 C O1	8.7681	Adder	10.32
938172	AE1-026 E O1	2.3132	Adder	2.72
938531	AE1-072 C O1	25.0552	50/50	25.0552
938532	AE1-072 E O1	13.0613	50/50	13.0613
939311	AE1-162 C	-0.8246	Adder	-0.97
940491	AE2-034 C	3.1034	Adder	3.65
940492	AE2-034 E	1.3300	Adder	1.56
941501	AE2-147 C	10.5354	50/50	10.5354
941502	AE2-147 E	7.0236	50/50	7.0236
941592	AE2-156 BAT	16.0800	50/50	16.0800
942401	AE2-253 C	9.5948	50/50	9.5948
942402	AE2-253 E	4.3107	50/50	4.3107
942851	AE2-304 C	0.4499	50/50	0.4499
942852	AE2-304 E	0.1750	50/50	0.1750
944581	AF1-123 C O1	20.1136	Adder	23.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944582	AF1-123 E O1	46.0545	Adder	54.18
944591	AF1-124 C O1	20.1136	Adder	23.66
944592	AF1-124 E O1	46.0545	Adder	54.18
944601	AF1-125 C O1	20.1136	Adder	23.66
944602	AF1-125 E O1	46.0545	Adder	54.18
944871	AF1-152 C	3.5118	50/50	3.5118
944872	AF1-152 E	2.3412	50/50	2.3412
945711	AF1-236 C O1	33.9749	Adder	39.97
945712	AF1-236 E O1	55.4327	Adder	65.21
957531	AF2-047 C	3.9084	Adder	8.68
957532	AF2-047 E	1.9659	Adder	4.36
957632	AF2-057 BAT	3.5448	50/50	3.5448
957871	AF2-081 C O1	14.9173	50/50	14.9173
957872	AF2-081 E O1	6.3931	50/50	6.3931
WEC	WEC	0.0573	Confirmed LTF	0.0573
LGEE	LGEE	0.1061	Confirmed LTF	0.1061
CPL	CPL	0.4922	Confirmed LTF	0.4922
CBM-W2	CBM-W2	2.0229	Confirmed LTF	2.0229
NY	NY	0.0111	Confirmed LTF	0.0111
CBM-W1	CBM-W1	2.1893	Confirmed LTF	2.1893
TVA	TVA	0.4046	Confirmed LTF	0.4046
O-066	O-066	0.2352	Confirmed LTF	0.2352
CBM-S2	CBM-S2	3.1501	Confirmed LTF	3.1501
CBM-S1	CBM-S1	2.2919	Confirmed LTF	2.2919
G-007	G-007	0.0374	Confirmed LTF	0.0374
MADISON	MADISON	0.0907	Confirmed LTF	0.0907
MEC	MEC	0.3257	Confirmed LTF	0.3257

11.6.14 Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721111	938530	AE1-072 TAP	DVP	314645	6SLIGO L269	DVP	1	DVP_P4-2: 246T247	breaker	699.0	108.8	112.02	DC	22.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.4967	50/50	0.4967
314639	6TANGLEW	0.8729	50/50	0.8729
314643	3O INLET	1.0656	50/50	1.0656
315294	1DOMTR10	8.8062	Adder	10.36
315603	6AA1-139SOLA	4.0686	50/50	4.0686
315605	6W1-029WIND	1.5347	50/50	1.5347
315611	6Z1-036WIND	11.5545	50/50	11.5545
315614	AA2-178 C	2.1779	50/50	2.1779
901082	W1-029 E	59.6431	50/50	59.6431
913392	Y1-086 E	4.6979	50/50	4.6979
916042	Z1-036 E (Suspended)	77.4154	50/50	77.4154
917122	Z2-027 E	2.1688	50/50	2.1688
917332	Z2-043 E	0.4426	Adder	0.52
917512	Z2-088 E OP1	1.2591	Adder	1.48
918512	AA1-065 E OP	2.0333	Adder	2.39
918532	AA1-067 E	0.3014	Adder	0.35
919152	AA1-139 E	10.1088	50/50	10.1088
920692	AA2-178 E	5.4110	50/50	5.4110
923831	AB2-022 C	4.9252	50/50	4.9252
923832	AB2-022 E	2.6520	50/50	2.6520
924501	AB2-099 C (Suspended)	0.2252	Adder	0.26
924502	AB2-099 E (Suspended)	0.0965	Adder	0.11
925122	AB2-169 E	3.9865	Adder	4.69
926201	AC1-098 C	1.8393	Adder	2.16
926202	AC1-098 E	1.0958	Adder	1.29
926211	AC1-099 C	0.6164	Adder	0.73
926212	AC1-099 E	0.3620	Adder	0.43
927021	AC1-189 C	3.0543	Adder	3.59
927022	AC1-189 E	1.5214	Adder	1.79
932631	AC2-084 C	2.6220	Adder	3.08
932632	AC2-084 E	1.2914	Adder	1.52
933991	AD1-023 C	12.5555	50/50	12.5555
933992	AD1-023 E	6.8353	50/50	6.8353
934521	AD1-076 C	58.8485	50/50	58.8485
934522	AD1-076 E	29.9656	50/50	29.9656
936401	AD2-051 C O1	4.3765	Adder	5.15
936402	AD2-051 E O1	1.8792	Adder	2.21
937221	AD2-160 C O1	6.2104	50/50	6.2104
937222	AD2-160 E O1	3.2566	50/50	3.2566
938171	AE1-026 C O1	24.0460	Adder	28.29
938172	AE1-026 E O1	6.3439	Adder	7.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938221	AE1-035 C	1.1352	Adder	1.34
938222	AE1-035 E	0.5591	Adder	0.66
938531	AE1-072 C O1	44.8847	50/50	44.8847
938532	AE1-072 E O1	23.3983	50/50	23.3983
940491	AE2-034 C	9.4693	50/50	9.4693
940492	AE2-034 E	4.0583	50/50	4.0583
941501	AE2-147 C	29.6568	50/50	29.6568
941502	AE2-147 E	19.7712	50/50	19.7712
941541	AE2-151 C	0.4642	Adder	0.55
941542	AE2-151 E	0.2499	Adder	0.29
942401	AE2-253 C	6.5322	50/50	6.5322
942402	AE2-253 E	2.9348	50/50	2.9348
942851	AE2-304 C	1.1364	50/50	1.1364
942852	AE2-304 E	0.4419	50/50	0.4419
943171	AE2-346 C	0.5406	Adder	0.64
943172	AE2-346 E	0.2317	Adder	0.27
944871	AF1-152 C	9.8856	50/50	9.8856
944872	AF1-152 E	6.5904	50/50	6.5904
945711	AF1-236 C O1	103.6665	50/50	103.6665
945712	AF1-236 E O1	169.1401	50/50	169.1401
957521	AF2-046 C	2.4827	Adder	5.51
957522	AF2-046 E	1.2488	Adder	2.77
957531	AF2-047 C	22.5009	50/50	22.5009
957532	AF2-047 E	11.3181	50/50	11.3181
957861	AF2-080 C	1.4702	Adder	3.26
957862	AF2-080 E	0.6518	Adder	1.45
957871	AF2-081 C O1	15.7248	50/50	15.7248
957872	AF2-081 E O1	6.7392	50/50	6.7392
959511	AF2-242	2.4593	Adder	5.46
959731	AF2-264 C	0.3991	Adder	0.89
959732	AF2-264 E	0.1966	Adder	0.44
960831	AF2-374 C	0.2499	Adder	0.55
960832	AF2-374 E	0.4078	Adder	0.91
WEC	WEC	0.0885	Confirmed LTF	0.0885
LGEE	LGEE	0.1660	Confirmed LTF	0.1660
CPL	CPL	1.0961	Confirmed LTF	1.0961
CBM-W2	CBM-W2	3.5381	Confirmed LTF	3.5381
NY	NY	0.1012	Confirmed LTF	0.1012
CBM-W1	CBM-W1	3.3151	Confirmed LTF	3.3151
TVA	TVA	0.7406	Confirmed LTF	0.7406
O-066	O-066	1.4650	Confirmed LTF	1.4650
CBM-S2	CBM-S2	6.5950	Confirmed LTF	6.5950
CBM-S1	CBM-S1	4.1322	Confirmed LTF	4.1322
G-007	G-007	0.2288	Confirmed LTF	0.2288
MADISON	MADISON	0.2076	Confirmed LTF	0.2076
MEC	MEC	0.5355	Confirmed LTF	0.5355

11.7 Queue Dependencies

The Queue Projects below are listed in one or more indices for the overloads identified in your report. These projects contribute to the loading of the overloaded facilities identified in your report. The percent overload of a facility and cost allocation you may have towards a particular reinforcement could vary depending on the action of these earlier projects. The status of each project at the time of the analysis is presented in the table. This list may change as earlier projects withdraw or modify their requests.

Queue Number	Project Name	Status
AA1-065	Earleys 230kV	In Service
AA1-067	Everetts 34.5kV	In Service
AA1-139	Hickory-Shawboro 230kV	In Service
AA2-178	Mackeys 230kV	Under Construction
AB2-015	Franklin 115kV	Engineering and Procurement
AB2-022	Elizabeth City 34.5kV	Engineering and Procurement
AB2-099	Ahoskie 34.5kV	Suspended
AB2-134	Hopewell-Surry 230kV	In Service
AB2-161	Waverly #2 DP 115kV	Suspended
AB2-169	Pantago-Five Points 115kV	Partially in Service - Under Construction
AB2-190	Hopewell-Surry 230kV	Engineering and Procurement
AC1-027	Pendleton 34.5kV	In Service
AC1-065	Harmony Village-Shackleford 115kV	Engineering and Procurement
AC1-098	Dawson-South Justice 115kV	Engineering and Procurement
AC1-099	Dawson-South Justice 115kV	Engineering and Procurement
AC1-147	Grassfield 34.5kV	Engineering and Procurement
AC1-161	Septa 500kV	Active
AC1-164	Chickahominy 230kV	Engineering and Procurement
AC1-189	Chinquapin-Everetts 230kV	Active
AC1-216	Hopewell-Surry 230kV	Under Construction
AC2-012	Grassfield-Great Bridge 115kV	Active
AC2-070	Old Church 34.5kV	Engineering and Procurement
AC2-079	Ivor-Oakridge 115kV	Active
AC2-084	Dawson-South Justice 115kV	Active
AC2-110	Harmony Village-Shackleford 115kV	Engineering and Procurement
AC2-137	Elko 34.5kV	Under Construction
AC2-138	Northern Neck 34.5kV	Under Construction
AC2-141	Septa 500kV	Active
AC2-196	Fentress 34.5kV	Engineering and Procurement
AD1-023	Cashie-Trowbridge 230 kV	Active
AD1-025	Hopewell-Surry 230 kV	Active
AD1-033	Fentress-Landstown 230 kV	Active
AD1-046	Oak Grove 34.5 kV III	Engineering and Procurement
AD1-076	Trowbridge 230 kV	Active
AD1-082	Bakers Pond-Ivor 115kV	Active
AD1-144	Kings Fork 34.5 kV	Engineering and Procurement
AD1-151	Hopewell-Surry 230 kV	Active
AD2-007	Hopewell-Surry 230 kV	Active
AD2-008	Hopewell-Surry 230 kV	Active

Queue Number	Project Name	Status
AD2-021	Elko 34.5 kV	Under Construction
AD2-039	Harmony Village-Shackleford 115 kV	Engineering and Procurement
AD2-044	Northern Neck 34.5 kV	Under Construction
AD2-051	Earleys – Northampton 230kV	Active
AD2-085	Myrtle-Windsor DP 115kV	Active
AD2-160	Hickory-Moyock 230kV	Active
AD2-164	Peninsula 34.5kV	Withdrawn
AD2-215	Kings Fork 34.5 kV	Engineering and Procurement
AE1-004	Harmony Village-Shackleford 115 kV	Engineering and Procurement
AE1-026	Cashie 230 kV	Active
AE1-035	Earleys 230 kV	Engineering and Procurement
AE1-072	Shawboro-Sligo 230 kV	Active
AE1-103	Holland-Union Camp 115 kV	Active
AE1-124	Oak Grove 34.5 kV	Engineering and Procurement
AE1-162	Smithfield 34.5 kV	Engineering and Procurement
AE1-173	Carson-Suffolk 500 kV	Active
AE1-174	Light Foot 34.5 kV	Withdrawn
AE1-175	Light Foot 34.5 kV	Engineering and Procurement
AE2-000B	N/A	N/A
AE2-007	Chesapeake 230 kV	Active
AE2-034	Mackeys 230 kV	Active
AE2-051	Carson-Septa 500 kV	Active
AE2-078	Poolesville 34.5 kV	Engineering and Procurement
AE2-079	Poolesville 34.5 kV	Engineering and Procurement
AE2-094	Carson-Rogers Road 500 kV	Active
AE2-104	Suffolk 115 kV	Active
AE2-122	Birdneck-Landstown 230 kV	Active
AE2-123	Birdneck-Landstown 230 kV	Active
AE2-124	Landstown 230 kV	Active
AE2-147	Swamp 230 kV	Active
AE2-151	Earleys 34.5kV	Engineering and Procurement
AE2-156	Yadkin 115 kV	Active
AE2-225	Suffolk 34 kV	Engineering and Procurement
AE2-229	Suffolk 34 kV	Engineering and Procurement
AE2-247	Myrtle-Windsor 115 kV	Active
AE2-253	Hickory-Moyock 230 kV	Active
AE2-270	Hopewell-Surry 230 kV	Active
AE2-304	South Hertford 34 kV	Engineering and Procurement
AE2-346	Ahoskie 34.5 kV	Active
AF1-017	Myrtle-Windsor 115 kV	Active
AF1-032	Suffolk 34.5 kV	Engineering and Procurement
AF1-033	Poolesville 34 kV	Engineering and Procurement
AF1-069	Carson-Rogers Rd 500 kV	Active
AF1-115	Poolesville 230 kV	Active
AF1-123	Fentress 500 kV	Active
AF1-124	Fentress 500 kV	Active
AF1-125	Fentress 500 kV	Active
AF1-152	Swamp 230 kV	Active
AF1-201	Hayes-Whitemarsh 115 kV	Active
AF1-236	Mackeys 230 kV	Active
AF2-043	Suffolk 34.5 kV	Active
AF2-046	Tunis-Mapleton 115 kV	Active

Queue Number	Project Name	Status
AF2-047	Creswell-Riders Creek 115 kV	Active
AF2-057	Grassfield 34.5 kV	Active
AF2-065	Surry-Hopewell 230 kV	Active
AF2-073	Nucor Steel-Suffolk 230 kV	Withdrawn
AF2-074	Nucor Steel-Suffolk 230 kV	Withdrawn
AF2-076	Suffolk-Nucor Steel 230 kV	Active
AF2-080	Chinquapin-Everetts 230 kV	Active
AF2-081	Moyock 230 kV	Active
AF2-110	Suffolk 115 kV	Active
AF2-242	Wharton 115 kV	Active
AF2-264	Tunis 34.5 kV	Active
AF2-301	Poolesville-Winchester 230 kV	Active
AF2-304	Surry-Hopewell 230 kV	Active
AF2-374	Woodland 34.5 kV	Active
AF2-400	Franklin 13.2 kV	Active
AF2-402	Ivor-Oak Ridge 115 kV	Active
W1-029	Winfall 230kV	In Service
Y1-086	Morgans Corner	In Service
Z1-036	WinFall-Chowan 230kV	Suspended
Z1-068	Birdneck 34.5kV	Under Construction
Z2-027	Pasquotank 34.5kV	In Service
Z2-043	Kelford 34.5kV	In Service
Z2-088	Tarboro-Everetts 230kV	In Service

11.8 Contingency Descriptions - Primary POI

Contingency Name	Contingency Definition
DVP_P4-2: 231T2026	CONTINGENCY 'DVP_P4-2: 231T2026' /* LANDSTOWN 230 KV OPEN BRANCH FROM BUS 314481 TO BUS 314502 CKT 1 /* 6LANDSTN 230.00 - 6STUMPY 230.00 OPEN BRANCH FROM BUS 314502 TO BUS 314508 CKT 1 /* 6STUMPY 230.00 - 6THRASHER 230.00 OPEN BUS 314502 /* ISLAND: 6STUMPY 230.00 OPEN BRANCH FROM BUS 314481 TO BUS 314486 CKT 1 /* 6LANDSTN 230.00 - 6LYNHAVN 230.00 END
DVP_P1-2: LN 567	CONTINGENCY 'DVP_P1-2: LN 567' OPEN BRANCH FROM BUS 314903 TO BUS 314924 CKT 1 /* 8CHCKAHM 500.00 - 8SURRY 500.00 END
DVP_P1-2: LN 565	CONTINGENCY 'DVP_P1-2: LN 565' OPEN BRANCH FROM BUS 314927 TO BUS 314928 CKT 1 /* 8YADKIN 500.00 - 8SUFFOLK 500.00 END

Contingency Name	Contingency Definition
DVP_P1-2: LN 563	CONTINGENCY 'DVP_P1-2: LN 563' OPEN BRANCH FROM BUS 314902 TO BUS 314914 CKT 1 /* 8CARSON 500.00 - 8MDLTAN 500.00 END
DVP_P1-2: LN 579	CONTINGENCY 'DVP_P1-2: LN 579' OPEN BRANCH FROM BUS 314923 TO BUS 314927 CKT 1 /* 8SEPTA 500.00 - 8YADKIN 500.00 END
DVP_P7-1: LN 579-2110	CONTINGENCY 'DVP_P7-1: LN 579-2110' /* . OPEN BRANCH FROM BUS 314923 TO BUS 314927 CKT 1 /* 8SEPTA 500.00 - 8YADKIN 500.00 OPEN BRANCH FROM BUS 314480 TO BUS 314508 CKT 1 /* 6HUNTSMN 230.00 - 6THRASHER 230.00 OPEN BRANCH FROM BUS 314480 TO BUS 314537 CKT 1 /* 6HUNTSMN 230.00 - 6SUFFOLK 230.00 OPEN BUS 314480 /* ISLAND: 6HUNTSMN 230.00 END
DVP_P1-2: LN 271-B	CONTINGENCY 'DVP_P1-2: LN 271-B' OPEN BRANCH FROM BUS 934060 TO BUS 314481 CKT 1 /* AD1-033 TAP 230.00 - 6LANDSTN 230.00 END
314295 6BIRDNECK 230 941280 AE2-122 TAP 230 1	CONTINGENCY '314295 6BIRDNECK 230 941280 AE2-122 TAP 230 1' OPEN BRANCH FROM BUS 314295 TO BUS 941280 CKT 1 END
DVP_P4-2: 2110T2128	CONTINGENCY 'DVP_P4-2: 2110T2128' /* THRASHER 230 KV OPEN BRANCH FROM BUS 314480 TO BUS 314508 CKT 1 /* 6HUNTSMN 230.00 - 6THRASHER 230.00 OPEN BRANCH FROM BUS 314480 TO BUS 314537 CKT 1 /* 6HUNTSMN 230.00 - 6SUFFOLK 230.00 OPEN BUS 314480 /* ISLAND: 6HUNTSMN 230.00 OPEN BRANCH FROM BUS 314466 TO BUS 314508 CKT 1 /* 6FENTRES 230.00 - 6THRASHER 230.00 END
314550 6HICKORY 230 937220 AD2- 160 TAP 230 1	CONTINGENCY '314550 6HICKORY 230 937220 AD2-160 TAP 230 1' OPEN BRANCH FROM BUS 314550 TO BUS 937220 CKT 1 END

Contingency Name	Contingency Definition
DVP_P4-2: 231T2128	CONTINGENCY 'DVP_P4-2: 231T2128' /* THRASHER 230 KV OPEN BRANCH FROM BUS 314481 TO BUS 314502 CKT 1 /* 6LANDSTN 230.00 - 6STUMPY 230.00 OPEN BRANCH FROM BUS 314502 TO BUS 314508 CKT 1 /* 6STUMPY 230.00 - 6THRASHER 230.00 OPEN BUS 314502 /* ISLAND: 6STUMPY 230.00 OPEN BRANCH FROM BUS 314466 TO BUS 314508 CKT 1 /* 6FENTRES 230.00 - 6THRASHER 230.00 END
314645 6SLIGO L269 230 938530 AE1-072 TAP 230 1	CONTINGENCY '314645 6SLIGO L269 230 938530 AE1-072 TAP 230 1' OPEN BRANCH FROM BUS 314645 TO BUS 938530 CKT 1 END
Base Case	
DVP_P4-2: 26922	CONTINGENCY 'DVP_P4-2: 26922' /* FENTRESS 230 KV OPEN BRANCH FROM BUS 314466 TO BUS 314645 CKT 1 /* 6FENTRES 230.00 - 6SLIGO L269 230.00 OPEN BRANCH FROM BUS 314645 TO BUS 938530 CKT 1 /* 6SLIGO L269 230.00 - AE1-072 TAP 230.00 OPEN BUS 314645 /* ISLAND: 6SLIGO L269 230.00 OPEN BRANCH FROM BUS 314466 TO BUS 314909 CKT 2 /* 6FENTRES 230.00 - 8FENTRES 500.00 OPEN BUS 314654 /* 6FENTR_1 230.00 KV OPEN BUS 313889 /* 6FENTRES_STC230.00 KV END
DVP_P4-2: 246T247	CONTINGENCY 'DVP_P4-2: 246T247' /* SUFFOLK 230 KV OPEN BRANCH FROM BUS 314537 TO BUS 957820 CKT 1 /* 6SUFFOLK 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1 /* 6EARLEYS 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1 /* 6NUCO TP 230.00 - 6NUCOR 230.00 OPEN BUS 314575 /* ISLAND: 6NUCO TP 230.00 OPEN BUS 314590 /* ISLAND: 6NUCOR 230.00 OPEN BRANCH FROM BUS 313713 TO BUS 314648 CKT 1 /* 6SWAMP 230.00 - 6SUNBURY 230.00 OPEN BRANCH FROM BUS 314537 TO BUS 314648 CKT 1 /* 6SUFFOLK 230.00 - 6SUNBURY 230.00 OPEN BUS 314648 /* ISLAND: 6SUNBURY 230.00 END
DVP_P1-2: LN 2128	CONTINGENCY 'DVP_P1-2: LN 2128' OPEN BRANCH FROM BUS 314466 TO BUS 314508 CKT 1 /* 6FENTRES 230.00 - 6THRASHER 230.00 END

12 Short Circuit Analysis - Primary POI

Short circuit analysis will be provided in the System Impact Study report.

13 Summer Peak - Load Flow Analysis - Secondary POI

The Queue Project AF2-081 was evaluated as an 80.0 MW (Capacity 56.0 MW) injection tapping the Fentress to Sligo 230 kV line in the Dominion area. Project AF2-081 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-081 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

13.1 Generation Deliverability

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC D C	MW IMPAC T
96848021	314934	8SPOTS YL	500.0	DVP	314916	8MORRSV L	500.0	DVP	1	DVP_P1-2: LN 2088	single	3218.56005859	99.98	100.02	DC	8.84

13.2 Multiple Facility Contingency

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

None

13.3 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)

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC D C	MW IMPAC T
97916615	314209	6SKIFF CREEK	230.0	DVP	314386	6KINGS M	230.0	DVP	1	DVP_P1-2: LN 567	single	441.799987793	148.14	149.19	DC	4.6
97916656	314296	6PENNIMAN	230.0	DVP	314415	6WALR209	230.0	DVP	1	DVP_P1-2: LN 567	single	441.799987793	136.73	137.78	DC	4.6
97916636	314386	6KINGS M	230.0	DVP	314296	6PENNIMAN	230.0	DVP	1	DVP_P1-2: LN 567	single	441.799987793	140.37	141.43	DC	4.6
97916724	314415	6WALR209	230.0	DVP	314391	6LIGH209	230.0	DVP	1	DVP_P1-2: LN 567	single	441.799987793	121.61	122.66	DC	4.6
97720986	314466	6FENTRES	230.0	DVP	314508	6THRASH ER	230.0	DVP	1	DVP_P4-2: 231T2026	break er	830.0	133.0	136.1	DC	25.69
97721095	314466	6FENTRES	230.0	DVP	934060	AD1-033 TAP	230.0	DVP	1	DVP_P4-2: 2110T2128	break er	830.0	113.29	115.87	DC	21.39
148728182	314466	6FENTRES	230.0	DVP	314508	6THRASH ER	230.0	DVP	1	DVP_P4-2: 246T2034	break er	830.0	138.55	141.73	DC	26.42
97721116	314481	6LANDSTN	230.0	DVP	314486	6LYNHAV N	230.0	DVP	1	DVP_P4-2: 231T2128	break er	830.0	110.49	112.14	DC	13.67

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPA CT
97721155	314486	6LYNHAV N	230.0	DVP	314504	6THALIA	230.0	DVP	1	DVP_P4-2: 231T2128	breaker	906.0	101.91	103.15	DC	11.2
97721061	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 246T247	breaker	699.0	117.22	120.49	DC	22.82
97721062	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 26922	breaker	699.0	100.87	107.97	DC	49.63
148728142	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 246T2034	breaker	699.0	146.51	150.06	DC	24.83
148728143	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 24662	breaker	699.0	117.73	121.0	DC	22.84
148728144	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 24642	breaker	699.0	117.25	120.51	DC	22.81
97159401	314596	3POPLR C	115.0	DVP	314573	3EVERETS	115.0	DVP	1	DVP_P4-2: 246T2034	breaker	349.0	210.37	211.08	DC	5.46
97159396	314614	3TRWBRD G2	115.0	DVP	314596	3POPLR C	115.0	DVP	1	DVP_P4-2: 246T2034	breaker	350.0	211.4	212.1	DC	5.46
96848355	314927	8YADKIN	500.0	DVP	314928	8SUFFOLK	500.0	DVP	1	DVP_P7-1: LN 579-2110	tower	3637.0	100.36	100.94	DC	47.7
97721073	934060	AD1-033 TAP	230.0	DVP	314481	6LANDST N	230.0	DVP	1	DVP_P4-2: 2110T2128	breaker	830.0	117.64	120.22	DC	21.39
148728177	957870	AF2-081 TAP	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 246T2034	breaker	699.0	135.12	142.06	DC	48.46
148728178	957870	AF2-081 TAP	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 24662	breaker	699.0	108.19	114.86	DC	46.56
148728179	957870	AF2-081 TAP	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 24642	breaker	699.0	107.74	114.4	DC	46.54
148728180	957870	AF2-081 TAP	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P4-2: 246T247	breaker	699.0	107.71	114.37	DC	46.54

13.4 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 developer 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 project by fixing 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.

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
97916610	314209	6SKIFF CREEK	230.0	DVP	314386	6KINGS M	230.0	DVP	1	DVP_P1-2: LN 567	operation	441.799987793	237.59	237.97	DC	6.58
97916651	314296	6PENNNIMAN	230.0	DVP	314415	6WALR209	230.0	DVP	1	DVP_P1-2: LN 567	operation	441.799987793	226.18	226.56	DC	6.58
97916631	314386	6KINGS M	230.0	DVP	314296	6PENNNIMAN	230.0	DVP	1	DVP_P1-2: LN 567	operation	441.799987793	229.82	230.21	DC	6.58
97916719	314415	6WALR209	230.0	DVP	314391	6LIGH209	230.0	DVP	1	DVP_P1-2: LN 567	operation	441.799987793	211.06	211.44	DC	6.58
97916843	314466	6FENTRES	230.0	DVP	314508	6THRASH ER	230.0	DVP	1	DVP_P1-2: LN 271-B	operation	678.679992676	158.25	162.67	DC	29.98
97916848	314466	6FENTRES	230.0	DVP	314508	6THRASH ER	230.0	DVP	1	Base Case	operation	678.679992676	96.78	100.06	DC	22.29
97917054	314466	6FENTRES	230.0	DVP	934060	AD1-033 TAP	230.0	DVP	1	DVP_P1-2: LN 2128	operation	678.679992676	132.87	136.25	DC	22.87
97917124	314481	6LANDST N	230.0	DVP	314486	6LYNHAV N	230.0	DVP	1	314295 6BIRDNECK 230 941280 AE2-122 TAP 230 1	operation	678.679992676	130.95	131.41	DC	6.84
148994563	314550	6HICKORY	230.0	DVP	314466	6FENTRES	230.0	DVP	1	DVP_P1-2: LN 269-A-B	operation	571.520019531	122.88	131.65	DC	50.15
96847931	314903	8CHCKAH M	500.0	DVP	314908	8ELMONT	500.0	DVP	1	DVP_P1-2: LN 563	operation	2442.12011719	174.9	174.92	DC	24.84
96848033	314927	8YADKIN	500.0	DVP	314928	8SUFFOLK	500.0	DVP	1	DVP_P1-2: LN 579	operation	2442.12011719	126.36	127.09	DC	40.54
96848087	314927	8YADKIN	500.0	DVP	314923	8SEPTA	500.0	DVP	1	DVP_P1-2: LN 565	operation	2442.12011719	115.57	116.22	DC	36.14
96848105	314928	8SUFFOLK	500.0	DVP	314924	8SURREY	500.0	DVP	1	DVP_P1-2: LN 579	operation	2442.12011719	103.24	103.71	DC	25.55
97917036	934060	AD1-033 TAP	230.0	DVP	314481	6LANDST N	230.0	DVP	1	DVP_P1-2: LN 2128	operation	678.679992676	136.85	140.22	DC	22.87
148994530	957870	AF2-081 TAP	230.0	DVP	314466	6FENTRES	230.0	DVP	1	314550 6HICKORY 230 937220 AD2-160 TAP 230 1	operation	571.520019531	124.85	134.82	DC	56.95

13.5 Flow Gate Details - Secondary POI

The following indices contain additional information about each facility presented in the body of the report. For each index, a description of the flowgate and its contingency was included for convenience. The intent of the indices is to provide more details 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 indices. Please note that there may be contributors that are subsequently queued after the queue under study that are not listed in the indices. 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 are Full MW Impact contributions which are also noted in the indices column named "Full MW Impact", whereas the loading percentages reported in the body of the report, take into consideration the PJM Generator Deliverability Test rules such as commercial probability of each project as well as the ramping impact of "Adder" contributions. The MW Impact found and used in the analysis is shown in the indices column named "Gendeliv MW Impact".

13.5.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96848021	314934	8SPOTSYL	DVP	314916	8MORRSVL	DVP	1	DVP_P1-2: LN 2088	single	3218.56	99.98	100.02	DC	8.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314250	6ROCKVILLE	0.3075	80/20	0.3075
314947	8GREENSVILLE	45.4615	80/20	45.4615
315060	1CHESTF5 (Deactivation : 31/05/2023)	44.0413	Adder	51.81
315065	1CHESTF6 (Deactivation : 31/05/2023)	90.2504	Adder	106.18
315083	1SPRUNCA (Deactivation : 12/01/2021)	9.3774	80/20	9.3774
315084	1SPRUNCB (Deactivation : 12/01/2021)	9.3774	80/20	9.3774
315102	1BRUNSWICKG1	7.4662	80/20	7.4662
315103	1BRUNSWICKG2	7.4662	80/20	7.4662
315104	1BRUNSWICKG3	7.4662	80/20	7.4662
315105	1BRUNSWICKS1	15.5110	80/20	15.5110
315108	1ELIZAR1	3.0056	80/20	3.0056
315109	1ELIZAR2	2.9534	80/20	2.9534
315110	1ELIZAR3	3.0440	80/20	3.0440
315172	1LOISA A	4.4106	80/20	4.4106
315173	1LOISA B	4.4334	80/20	4.4334
315174	1LOISA C	4.4334	80/20	4.4334
315175	1LOISA D	4.4334	80/20	4.4334
315176	1LOISA E	9.0385	80/20	9.0385
315177	1S ANNAG1	2.9875	80/20	2.9875
315178	1S ANNAS1	1.5353	80/20	1.5353
315179	1S ANNAG2	2.9875	80/20	2.9875
315180	1S ANNAS2	1.5353	80/20	1.5353
315225	1N ANNA1	54.2499	80/20	54.2499
315226	1N ANNA2	54.2727	80/20	54.2727
315611	6Z1-036WIND	5.0298	Adder	5.92
923801	AB2-015 C OP	6.2943	Adder	7.41
923831	AB2-022 C	1.7236	Adder	2.03
924241	AB2-068 OP	13.5233	Adder	15.91
925021	AB2-158 C	3.4892	80/20	3.4892
925051	AB2-160 C O1 (Suspended)	4.0618	Adder	4.78
925061	AB2-161 C O1 (Suspended)	2.5330	Adder	2.98
925331	AB2-190 C	14.8855	Adder	17.51
926001	AC1-076 C (Suspended)	4.4513	80/20	4.4513
926291	AC1-107 O1 (Suspended)	201.1440	Adder	236.64
926661	AC1-147 C	1.7045	Adder	2.01
926731	AC1-158 C	31.9416	80/20	31.9416

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926751	AC1-161 C O1	27.1172	80/20	27.1172
926781	AC1-164 C	28.2477	Adder	33.23
932041	AC2-012 C	7.7108	Adder	9.07
932501	AC2-070 C	1.1682	Adder	1.37
932581	AC2-078 C O1	3.0522	Adder	3.59
932591	AC2-079 C O1	4.2981	Adder	5.06
933261	AC2-137 C	1.4675	Adder	1.73
933291	AC2-141 C	27.1172	80/20	27.1172
933731	AC2-196 C	1.3506	Adder	1.59
934011	AD1-025 C	12.5254	Adder	14.74
934061	AD1-033 C	5.6727	Adder	6.67
934571	AD1-082 C	5.7725	Adder	6.79
935111	AD1-144 C	1.2947	Adder	1.52
935161	AD1-151 C O1	11.9615	Adder	14.07
936041	AD2-007 C	0.5983	Adder	0.7
936051	AD2-008 C	2.1806	Adder	2.57
936151	AD2-021	0.1673	Adder	0.2
936661	AD2-085 C	2.5790	Adder	3.03
936761	AD2-097 C	0.3068	80/20	0.3068
937221	AD2-160 C O1	4.4075	Adder	5.19
937251	AD2-164 (Withdrawn : 06/30/2020)	3.5320	Adder	4.16
937541	AD2-215 C	1.3081	Adder	1.54
938491	AE1-068 C O1	52.5603	80/20	52.5603
938501	AE1-069 C O1	41.1501	80/20	41.1501
938531	AE1-072 C O1	13.1934	Adder	15.52
938551	AE1-074 C	2.2426	80/20	2.2426
938631	AE1-085 C O1	6.6895	Adder	7.87
938771	AE1-103 C O1	2.6625	Adder	3.13
939191	AE1-149 C O1	8.0381	Adder	9.46
939231	AE1-154 C	3.3161	80/20	3.3161
939311	AE1-162 C	1.6103	Adder	1.89
939411	AE1-173 C	80.3184	80/20	80.3184
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.2614	Adder	0.31
939431	AE1-175 C	1.7386	Adder	2.05
940061	AE2-000BC O1	11.9983	Adder	14.12
940251	AE2-007 O1	154.0903	80/20	154.0903
940431	AE2-027 C O1	9.5527	Adder	11.24
940471	AE2-031 C	28.6752	80/20	28.6752
940481	AE2-033 C	11.6236	Adder	13.67
940541	AE2-040 O1	2.0977	Adder	2.47
940641	AE2-051 C O1	15.3117	80/20	15.3117
940651	AE2-052	2.6794	Adder	3.15
940891	AE2-078 C	1.7592	Adder	2.07
940901	AE2-079 C	1.7592	Adder	2.07
941031	AE2-094 C	34.3911	80/20	34.3911
941101	AE2-104 C O1	2.5115	Adder	2.95
941281	AE2-122 C O1	21.4713	Adder	25.26
941291	AE2-123 C O1	22.0658	Adder	25.96
941301	AE2-124 C O1	20.0635	Adder	23.6
941381	AE2-134 (Suspended)	3.0673	80/20	3.0673
941501	AE2-147 C	11.8116	Adder	13.9

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941581	AE2-155 C	0.4444	Adder	0.52
941591	AE2-156 O1	15.9210	80/20	15.9210
942001	AE2-212 C	1.6075	Adder	1.89
942131	AE2-225 C	1.6036	Adder	1.89
942151	AE2-227 C	1.5838	Adder	1.86
942161	AE2-228 C	1.5998	Adder	1.88
942171	AE2-229 C	1.6036	Adder	1.89
942341	AE2-247 C	1.1179	Adder	1.32
942371	AE2-250 C O1	7.2150	Adder	8.49
942401	AE2-253 C	4.6360	Adder	5.45
942551	AE2-270	19.9448	Adder	23.46
942851	AE2-304 C	0.4684	Adder	0.55
942931	AE2-313 C	31.0483	80/20	31.0483
943461	AF1-017 C	1.0114	Adder	1.19
943611	AF1-032 C	1.3096	Adder	1.54
943621	AF1-033 C	1.7592	Adder	2.07
944011	AF1-069 C	11.2368	80/20	11.2368
944111	AF1-079 C	6.3006	80/20	6.3006
944501	AF1-115 C O1	5.3575	Adder	6.3
944581	AF1-123 C O1	42.7492	80/20	42.7492
944591	AF1-124 C O1	42.7492	80/20	42.7492
944601	AF1-125 C O1	42.7492	80/20	42.7492
944631	AF1-128 O1	34.2732	Adder	40.32
944871	AF1-152 C	3.9372	Adder	4.63
945361	AF1-201 C O1	11.6326	Adder	13.69
946011	AF1-266	9.7299	Adder	11.45
946261	AF1-291 C	1.5997	Adder	1.88
946371	AF1-301 C	25.2024	80/20	25.2024
957431	AF2-037 C	18.7022	80/20	18.7022
957491	AF2-043 C	0.8499	Adder	1.89
957631	AF2-057	1.4339	Adder	3.18
957691	AF2-063 C	29.8440	80/20	29.8440
957711	AF2-065 C	5.3911	Adder	11.97
957791	AF2-073 C (Withdrawn : 07/02/2020)	3.7722	Adder	8.37
957801	AF2-074 C (Withdrawn : 07/02/2020)	1.6765	Adder	3.72
957821	AF2-076 C O2	2.1198	Adder	4.71
957831	AF2-077 C	0.8131	Adder	1.8
957871	AF2-081 C O2	3.9807	Adder	8.84
957911	AF2-085	3.5732	80/20	3.5732
958141	AF2-108	1.2492	Adder	2.77
958161	AF2-110 C	0.5488	Adder	1.22
959641	AF2-255 C	0.2098	Adder	0.47
959651	AF2-256 C	0.2120	Adder	0.47
959661	AF2-257 C	0.2120	Adder	0.47
959671	AF2-258 C	0.2130	Adder	0.47
959681	AF2-259 C	1.0707	Adder	2.38
960101	AF2-301 C	1.0570	Adder	2.35
960131	AF2-304 C O2	6.2720	Adder	13.92
960361	AF2-327 C (Withdrawn : 07/22/2020)	1.1318	Adder	2.51
961091	AF2-400 C	0.1801	Adder	0.4

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961111	AF2-402 C O2	0.4450	Adder	0.99
WEC	WEC	0.4136	Confirmed LTF	0.4136
LGEE	LGEE	0.8506	Confirmed LTF	0.8506
CPL	CPL	6.3014	Confirmed LTF	6.3014
CBM-W2	CBM-W2	21.1793	Confirmed LTF	21.1793
NY	NY	2.1556	Confirmed LTF	2.1556
CBM-W1	CBM-W1	14.2364	Confirmed LTF	14.2364
TVA	TVA	4.8160	Confirmed LTF	4.8160
CBM-S2	CBM-S2	43.0379	Confirmed LTF	43.0379
CBM-S1	CBM-S1	26.2246	Confirmed LTF	26.2246
MADISON	MADISON	1.6430	Confirmed LTF	1.6430
MEC	MEC	2.8380	Confirmed LTF	2.8380
AA2-074	AA2-074	4.2921	LTF	4.2921

13.5.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97916615	314209	6SKIIF CREEK	DVP	314386	6KINGS M	DVP	1	DVP_P1-2: LN 567	single	441.8	148.14	149.19	DC	4.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0216	80/20	0.0216
314421	6WINCHST	0.1174	80/20	0.1174
314491	3PENDLTN	0.1610	80/20	0.1610
314507	3THOMPSN	0.1616	80/20	0.1616
315092	1YORKTN3	21.6871	80/20	21.6871
315098	1CHESPKA	0.2137	80/20	0.2137
315099	1CHESPKB (Deactivation : 31/05/2019)	1.3850	80/20	1.3850
315108	1ELIZAR1	1.5744	80/20	1.5744
315109	1ELIZAR2	1.5470	80/20	1.5470
315110	1ELIZAR3	1.5945	80/20	1.5945
315233	1SURRY 2	15.7051	80/20	15.7051
315260	1GOSPORTA	0.1706	80/20	0.1706
315261	1GOSPORTB	0.2179	80/20	0.2179
315262	1GOSPORTC	0.1849	80/20	0.1849
315294	1DOMTR10	3.3373	Adder	3.93
315603	6AA1-139SOLA	1.1905	80/20	1.1905
315611	6Z1-036WIND	2.4670	Adder	2.9
923801	AB2-015 C OP	2.7115	Adder	3.19
923831	AB2-022 C	0.8832	Adder	1.04
924501	AB2-099 C (Suspended)	0.1652	Adder	0.19
925061	AB2-161 C O1 (Suspended)	0.8266	Adder	0.97
925861	AC1-065 C	-2.2607	Adder	-2.66
926661	AC1-147 C	1.0474	80/20	1.0474
926751	AC1-161 C O1	15.6813	80/20	15.6813
926781	AC1-164 C	-14.4570	Adder	-17.01
932041	AC2-012 C	4.7384	80/20	4.7384
932501	AC2-070 C	-0.4125	Adder	-0.49
932591	AC2-079 C O1	1.6890	Adder	1.99
932831	AC2-110 C	-0.9043	Adder	-1.06
933261	AC2-137 C	-0.6062	Adder	-0.71
933271	AC2-138 C	-0.5379	Adder	-0.63
933291	AC2-141 C	15.6813	80/20	15.6813
933731	AC2-196 C	0.8356	80/20	0.8356
933991	AD1-023 C	4.1258	Adder	4.85
934061	AD1-033 C	3.5087	80/20	3.5087
934191	AD1-046 C	-2.7204	Adder	-3.2
934521	AD1-076 C	17.4570	Adder	20.54
934571	AD1-082 C	1.8837	Adder	2.22
935111	AD1-144 C	0.8444	80/20	0.8444
936151	AD2-021	-0.0691	Adder	-0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936301	AD2-039 C	-0.9043	Adder	-1.06
936341	AD2-044 C	-0.1681	Adder	-0.2
936401	AD2-051 C O1	2.5659	Adder	3.02
936661	AD2-085 C	1.0055	Adder	1.18
937221	AD2-160 C O1	2.7080	80/20	2.7080
937251	AD2-164 (Withdrawn : 06/30/2020)	3.8843	80/20	3.8843
937541	AD2-215 C	0.8531	80/20	0.8531
938031	AE1-004 C	-0.9043	Adder	-1.06
938171	AE1-026 C O1	9.9367	Adder	11.69
938221	AE1-035 C	0.6610	Adder	0.78
938531	AE1-072 C O1	8.0586	80/20	8.0586
938771	AE1-103 C O1	1.1652	Adder	1.37
938961	AE1-124 C	-1.1785	Adder	-1.39
939311	AE1-162 C	0.7760	Adder	0.91
939411	AE1-173 C	26.8994	Adder	31.65
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.1971	80/20	0.1971
939431	AE1-175 C	1.3107	80/20	1.3107
940061	AE2-000BC O1	3.9153	Adder	4.61
940251	AE2-007 O1	80.6978	80/20	80.6978
940491	AE2-034 C	2.4240	Adder	2.85
940641	AE2-051 C O1	4.5686	Adder	5.37
940891	AE2-078 C	1.1039	80/20	1.1039
940901	AE2-079 C	1.1039	80/20	1.1039
941031	AE2-094 C	8.8183	Adder	10.37
941101	AE2-104 C O1	1.2070	Adder	1.42
941281	AE2-122 C O1	13.2491	80/20	13.2491
941291	AE2-123 C O1	13.6160	80/20	13.6160
941301	AE2-124 C O1	12.3849	80/20	12.3849
941501	AE2-147 C	5.9708	Adder	7.02
941541	AE2-151 C	0.3058	Adder	0.36
941591	AE2-156 O1	8.3250	80/20	8.3250
942131	AE2-225 C	0.9862	80/20	0.9862
942171	AE2-229 C	0.9862	80/20	0.9862
942341	AE2-247 C	0.4344	Adder	0.51
942401	AE2-253 C	2.8483	80/20	2.8483
942851	AE2-304 C	0.2332	Adder	0.27
943171	AE2-346 C	0.3965	Adder	0.47
943461	AF1-017 C	0.3930	Adder	0.46
943611	AF1-032 C	0.8054	80/20	0.8054
943621	AF1-033 C	1.1039	80/20	1.1039
944011	AF1-069 C	2.8813	Adder	3.39
944501	AF1-115 C O1	3.3619	80/20	3.3619
944581	AF1-123 C O1	22.7964	80/20	22.7964
944591	AF1-124 C O1	22.7964	80/20	22.7964
944601	AF1-125 C O1	22.7964	80/20	22.7964
944871	AF1-152 C	1.9903	Adder	2.34
945361	AF1-201 C O1	5.6136	Adder	6.6
945711	AF1-236 C O1	26.5374	Adder	31.22
957491	AF2-043 C	0.9862	80/20	0.9862
957521	AF2-046 C	2.5169	Adder	5.59
957531	AF2-047 C	3.0528	Adder	6.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957631	AF2-057	1.6626	80/20	1.6626
957791	AF2-073 C (Withdrawn : 07/02/2020)	1.8633	Adder	4.14
957801	AF2-074 C (Withdrawn : 07/02/2020)	0.8282	Adder	1.84
957821	AF2-076 C O2	2.4492	80/20	2.4492
957871	AF2-081 C O2	4.6026	80/20	4.6026
958161	AF2-110 C	0.2637	Adder	0.59
959511	AF2-242	1.1642	Adder	2.58
959731	AF2-264 C	0.3365	Adder	0.75
960101	AF2-301 C	1.5672	80/20	1.5672
960831	AF2-374 C	0.1789	Adder	0.4
961091	AF2-400 C	0.0776	Adder	0.17
961111	AF2-402 C O2	0.1502	Adder	0.33
WEC	WEC	0.1269	Confirmed LTF	0.1269
LGEE	LGEE	0.2436	Confirmed LTF	0.2436
CPL	CPL	1.8952	Confirmed LTF	1.8952
CBM-W2	CBM-W2	6.0197	Confirmed LTF	6.0197
NY	NY	0.3661	Confirmed LTF	0.3661
CBM-W1	CBM-W1	4.6037	Confirmed LTF	4.6037
TVA	TVA	1.3314	Confirmed LTF	1.3314
CBM-S2	CBM-S2	12.4848	Confirmed LTF	12.4848
CBM-S1	CBM-S1	7.2676	Confirmed LTF	7.2676
MADISON	MADISON	0.4536	Confirmed LTF	0.4536
MEC	MEC	0.8342	Confirmed LTF	0.8342

13.5.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97916656	314296	6PENNIMAN	DVP	314415	6WALR209	DVP	1	DVP_P1-2: LN 567	single	441.8	136.73	137.78	DC	4.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0216	80/20	0.0216
314421	6WINCHST	0.1174	80/20	0.1174
314491	3PENDLTN	0.1610	80/20	0.1610
314507	3THOMPSN	0.1616	80/20	0.1616
315092	1YORKTN3	21.6871	80/20	21.6871
315098	1CHESPKA	0.2137	80/20	0.2137
315099	1CHESPKB (Deactivation : 31/05/2019)	1.3850	80/20	1.3850
315108	1ELIZAR1	1.5744	80/20	1.5744
315109	1ELIZAR2	1.5470	80/20	1.5470
315110	1ELIZAR3	1.5945	80/20	1.5945
315233	1SURRY 2	15.7051	80/20	15.7051
315260	1GOSPORTA	0.1706	80/20	0.1706
315261	1GOSPORTB	0.2179	80/20	0.2179
315262	1GOSPORTC	0.1849	80/20	0.1849
315294	1DOMTR10	3.3373	Adder	3.93
315603	6AA1-139SOLA	1.1905	80/20	1.1905
315611	6Z1-036WIND	2.4670	Adder	2.9
923801	AB2-015 C OP	2.7115	Adder	3.19
923831	AB2-022 C	0.8832	Adder	1.04
924501	AB2-099 C (Suspended)	0.1652	Adder	0.19
925061	AB2-161 C O1 (Suspended)	0.8266	Adder	0.97
925861	AC1-065 C	-2.2607	Adder	-2.66
926661	AC1-147 C	1.0474	80/20	1.0474
926751	AC1-161 C O1	15.6813	80/20	15.6813
926781	AC1-164 C	-14.4570	Adder	-17.01
932041	AC2-012 C	4.7384	80/20	4.7384
932501	AC2-070 C	-0.4125	Adder	-0.49
932591	AC2-079 C O1	1.6890	Adder	1.99
932831	AC2-110 C	-0.9043	Adder	-1.06
933261	AC2-137 C	-0.6062	Adder	-0.71
933271	AC2-138 C	-0.5379	Adder	-0.63
933291	AC2-141 C	15.6813	80/20	15.6813
933731	AC2-196 C	0.8356	80/20	0.8356
933991	AD1-023 C	4.1258	Adder	4.85
934061	AD1-033 C	3.5087	80/20	3.5087
934191	AD1-046 C	-2.7204	Adder	-3.2
934521	AD1-076 C	17.4570	Adder	20.54
934571	AD1-082 C	1.8837	Adder	2.22
935111	AD1-144 C	0.8444	80/20	0.8444
936151	AD2-021	-0.0691	Adder	-0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936301	AD2-039 C	-0.9043	Adder	-1.06
936341	AD2-044 C	-0.1681	Adder	-0.2
936401	AD2-051 C O1	2.5659	Adder	3.02
936661	AD2-085 C	1.0055	Adder	1.18
937221	AD2-160 C O1	2.7080	80/20	2.7080
937251	AD2-164 (Withdrawn : 06/30/2020)	3.8843	80/20	3.8843
937541	AD2-215 C	0.8531	80/20	0.8531
938031	AE1-004 C	-0.9043	Adder	-1.06
938171	AE1-026 C O1	9.9367	Adder	11.69
938221	AE1-035 C	0.6610	Adder	0.78
938531	AE1-072 C O1	8.0586	80/20	8.0586
938771	AE1-103 C O1	1.1652	Adder	1.37
938961	AE1-124 C	-1.1785	Adder	-1.39
939311	AE1-162 C	0.7760	Adder	0.91
939411	AE1-173 C	26.8994	Adder	31.65
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.1971	80/20	0.1971
939431	AE1-175 C	1.3107	80/20	1.3107
940061	AE2-000BC O1	3.9153	Adder	4.61
940251	AE2-007 O1	80.6978	80/20	80.6978
940491	AE2-034 C	2.4240	Adder	2.85
940641	AE2-051 C O1	4.5686	Adder	5.37
940891	AE2-078 C	1.1039	80/20	1.1039
940901	AE2-079 C	1.1039	80/20	1.1039
941031	AE2-094 C	8.8183	Adder	10.37
941101	AE2-104 C O1	1.2070	Adder	1.42
941281	AE2-122 C O1	13.2491	80/20	13.2491
941291	AE2-123 C O1	13.6160	80/20	13.6160
941301	AE2-124 C O1	12.3849	80/20	12.3849
941501	AE2-147 C	5.9708	Adder	7.02
941541	AE2-151 C	0.3058	Adder	0.36
941591	AE2-156 O1	8.3250	80/20	8.3250
942131	AE2-225 C	0.9862	80/20	0.9862
942171	AE2-229 C	0.9862	80/20	0.9862
942341	AE2-247 C	0.4344	Adder	0.51
942401	AE2-253 C	2.8483	80/20	2.8483
942851	AE2-304 C	0.2332	Adder	0.27
943171	AE2-346 C	0.3965	Adder	0.47
943461	AF1-017 C	0.3930	Adder	0.46
943611	AF1-032 C	0.8054	80/20	0.8054
943621	AF1-033 C	1.1039	80/20	1.1039
944011	AF1-069 C	2.8813	Adder	3.39
944501	AF1-115 C O1	3.3619	80/20	3.3619
944581	AF1-123 C O1	22.7964	80/20	22.7964
944591	AF1-124 C O1	22.7964	80/20	22.7964
944601	AF1-125 C O1	22.7964	80/20	22.7964
944871	AF1-152 C	1.9903	Adder	2.34
945361	AF1-201 C O1	5.6136	Adder	6.6
945711	AF1-236 C O1	26.5374	Adder	31.22
957491	AF2-043 C	0.9862	80/20	0.9862
957521	AF2-046 C	2.5169	Adder	5.59
957531	AF2-047 C	3.0528	Adder	6.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957631	AF2-057	1.6626	80/20	1.6626
957791	AF2-073 C (Withdrawn : 07/02/2020)	1.8633	Adder	4.14
957801	AF2-074 C (Withdrawn : 07/02/2020)	0.8282	Adder	1.84
957821	AF2-076 C O2	2.4492	80/20	2.4492
957871	AF2-081 C O2	4.6026	80/20	4.6026
958161	AF2-110 C	0.2637	Adder	0.59
959511	AF2-242	1.1642	Adder	2.58
959731	AF2-264 C	0.3365	Adder	0.75
960101	AF2-301 C	1.5672	80/20	1.5672
960831	AF2-374 C	0.1789	Adder	0.4
961091	AF2-400 C	0.0776	Adder	0.17
961111	AF2-402 C O2	0.1502	Adder	0.33
WEC	WEC	0.1269	Confirmed LTF	0.1269
LGEE	LGEE	0.2436	Confirmed LTF	0.2436
CPL	CPL	1.8952	Confirmed LTF	1.8952
CBM-W2	CBM-W2	6.0197	Confirmed LTF	6.0197
NY	NY	0.3661	Confirmed LTF	0.3661
CBM-W1	CBM-W1	4.6037	Confirmed LTF	4.6037
TVA	TVA	1.3314	Confirmed LTF	1.3314
CBM-S2	CBM-S2	12.4848	Confirmed LTF	12.4848
CBM-S1	CBM-S1	7.2676	Confirmed LTF	7.2676
MADISON	MADISON	0.4536	Confirmed LTF	0.4536
MEC	MEC	0.8342	Confirmed LTF	0.8342

13.5.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97916636	314386	6KINGS M	DVP	314296	6PENNINGMAN	DVP	1	DVP_P1-2: LN 567	single	441.8	140.37	141.43	DC	4.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0216	80/20	0.0216
314421	6WINCHST	0.1174	80/20	0.1174
314491	3PENDLTN	0.1610	80/20	0.1610
314507	3THOMPSN	0.1616	80/20	0.1616
315092	1YORKTN3	21.6871	80/20	21.6871
315098	1CHESPKA	0.2137	80/20	0.2137
315099	1CHESPKB (Deactivation : 31/05/2019)	1.3850	80/20	1.3850
315108	1ELIZAR1	1.5744	80/20	1.5744
315109	1ELIZAR2	1.5470	80/20	1.5470
315110	1ELIZAR3	1.5945	80/20	1.5945
315233	1SURRY 2	15.7051	80/20	15.7051
315260	1GOSPORTA	0.1706	80/20	0.1706
315261	1GOSPORTB	0.2179	80/20	0.2179
315262	1GOSPORTC	0.1849	80/20	0.1849
315294	1DOMTR10	3.3373	Adder	3.93
315603	6AA1-139SOLA	1.1905	80/20	1.1905
315611	6Z1-036WIND	2.4670	Adder	2.9
923801	AB2-015 C OP	2.7115	Adder	3.19
923831	AB2-022 C	0.8832	Adder	1.04
924501	AB2-099 C (Suspended)	0.1652	Adder	0.19
925061	AB2-161 C O1 (Suspended)	0.8266	Adder	0.97
925861	AC1-065 C	-2.2607	Adder	-2.66
926661	AC1-147 C	1.0474	80/20	1.0474
926751	AC1-161 C O1	15.6813	80/20	15.6813
926781	AC1-164 C	-14.4570	Adder	-17.01
932041	AC2-012 C	4.7384	80/20	4.7384
932501	AC2-070 C	-0.4125	Adder	-0.49
932591	AC2-079 C O1	1.6890	Adder	1.99
932831	AC2-110 C	-0.9043	Adder	-1.06
933261	AC2-137 C	-0.6062	Adder	-0.71
933271	AC2-138 C	-0.5379	Adder	-0.63
933291	AC2-141 C	15.6813	80/20	15.6813
933731	AC2-196 C	0.8356	80/20	0.8356
933991	AD1-023 C	4.1258	Adder	4.85
934061	AD1-033 C	3.5087	80/20	3.5087
934191	AD1-046 C	-2.7204	Adder	-3.2
934521	AD1-076 C	17.4570	Adder	20.54
934571	AD1-082 C	1.8837	Adder	2.22
935111	AD1-144 C	0.8444	80/20	0.8444
936151	AD2-021	-0.0691	Adder	-0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936301	AD2-039 C	-0.9043	Adder	-1.06
936341	AD2-044 C	-0.1681	Adder	-0.2
936401	AD2-051 C O1	2.5659	Adder	3.02
936661	AD2-085 C	1.0055	Adder	1.18
937221	AD2-160 C O1	2.7080	80/20	2.7080
937251	AD2-164 (Withdrawn : 06/30/2020)	3.8843	80/20	3.8843
937541	AD2-215 C	0.8531	80/20	0.8531
938031	AE1-004 C	-0.9043	Adder	-1.06
938171	AE1-026 C O1	9.9367	Adder	11.69
938221	AE1-035 C	0.6610	Adder	0.78
938531	AE1-072 C O1	8.0586	80/20	8.0586
938771	AE1-103 C O1	1.1652	Adder	1.37
938961	AE1-124 C	-1.1785	Adder	-1.39
939311	AE1-162 C	0.7760	Adder	0.91
939411	AE1-173 C	26.8994	Adder	31.65
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.1971	80/20	0.1971
939431	AE1-175 C	1.3107	80/20	1.3107
940061	AE2-000BC O1	3.9153	Adder	4.61
940251	AE2-007 O1	80.6978	80/20	80.6978
940491	AE2-034 C	2.4240	Adder	2.85
940641	AE2-051 C O1	4.5686	Adder	5.37
940891	AE2-078 C	1.1039	80/20	1.1039
940901	AE2-079 C	1.1039	80/20	1.1039
941031	AE2-094 C	8.8183	Adder	10.37
941101	AE2-104 C O1	1.2070	Adder	1.42
941281	AE2-122 C O1	13.2491	80/20	13.2491
941291	AE2-123 C O1	13.6160	80/20	13.6160
941301	AE2-124 C O1	12.3849	80/20	12.3849
941501	AE2-147 C	5.9708	Adder	7.02
941541	AE2-151 C	0.3058	Adder	0.36
941591	AE2-156 O1	8.3250	80/20	8.3250
942131	AE2-225 C	0.9862	80/20	0.9862
942171	AE2-229 C	0.9862	80/20	0.9862
942341	AE2-247 C	0.4344	Adder	0.51
942401	AE2-253 C	2.8483	80/20	2.8483
942851	AE2-304 C	0.2332	Adder	0.27
943171	AE2-346 C	0.3965	Adder	0.47
943461	AF1-017 C	0.3930	Adder	0.46
943611	AF1-032 C	0.8054	80/20	0.8054
943621	AF1-033 C	1.1039	80/20	1.1039
944011	AF1-069 C	2.8813	Adder	3.39
944501	AF1-115 C O1	3.3619	80/20	3.3619
944581	AF1-123 C O1	22.7964	80/20	22.7964
944591	AF1-124 C O1	22.7964	80/20	22.7964
944601	AF1-125 C O1	22.7964	80/20	22.7964
944871	AF1-152 C	1.9903	Adder	2.34
945361	AF1-201 C O1	5.6136	Adder	6.6
945711	AF1-236 C O1	26.5374	Adder	31.22
957491	AF2-043 C	0.9862	80/20	0.9862
957521	AF2-046 C	2.5169	Adder	5.59
957531	AF2-047 C	3.0528	Adder	6.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957631	AF2-057	1.6626	80/20	1.6626
957791	AF2-073 C (Withdrawn : 07/02/2020)	1.8633	Adder	4.14
957801	AF2-074 C (Withdrawn : 07/02/2020)	0.8282	Adder	1.84
957821	AF2-076 C O2	2.4492	80/20	2.4492
957871	AF2-081 C O2	4.6026	80/20	4.6026
958161	AF2-110 C	0.2637	Adder	0.59
959511	AF2-242	1.1642	Adder	2.58
959731	AF2-264 C	0.3365	Adder	0.75
960101	AF2-301 C	1.5672	80/20	1.5672
960831	AF2-374 C	0.1789	Adder	0.4
961091	AF2-400 C	0.0776	Adder	0.17
961111	AF2-402 C O2	0.1502	Adder	0.33
WEC	WEC	0.1269	Confirmed LTF	0.1269
LGEE	LGEE	0.2436	Confirmed LTF	0.2436
CPL	CPL	1.8952	Confirmed LTF	1.8952
CBM-W2	CBM-W2	6.0197	Confirmed LTF	6.0197
NY	NY	0.3661	Confirmed LTF	0.3661
CBM-W1	CBM-W1	4.6037	Confirmed LTF	4.6037
TVA	TVA	1.3314	Confirmed LTF	1.3314
CBM-S2	CBM-S2	12.4848	Confirmed LTF	12.4848
CBM-S1	CBM-S1	7.2676	Confirmed LTF	7.2676
MADISON	MADISON	0.4536	Confirmed LTF	0.4536
MEC	MEC	0.8342	Confirmed LTF	0.8342

13.5.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97916724	314415	6WALR209	DVP	314391	6LIGH209	DVP	1	DVP_P1-2: LN 567	single	441.8	121.61	122.66	DC	4.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0216	80/20	0.0216
314421	6WINCHST	0.1174	80/20	0.1174
314491	3PENDLTN	0.1610	80/20	0.1610
314507	3THOMPSN	0.1616	80/20	0.1616
315092	1YORKTN3	21.6871	80/20	21.6871
315098	1CHESPKA	0.2137	80/20	0.2137
315099	1CHESPKB (Deactivation : 31/05/2019)	1.3850	80/20	1.3850
315108	1ELIZAR1	1.5744	80/20	1.5744
315109	1ELIZAR2	1.5470	80/20	1.5470
315110	1ELIZAR3	1.5945	80/20	1.5945
315233	1SURRY 2	15.7051	80/20	15.7051
315260	1GOSPORTA	0.1706	80/20	0.1706
315261	1GOSPORTB	0.2179	80/20	0.2179
315262	1GOSPORTC	0.1849	80/20	0.1849
315294	1DOMTR10	3.3373	Adder	3.93
315603	6AA1-139SOLA	1.1905	80/20	1.1905
315611	6Z1-036WIND	2.4670	Adder	2.9
923801	AB2-015 C OP	2.7115	Adder	3.19
923831	AB2-022 C	0.8832	Adder	1.04
924501	AB2-099 C (Suspended)	0.1652	Adder	0.19
925061	AB2-161 C O1 (Suspended)	0.8266	Adder	0.97
925861	AC1-065 C	-2.2607	Adder	-2.66
926661	AC1-147 C	1.0474	80/20	1.0474
926751	AC1-161 C O1	15.6813	80/20	15.6813
926781	AC1-164 C	-14.4570	Adder	-17.01
932041	AC2-012 C	4.7384	80/20	4.7384
932501	AC2-070 C	-0.4125	Adder	-0.49
932591	AC2-079 C O1	1.6890	Adder	1.99
932831	AC2-110 C	-0.9043	Adder	-1.06
933261	AC2-137 C	-0.6062	Adder	-0.71
933271	AC2-138 C	-0.5379	Adder	-0.63
933291	AC2-141 C	15.6813	80/20	15.6813
933731	AC2-196 C	0.8356	80/20	0.8356
933991	AD1-023 C	4.1258	Adder	4.85
934061	AD1-033 C	3.5087	80/20	3.5087
934191	AD1-046 C	-2.7204	Adder	-3.2
934521	AD1-076 C	17.4570	Adder	20.54
934571	AD1-082 C	1.8837	Adder	2.22
935111	AD1-144 C	0.8444	80/20	0.8444
936151	AD2-021	-0.0691	Adder	-0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936301	AD2-039 C	-0.9043	Adder	-1.06
936341	AD2-044 C	-0.1681	Adder	-0.2
936401	AD2-051 C O1	2.5659	Adder	3.02
936661	AD2-085 C	1.0055	Adder	1.18
937221	AD2-160 C O1	2.7080	80/20	2.7080
937251	AD2-164 (Withdrawn : 06/30/2020)	3.8843	80/20	3.8843
937541	AD2-215 C	0.8531	80/20	0.8531
938031	AE1-004 C	-0.9043	Adder	-1.06
938171	AE1-026 C O1	9.9367	Adder	11.69
938221	AE1-035 C	0.6610	Adder	0.78
938531	AE1-072 C O1	8.0586	80/20	8.0586
938771	AE1-103 C O1	1.1652	Adder	1.37
938961	AE1-124 C	-1.1785	Adder	-1.39
939311	AE1-162 C	0.7760	Adder	0.91
939411	AE1-173 C	26.8994	Adder	31.65
939421	AE1-174 C (Withdrawn : 06/16/2020)	0.1971	80/20	0.1971
939431	AE1-175 C	1.3107	80/20	1.3107
940061	AE2-000BC O1	3.9153	Adder	4.61
940251	AE2-007 O1	80.6978	80/20	80.6978
940491	AE2-034 C	2.4240	Adder	2.85
940641	AE2-051 C O1	4.5686	Adder	5.37
940891	AE2-078 C	1.1039	80/20	1.1039
940901	AE2-079 C	1.1039	80/20	1.1039
941031	AE2-094 C	8.8183	Adder	10.37
941101	AE2-104 C O1	1.2070	Adder	1.42
941281	AE2-122 C O1	13.2491	80/20	13.2491
941291	AE2-123 C O1	13.6160	80/20	13.6160
941301	AE2-124 C O1	12.3849	80/20	12.3849
941501	AE2-147 C	5.9708	Adder	7.02
941541	AE2-151 C	0.3058	Adder	0.36
941591	AE2-156 O1	8.3250	80/20	8.3250
942131	AE2-225 C	0.9862	80/20	0.9862
942171	AE2-229 C	0.9862	80/20	0.9862
942341	AE2-247 C	0.4344	Adder	0.51
942401	AE2-253 C	2.8483	80/20	2.8483
942851	AE2-304 C	0.2332	Adder	0.27
943171	AE2-346 C	0.3965	Adder	0.47
943461	AF1-017 C	0.3930	Adder	0.46
943611	AF1-032 C	0.8054	80/20	0.8054
943621	AF1-033 C	1.1039	80/20	1.1039
944011	AF1-069 C	2.8813	Adder	3.39
944501	AF1-115 C O1	3.3619	80/20	3.3619
944581	AF1-123 C O1	22.7964	80/20	22.7964
944591	AF1-124 C O1	22.7964	80/20	22.7964
944601	AF1-125 C O1	22.7964	80/20	22.7964
944871	AF1-152 C	1.9903	Adder	2.34
945361	AF1-201 C O1	5.6136	Adder	6.6
945711	AF1-236 C O1	26.5374	Adder	31.22
957491	AF2-043 C	0.9862	80/20	0.9862
957521	AF2-046 C	2.5169	Adder	5.59
957531	AF2-047 C	3.0528	Adder	6.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957631	AF2-057	1.6626	80/20	1.6626
957791	AF2-073 C (Withdrawn : 07/02/2020)	1.8633	Adder	4.14
957801	AF2-074 C (Withdrawn : 07/02/2020)	0.8282	Adder	1.84
957821	AF2-076 C O2	2.4492	80/20	2.4492
957871	AF2-081 C O2	4.6026	80/20	4.6026
958161	AF2-110 C	0.2637	Adder	0.59
959511	AF2-242	1.1642	Adder	2.58
959731	AF2-264 C	0.3365	Adder	0.75
960101	AF2-301 C	1.5672	80/20	1.5672
960831	AF2-374 C	0.1789	Adder	0.4
961091	AF2-400 C	0.0776	Adder	0.17
961111	AF2-402 C O2	0.1502	Adder	0.33
WEC	WEC	0.1269	Confirmed LTF	0.1269
LGEE	LGEE	0.2436	Confirmed LTF	0.2436
CPL	CPL	1.8952	Confirmed LTF	1.8952
CBM-W2	CBM-W2	6.0197	Confirmed LTF	6.0197
NY	NY	0.3661	Confirmed LTF	0.3661
CBM-W1	CBM-W1	4.6037	Confirmed LTF	4.6037
TVA	TVA	1.3314	Confirmed LTF	1.3314
CBM-S2	CBM-S2	12.4848	Confirmed LTF	12.4848
CBM-S1	CBM-S1	7.2676	Confirmed LTF	7.2676
MADISON	MADISON	0.4536	Confirmed LTF	0.4536
MEC	MEC	0.8342	Confirmed LTF	0.8342

13.5.6 Index 6

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
148728182	314466	6FENTRES	DVP	314508	6THRASHER	DVP	1	DVP_P4-2: 246T2034	breaker	830.0	138.55	141.73	DC	26.42

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.4059	50/50	0.4059
314639	6TANGLEW	0.7285	50/50	0.7285
314643	3O INLET	0.8401	50/50	0.8401
315294	1DOMTR10	9.9579	Adder	11.72
315603	6AA1-139SOLA	4.7814	50/50	4.7814
315605	6W1-029WIND	1.3370	50/50	1.3370
315611	6Z1-036WIND	10.6033	50/50	10.6033
315614	AA2-178 C	2.3139	50/50	2.3139
901082	W1-029 E	51.9597	50/50	51.9597
913392	Y1-086 E	3.8390	50/50	3.8390
916042	Z1-036 E (Suspended)	71.0422	50/50	71.0422
917122	Z2-027 E	1.8100	50/50	1.8100
919152	AA1-139 E	11.8796	50/50	11.8796
920692	AA2-178 E	5.7490	50/50	5.7490
923831	AB2-022 C	4.0248	50/50	4.0248
923832	AB2-022 E	2.1672	50/50	2.1672
925122	AB2-169 E	4.0882	Adder	4.81
926661	AC1-147 C	-1.0166	Adder	-1.2
933731	AC2-196 C	3.4291	50/50	3.4291
933732	AC2-196 E	2.2838	50/50	2.2838
933991	AD1-023 C	17.1235	50/50	17.1235
933992	AD1-023 E	9.3221	50/50	9.3221
934061	AD1-033 C	11.9125	50/50	11.9125
934062	AD1-033 E	7.9416	50/50	7.9416
934521	AD1-076 C	70.6759	50/50	70.6759
934522	AD1-076 E	35.9881	50/50	35.9881
937221	AD2-160 C O1	10.9454	50/50	10.9454
937222	AD2-160 E O1	5.7396	50/50	5.7396
938531	AE1-072 C O1	32.1535	50/50	32.1535
938532	AE1-072 E O1	16.7615	50/50	16.7615
939311	AE1-162 C	-0.5884	Adder	-0.69
940491	AE2-034 C	10.0607	50/50	10.0607
940492	AE2-034 E	4.3117	50/50	4.3117
941501	AE2-147 C	25.8363	50/50	25.8363
941502	AE2-147 E	17.2242	50/50	17.2242
941592	AE2-156 BAT	9.0010	Merchant Transmission	9.0010
942401	AE2-253 C	11.5127	50/50	11.5127
942402	AE2-253 E	5.1724	50/50	5.1724
942851	AE2-304 C	1.0107	50/50	1.0107
942852	AE2-304 E	0.3930	50/50	0.3930
944581	AF1-123 C O1	24.9317	Adder	29.33

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944582	AF1-123 E O1	57.0865	Adder	67.16
944591	AF1-124 C O1	24.9317	Adder	29.33
944592	AF1-124 E O1	57.0865	Adder	67.16
944601	AF1-125 C O1	24.9317	Adder	29.33
944602	AF1-125 E O1	57.0865	Adder	67.16
944871	AF1-152 C	8.6121	50/50	8.6121
944872	AF1-152 E	5.7414	50/50	5.7414
945711	AF1-236 C O1	110.1405	50/50	110.1405
945712	AF1-236 E O1	179.7029	50/50	179.7029
957531	AF2-047 C	23.9061	50/50	23.9061
957532	AF2-047 E	12.0249	50/50	12.0249
957632	AF2-057 BAT	1.0062	Merchant Transmission	1.0062
957821	AF2-076 C O2	8.6121	50/50	8.6121
957822	AF2-076 E O2	5.7414	50/50	5.7414
957871	AF2-081 C O2	18.4968	50/50	18.4968
957872	AF2-081 E O2	7.9272	50/50	7.9272
959511	AF2-242	2.2368	Adder	4.97
WEC	WEC	0.0586	Confirmed LTF	0.0586
LGEE	LGEE	0.1090	Confirmed LTF	0.1090
CPL	CPL	0.6258	Confirmed LTF	0.6258
CBM-W2	CBM-W2	2.2195	Confirmed LTF	2.2195
NY	NY	0.0398	Confirmed LTF	0.0398
CBM-W1	CBM-W1	2.2143	Confirmed LTF	2.2143
TVA	TVA	0.4564	Confirmed LTF	0.4564
O-066	O-066	0.6115	Confirmed LTF	0.6115
CBM-S2	CBM-S2	3.8553	Confirmed LTF	3.8553
CBM-S1	CBM-S1	2.5645	Confirmed LTF	2.5645
G-007	G-007	0.0957	Confirmed LTF	0.0957
MADISON	MADISON	0.1189	Confirmed LTF	0.1189
MEC	MEC	0.3448	Confirmed LTF	0.3448

13.5.7 Index 7

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721095	314466	6FENTRES	DVP	934060	AD1-033 TAP	DVP	1	DVP_P4-2: 2110T2128	breaker	830.0	113.29	115.87	DC	21.39

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.2648	50/50	0.2648
314639	6TANGLEW	0.4272	50/50	0.4272
314643	3O INLET	0.6457	50/50	0.6457
315294	1DOMTR10	3.3004	Adder	3.88
315603	6AA1-139SOLA	3.8597	50/50	3.8597
315605	6W1-029WIND	0.5452	50/50	0.5452
315611	6Z1-036WIND	4.5548	50/50	4.5548
901082	W1-029 E	21.1879	50/50	21.1879
913392	Y1-086 E	2.5047	50/50	2.5047
916042	21-036 E (Suspended)	30.5172	50/50	30.5172
917122	Z2-027 E	1.0613	50/50	1.0613
919152	AA1-139 E	9.5897	50/50	9.5897
920692	AA2-178 E	1.7734	Adder	2.09
923831	AB2-022 C	2.6259	50/50	2.6259
923832	AB2-022 E	1.4139	50/50	1.4139
926661	AC1-147 C	-1.8982	Adder	-2.23
933731	AC2-196 C	3.0719	50/50	3.0719
933732	AC2-196 E	2.0459	50/50	2.0459
933991	AD1-023 C	3.9475	Adder	4.64
933992	AD1-023 E	2.1490	Adder	2.53
934521	AD1-076 C	18.8718	Adder	22.2
934522	AD1-076 E	9.6095	Adder	11.31
937221	AD2-160 C O1	9.1220	50/50	9.1220
937222	AD2-160 E O1	4.7835	50/50	4.7835
938531	AE1-072 C O1	25.0552	50/50	25.0552
938532	AE1-072 E O1	13.0613	50/50	13.0613
939311	AE1-162 C	-0.8246	Adder	-0.97
940491	AE2-034 C	3.1034	Adder	3.65
940492	AE2-034 E	1.3300	Adder	1.56
941501	AE2-147 C	10.5354	50/50	10.5354
941502	AE2-147 E	7.0236	50/50	7.0236
941592	AE2-156 BAT	16.0800	50/50	16.0800
942401	AE2-253 C	9.5948	50/50	9.5948
942402	AE2-253 E	4.3107	50/50	4.3107
942851	AE2-304 C	0.4499	50/50	0.4499
942852	AE2-304 E	0.1750	50/50	0.1750
944581	AF1-123 C O1	20.1136	Adder	23.66
944582	AF1-123 E O1	46.0545	Adder	54.18
944591	AF1-124 C O1	20.1136	Adder	23.66
944592	AF1-124 E O1	46.0545	Adder	54.18
944601	AF1-125 C O1	20.1136	Adder	23.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944602	AF1-125 E O1	46.0545	Adder	54.18
944871	AF1-152 C	3.5118	50/50	3.5118
944872	AF1-152 E	2.3412	50/50	2.3412
945711	AF1-236 C O1	33.9749	Adder	39.97
945712	AF1-236 E O1	55.4327	Adder	65.21
957531	AF2-047 C	3.9084	Adder	8.68
957532	AF2-047 E	1.9659	Adder	4.36
957632	AF2-057 BAT	3.5448	50/50	3.5448
957871	AF2-081 C O2	14.9716	50/50	14.9716
957872	AF2-081 E O2	6.4164	50/50	6.4164
WEC	WEC	0.0573	Confirmed LTF	0.0573
LGEE	LGEE	0.1061	Confirmed LTF	0.1061
CPL	CPL	0.4922	Confirmed LTF	0.4922
CBM-W2	CBM-W2	2.0229	Confirmed LTF	2.0229
NY	NY	0.0111	Confirmed LTF	0.0111
CBM-W1	CBM-W1	2.1893	Confirmed LTF	2.1893
TVA	TVA	0.4046	Confirmed LTF	0.4046
O-066	O-066	0.2352	Confirmed LTF	0.2352
CBM-S2	CBM-S2	3.1501	Confirmed LTF	3.1501
CBM-S1	CBM-S1	2.2919	Confirmed LTF	2.2919
G-007	G-007	0.0374	Confirmed LTF	0.0374
MADISON	MADISON	0.0907	Confirmed LTF	0.0907
MEC	MEC	0.3257	Confirmed LTF	0.3257

13.5.8 Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721116	314481	6LANDSTN	DVP	314486	6LYNHAVN	DVP	1	DVP_P4-2: 231T2128	breaker	830.0	110.49	112.14	DC	13.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314491	3PENDLTN	0.2368	50/50	0.2368
314638	6ELIZ CT	0.1644	50/50	0.1644
314639	6TANGLEW	0.2606	50/50	0.2606
314643	3O INLET	0.4102	50/50	0.4102
315603	6AA1-139SOLA	2.4667	50/50	2.4667
315611	6Z1-036WIND	2.2164	Adder	2.61
901082	W1-029 E	10.1387	Adder	11.93
913392	Y1-086 E	1.5548	50/50	1.5548
916042	Z1-036 E (Suspended)	14.8499	Adder	17.47
917122	Z2-027 E	0.6475	50/50	0.6475
919152	AA1-139 E	6.1286	50/50	6.1286
923831	AB2-022 C	1.6301	50/50	1.6301
923832	AB2-022 E	0.8777	50/50	0.8777
925522	AC1-027 E	0.7845	50/50	0.7845
926661	AC1-147 C	-0.9964	Adder	-1.17
933731	AC2-196 C	1.9866	50/50	1.9866
933732	AC2-196 E	1.3231	50/50	1.3231
934061	AD1-033 C	9.7205	50/50	9.7205
934062	AD1-033 E	6.4803	50/50	6.4803
937221	AD2-160 C O1	5.8518	50/50	5.8518
937222	AD2-160 E O1	3.0687	50/50	3.0687
938531	AE1-072 C O1	15.9426	50/50	15.9426
938532	AE1-072 E O1	8.3109	50/50	8.3109
941281	AE2-122 C O1	26.4902	50/50	26.4902
941282	AE2-122 E O1	106.8945	50/50	106.8945
941291	AE2-123 C O1	27.2237	50/50	27.2237
941292	AE2-123 E O1	106.1609	50/50	106.1609
941301	AE2-124 C O1	57.8482	50/50	57.8482
941302	AE2-124 E O1	253.8308	50/50	253.8308
941501	AE2-147 C	5.0413	Adder	5.93
941502	AE2-147 E	3.3609	Adder	3.95
941592	AE2-156 BAT	8.2640	Merchant Transmission	8.2640
942401	AE2-253 C	6.1551	50/50	6.1551
942402	AE2-253 E	2.7654	50/50	2.7654
942851	AE2-304 C	0.2206	Adder	0.26
942852	AE2-304 E	0.0858	Adder	0.1
944581	AF1-123 C O1	13.9790	Adder	16.45
944582	AF1-123 E O1	32.0080	Adder	37.66
944591	AF1-124 C O1	13.9790	Adder	16.45
944592	AF1-124 E O1	32.0080	Adder	37.66
944601	AF1-125 C O1	13.9790	Adder	16.45

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944602	AF1-125 E O1	32.0080	Adder	37.66
944871	AF1-152 C	1.6805	Adder	1.98
944872	AF1-152 E	1.1203	Adder	1.32
957632	AF2-057 BAT	0.9861	Merchant Transmission	0.9861
957871	AF2-081 C O2	9.5710	50/50	9.5710
957872	AF2-081 E O2	4.1018	50/50	4.1018
WEC	WEC	0.0265	Confirmed LTF	0.0265
LGEE	LGEE	0.0491	Confirmed LTF	0.0491
CPL	CPL	0.2209	Confirmed LTF	0.2209
CBM-W2	CBM-W2	0.9337	Confirmed LTF	0.9337
NY	NY	0.0033	Confirmed LTF	0.0033
CBM-W1	CBM-W1	1.0133	Confirmed LTF	1.0133
TVA	TVA	0.1848	Confirmed LTF	0.1848
O-066	O-066	0.0874	Confirmed LTF	0.0874
CBM-S2	CBM-S2	1.4277	Confirmed LTF	1.4277
CBM-S1	CBM-S1	1.0565	Confirmed LTF	1.0565
G-007	G-007	0.0135	Confirmed LTF	0.0135
MADISON	MADISON	0.0403	Confirmed LTF	0.0403
MEC	MEC	0.1510	Confirmed LTF	0.1510

13.5.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721155	314486	6LYNHAVN	DVP	314504	6THALIA	DVP	1	DVP_P4-2: 231T2128	breaker	906.0	101.91	103.15	DC	11.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.0916	50/50	0.0916
314491	3PENDLTN	0.5631	50/50	0.5631
314638	6ELIZ CT	0.1345	50/50	0.1345
314643	3O INLET	0.3359	50/50	0.3359
315603	6AA1-139SOLA	2.0204	50/50	2.0204
315611	6Z1-036WIND	1.8100	Adder	2.13
901082	W1-029 E	8.2741	Adder	9.73
913392	Y1-086 E	1.2725	50/50	1.2725
916042	Z1-036 E (Suspended)	12.1269	Adder	14.27
916192	Z1-068 E	3.7155	50/50	3.7155
917122	Z2-027 E	0.4502	Adder	0.53
919152	AA1-139 E	5.0198	50/50	5.0198
923831	AB2-022 C	1.3341	50/50	1.3341
923832	AB2-022 E	0.7183	50/50	0.7183
925522	AC1-027 E	1.8655	50/50	1.8655
926661	AC1-147 C	-0.7477	Adder	-0.88
933731	AC2-196 C	1.6277	50/50	1.6277
933732	AC2-196 E	1.0840	50/50	1.0840
934061	AD1-033 C	7.9661	50/50	7.9661
934062	AD1-033 E	5.3108	50/50	5.3108
937221	AD2-160 C O1	4.7937	50/50	4.7937
937222	AD2-160 E O1	2.5138	50/50	2.5138
938531	AE1-072 C O1	13.0566	50/50	13.0566
938532	AE1-072 E O1	6.8064	50/50	6.8064
941281	AE2-122 C O1	54.0927	50/50	54.0927
941282	AE2-122 E O1	218.2773	50/50	218.2773
941291	AE2-123 C O1	55.5906	50/50	55.5906
941292	AE2-123 E O1	216.7795	50/50	216.7795
941301	AE2-124 C O1	47.4339	50/50	47.4339
941302	AE2-124 E O1	208.1341	50/50	208.1341
941501	AE2-147 C	4.1142	Adder	4.84
941502	AE2-147 E	2.7428	Adder	3.23
941592	AE2-156 BAT	6.3840	Merchant Transmission	6.3840
942401	AE2-253 C	5.0422	50/50	5.0422
942402	AE2-253 E	2.2653	50/50	2.2653
942851	AE2-304 C	0.1801	Adder	0.21
942852	AE2-304 E	0.0701	Adder	0.08
944581	AF1-123 C O1	11.4165	Adder	13.43
944582	AF1-123 E O1	26.1406	Adder	30.75
944591	AF1-124 C O1	11.4165	Adder	13.43
944592	AF1-124 E O1	26.1406	Adder	30.75

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944601	AF1-125 C O1	11.4165	Adder	13.43
944602	AF1-125 E O1	26.1406	Adder	30.75
944871	AF1-152 C	1.3714	Adder	1.61
944872	AF1-152 E	0.9143	Adder	1.08
957632	AF2-057 BAT	0.7400	Merchant Transmission	0.7400
957871	AF2-081 C O2	7.8394	50/50	7.8394
957872	AF2-081 E O2	3.3598	50/50	3.3598
WEC	WEC	0.0208	Confirmed LTF	0.0208
LGEE	LGEE	0.0382	Confirmed LTF	0.0382
CPL	CPL	0.1760	Confirmed LTF	0.1760
CBM-W2	CBM-W2	0.7289	Confirmed LTF	0.7289
NY	NY	0.0033	Confirmed LTF	0.0033
CBM-W1	CBM-W1	0.7881	Confirmed LTF	0.7881
TVA	TVA	0.1470	Confirmed LTF	0.1470
O-066	O-066	0.0806	Confirmed LTF	0.0806
CBM-S2	CBM-S2	1.1329	Confirmed LTF	1.1329
CBM-S1	CBM-S1	0.8350	Confirmed LTF	0.8350
G-007	G-007	0.0125	Confirmed LTF	0.0125
MADISON	MADISON	0.0323	Confirmed LTF	0.0323
MEC	MEC	0.1192	Confirmed LTF	0.1192

13.5.10 Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
148728142	314550	6HICKORY	DVP	314466	6FENTRES	DVP	1	DVP_P4-2: 246T2034	breaker	699.0	146.51	150.06	DC	24.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.5753	50/50	0.5753
314639	6TANGLEW	1.0326	50/50	1.0326
314643	3O INLET	1.1904	50/50	1.1904
315294	1DOMTR10	14.1649	Adder	16.66
315603	6AA1-139SOLA	8.8423	50/50	8.8423
315605	6W1-029WIND	1.8957	50/50	1.8957
315611	6Z1-036WIND	15.0396	50/50	15.0396
315614	AA2-178 C	3.2845	50/50	3.2845
901082	W1-029 E	73.6742	50/50	73.6742
913392	Y1-086 E	5.4414	50/50	5.4414
916042	Z1-036 E (Suspended)	100.7651	50/50	100.7651
917122	Z2-027 E	2.5657	50/50	2.5657
919152	AA1-139 E	21.9694	50/50	21.9694
920692	AA2-178 E	8.1605	50/50	8.1605
923831	AB2-022 C	5.7047	50/50	5.7047
923832	AB2-022 E	3.0717	50/50	3.0717
925122	AB2-169 E	5.8313	Adder	6.86
933991	AD1-023 C	24.3201	50/50	24.3201
933992	AD1-023 E	13.2399	50/50	13.2399
934521	AD1-076 C	100.3791	50/50	100.3791
934522	AD1-076 E	51.1129	50/50	51.1129
937221	AD2-160 C O1	23.4550	50/50	23.4550
937222	AD2-160 E O1	12.2995	50/50	12.2995
938531	AE1-072 C O1	41.5944	50/50	41.5944
938532	AE1-072 E O1	21.6831	50/50	21.6831
940491	AE2-034 C	14.2808	50/50	14.2808
940492	AE2-034 E	6.1204	50/50	6.1204
941501	AE2-147 C	36.6336	50/50	36.6336
941502	AE2-147 E	24.4224	50/50	24.4224
942401	AE2-253 C	24.6706	50/50	24.6706
942402	AE2-253 E	11.0839	50/50	11.0839
942851	AE2-304 C	1.4332	50/50	1.4332
942852	AE2-304 E	0.5574	50/50	0.5574
944871	AF1-152 C	12.2112	50/50	12.2112
944872	AF1-152 E	8.1408	50/50	8.1408
945711	AF1-236 C O1	156.3412	50/50	156.3412
945712	AF1-236 E O1	255.0830	50/50	255.0830
957531	AF2-047 C	33.9340	50/50	33.9340
957532	AF2-047 E	17.0690	50/50	17.0690
957821	AF2-076 C O2	12.2112	50/50	12.2112
957822	AF2-076 E O2	8.1408	50/50	8.1408

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957871	AF2-081 C O2	17.3807	50/50	17.3807
957872	AF2-081 E O2	7.4489	50/50	7.4489
959511	AF2-242	3.2025	Adder	7.11
WEC	WEC	0.0558	Confirmed LTF	0.0558
LGEE	LGEE	0.1050	Confirmed LTF	0.1050
CPL	CPL	0.7998	Confirmed LTF	0.7998
CBM-W2	CBM-W2	2.3587	Confirmed LTF	2.3587
NY	NY	0.0901	Confirmed LTF	0.0901
CBM-W1	CBM-W1	2.0641	Confirmed LTF	2.0641
TVA	TVA	0.5026	Confirmed LTF	0.5026
O-066	O-066	1.2499	Confirmed LTF	1.2499
CBM-S2	CBM-S2	4.7107	Confirmed LTF	4.7107
CBM-S1	CBM-S1	2.7860	Confirmed LTF	2.7860
G-007	G-007	0.1955	Confirmed LTF	0.1955
MADISON	MADISON	0.1532	Confirmed LTF	0.1532
MEC	MEC	0.3464	Confirmed LTF	0.3464

13.5.11 Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97159401	314596	3POPLR C	DVP	314573	3EVERETS	DVP	1	DVP_P4-2: 246T2034	breaker	349.0	210.37	211.08	DC	5.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.1516	50/50	0.1516
314639	6TANGLEW	0.3233	50/50	0.3233
315292	1DOMTR78	3.5406	50/50	3.5406
315294	1DOMTR10	26.6017	50/50	26.6017
315605	6W1-029WIND	0.7789	50/50	0.7789
315611	6Z1-036WIND	7.8780	50/50	7.8780
315614	AA2-178 C	2.6663	50/50	2.6663
901082	W1-029 E	30.2723	50/50	30.2723
913392	Y1-086 E	1.4343	50/50	1.4343
916042	21-036 E (Suspended)	52.7826	50/50	52.7826
917122	Z2-027 E	0.8032	50/50	0.8032
919152	AA1-139 E	2.1120	Adder	2.48
920692	AA2-178 E	6.6245	50/50	6.6245
923831	AB2-022 C	1.5037	50/50	1.5037
923832	AB2-022 E	0.8097	50/50	0.8097
925121	AB2-169 C	1.0532	50/50	1.0532
925122	AB2-169 E	5.4793	50/50	5.4793
933991	AD1-023 C	24.8547	50/50	24.8547
933992	AD1-023 E	13.5309	50/50	13.5309
934521	AD1-076 C	102.5855	50/50	102.5855
934522	AD1-076 E	52.2364	50/50	52.2364
937221	AD2-160 C O1	1.6870	Adder	1.98
937222	AD2-160 E O1	0.8847	Adder	1.04
938531	AE1-072 C O1	6.5296	Adder	7.68
938532	AE1-072 E O1	3.4039	Adder	4.0
940491	AE2-034 C	11.5928	50/50	11.5928
940492	AE2-034 E	4.9684	50/50	4.9684
941501	AE2-147 C	15.0525	50/50	15.0525
941502	AE2-147 E	10.0350	50/50	10.0350
942401	AE2-253 C	1.7745	Adder	2.09
942402	AE2-253 E	0.7972	Adder	0.94
942851	AE2-304 C	0.6542	50/50	0.6542
942852	AE2-304 E	0.2544	50/50	0.2544
944871	AF1-152 C	5.0175	50/50	5.0175
944872	AF1-152 E	3.3450	50/50	3.3450
945711	AF1-236 C O1	126.9140	50/50	126.9140
945712	AF1-236 E O1	207.0702	50/50	207.0702
957531	AF2-047 C	27.5468	50/50	27.5468
957532	AF2-047 E	13.8562	50/50	13.8562
957821	AF2-076 C O2	5.0175	50/50	5.0175
957822	AF2-076 E O2	3.3450	50/50	3.3450

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957871	AF2-081 C O2	1.7233	Adder	3.83
957872	AF2-081 E O2	0.7386	Adder	1.64
960123	AF2-303 BAT	2.1425	Merchant Transmission	2.1425
NEWTON	NEWTON	0.4900	Confirmed LTF	0.4900
FARMERCITY	FARMERCITY	0.0284	Confirmed LTF	0.0284
G-007A	G-007A	0.4244	Confirmed LTF	0.4244
VFT	VFT	1.1352	Confirmed LTF	1.1352
CALDERWOOD	CALDERWOOD	0.4031	Confirmed LTF	0.4031
PRAIRIE	PRAIRIE	1.3380	Confirmed LTF	1.3380
CHEOAH	CHEOAH	0.4134	Confirmed LTF	0.4134
EDWARDS	EDWARDS	0.1470	Confirmed LTF	0.1470
TILTON	TILTON	0.2589	Confirmed LTF	0.2589
GIBSON	GIBSON	0.2353	Confirmed LTF	0.2353
BLUEG	BLUEG	0.7239	Confirmed LTF	0.7239
TRIMBLE	TRIMBLE	0.2298	Confirmed LTF	0.2298
CATAWBA	CATAWBA	0.4368	Confirmed LTF	0.4368

13.5.12 Index 12

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97159396	314614	3TRWBRDG2	DVP	314596	3POPLR C	DVP	1	DVP_P4-2: 246T2034	breaker	350.0	211.4	212.1	DC	5.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.1516	50/50	0.1516
314639	6TANGLEW	0.3233	50/50	0.3233
315292	1DOMTR78	3.5406	50/50	3.5406
315294	1DOMTR10	26.6017	50/50	26.6017
315605	6W1-029WIND	0.7789	50/50	0.7789
315611	6Z1-036WIND	7.8780	50/50	7.8780
315614	AA2-178 C	2.6663	50/50	2.6663
901082	W1-029 E	30.2723	50/50	30.2723
913392	Y1-086 E	1.4343	50/50	1.4343
916042	21-036 E (Suspended)	52.7826	50/50	52.7826
917122	Z2-027 E	0.8032	50/50	0.8032
919152	AA1-139 E	2.1120	Adder	2.48
920692	AA2-178 E	6.6245	50/50	6.6245
923831	AB2-022 C	1.5037	50/50	1.5037
923832	AB2-022 E	0.8097	50/50	0.8097
925121	AB2-169 C	1.0532	50/50	1.0532
925122	AB2-169 E	5.4793	50/50	5.4793
933991	AD1-023 C	24.8547	50/50	24.8547
933992	AD1-023 E	13.5309	50/50	13.5309
934521	AD1-076 C	102.5855	50/50	102.5855
934522	AD1-076 E	52.2364	50/50	52.2364
937221	AD2-160 C O1	1.6870	Adder	1.98
937222	AD2-160 E O1	0.8847	Adder	1.04
938531	AE1-072 C O1	6.5296	Adder	7.68
938532	AE1-072 E O1	3.4039	Adder	4.0
940491	AE2-034 C	11.5928	50/50	11.5928
940492	AE2-034 E	4.9684	50/50	4.9684
941501	AE2-147 C	15.0525	50/50	15.0525
941502	AE2-147 E	10.0350	50/50	10.0350
942401	AE2-253 C	1.7745	Adder	2.09
942402	AE2-253 E	0.7972	Adder	0.94
942851	AE2-304 C	0.6542	50/50	0.6542
942852	AE2-304 E	0.2544	50/50	0.2544
944871	AF1-152 C	5.0175	50/50	5.0175
944872	AF1-152 E	3.3450	50/50	3.3450
945711	AF1-236 C O1	126.9140	50/50	126.9140
945712	AF1-236 E O1	207.0702	50/50	207.0702
957531	AF2-047 C	27.5468	50/50	27.5468
957532	AF2-047 E	13.8562	50/50	13.8562
957821	AF2-076 C O2	5.0175	50/50	5.0175
957822	AF2-076 E O2	3.3450	50/50	3.3450

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957871	AF2-081 C O2	1.7233	Adder	3.83
957872	AF2-081 E O2	0.7386	Adder	1.64
960123	AF2-303 BAT	2.1425	Merchant Transmission	2.1425
NEWTON	NEWTON	0.4900	Confirmed LTF	0.4900
FARMERCITY	FARMERCITY	0.0284	Confirmed LTF	0.0284
G-007A	G-007A	0.4244	Confirmed LTF	0.4244
VFT	VFT	1.1352	Confirmed LTF	1.1352
CALDERWOOD	CALDERWOOD	0.4031	Confirmed LTF	0.4031
PRAIRIE	PRAIRIE	1.3380	Confirmed LTF	1.3380
CHEOAH	CHEOAH	0.4134	Confirmed LTF	0.4134
EDWARDS	EDWARDS	0.1470	Confirmed LTF	0.1470
TILTON	TILTON	0.2589	Confirmed LTF	0.2589
GIBSON	GIBSON	0.2353	Confirmed LTF	0.2353
BLUEG	BLUEG	0.7239	Confirmed LTF	0.7239
TRIMBLE	TRIMBLE	0.2298	Confirmed LTF	0.2298
CATAWBA	CATAWBA	0.4368	Confirmed LTF	0.4368

13.5.13 Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96848355	314927	8YADKIN	DVP	314928	8SUFFOLK	DVP	1	DVP_P7-1: LN 579-2110	tower	3637.0	100.36	100.94	DC	47.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314295	6BIRDNECK	0.1793	50/50	0.1793
314491	3PENDLTN	1.3352	50/50	1.3352
315098	1CHESPKA	1.7702	50/50	1.7702
315099	1CHESPKB (Deactivation : 31/05/2019)	11.4753	50/50	11.4753
315108	1ELIZAR1	13.2311	50/50	13.2311
315109	1ELIZAR2	13.0013	50/50	13.0013
315110	1ELIZAR3	13.4004	50/50	13.4004
315611	6Z1-036WIND	7.9603	Adder	9.37
901082	W1-029 E	36.7225	Adder	43.2
913392	Y1-086 E	4.6482	Adder	5.47
916042	Z1-036 E (Suspended)	53.3341	Adder	62.75
916192	Z1-068 E	7.2747	50/50	7.2747
917122	Z2-027 E	1.9451	Adder	2.29
919152	AA1-139 E	18.1749	Adder	21.38
920692	AA2-178 E	3.5159	Adder	4.14
923831	AB2-022 C	4.8732	Adder	5.73
923832	AB2-022 E	2.6240	Adder	3.09
924812	AB2-134 E OP	10.5654	Adder	12.43
925331	AB2-190 C	15.9289	Adder	18.74
925332	AB2-190 E	6.8267	Adder	8.03
925522	AC1-027 E	4.4232	50/50	4.4232
926661	AC1-147 C	7.3767	Adder	8.68
926662	AC1-147 E	4.3324	Adder	5.1
927222	AC1-216 E O1	6.4500	Adder	7.59
932041	AC2-012 C	39.2599	50/50	39.2599
932042	AC2-012 E	64.0556	50/50	64.0556
933731	AC2-196 C	6.9089	50/50	6.9089
933732	AC2-196 E	4.6013	50/50	4.6013
934011	AD1-025 C	14.0971	Adder	16.58
934012	AD1-025 E	8.3505	Adder	9.82
934061	AD1-033 C	29.0325	50/50	29.0325
934062	AD1-033 E	19.3550	50/50	19.3550
935161	AD1-151 C O1	12.8000	Adder	15.06
935162	AD1-151 E O1	8.5333	Adder	10.04
936041	AD2-007 C	0.6734	Adder	0.79
936042	AD2-007 E	0.4639	Adder	0.55
936051	AD2-008 C	2.4543	Adder	2.89
936052	AD2-008 E	5.3425	Adder	6.29
937221	AD2-160 C O1	17.3363	Adder	20.4
937222	AD2-160 E O1	9.0910	Adder	10.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938531	AE1-072 C O1	47.3359	Adder	55.69
938532	AE1-072 E O1	24.6761	Adder	29.03
939311	AE1-162 C	4.3056	Adder	5.07
939312	AE1-162 E	2.8704	Adder	3.38
940251	AE2-007 O1	676.9039	50/50	676.9039
940491	AE2-034 C	6.1529	Adder	7.24
940492	AE2-034 E	2.6370	Adder	3.1
940891	AE2-078 C	2.5143	Adder	2.96
940892	AE2-078 E	1.2952	Adder	1.52
940901	AE2-079 C	2.5143	Adder	2.96
940902	AE2-079 E	1.2952	Adder	1.52
941281	AE2-122 C O1	110.1002	50/50	110.1002
941282	AE2-122 E O1	444.2811	50/50	444.2811
941291	AE2-123 C O1	113.1489	50/50	113.1489
941292	AE2-123 E O1	441.2323	50/50	441.2323
941301	AE2-124 C O1	102.9075	50/50	102.9075
941302	AE2-124 E O1	451.5457	50/50	451.5457
941501	AE2-147 C	18.2598	Adder	21.48
941502	AE2-147 E	12.1732	Adder	14.32
941591	AE2-156 O1	69.3970	50/50	69.3970
942401	AE2-253 C	18.2349	Adder	21.45
942402	AE2-253 E	8.1925	Adder	9.64
942551	AE2-270	22.5497	Adder	26.53
942851	AE2-304 C	0.7916	Adder	0.93
942852	AE2-304 E	0.3078	Adder	0.36
943621	AF1-033 C	2.5143	Adder	2.96
943622	AF1-033 E	1.2952	Adder	1.52
944501	AF1-115 C O1	7.6572	Adder	9.01
944502	AF1-115 E O1	3.7714	Adder	4.44
944581	AF1-123 C O1	205.5069	50/50	205.5069
944582	AF1-123 E O1	470.5531	50/50	470.5531
944591	AF1-124 C O1	205.5069	50/50	205.5069
944592	AF1-124 E O1	470.5531	50/50	470.5531
944601	AF1-125 C O1	205.5069	50/50	205.5069
944602	AF1-125 E O1	470.5531	50/50	470.5531
944871	AF1-152 C	6.0866	Adder	7.16
944872	AF1-152 E	4.0577	Adder	4.77
945711	AF1-236 C O1	67.3596	Adder	79.25
945712	AF1-236 E O1	109.9024	Adder	129.3
957531	AF2-047 C	7.7488	Adder	17.2
957532	AF2-047 E	3.8977	Adder	8.65
957631	AF2-057	6.2058	Adder	13.78
957711	AF2-065 C	6.0952	Adder	13.53
957712	AF2-065 E	5.8561	Adder	13.0
957871	AF2-081 C O2	15.0422	Adder	33.39
957872	AF2-081 E O2	6.4467	Adder	14.31
960101	AF2-301 C	1.1729	Adder	2.6
960102	AF2-301 E	0.7819	Adder	1.74
960131	AF2-304 C O2	7.0590	Adder	15.67
960132	AF2-304 E O2	4.8382	Adder	10.74
NEWTON	NEWTON	0.4395	Confirmed LTF	0.4395
FARMERCITY	FARMERCITY	0.0230	Confirmed LTF	0.0230

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CALDERWOOD	CALDERWOOD	0.2112	Confirmed LTF	0.2112
NY	NY	0.2151	Confirmed LTF	0.2151
PRAIRIE	PRAIRIE	1.0616	Confirmed LTF	1.0616
O-066	O-066	2.5670	Confirmed LTF	2.5670
CHEOAH	CHEOAH	0.2132	Confirmed LTF	0.2132
EDWARDS	EDWARDS	0.1428	Confirmed LTF	0.1428
TILTON	TILTON	0.2570	Confirmed LTF	0.2570
G-007	G-007	0.3973	Confirmed LTF	0.3973
GIBSON	GIBSON	0.2233	Confirmed LTF	0.2233
BLUEG	BLUEG	0.7083	Confirmed LTF	0.7083
TRIMBLE	TRIMBLE	0.2271	Confirmed LTF	0.2271
CATAWBA	CATAWBA	0.1582	Confirmed LTF	0.1582

13.5.14 Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
97721073	934060	AD1-033 TAP	DVP	314481	6LANDSTN	DVP	1	DVP_P4-2: 2110T2128	breaker	830.0	117.64	120.22	DC	21.39

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.2648	50/50	0.2648
314639	6TANGLEW	0.4272	50/50	0.4272
314643	3O INLET	0.6457	50/50	0.6457
315294	1DOMTR10	3.3004	Adder	3.88
315603	6AA1-139SOLA	3.8597	50/50	3.8597
315605	6W1-029WIND	0.5452	50/50	0.5452
315611	6Z1-036WIND	4.5548	50/50	4.5548
901082	W1-029 E	21.1879	50/50	21.1879
913392	Y1-086 E	2.5047	50/50	2.5047
916042	Z1-036 E (Suspended)	30.5172	50/50	30.5172
917122	Z2-027 E	1.0613	50/50	1.0613
919152	AA1-139 E	9.5897	50/50	9.5897
920692	AA2-178 E	1.7734	Adder	2.09
923831	AB2-022 C	2.6259	50/50	2.6259
923832	AB2-022 E	1.4139	50/50	1.4139
926661	AC1-147 C	-1.8982	Adder	-2.23
933731	AC2-196 C	3.0719	50/50	3.0719
933732	AC2-196 E	2.0459	50/50	2.0459
933991	AD1-023 C	3.9475	Adder	4.64
933992	AD1-023 E	2.1490	Adder	2.53
934061	AD1-033 C	15.0637	50/50	15.0637
934062	AD1-033 E	10.0425	50/50	10.0425
934521	AD1-076 C	18.8718	Adder	22.2
934522	AD1-076 E	9.6095	Adder	11.31
937221	AD2-160 C O1	9.1220	50/50	9.1220
937222	AD2-160 E O1	4.7835	50/50	4.7835
938171	AE1-026 C O1	8.7681	Adder	10.32
938172	AE1-026 E O1	2.3132	Adder	2.72
938531	AE1-072 C O1	25.0552	50/50	25.0552
938532	AE1-072 E O1	13.0613	50/50	13.0613
939311	AE1-162 C	-0.8246	Adder	-0.97
940491	AE2-034 C	3.1034	Adder	3.65
940492	AE2-034 E	1.3300	Adder	1.56
941501	AE2-147 C	10.5354	50/50	10.5354
941502	AE2-147 E	7.0236	50/50	7.0236
941592	AE2-156 BAT	16.0800	50/50	16.0800
942401	AE2-253 C	9.5948	50/50	9.5948
942402	AE2-253 E	4.3107	50/50	4.3107
942851	AE2-304 C	0.4499	50/50	0.4499
942852	AE2-304 E	0.1750	50/50	0.1750
944581	AF1-123 C O1	20.1136	Adder	23.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944582	AF1-123 E O1	46.0545	Adder	54.18
944591	AF1-124 C O1	20.1136	Adder	23.66
944592	AF1-124 E O1	46.0545	Adder	54.18
944601	AF1-125 C O1	20.1136	Adder	23.66
944602	AF1-125 E O1	46.0545	Adder	54.18
944871	AF1-152 C	3.5118	50/50	3.5118
944872	AF1-152 E	2.3412	50/50	2.3412
945711	AF1-236 C O1	33.9749	Adder	39.97
945712	AF1-236 E O1	55.4327	Adder	65.21
957531	AF2-047 C	3.9084	Adder	8.68
957532	AF2-047 E	1.9659	Adder	4.36
957632	AF2-057 BAT	3.5448	50/50	3.5448
957871	AF2-081 C O2	14.9716	50/50	14.9716
957872	AF2-081 E O2	6.4164	50/50	6.4164
WEC	WEC	0.0573	Confirmed LTF	0.0573
LGEE	LGEE	0.1061	Confirmed LTF	0.1061
CPL	CPL	0.4922	Confirmed LTF	0.4922
CBM-W2	CBM-W2	2.0229	Confirmed LTF	2.0229
NY	NY	0.0111	Confirmed LTF	0.0111
CBM-W1	CBM-W1	2.1893	Confirmed LTF	2.1893
TVA	TVA	0.4046	Confirmed LTF	0.4046
O-066	O-066	0.2352	Confirmed LTF	0.2352
CBM-S2	CBM-S2	3.1501	Confirmed LTF	3.1501
CBM-S1	CBM-S1	2.2919	Confirmed LTF	2.2919
G-007	G-007	0.0374	Confirmed LTF	0.0374
MADISON	MADISON	0.0907	Confirmed LTF	0.0907
MEC	MEC	0.3257	Confirmed LTF	0.3257

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
148728177	957870	AF2-081 TAP	DVP	314466	6FENTRES	DVP	1	DVP_P4-2: 246T2034	breaker	699.0	135.12	142.06	DC	48.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314638	6ELIZ CT	0.5509	50/50	0.5509
314639	6TANGLEW	0.9890	50/50	0.9890
314643	3O INLET	1.1400	50/50	1.1400
315294	1DOMTR10	13.5684	Adder	15.96
315603	6AA1-139SOLA	4.4203	50/50	4.4203
315605	6W1-029WIND	1.8155	50/50	1.8155
315611	6Z1-036WIND	14.4035	50/50	14.4035
315614	AA2-178 C	3.1458	50/50	3.1458
901082	W1-029 E	70.5574	50/50	70.5574
913392	Y1-086 E	5.2110	50/50	5.2110
916042	Z1-036 E (Suspended)	96.5033	50/50	96.5033
917122	Z2-027 E	2.4571	50/50	2.4571
919152	AA1-139 E	10.9825	50/50	10.9825
920692	AA2-178 E	7.8158	50/50	7.8158
923831	AB2-022 C	5.4631	50/50	5.4631
923832	AB2-022 E	2.9417	50/50	2.9417
925122	AB2-169 E	5.5865	Adder	6.57
933991	AD1-023 C	23.2929	50/50	23.2929
933992	AD1-023 E	12.6807	50/50	12.6807
934521	AD1-076 C	96.1395	50/50	96.1395
934522	AD1-076 E	48.9541	50/50	48.9541
937221	AD2-160 C O1	5.8685	Adder	6.9
937222	AD2-160 E O1	3.0774	Adder	3.62
938531	AE1-072 C O1	47.6001	50/50	47.6001
938532	AE1-072 E O1	24.8139	50/50	24.8139
940491	AE2-034 C	13.6777	50/50	13.6777
940492	AE2-034 E	5.8619	50/50	5.8619
941501	AE2-147 C	35.0838	50/50	35.0838
941502	AE2-147 E	23.3892	50/50	23.3892
942401	AE2-253 C	6.1726	Adder	7.26
942402	AE2-253 E	2.7732	Adder	3.26
942851	AE2-304 C	1.3726	50/50	1.3726
942852	AE2-304 E	0.5338	50/50	0.5338
944871	AF1-152 C	11.6946	50/50	11.6946
944872	AF1-152 E	7.7964	50/50	7.7964
945711	AF1-236 C O1	149.7385	50/50	149.7385
945712	AF1-236 E O1	244.3101	50/50	244.3101
957531	AF2-047 C	32.5009	50/50	32.5009
957532	AF2-047 E	16.3481	50/50	16.3481
957821	AF2-076 C O2	11.6946	50/50	11.6946
957822	AF2-076 E O2	7.7964	50/50	7.7964

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957871	AF2-081 C O2	33.9254	50/50	33.9254
957872	AF2-081 E O2	14.5394	50/50	14.5394
959511	AF2-242	3.0687	Adder	6.81
WEC	WEC	0.0567	Confirmed LTF	0.0567
LGEE	LGEE	0.1067	Confirmed LTF	0.1067
CPL	CPL	0.7733	Confirmed LTF	0.7733
CBM-W2	CBM-W2	2.3505	Confirmed LTF	2.3505
NY	NY	0.0796	Confirmed LTF	0.0796
CBM-W1	CBM-W1	2.1142	Confirmed LTF	2.1142
TVA	TVA	0.4970	Confirmed LTF	0.4970
O-066	O-066	1.1222	Confirmed LTF	1.1222
CBM-S2	CBM-S2	4.5778	Confirmed LTF	4.5778
CBM-S1	CBM-S1	2.7605	Confirmed LTF	2.7605
G-007	G-007	0.1758	Confirmed LTF	0.1758
MADISON	MADISON	0.1472	Confirmed LTF	0.1472
MEC	MEC	0.3496	Confirmed LTF	0.3496

13.6 Contingency Descriptions - Secondary POI

Contingency Name	Contingency Definition
DVP_P4-2: 231T2026	CONTINGENCY 'DVP_P4-2: 231T2026' /* LANDSTOWN 230 KV OPEN BRANCH FROM BUS 314481 TO BUS 314502 CKT 1 /* 6LANDSTN 230.00 - 6STUMPY 230.00 OPEN BRANCH FROM BUS 314502 TO BUS 314508 CKT 1 /* 6STUMPY 230.00 - 6THRASHER 230.00 OPEN BUS 314502 /* ISLAND: 6STUMPY 230.00 OPEN BRANCH FROM BUS 314481 TO BUS 314486 CKT 1 /* 6LANDSTN 230.00 - 6LYNHAVN 230.00 END
DVP_P1-2: LN 567	CONTINGENCY 'DVP_P1-2: LN 567' OPEN BRANCH FROM BUS 314903 TO BUS 314924 CKT 1 /* 8CHCKAHM 500.00 - 8SURREY 500.00 END
DVP_P4-2: 246T2034	CONTINGENCY 'DVP_P4-2: 246T2034' /* EARLEYS 230 KV OPEN BRANCH FROM BUS 314537 TO BUS 957820 CKT 1 /* 6SUFFOLK 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1 /* 6EARLEYS 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1 /* 6NUCO TP 230.00 - 6NUCOR 230.00 OPEN BUS 314575 /* ISLAND: 6NUCO TP 230.00 OPEN BUS 314590 /* ISLAND: 6NUCOR 230.00 OPEN BRANCH FROM BUS 314569 TO BUS 314620 CKT 1 /* 6EARLEYS 230.00 - 6CASHIE 230.00 OPEN BRANCH FROM BUS 933990 TO BUS 314620 CKT 1 /* AD1-023 TAP 230.00 - 6CASHIE 230.00 OPEN BUS 314620 /* ISLAND: 6CASHIE 230.00 END
DVP_P1-2: LN 565	CONTINGENCY 'DVP_P1-2: LN 565' OPEN BRANCH FROM BUS 314927 TO BUS 314928 CKT 1 /* 8YADKIN 500.00 - 8SUFFOLK 500.00 END
DVP_P1-2: LN 563	CONTINGENCY 'DVP_P1-2: LN 563' OPEN BRANCH FROM BUS 314902 TO BUS 314914 CKT 1 /* 8CARSON 500.00 - 8MDLTHAN 500.00 END

Contingency Name	Contingency Definition
DVP_P7-1: LN 579-2110	CONTINGENCY 'DVP_P7-1: LN 579-2110' /* . OPEN BRANCH FROM BUS 314923 TO BUS 314927 CKT 1 /* 8SEPTA 500.00 - 8YADKIN 500.00 OPEN BRANCH FROM BUS 314480 TO BUS 314508 CKT 1 /* 6HUNTSMN 230.00 - 6THRASHER 230.00 OPEN BRANCH FROM BUS 314480 TO BUS 314537 CKT 1 /* 6HUNTSMN 230.00 - 6SUFFOLK 230.00 OPEN BUS 314480 /* ISLAND: 6HUNTSMN 230.00 END
314550 6HICKORY 230 937220 AD2-160 TAP 230 1	CONTINGENCY '314550 6HICKORY 230 937220 AD2-160 TAP 230 1' OPEN BRANCH FROM BUS 314550 TO BUS 937220 CKT 1 END
DVP_P1-2: LN 271-B	CONTINGENCY 'DVP_P1-2: LN 271-B' OPEN BRANCH FROM BUS 934060 TO BUS 314481 CKT 1 /* AD1-033 TAP 230.00 - 6LANDSTN 230.00 END
314295 6BIRDNECK 230 941280 AE2-122 TAP 230 1	CONTINGENCY '314295 6BIRDNECK 230 941280 AE2-122 TAP 230 1' OPEN BRANCH FROM BUS 314295 TO BUS 941280 CKT 1 END
DVP_P4-2: 2110T2128	CONTINGENCY 'DVP_P4-2: 2110T2128' /* THRASHER 230 KV OPEN BRANCH FROM BUS 314480 TO BUS 314508 CKT 1 /* 6HUNTSMN 230.00 - 6THRASHER 230.00 OPEN BRANCH FROM BUS 314480 TO BUS 314537 CKT 1 /* 6HUNTSMN 230.00 - 6SUFFOLK 230.00 OPEN BUS 314480 /* ISLAND: 6HUNTSMN 230.00 OPEN BRANCH FROM BUS 314466 TO BUS 314508 CKT 1 /* 6FENTRES 230.00 - 6THRASHER 230.00 END
Base Case	
DVP_P4-2: 231T2128	CONTINGENCY 'DVP_P4-2: 231T2128' /* THRASHER 230 KV OPEN BRANCH FROM BUS 314481 TO BUS 314502 CKT 1 /* 6LANDSTN 230.00 - 6STUMPY 230.00 OPEN BRANCH FROM BUS 314502 TO BUS 314508 CKT 1 /* 6STUMPY 230.00 - 6THRASHER 230.00 OPEN BUS 314502 /* ISLAND: 6STUMPY 230.00 OPEN BRANCH FROM BUS 314466 TO BUS 314508 CKT 1 /* 6FENTRES 230.00 - 6THRASHER 230.00 END

Contingency Name	Contingency Definition
DVP_P1-2: LN 579	CONTINGENCY 'DVP_P1-2: LN 579' OPEN BRANCH FROM BUS 314923 TO BUS 314927 CKT 1 /* 8SEPTA 500.00 - 8YADKIN 500.00 END
DVP_P1-2: LN 2088	CONTINGENCY 'DVP_P1-2: LN 2088' OPEN BRANCH FROM BUS 314745 TO BUS 314758 CKT 1 /* 6LOISACT 230.00 - 6GORDNVL 230.00 END
DVP_P1-2: LN 269-A-B	CONTINGENCY 'DVP_P1-2: LN 269-A-B' OPEN BRANCH FROM BUS 314466 TO BUS 957870 CKT 1 /* 6FENTRES 230.00 - AF2- 081 TAP 230.00 END
DVP_P4-2: 24642	CONTINGENCY 'DVP_P4-2: 24642' /* SUFFOLK 230 KV OPEN BRANCH FROM BUS 314537 TO BUS 957820 CKT 1 /* 6SUFFOLK 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1 /* 6GEARLEYS 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1 /* 6NUCO TP 230.00 - 6NUCOR 230.00 OPEN BUS 314575 /* ISLAND: 6NUCO TP 230.00 OPEN BUS 314590 /* ISLAND: 6NUCOR 230.00 OPEN BRANCH FROM BUS 314536 TO BUS 314537 CKT 3 /* 3SUFFOLK 115.00 - 6SUFFOLK 230.00 OPEN BRANCH FROM BUS 314537 TO BUS 314928 CKT 2 /* 6SUFFOLK 230.00 - 8SUFFOLK 500.00 END
DVP_P4-2: 26922	CONTINGENCY 'DVP_P4-2: 26922' /* FENTRESS 230 KV OPEN BRANCH FROM BUS 314466 TO BUS 957870 CKT 1 /* 6FENTRES 230.00 - AF2- 081 TAP 230.00 OPEN BRANCH FROM BUS 314466 TO BUS 314909 CKT 2 /* 6FENTRES 230.00 - 8FENTRES 500.00 OPEN BUS 314654 /* 6FENTR_1 230.00 KV OPEN BUS 313889 /* 6FENTRES_STC230.00 KV END

Contingency Name	Contingency Definition
DVP_P4-2: 24662	CONTINGENCY 'DVP_P4-2: 24662' /* EARLEYS 230 KV OPEN BRANCH FROM BUS 314537 TO BUS 957820 CKT 1 /* 6SUFFOLK 230.00 - AF2-076 TAP 230.00 OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1 /* 6EARLEYS 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1 /* 6NUCO TP 230.00 - 6NUCOR 230.00 OPEN BUS 314575 /* ISLAND: 6NUCO TP 230.00 OPEN BUS 314590 /* ISLAND: 6NUCOR 230.00 OPEN BRANCH FROM BUS 314568 TO BUS 314569 CKT 1 /* 3EARLEYS 115.00 - 6EARLEYS 230.00 END
DVP_P4-2: 246T247	CONTINGENCY 'DVP_P4-2: 246T247' /* SUFFOLK 230 KV OPEN BRANCH FROM BUS 314537 TO BUS 957820 CKT 1 /* 6SUFFOLK 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1 /* 6EARLEYS 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1 /* 6NUCO TP 230.00 - 6NUCOR 230.00 OPEN BUS 314575 /* ISLAND: 6NUCO TP 230.00 OPEN BUS 314590 /* ISLAND: 6NUCOR 230.00 OPEN BRANCH FROM BUS 314537 TO BUS 957820 CKT 1 /* 6SUFFOLK 230.00 - AF2-076 TAP 230.00 END
DVP_P1-2: LN 2128	CONTINGENCY 'DVP_P1-2: LN 2128' OPEN BRANCH FROM BUS 314466 TO BUS 314508 CKT 1 /* 6FENTRES 230.00 - 6THRASHER 230.00 END

14 Affected Systems

14.1 TVA

TVA Impacts to be determined during later study phases (as applicable).

14.2 Duke Energy Progress

Duke Energy Progress Impacts to be determined during later study phases (as applicable).

15 Attachment 1: One Line Diagram