



**Generation Interconnection
Feasibility Study Report
for
Queue Project AG1-090
PHILIPSBURG 115 KV
60 MW Capacity / 100 MW Energy**

January 2021

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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 Mid-Atlantic Interstate Transmission, LLC (MAIT) (Penelec zone).

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.

An Interconnection Customer with a proposed new Customer Facility that has a Maximum Facility Output equal to or greater than 100 MW shall install and maintain, at its expense, phasor measurement units (PMUs). See Section 8.5.3 of Appendix 2 to the Interconnection Service Agreement as well as section 4.3 of PJM Manual 14D for additional information.

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 Centre County, Pennsylvania. The installed facilities will have a total capability of 100 MW with 80 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is August 01, 2023. This study does not imply a TO commitment to this in-service date.

Queue Number	AG1-090
Project Name	PHILIPSBURG 115 KV
State	Pennsylvania
County	Centre
Transmission Owner	PENELEC (MAIT)
MFO	100
MWE	100
MWC	80
Fuel	Solar
Basecase Study Year	2024

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

The interconnection of the project at the Primary POI will be accomplished by installing one 115 kV breaker at Philipsburg Substation to expand the station from a four breaker to a five breaker ring bus. Philipsburg Substation is planned to be converted to a four breaker ring bus with supplemental project s1919. Changes, deferral, or cancelation of this supplemental project could result in additional scope for AG1-090 to interconnect at Philipsburg Substation.

Attachment 1 shows a one-line diagram of the proposed primary interconnection facilities for the AG1-090 generation project to connect to the FirstEnergy (“FE”) Transmission System. The IC will be responsible for constructing the facilities on its side of the POI, including the Attachment Facilities which connect the generator to the FE Transmission System’s interconnection facilities.

4.2 Secondary Point of Interconnection

The interconnection of the project at a Secondary POI can be accomplished by constructing a new 230 kV three (3) breaker ring bus substation and looping the Shawville - Shingletown 230 kV line into the new station. A full scope of work or estimated cost is not provided for the proposed Secondary POI.

5 Cost Summary

The AG1-090 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$2,130,000
Total System Network Upgrade Costs	\$849,703,200 ¹
Total Costs	\$851,833,200

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 2016-36, 2016-25 I.R.B. (6/20/2016). 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.

¹ This project currently causes and/or contributes to overloads of the Transmission System (see Summer Peak Load Flow Analysis section below) and therefore has potential to have cost allocation for the system reinforcements listed in the report. This will be re-evaluated in the System Impact phase. The results may vary with queue customers withdrawing from the queue and other generators deactivating over time. If a customer is the first to cause the need for a project (causes loading to exceed 100% of rating), then the customer is responsible. If a customer contributes to a facility that is already overloaded by a prior queue, then they may receive cost allocation.

6 Transmission Owner Scope of Work

The interconnection of the project at the Primary POI will be accomplished by installing one 115 kV breaker at Philipsburg Substation to expand the station from a four breaker to a five breaker ring bus. Philipsburg Substation is planned to be converted to a four breaker ring bus with supplemental project s1919. Changes, deferral, or cancelation of this supplemental project could result in additional scope for AG1-090 to interconnect at Philipsburg Substation.

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

Description	Total Cost
Install 1-115 kV breaker and associated facilities to expand Philipsburg Substation to a five breaker ring bus.	\$2,130,000
Total Physical Interconnection Costs	\$2,130,000

7 Schedule

Based on the scope of work for the interconnection facilities, it is expected to take a minimum of **24 months** after the signing of an Interconnection Construction Service Agreement to complete the installation. This includes the requirement for the IC to make a preliminary payment that compensates FE for the first three months of the engineering design work that is related to the construction of the interconnection substation. This assumes that there will be no environmental issues with any of the new properties associated with this project, that there will be no delays in acquiring the necessary permits for implementing the defined interconnection facilities and network upgrades, and that all transmission system outages will be allowed when requested.

If the customer is ultimately responsible for network upgrades, then the schedule for those upgrades will be refined in future study phases. The customer would need to wait for those upgrades to be completed prior to commercial operation unless determined deliverable by an interim deliverability study. The elapsed time to complete any network upgrades is provided in the System Reinforcements table of this report.

8 Transmission Owner Analysis

8.1 Power Flow Analysis

FE performed an analysis of its underlying transmission <100 kV system. The AG1-090 project did not contribute to any overloads on the FE transmission <100 kV system.

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 FE's "Requirements for Transmission Connected Facilities" document located at:

<http://www.pjm.com/planning/design-engineering/to-tech-standards/private-firstenergy.aspx>.

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 FE's "Requirements for Transmission Connected Facilities" document located at: <http://www.pjm.com/planning/design-engineering/to-tech-standards/private-firstenergy.aspx>. In particular, the IC is responsible for the following:

1. The purchase and installation of a fully rated 115 kV circuit breaker to protect the AG1-090 generator lead line. A single circuit breaker must be used to protect this line; if the project has

several GSU transformers, the individual GSU transformer breakers cannot be used to protect this line.

2. The purchase and installation of the minimum required FE generation interconnection relaying and control facilities. 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 FE Transmission System Control Center.
4. Compliance with the FE and PJM generator power factor and voltage control requirements.
5. The execution of a back-up service agreement to serve the customer load supplied from the AG1-090 generation project metering point when the units are out-of-service. This assumes the intent of the IC is to net the generation with the load.

The IC will also be required to meet all PJM, ReliabilityFirst, 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 ReliabilityFirst 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 FE 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) - (Required for plants with Maximum Facility Output of 3 MW or higher)
- Irradiance (Watts/meter²) - (Required for plants with Maximum Facility Output of 3 MW or higher)
- 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

The IC will be required to comply with all Interconnected Transmission Owner's revenue metering requirements for generation interconnection customers located at the following link:

<http://www.pjm.com/planning/design-engineering/to-tech-standards/>

11 Summer Peak - Load Flow Analysis - Primary POI

The Queue Project AG1-090 was evaluated as a 100.0 MW (Capacity 60.0 MW) injection at the Phillipsburg 115 kV substation in the PENELEC area. Project AG1-090 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-090 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)

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
166132851	200519	26REED TAP	115.0	PENELEC	200522	26SHADE GP	115.0	PENELEC	1	PN-P1-2-PN-230-103AT	single	225.0	99.23	100.93	DC	3.83

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	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
165880312	200741	26SEWARD	115.0	PENELEC	200766	26FLORENCE	115.0	PENELEC	1	PN-P2_3-PN-230-0347-A	breaker	263.0	98.96	100.06	DC	6.43

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	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
165729089	200512	26LEWISTOWN	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PL:10:P24:100548	bus	225.0	127.5	128.78	DC	6.39
165880163	200512	26LEWISTOWN	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	225.0	129.6	130.87	DC	6.39
165880164	200512	26LEWISTOWN	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PL:10:P45:102437	breaker	225.0	127.5	128.78	DC	6.39
166132827	200512	26LEWISTOWN	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PL:10:P13:100618	single	225.0	106.72	108.42	DC	3.83
166132828	200512	26LEWISTOWN	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PN-P1-2-PN-230-103AT	single	225.0	105.36	107.07	DC	3.83
167578458	200513	26LEWISTOWN	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	Base Case	single	493.0	119.93	122.28	DC	11.57
167578459	200513	26LEWISTOWN	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	PN-P1-2-PN-115-094_NON	single	618.0	106.87	108.94	DC	12.79
165729099	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PL:10:P24:100548	bus	225.0	121.41	122.69	DC	6.39
165880185	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	225.0	123.46	124.74	DC	6.39
165880186	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PL:10:P45:102437	breaker	225.0	121.41	122.69	DC	6.39
166132850	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PL:10:P13:100618	single	225.0	100.63	102.33	DC	3.83
165729028	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PL:10:P24:100548	bus	160.0	195.09	197.11	DC	7.17
165880071	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PL:10:P45:102437	breaker	160.0	195.09	197.11	DC	7.17

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 LOADI NG %	POST PROJE CT LOADI NG %	AC D C	MW IMPA CT
165880072	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	160.0	190.14	192.16	DC	7.15
166132716	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PL:10:P13:100618	single	160.0	150.57	153.25	DC	4.3
166132717	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PN-P1-2-PN-230-103AT	single	160.0	148.46	151.15	DC	4.29
165880279	200582	26RIDGWAY	115.0	PENEL EC	200647	26FOREST	115.0	PENEL EC	1	PN-P2_1-PN-345-997-DRT-051	breaker	277.0	103.18	104.29	DC	6.84
167578492	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	Base Case	single	520.0	116.06	117.06	DC	5.23
164869470	200675	26E.TWANDA	230.0	PENEL EC	200924	26CANYON	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	615.0	180.45	181.19	DC	9.92
164869648	200701	26GROVER	230.0	PENEL EC	941420	AE2-139 TAP	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	621.0	101.81	102.75	DC	12.93
165729098	200713	26ROCKTON	115.0	PENEL EC	200712	26DUBOIS	115.0	PENEL EC	1	AP-P2-2-WP-230-001T	bus	190.0	122.07	129.16	DC	13.47
165880209	200713	26ROCKTON	115.0	PENEL EC	200712	26DUBOIS	115.0	PENEL EC	1	AP-P2-3-WP-230-446T	breaker	190.0	122.07	129.17	DC	13.47
165880210	200713	26ROCKTON	115.0	PENEL EC	200712	26DUBOIS	115.0	PENEL EC	1	AP-P2-3-WP-230-443T *	breaker	190.0	121.97	129.06	DC	13.47
165729097	200714	26SHAWVL 1	115.0	PENEL EC	200713	26ROCKTON	115.0	PENEL EC	1	AP-P2-2-WP-230-001T	bus	190.0	123.01	130.11	DC	13.47
165880200	200714	26SHAWVL 1	115.0	PENEL EC	200713	26ROCKTON	115.0	PENEL EC	1	AP-P2-3-WP-230-446T	breaker	190.0	123.02	130.11	DC	13.47
165880201	200714	26SHAWVL 1	115.0	PENEL EC	200713	26ROCKTON	115.0	PENEL EC	1	AP-P2-3-WP-230-443T *	breaker	190.0	122.91	130.01	DC	13.47
164248145	200726	26SHAWVL 2	230.0	PENEL EC	235248	01SHINGL	230.0	AP	1	AP-P1-2-WP-230-005A-B	single	666.0	106.33	107.72	DC	9.21
164248146	200726	26SHAWVL 2	230.0	PENEL EC	235248	01SHINGL	230.0	AP	1	AP-P1-3-WP-230-005-B	single	666.0	106.33	107.72	DC	9.21
165880310	200741	26SEWARD	115.0	PENEL EC	200766	26FLORENCE	115.0	PENEL EC	1	PN-P2-3-PN-230-0183-208	breaker	263.0	102.22	103.22	DC	5.86
165880311	200741	26SEWARD	115.0	PENEL EC	200766	26FLORENCE	115.0	PENEL EC	1	PN-P2-3-PN-230-0183-209	breaker	263.0	100.66	101.65	DC	5.79
164247797	200763	26BLAIRSVL	138.0	PENEL EC	235253	01SOCIAL	138.0	AP	1	PN-P2-3-PN-230-0201A-20	breaker	287.0	114.07	115.13	DC	6.72
167504984	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	ATSI-P2-3-CEI-345-004C	breaker	923.0	191.16	192.01	DC	17.16
167504985	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	ATSI-P2-3-CEI-345-004D	breaker	923.0	189.42	190.27	DC	17.04
167578480	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	PN-P1-2-PN-230-025	single	923.0	121.54	122.85	DC	12.03
167578481	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	PN-P1-3-PN-500-003	single	923.0	121.54	122.85	DC	12.03
167578482	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	Base Case	single	809.0	111.83	112.89	DC	8.51
167504982	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	ATSI-P2-3-CEI-345-004D	breaker	923.0	187.73	188.71	DC	19.91
167504983	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	ATSI-P2-3-CEI-345-004C	breaker	923.0	186.6	187.58	DC	20.03
167578467	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	PN-P1-2-PN-230-025	single	923.0	114.58	116.09	DC	13.89
167578468	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	PN-P1-3-PN-500-003	single	923.0	114.58	116.09	DC	13.89
167578469	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	Base Case	single	809.0	102.67	103.94	DC	10.17
164869505	200810	26KEYSTONE	230.0	PENEL EC	999332	KEYSTONE	1.0	PENEL EC	4	APS-P2-2-WP-500-DRT19	bus	634.0	139.13	140.03	DC	12.58
164869506	200810	26KEYSTONE	230.0	PENEL EC	999332	KEYSTONE	1.0	PENEL EC	4	PN-P2-2-PN-500-001T	bus	634.0	121.17	122.0	DC	11.51
164869667	200857	26MARSHAL	230.0	PENEL EC	200701	26GROVER	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	666.0	100.06	100.97	DC	13.33
164869495	200924	26CANYON	230.0	PENEL EC	200706	26N.MESHP N	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	666.0	165.37	166.05	DC	9.92

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 PROJECTIONS T LOADING %	POST PROJECTIONS T LOADING %	ACDC	MW IMPACT
164869515	200940	26SCOTCHHLLW	230.0	PENEL EC	200675	26E.TWANDA	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	570.0	149.26	150.29	DC	12.93
167578517	200940	26SCOTCHHLLW	230.0	PENEL EC	200675	26E.TWANDA	230.0	PENEL EC	1	AP-P1-3-WP-230-326T-A	single	570.0	107.56	108.87	DC	7.47
164247657	235175	01ELKO	230.0	AP	235971	01SQUABHLLW	230.0	AP	1	PN-P2-2-PN-230-007T	bus	621.0	105.62	108.21	DC	16.05
164247862	235175	01ELKO	230.0	AP	235971	01SQUABHLLW	230.0	AP	1	PN-P2-3-PN-230-14CT	breaker	621.0	105.64	108.23	DC	16.05
164247863	235175	01ELKO	230.0	AP	235971	01SQUABHLLW	230.0	AP	1	PN-P2-3-PN-230-14BT	breaker	621.0	105.61	108.19	DC	16.07
164247864	235175	01ELKO	230.0	AP	235971	01SQUABHLLW	230.0	AP	1	PN-P2-3-PN-230-0347-12-DRT-025	breaker	621.0	104.85	107.4	DC	15.86
167280539	235197	01KARNSC	138.0	AP	235152	01BUTLER	138.0	AP	1	ATSI-P2-3-CEI-345-004D	breaker	179.0	228.28	229.67	DC	5.49
167821085	235197	01KARNSC	138.0	AP	235152	01BUTLER	138.0	AP	1	PN-P1-2-PN-345-107T	single	179.0	178.09	178.93	DC	3.33
167821086	235197	01KARNSC	138.0	AP	235152	01BUTLER	138.0	AP	1	ATSI-P1-2-CEI-345-700T	single	179.0	178.09	178.93	DC	3.33
167821107	235203	01KISSNG	138.0	AP	235197	01KARNSC	138.0	AP	1	PN-P1-2-PN-345-107T	single	268.0	137.23	137.82	DC	3.51
167821108	235203	01KISSNG	138.0	AP	235197	01KARNSC	138.0	AP	1	ATSI-P1-2-CEI-345-700T	single	268.0	137.23	137.82	DC	3.51
164247620	235219	01MILESB	230.0	AP	235970	01DALE	230.0	AP	1	PN-P2-2-PN-230-014T	bus	688.0	120.34	122.0	DC	11.42
164247824	235219	01MILESB	230.0	AP	235970	01DALE	230.0	AP	1	PN-P2-3-PN-230-21AT	breaker	688.0	120.31	121.97	DC	11.42
164248049	235248	01SHINGL	230.0	AP	966040	AG1-473 TAP	230.0	AP	1	Base Case	single	520.0	134.92	136.96	DC	10.64
164248050	235248	01SHINGL	230.0	AP	966040	AG1-473 TAP	230.0	AP	1	PL:03:P12:000193	single	621.0	132.34	134.16	DC	11.26
164247602	235970	01DALE	230.0	AP	235248	01SHINGL	230.0	AP	1	PN-P2-2-PN-230-014T	bus	554.0	139.79	141.86	DC	11.47
164247767	235970	01DALE	230.0	AP	235248	01SHINGL	230.0	AP	1	PN-P2-3-PN-230-21AT	breaker	554.0	139.75	141.83	DC	11.47
164248069	235970	01DALE	230.0	AP	235248	01SHINGL	230.0	AP	1	AP-P1-3-WP-230-325T	single	554.0	106.82	108.19	DC	7.59
164248070	235970	01DALE	230.0	AP	235248	01SHINGL	230.0	AP	1	AP-P1-2-WP-230-322T	single	554.0	106.81	108.16	DC	7.48
164869555	919200	AA1-144 TAP	230.0	PENEL EC	200940	26SCOTCHHLLW	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	621.0	139.24	140.18	DC	12.93
165729023	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PL:10:P24:100548	bus	160.0	227.95	229.97	DC	7.17
165880061	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	160.0	230.27	232.29	DC	7.15
165880062	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PL:10:P45:102437	breaker	160.0	227.95	229.97	DC	7.17
166132704	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PL:10:P13:100618	single	160.0	175.24	177.92	DC	4.3
166132705	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PN-P1-2-PN-230-103AT	single	160.0	173.14	175.82	DC	4.29
165880253	941190	AE2-113 TAP	115.0	PENEL EC	200668	26FARM VLY	115.0	PENEL EC	1	PN-P2-3-PN-230-8M_SUM_WIN	breaker	160.0	120.16	122.08	DC	6.79
164869608	941420	AE2-139 TAP	230.0	PENEL EC	919200	AA1-144 TAP	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	621.0	113.68	114.62	DC	12.93
164247612	942490	AE2-262 TAP	230.0	AP	235219	01MILESB	230.0	AP	1	PN-P2-2-PN-230-014T	bus	688.0	132.43	134.22	DC	12.29
164247792	942490	AE2-262 TAP	230.0	AP	235219	01MILESB	230.0	AP	1	PN-P2-3-PN-230-21AT	breaker	688.0	132.4	134.19	DC	12.29
164248100	942490	AE2-262 TAP	230.0	AP	235219	01MILESB	230.0	AP	1	AP-P1-3-WP-230-325T	single	688.0	112.66	113.82	DC	8.0
164248101	942490	AE2-262 TAP	230.0	AP	235219	01MILESB	230.0	AP	1	AP-P1-2-WP-230-322T	single	688.0	111.29	112.45	DC	8.01

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 LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
164248039	966040	AG1-473 TAP	230.0	AP	200513	26LEWISTW N	230.0	PENEL EC	1	Base Case	single	520.0	134.82	136.87	DC	10.64
164248040	966040	AG1-473 TAP	230.0	AP	200513	26LEWISTW N	230.0	PENEL EC	1	PL:03:P12:000193	single	621.0	132.26	134.08	DC	11.26
164869510	999332	KEYSTONE	1.0	PENEL EC	200011	KEYSTONE	500.0	PENEL EC	4	APS-P2-2-WP-500-DRT19	bus	634.0	138.65	139.56	DC	12.58
164869511	999332	KEYSTONE	1.0	PENEL EC	200011	KEYSTONE	500.0	PENEL EC	4	PN-P2-2-PN-500-001T	bus	634.0	120.7	121.53	DC	11.51

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 PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
166132825	200512	26LEWISTW N	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PL:10:P13:100618	operati on	225.0	126.23	127.51	DC	6.39
167578456	200513	26LEWISTW N	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	Base Case	operati on	493.0	177.88	181.8	DC	19.29
167578457	200513	26LEWISTW N	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	PN-P1-2-PN-115-094_NON	operati on	618.0	155.92	159.37	DC	21.32
166132848	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PL:10:P13:100618	operati on	225.0	120.14	121.42	DC	6.39
166132714	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PL:10:P13:100618	operati on	160.0	189.59	191.6	DC	7.16
167578490	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	Base Case	operati on	520.0	159.72	160.47	DC	8.72
167578491	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	PN-P1-2-PN-345-003	operati on	621.0	158.6	159.28	DC	9.31
167578778	200701	26GROVER	230.0	PENEL EC	941420	AE2-139 TAP	230.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operati on	621.0	99.28	100.19	DC	12.51
166132810	200714	26SHAWVL 1	115.0	PENEL EC	200872	26BIOEN TP	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operati on	185.0	125.32	132.34	DC	12.99
166132770	200716	26PHILIPSB	115.0	PENEL EC	964450	AG1-308 TAP	115.0	PENEL EC	1	PN-P1-2-PN-115-052A	operati on	202.0	87.43	136.93	DC	100.0
166132839	200716	26PHILIPSB	115.0	PENEL EC	200904	26EAGL VAL	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operati on	244.0	103.97	119.62	DC	38.2
164248142	200726	26SHAWVL 2	230.0	PENEL EC	235248	01SHINGL	230.0	AP	1	AP-P1-3-WP-230-005A-B	operati on	666.0	126.59	127.63	DC	15.35
164248143	200726	26SHAWVL 2	230.0	PENEL EC	235248	01SHINGL	230.0	AP	1	AP-P1-3-WP-230-005-B	operati on	666.0	126.59	127.63	DC	15.35
166132835	200727	26SHAW. 2	115.0	PENEL EC	200714	26SHAWVL 1	115.0	PENEL EC	ZB	PN-P1-2-PN-115-052A	operati on	191.0	62.86	101.84	DC	74.46
166132852	200755	26WESTOVE R	115.0	PENEL EC	200801	26GARMAN	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operati on	246.0	118.5	123.78	DC	12.99
166132856	200755	26WESTOVE R	115.0	PENEL EC	200801	26GARMAN	115.0	PENEL EC	1	Base Case	operati on	193.0	96.85	102.62	DC	11.12

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 LOAD NG %	POST PROJECT LOAD NG %	AC/DC	MW IMPACT
164248117	200763	26BLAIRSVL	138.0	PENEL EC	235253	01SOCIAL	138.0	AP	1	PN-P1-2-PN-230-002	operation	287.0	102.16	103.23	DC	6.84
167578477	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	PN-P1-3-PN-500-003	operation	923.0	170.83	171.83	DC	20.04
167578478	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	PN-P1-2-PN-230-025	operation	923.0	170.83	171.83	DC	20.04
167578479	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	Base Case	operation	809.0	153.8	154.61	DC	14.19
167578657	200793	26SEWARD 2	230.0	PENEL EC	200912	26CONEMA GH	230.0	PENEL EC	1	PN-P1-2-PN-230-002	operation	1147.0	107.31	108.11	DC	20.16
167578464	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	PN-P1-3-PN-230-025	operation	923.0	170.62	171.77	DC	23.16
167578465	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	PN-P1-3-PN-500-003	operation	923.0	170.62	171.77	DC	23.16
167578466	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	Base Case	operation	809.0	149.87	150.83	DC	16.95
167578611	200811	26WARREN	230.0	PENEL EC	200918	26ERIE S TIE	230.0	PENEL EC	1	PN-P1-2-PN-115-100-A	operation	621.0	119.81	120.38	DC	7.89
167578612	200811	26WARREN	230.0	PENEL EC	200918	26ERIE S TIE	230.0	PENEL EC	1	Base Case	operation	520.0	118.87	119.48	DC	6.9
167578775	200857	26MARSHAL L	230.0	PENEL EC	200701	26GROVER	230.0	PENEL EC	1	AP-P1-2-WP-230-323T-A	operation	666.0	100.76	101.63	DC	12.91
166132775	200904	26EAGL VAL	115.0	PENEL EC	200527	26TYRONE N	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	242.0	139.89	155.67	DC	38.2
166132780	200904	26EAGL VAL	115.0	PENEL EC	200527	26TYRONE N	115.0	PENEL EC	1	Base Case	operation	200.0	96.12	114.14	DC	36.03
167578598	200912	26CONEMA GH	230.0	PENEL EC	200005	CONEM-GH	500.0	PENEL EC	3	PN-P1-2-PN-230-002	operation	1066.0	115.47	116.33	DC	20.16
167578515	200940	26SCOTCHHL LW	230.0	PENEL EC	200675	26E.TWAND A	230.0	PENEL EC	1	AP-P1-3-WP-230-326T-A	operation	570.0	146.88	147.86	DC	12.45
167578516	200940	26SCOTCHHL LW	230.0	PENEL EC	200675	26E.TWAND A	230.0	PENEL EC	1	Base Case	operation	491.0	131.16	131.94	DC	8.52
167578604	208005	JUNI BU2	230.0	PPL	208004	JUNI BU1	230.0	PPL	1	PL:10:P13:001633	operation	641.0	117.11	118.94	DC	11.73
167578645	208005	JUNI BU2	230.0	PPL	207955	DAUP TR2	230.0	PPL	1	PL:10:P13:001616	operation	531.0	114.68	115.19	DC	6.03
167821407	235157	01CARB	138.0	AP	235159	01CARB J	138.0	AP	1	AP-P1-3-WP-230-001	operation	299.0	109.46	110.9	DC	9.51
167821346	235159	01CARB J	138.0	AP	235174	01ELKO	138.0	AP	1	AP-P1-3-WP-230-001	operation	192.0	119.66	121.3	DC	6.96
164248205	235175	01ELKO	230.0	AP	235971	01SQUABHL LW	230.0	AP	1	AP-P1-3-WP-230-326T-B	operation	621.0	104.77	107.32	DC	15.86
167821083	235197	01KARNSC	138.0	AP	235152	01BUTLER	138.0	AP	1	PN-P1-2-PN-345-107T	operation	179.0	226.56	227.96	DC	5.55
167821084	235197	01KARNSC	138.0	AP	235152	01BUTLER	138.0	AP	1	ATSI-P1-2-CEI-345-700T	operation	179.0	226.56	227.96	DC	5.55
167821105	235203	01KISSNG	138.0	AP	235197	01KARNSC	138.0	AP	1	ATSI-P1-2-CEI-345-700T	operation	268.0	173.13	174.12	DC	5.86
167821106	235203	01KISSNG	138.0	AP	235197	01KARNSC	138.0	AP	1	PN-P1-2-PN-345-107T	operation	268.0	173.13	174.12	DC	5.86
164248171	235219	01MILES B	230.0	AP	235970	01DALE	230.0	AP	1	AP-P1-2-WP-230-322T	operation	688.0	121.36	122.18	DC	12.4
164248254	235220	01MOSHAN	230.0	AP	942490	AE2-262 TAP	230.0	AP	1	AP-P1-2-WP-230-322T	operation	688.0	105.57	106.45	DC	13.35
164248044	235248	01SHINGL	230.0	AP	966040	AG1-473 TAP	230.0	AP	1	PL:03:P12:000193	operation	621.0	179.67	181.04	DC	18.76
164248046	235248	01SHINGL	230.0	AP	966040	AG1-473 TAP	230.0	AP	1	Base Case	operation	520.0	175.97	177.51	DC	17.73
164248064	235970	01DALE	230.0	AP	235248	01SHINGL	230.0	AP	1	AP-P1-3-WP-230-325T	operation	554.0	140.44	141.47	DC	12.65
169558872	919200	AA1-144 TAP	230.0	PENEL EC	200940	26SCOTCHHL LW	230.0	PENEL EC	1	AP-P1-3-WP-230-326T-A	operation	621.0	137.04	137.94	DC	12.45
169558873	919200	AA1-144 TAP	230.0	PENEL EC	200940	26SCOTCHHL LW	230.0	PENEL EC	1	Base Case	operation	520.0	126.5	127.24	DC	8.52
166132702	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PL:10:P13:100618	operation	160.0	225.92	227.94	DC	7.16

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 LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
166132969	941190	AE2-113 TAP	115.0	PENEL EC	200668	26FARM VLY	115.0	PENEL EC	1	PN-P1-2-PN-230-006	operation	160.0	104.93	106.85	DC	6.8
169559022	941420	AE2-139 TAP	230.0	PENEL EC	919200	AA1-144 TAP	230.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	621.0	111.19	112.09	DC	12.51
164248097	942490	AE2-262 TAP	230.0	AP	235219	01MILES B	230.0	AP	1	AP-P1-3-WP-230-325T	operation	688.0	134.12	134.99	DC	13.33
164248099	942490	AE2-262 TAP	230.0	AP	235219	01MILES B	230.0	AP	1	Base Case	operation	548.0	115.32	115.83	DC	6.16
166132829	944180	AF1-086 TAP	115.0	PENEL EC	200755	26WESTOVER	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	237.0	123.8	129.29	DC	12.99
166132832	944180	AF1-086 TAP	115.0	PENEL EC	200755	26WESTOVER	115.0	PENEL EC	1	Base Case	operation	175.0	107.9	114.26	DC	11.12
166132749	964450	AG1-308 TAP	115.0	PENEL EC	200727	26SHAW. 2	115.0	PENEL EC	1	PN-P1-2-PN-115-052A	operation	202.0	87.33	136.83	DC	100.0
164248034	966040	AG1-473 TAP	230.0	AP	200513	26LEWISTWN	230.0	PENEL EC	1	PL:03:P12:000193	operation	621.0	179.59	180.95	DC	18.76
164248036	966040	AG1-473 TAP	230.0	AP	200513	26LEWISTWN	230.0	PENEL EC	1	Base Case	operation	520.0	175.88	177.42	DC	17.73

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
165880072,165729028,165880071,166132716,166132717	5	26SHADE GP 115.0 kV - AE1-071 TAP 115.0 kV Ckt 1	PENELEC PN-AF2-F-0015A (1424) : Reconductor 6.4 miles of line. Project Type : FAC Cost : \$19,600,000 Time Estimate : 30.0 Months PN-AF2-F-0015B (1425) : Replace line trap at Shade Gap Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months PN-AF2-F-0015C (1426) : Replace transmission line drop at Shade Gap Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months PN-AF2-F-0015D (1427) : Replace adjust CTs at Shade Gap Project Type : FAC Cost : \$800,000 Time Estimate : 12.0 Months PN-AF2-F-0015E (1428) : Replace substation conductor (bus taps) at Shade Gap Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months PN-AG1-F-0016F (1429) : Replace breaker at Shade Gap Project Type : FAC Cost : \$900,000 Time Estimate : 12.0 Months Note: It should be noted that some of the contingencies taken in the analysis may not be valid due to system condition changes that were not captured in the model. This will be re-evaluated for validity in the System Impact phase, though the worst case contingency driving the reinforcements listed above is valid.	\$21,900,000

ID	Idx	Facility	Upgrade Description	Cost
167578458,167578459	4	26LEWISTWN 230.0 kV - JUNI BU2 230.0 kV Ckt 1	<u>PPL</u> R-PL-0006 (784) : Rebuild PPL's ~0.9 miles LEWI-JUNI & JUNI-DAUP 230kV line and replace terminal equipment at Juniata 230kV. Project Type : FAC Cost : \$3,450,000 Time Estimate : 24.0 Months R-PL-0011 (786) : Replace limiting TR2 lead equipment and bus sections at Juniata 230kV yard. Project Type : FAC Cost : \$750,000 Time Estimate : 24.0 Months <u>PENELEC</u> PN-AF2-F-0018A (1461) : PPL would need to replace their 1.05 mile section of the limiting conductor/ equipment and provide estimates for their replacement. Project Type : FAC Cost : \$4,575,000 Time Estimate : N/A Months PN-AF2-F-0018B (1462) : Rebuild 24.59 miles of line. Project Type : FAC Cost : \$105,265,000 Time Estimate : 48.0 Months Note: It should be noted that some of the contingencies taken in the analysis may not be valid due to system condition changes that were not captured in the model. This will be re-evaluated for validity in the System Impact phase, though the worst case contingency driving the reinforcements listed above is valid.	\$114,040,000
164869648	9	26GROVER 230.0 kV - AE2-139 TAP 230.0 kV Ckt 1	<u>PENELEC</u> No violation, incorrect contingency.	\$0
164869555	26	AA1-144 TAP 230.0 kV - 26SCOTCHHLLW 230.0 kV Ckt 1	Note: It should be noted that some of the contingencies taken in the analysis may not be valid due to system condition changes that were not captured in the model. This will be re-evaluated for validity in the System Impact phase.	
164869495	18	26CANYON 230.0 kV - 26N.MESHPN 230.0 kV Ckt 1		
164869608	29	AE2-139 TAP 230.0 kV - AA1-144 TAP 230.0 kV Ckt 1		
164869470	8	26E.TWANDA 230.0 kV - 26CANYON 230.0 kV Ckt 1		
164869667	17	26MARSHALL 230.0 kV - 26GROVER 230.0 kV Ckt 1		

ID	Idx	Facility	Upgrade Description	Cost
164869506,164869505	16	26KEYSTONE 230.0 kV - KEYSTONE 1.0 kV Ckt 4	PENELEC PN-AF2-F-0005 (1358) : Construct 500 kV yard consisting of three-500 kV breakers configured in a breaker-and-a-half layout (initially a ring bus) Tap the Keystone - Conemaugh 500 kV line and loop into the new Homer City 500 kV yard Install one 500/345 kV transformer Install a new 345 kV breaker-and-a-half string using three new breakers Project Type : CON Cost : \$85,600,000 Time Estimate : 48.0 Months	\$85,600,000
164869511,164869510	32	KEYSTONE 1.0 kV - KEYSTONE 500.0 kV Ckt 4		
167578482,167578481,167578480,167504985,167504984	14	26HOMER CT 230.0 kV - 26SHELOCTA 230.0 kV Ckt 1		
167504983,167504982,167578467,167578469,167578468	15	26SHELOCTA 230.0 kV - 26KEYSTONE 230.0 kV Ckt 1		
164248145,164248146	12	26SHAWVL 2 230.0 kV - 01SHINGL 230.0 kV Ckt 1	APS WP-AG1-F-0016A (1223) : Replace risers at Shingletown substation with 1033 ACSS. Project Type : FAC Cost : \$162,816 Time Estimate : 12.0 Months WP-AG1-F-0016B (1224) : Replace 1200 A line side and bus side disconnect switches at Shingletown substation. Adjust line relaying as necessary at Shingletown. Project Type : FAC Cost : \$455,884 Time Estimate : 12.0 Months PENELEC PN-AF2-F-0023A (1431) : Reconductor 40.7 miles of line. Project Type : FAC Cost : \$174,250,000 Time Estimate : 90.0 Months	\$174,868,699
165880279	6	26RIDGWAY 115.0 kV - 26FOREST 115.0 kV Ckt 1	PENELEC PN-AF2-F-0063A (1463) : Replace line traps at Forest and Ridgway substations. Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months PN-AF2-F-0063B (1464) : Adjust relay settings at Forest. Project Type : FAC Cost : \$450,000 Time Estimate : 12.0 Months PN-AF2-F-0063C (1465) : Replace line relays. Project Type : FAC Cost : \$450,000 Time Estimate : 12.0 Months	\$1,100,000

ID	Idx	Facility	Upgrade Description	Cost
166132851,165 729099,165880 186,166132850, 165880185	1	26REED TAP 115.0 kV - 26SHADE GP 115.0 kV Ckt 1	PENELEC PN-AF2-F-0016A (1479) : Rebuild 22.36 miles of 115 kV line. Project Type : FAC Cost : \$67,975,000 Time Estimate : 42.0 Months PN-AF2-F-0016B (1480) : Rebuild 0.3 miles of line and replace line drop at Reed Gap Switching Station Project Type : FAC Cost : \$1,050,000 Time Estimate : 18.0 Months PN-AF2-F-0016C (1481) : Adjust CT ratios at Shade Gap Project Type : FAC Cost : \$800,000 Time Estimate : 12.0 Months PN-AF2-F-0016D (1482) : Replace substation conductor at Shade Gap Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months Note: It should be noted that some of the contingencies taken in the analysis may not be valid due to system condition changes that were not captured in the model. This will be re-evaluated for validity in the System Impact phase.	\$70,025,000

ID	Idx	Facility	Upgrade Description	Cost
164248070,164 248069,164247 602,164247767	25	01DALE 230.0 kV - 01SHINGL 230.0 kV Ckt 1	<u>APS</u> WP-AG1-F-0013A (1208) : Replace WT at Shingletown substation. Project Type : FAC Cost : \$162,816 Time Estimate : 12.0 Months WP-AG1-F-0013B (1209) : Replace 1200 A line and bus side disconnect switches at Shingletown substation. Project Type : FAC Cost : \$716,389 Time Estimate : 12.0 Months WP-AG1-F-0013C (1210) : Replace 1272 ACSR 45/7 SCCIR Bus & Line side breaker risers at Shingletown substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0013D (1211) : Replace 1272 ACSR 45/7 Transmission Line conductor at Dale Summit substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0013E (1212) : Replace 1272 ACSR 45/7 Transmission Line conductor at Shingletown substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0013F (1213) : Reconductor 5.47 miles (45 spans) of 1272 ACSR 45/7 Transmission Line from Shingletown to Dale Summit. Project Type : FAC Cost : \$24,936,841 Time Estimate : 42.0 Months	\$26,206,803
164869515,167 578517	19	26SCOTCHHLLW 230.0 kV - 26E.TWANDA 230.0 kV Ckt 1	<u>PENELEC</u> PN-AF2-F-0044A (1417) : Replace line trap at East Towanda Project Type : FAC Cost : \$225,000 Time Estimate : 12.0 Months PN-AF2-F-0044B (1418) : Replace substation conductor at East Towanda Project Type : FAC Cost : \$225,000 Time Estimate : 12.0 Months Note: It should be noted that some of the contingencies taken in the analysis may not be valid due to system condition changes that were not captured in the model. This will be re-evaluated for validity in the System Impact phase.	\$450,000

ID	Idx	Facility	Upgrade Description	Cost
165880164,166 132827,166132 828,165729089, 165880163	3	26LEWISTWN 115.0 kV - 26REED TAP 115.0 kV Ckt 1	PENELEC PN-AF2-F-0017A (1446) : Rebuild 11.84 miles of line. Project Type : FAC Cost : \$36,200,000 Time Estimate : 36.0 Months PN-AF2-F-0017B (1447) : Rebuild 0.18 miles of line and replace line drop at Reed Gap Switching Station. Project Type : FAC Cost : \$650,000 Time Estimate : 18.0 Months PN-AF2-F-0017C (1448) : Replace line trap at Lewistown Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months Note: It should be noted that some of the contingencies taken in the analysis may not be valid due to system condition changes that were not captured in the model. This will be re-evaluated for validity in the System Impact phase.	\$37,050,000
165880061,165 729023,165880 062,166132705, 166132704	27	AE1-071 TAP 115.0 kV - 26ROXBURY 115.0 kV Ckt 1	PENELEC PN-AF2-F-0014A (1435) : Reconnector 6.4 miles of line. Project Type : FAC Cost : \$15,700,000 Time Estimate : 36.0 Months PN-AF2-F-0014B (1436) : Replace substation conductor (including bus, risers, line trap leads, and breaker leads) at Roxbury Project Type : FAC Cost : \$175,000 Time Estimate : 12.0 Months PN-AF2-F-0014C (1437) : Replace transmission line drop at Roxbury Project Type : FAC Cost : \$175,000 Time Estimate : 12.0 Months PN-AF2-F-0014D (1438) : Replace circuit breaker and CTs at Roxbury Project Type : FAC Cost : \$800,000 Time Estimate : 12.0 Months Note: It should be noted that some of the contingencies taken in the analysis may not be valid due to system condition changes that were not captured in the model. This will be re-evaluated for validity in the System Impact phase.	\$16,850,000

ID	Idx	Facility	Upgrade Description	Cost
167821085,167 821086,167280 539	21	01KARNSC 138.0 kV - 01BUTLER 138.0 kV Ckt 1	<u>APS</u> WP-AG1-F-0008A (1190) : Replace 336 ACSR, 954 ACSR, & 1024.5 ACAR bus conductor at Karns City substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0008B (1191) : Replace 350 CU, 1.00 IPS CU, & 954 ACSR bus conductor at Butler substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0008C (1192) : Replace 336 ACSR line risers at Butler substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0008D (1193) : Replace 336 ACSR line risers at Karns City substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0008E (1194) : Reconductor 15.6 miles of 336 ACSR on the Butler - Karns City 138 kV line (102 spans). Project Type : FAC Cost : \$40,638,780 Time Estimate : 60.0 Months WP-AG1-F-0008F (1195) : Replace 600 A line side and bus side disconnects at Butler substation. Project Type : FAC Cost : \$390,758 Time Estimate : 12.0 Months WP-AG1-F-0008G (1196) : Replace 350 CU wire to WT at Butler substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0008H (1197) : Replace relaying (WT, ZR) at Butler substation. Project Type : FAC Cost : \$455,884 Time Estimate : 12.0 Months WP-AG1-F-0008I (1198) : Replace relaying (RT, OR, WT, MT) at Karns City substation. Project Type : FAC Cost : \$455,884 Time Estimate : 12.0 Months WP-AG1-F-0008J (1199) : Replace 1200 A circuit breaker at Karns City substation. Project Type : FAC Cost : \$781,515 Time Estimate : 12.0 Months	\$43,374,082

ID	Idx	Facility	Upgrade Description	Cost
167578492	7	26GLADE 230.0 kV - 26WARREN 230.0 kV Ckt 1	<u>PENELEC</u> PN-AF2-F-0019A (1359) : Replace substation conductor at Warren and Glade substations Project Type : FAC Cost : \$350,000 Time Estimate : 12.0 Months PN-AF2-F-0019B (1360) : Rebuild 11.53 miles of line. Project Type : FAC Cost : \$42,390,000 Time Estimate : 48.0 Months	\$42,740,000
165880253	28	AE2-113 TAP 115.0 kV - 26FARM VLY 115.0 kV Ckt 1	<u>PENELEC</u> PN-AG1-F-0012A (1394) : Reconductor 5.6 miles of line. Project Type : FAC Cost : \$13,700,000 Time Estimate : 36.0 Months PN-AG1-F-0012B (1395) : Replace substation conductor at Farmers Valley Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months	\$13,900,000
165880312,165880311,165880310	2	26SEWARD 115.0 kV - 26FLORENCE 115.0 kV Ckt 1	<u>PENELEC</u> PN-AF2-F-0029A (1487) : Replace bus conductor at Seward. Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months	\$200,000
165880201,165880200,165729097	11	26SHAWVL 1 115.0 kV - 26ROCKTON 115.0 kV Ckt 1	<u>PENELEC</u> PN-AF2-F-0050A (1432) : Replace line trap at Shawville. Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months PN-AF2-F-0050B (1433) : Reconductor 8.63 miles of line. Replace line drops at Shawville. Project Type : FAC Cost : \$26,475,000 Time Estimate : 48.0 Months	\$26,675,000

ID	Idx	Facility	Upgrade Description	Cost
164248040,164 248039	31	AG1-473 TAP 230.0 kV - 26LEWISTWN 230.0 kV Ckt 1	<u>APS</u> WP-AG1-F-0028A (1251) : Replace 1033.5 ACSR 54/7 SCCIR (Bus taps, bus & line side disconnect leads, line risers) at Shingletown substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0028B (1252) : Replace 1200 A bus & line side disconnect switches at Shingletown substation. Project Type : FAC Cost : \$716,389 Time Estimate : 12.0 Months WP-AG1-F-0028C (1253) : Replace 2.00 IPS AL Pipe SCCIR (Line & bus side breaker risers) at Shingletown substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0028D (1254) : Replace circuit breaker and associated equipment at Shingletown on the Lewistown 230 kV terminal. Project Type : FAC Cost : \$1,042,020 Time Estimate : 12.0 Months WP-AG1-F-0028E (1255) : Replace ZR relays at Shingletown substation. Project Type : FAC Cost : \$1,107,146 Time Estimate : 12.0 Months <u>PENELEC</u> PN-AG1-F-0027A (1509) : Reconductor 2.70 miles of line. Project Type : FAC Cost : \$8,350,000 Time Estimate : 24.0 Months Note: It should be noted that some of the contingencies taken in the analysis may not be valid due to system condition changes that were not captured in the model. This will be re-evaluated for validity in the System Impact phase, though the worst case contingency driving the reinforcements listed above is valid.	\$11,476,059

ID	Idx	Facility	Upgrade Description	Cost
164248049,164 248050	24	01SHINGL 230.0 kV - AG1-473 TAP 230.0 kV Ckt 1	<u>APS</u> WP-AG1-F-0028A (1251) : Replace 1033.5 ACSR 54/7 SCCIR (Bus taps, bus & line side disconnect leads, line risers) at Shingletown substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0028B (1252) : Replace 1200 A bus & line side disconnect switches at Shingletown substation. Project Type : FAC Cost : \$716,389 Time Estimate : 12.0 Months WP-AG1-F-0028C (1253) : Replace 2.00 IPS AL Pipe SCCIR (Line & bus side breaker risers) at Shingletown substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0028D (1254) : Replace circuit breaker and associated equipment at Shingletown on the Lewistown 230 kV terminal. Project Type : FAC Cost : \$1,042,020 Time Estimate : 12.0 Months WP-AG1-F-0028E (1255) : Replace ZR relays at Shingletown substation. Project Type : FAC Cost : \$1,107,146 Time Estimate : 12.0 Months	\$3,126,060
167821107,167 821108	22	01KISSNG 138.0 kV - 01KARNSC 138.0 kV Ckt 1	<u>APS</u> WP-AG1-F-0003A (1175) : Reconductor 7.5 miles of 556.5 ACSR from Karns City to Kissinger Jct (47 spans). Project Type : FAC Cost : \$19,537,875 Time Estimate : 42.0 Months WP-AG1-F-0003B (1176) : Replace relaying (RT, WT, MT, ZR, OR) at Karns City substation. Project Type : FAC Cost : \$455,884 Time Estimate : 12.0 Months WP-AG1-F-0003C (1177) : Replace 954 ACSR & 1024.5 ACAR bus conductor at Karns City substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0003D (1178) : Replace 1200 A circuit breaker at Karns City substation. Project Type : FAC Cost : \$911,768 Time Estimate : 12.0 Months	\$21,035,779

ID	Idx	Facility	Upgrade Description	Cost
165729098,165 880209,165880 210	10	26ROCKTON 115.0 kV - 26DUBOIS 115.0 kV Ckt 1	<u>PENELEC</u> PN-AF2-F-0054A (1472) : Replace line trap at Dubois. Project Type : FAC Cost : \$200,000 Time Estimate : 12.0 Months PN-AF2-F-0054B (1473) : Reconductor 11.67 miles of line. Project Type : FAC Cost : \$28,640,000 Time Estimate : 48.0 Months	\$28,840,000
164247620,164 247824	23	01MILESB 230.0 kV - 01DALE 230.0 kV Ckt 1	<u>APS</u> WP-AG1-F-0021A (1234) : Replace 1200 A bus & line side disconnect switches at Milesburg substation. Project Type : FAC Cost : \$521,010 Time Estimate : 12.0 Months WP-AG1-F-0021B (1235) : Replace 1272 ACSR 45/7 SCCIR (bus & line side breaker risers, WT leads) at Milesburg substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0021C (1236) : Replace 1272 ACSR 45/7 TL conductor at Milesburg substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0021D (1237) : Replace 1272 ACSR 45/7 TL conductor at Dale Summit substation. Project Type : FAC Cost : \$130,252 Time Estimate : 12.0 Months WP-AG1-F-0021E (1238) : Reconductor 8.44 miles (62 spans) of 1272 ACSR 45/7 on the Milesburg - Dale Summit 230 kV line. Project Type : FAC Cost : \$38,476,588 Time Estimate : 48.0 Months	\$39,388,356

ID	Idx	Facility	Upgrade Description	Cost
164247612,164 248101,164248 100,164247792	30	AE2-262 TAP 230.0 kV - 01MILES 230.0 kV Ckt 1	<u>APS</u> WP-AG1-F-0014A (1214) : Replace 1200 A bus side and line side disconnects at Milesburg Substation. Project Type : FAC Cost : \$455,884 Time Estimate : 12.0 Months WP-AG1-F-0014B (1215) : Replace 1272 ACSR bus conductor at Milesburg substation. Project Type : FAC Cost : \$162,816 Time Estimate : 12.0 Months WP-AG1-F-0014C (1216) : Replace 1272 ACSR line riser at Milesburg substation. Project Type : FAC Cost : \$162,816 Time Estimate : 12.0 Months WP-AG1-F-0014D (1217) : Reconductor 15.3 miles of 1272 ACSR on the Milesburg - Moshannon 230 kV line, from Milesburg substation to structure 102, where new generator AE2-262 tap will be located (103 spans). Project Type : FAC Cost : \$69,750,214 Time Estimate : 54.0 Months WP-AG1-F-0014E (1218) : Replace 2000 A WT at Milesburg substation. Project Type : FAC Cost : \$162,816 Time Estimate : 12.0 Months WP-AG1-F-0014F (1219) : Replace 2000 A WT at Moshannon substation. Project Type : FAC Cost : \$162,816 Time Estimate : 12.0 Months	\$70,857,362
			TOTAL COST	\$849,703,200

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
165880185	200519	26REED TAP	PENELEC	200522	26SHADE GP	PENELEC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	225.0	123.46	124.74	DC	6.39

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200812	26ALY HYDR	0.3605	50/50	0.3605
200852	26WARR RDG	0.1998	Adder	0.24
235003	AC1-025 E	0.1664	50/50	0.1664
236828	01GRAYMONT	0.4282	50/50	0.4282
290086	Q-036 E	2.0788	Adder	2.45
293301	N-039 E	3.2460	Adder	3.82
294515	O38_P22	2.8403	Adder	3.34
921642	AA2-000	23.0463	Adder	27.11
930511	AB2-092	0.8462	Adder	1.0
936421	AD2-055	1.7422	Adder	2.05
936991	AD2-133 C	0.9354	Adder	1.1
936992	AD2-133 E	4.2786	Adder	5.03
939171	AE1-147 C	1.2773	50/50	1.2773
939172	AE1-147 E	0.8515	50/50	0.8515
939591	AE1-188 C	-0.6130	Adder	-0.72
940201	AE2-001 C	1.2815	50/50	1.2815
940202	AE2-001 E	0.8543	50/50	0.8543
940681	AE2-055 C (Suspended)	1.3447	50/50	1.3447
940682	AE2-055 E (Suspended)	0.8965	50/50	0.8965
941231	AE2-117 C	0.9303	Adder	1.09
941232	AE2-117 E	0.6202	Adder	0.73
941241	AE2-118 C	0.8844	Adder	1.04
941242	AE2-118 E	0.5896	Adder	0.69
941261	AE2-120 C	1.2838	50/50	1.2838
941262	AE2-120 E	0.8558	50/50	0.8558
941271	AE2-121 C	0.6753	50/50	0.6753
941272	AE2-121 E	0.4509	50/50	0.4509
941321	AE2-126 C	0.6212	Adder	0.73
941322	AE2-126 E	0.4141	Adder	0.49
941331	AE2-129 C	0.6514	Adder	0.77
941332	AE2-129 E	0.4342	Adder	0.51
941351	AE2-131 C (Suspended)	0.6514	Adder	0.77
941352	AE2-131 E (Suspended)	0.4342	Adder	0.51
942121	AE2-224 C	2.6464	Adder	3.11
942122	AE2-224 E	1.7643	Adder	2.08
942351	AE2-248 C	1.0547	50/50	1.0547
942352	AE2-248 E	0.7031	50/50	0.7031
942491	AE2-262 C	3.7800	Adder	4.45
942492	AE2-262 E	2.5401	Adder	2.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942501	AE2-263 C	3.5532	Adder	4.18
942502	AE2-263 E	2.3723	Adder	2.79
942511	AE2-264 C	3.8801	Adder	4.56
942512	AE2-264 E	2.5867	Adder	3.04
943751	AF1-043	5.2265	Adder	6.15
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.4148	50/50	1.4148
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.7958	50/50	0.7958
944311	AF1-099 C	5.7380	Adder	6.75
944312	AF1-099 E	3.8253	Adder	4.5
944321	AF1-100 C	9.7346	Adder	11.45
944322	AF1-100 E	6.4898	Adder	7.64
944471	AF1-112 C	1.3115	50/50	1.3115
944472	AF1-112 E	0.8743	50/50	0.8743
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3308	50/50	1.3308
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.8872	50/50	0.8872
944691	AF1-134 C	0.5302	Adder	0.62
944692	AF1-134 E	0.3535	Adder	0.42
944771	AF1-142 C	9.1807	Adder	10.8
944772	AF1-142 E	6.1205	Adder	7.2
944881	AF1-153 C O1	0.5901	Adder	0.69
944882	AF1-153 E O1	0.3934	Adder	0.46
944901	AF1-155 C	0.5866	Adder	0.69
944902	AF1-155 E	0.3911	Adder	0.46
945011	AF1-166 C	-0.5009	Adder	-0.59
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.2836	50/50	1.2836
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.8558	50/50	0.8558
945591	AF1-224 C	-0.3844	Adder	-0.45
946421	AF1-306 C	2.5604	Adder	3.01
946422	AF1-306 E	10.2416	Adder	12.05
957451	AF2-039 C	0.4623	Adder	0.54
957452	AF2-039 E	0.3082	Adder	0.36
957561	AF2-050 C	1.3232	Adder	1.56
957562	AF2-050 E	0.8821	Adder	1.04
957931	AF2-087 C (Suspended)	0.1706	Adder	0.2
957932	AF2-087 E (Suspended)	0.2350	Adder	0.28
957941	AF2-088 C	0.2226	Adder	0.26
957942	AF2-088 E	0.1484	Adder	0.17
958071	AF2-101 C	-0.0823	Adder	-0.1
958271	AF2-121 C	0.6514	Adder	0.77
958272	AF2-121 E	0.4342	Adder	0.51
958601	AF2-151 C	-0.0812	Adder	-0.1
959241	AF2-215 C	-0.1404	Adder	-0.17
959802	AF2-271 E	0.2111	Adder	0.25
959843	AF2-275 BAT	0.0921	Merchant Transmission	0.0921
959853	AF2-276 BAT	0.0921	Merchant Transmission	0.0921

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960022	AF2-293 E	0.1239	50/50	0.1239
960041	AF2-295 C	0.5866	Adder	0.69
960042	AF2-295 E	0.3911	Adder	0.46
960051	AF2-296 C	0.5302	Adder	0.62
960052	AF2-296 E	0.3535	Adder	0.42
962411	AG1-090 C O1	1.7261	Adder	3.83
962412	AG1-090 E O1	1.1508	Adder	2.55
962951	AG1-144 C	0.3452	Adder	0.77
962952	AG1-144 E	0.2302	Adder	0.51
963571	AG1-206 C	0.1737	Adder	0.39
963572	AG1-206 E	0.0935	Adder	0.21
963891	AG1-242 C	0.1522	Adder	0.34
963892	AG1-242 E	0.0820	Adder	0.18
964031	AG1-257 C	0.9032	50/50	0.9032
964032	AG1-257 E	1.2623	50/50	1.2623
964041	AG1-258 C	0.9032	50/50	0.9032
964042	AG1-258 E	1.2623	50/50	1.2623
964191	AG1-280 C	0.2720	Adder	0.6
964192	AG1-280 E	0.1814	Adder	0.4
964201	AG1-281 C	0.2737	Adder	0.61
964202	AG1-281 E	0.1824	Adder	0.4
964391	AG1-301 C	0.5082	Adder	1.13
964392	AG1-301 E	0.3388	Adder	0.75
964451	AG1-308 C O1	0.2426	Adder	0.54
964452	AG1-308 E O1	0.3390	Adder	0.75
965121	AG1-377 C O1	0.3452	Adder	0.77
965122	AG1-377 E O1	0.2302	Adder	0.51
965131	AG1-378 C O1	0.3452	Adder	0.77
965132	AG1-378 E O1	0.2302	Adder	0.51
965201	AG1-385 C	0.4021	Adder	0.89
965202	AG1-385 E	0.1191	Adder	0.26
965301	AG1-395 C	0.4436	Adder	0.98
965302	AG1-395 E	0.1318	Adder	0.29
966041	AG1-473 C	4.4668	50/50	4.4668
966042	AG1-473 E	2.9779	50/50	2.9779
966152	AG1-484 BAT	0.6272	Merchant Transmission	0.6272
966463	AG1-515 BAT	0.3718	Merchant Transmission	0.3718
966891	AG1-560 BAT	12.4896	50/50	12.4896
966901	AG1-561 BAT	5.4371	50/50	5.4371
WEC	WEC	0.0394	Confirmed LTF	0.0394
LGEE	LGEE	0.0647	Confirmed LTF	0.0647
CALDERWOOD	CALDERWOOD	0.0055	Confirmed LTF	0.0055
CBM-W2	CBM-W2	0.5555	Confirmed LTF	0.5555
TVA	TVA	0.0322	Confirmed LTF	0.0322
O-066	O-066	1.7633	Confirmed LTF	1.7633
SIGE	SIGE	0.0381	Confirmed LTF	0.0381
CHEOAH	CHEOAH	0.0070	Confirmed LTF	0.0070
CBM-S1	CBM-S1	0.0144	Confirmed LTF	0.0144
G-007	G-007	0.3034	Confirmed LTF	0.3034
HAMLET	HAMLET	0.0878	Confirmed LTF	0.0878
MEC	MEC	0.1621	Confirmed LTF	0.1621
LAGN	LAGN	0.0543	Confirmed LTF	0.0543

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CATAWBA	CATAWBA	0.0374	Confirmed LTF	0.0374
CBM-W1	CBM-W1	2.1170	Confirmed LTF	2.1170

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
165880310	200741	26SEWARD	PENELEC	200766	26FLORENCE	PENELEC	1	PN-P2-3-PN-230-0183-208	breaker	263.0	102.22	103.22	DC	5.86

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200503	26C.SLOPE (Deactivation : 07/06/2019)	0.8909	50/50	0.8909
200794	26CONEMAGH	0.2735	50/50	0.2735
200834	26SW_E13_K22	0.0155	50/50	0.0155
200835	26ARN_Z1-066	0.6157	Adder	0.72
200846	26FORWARD	0.0615	50/50	0.0615
200852	26WARR RDG	0.1320	Adder	0.16
200864	K-013 E	2.8269	50/50	2.8269
200883	Q-053 E	3.9870	Adder	4.69
200888	26HIGHLAND	0.1454	50/50	0.1454
200889	26STNY CRK	0.1483	50/50	0.1483
200925	26R32	0.2280	50/50	0.2280
202225	26SCI_S29B	0.0309	50/50	0.0309
203915	26BF_Z2-108	1.3853	Adder	1.63
290086	Q-036 E	2.3695	Adder	2.79
292350	K-023	2.5320	Adder	2.98
292542	L-013 1	2.4627	Adder	2.9
293301	N-039 E	4.0338	Adder	4.75
293393	V3-030E	2.1204	Adder	2.49
293432	R-040 E	0.1385	Adder	0.16
293603	O-018 E	5.9160	50/50	5.9160
293902	O-048 E	2.2164	Adder	2.61
294515	O38_P22	3.5295	Adder	4.15
294903	P-060 E	4.6439	50/50	4.6439
296332	R-032 E	6.8262	50/50	6.8262
913142	Y1-033 E OP1	1.9588	Adder	2.3
936991	AD2-133 C	1.0663	Adder	1.25
936992	AD2-133 E	4.8769	Adder	5.74
938351	AE1-053	0.7696	Adder	0.91
938881	AE1-116	0.4900	50/50	0.4900
938993	AE1-128 C	8.1036	50/50	8.1036
938994	AE1-128 E	5.4024	50/50	5.4024
941231	AE2-117 C	0.6447	Adder	0.76
941232	AE2-117 E	0.4298	Adder	0.51
941241	AE2-118 C	0.6817	Adder	0.8
941242	AE2-118 E	0.4544	Adder	0.53
941331	AE2-129 C	0.5979	Adder	0.7
941332	AE2-129 E	0.3986	Adder	0.47
941351	AE2-131 C (Suspended)	0.5979	Adder	0.7
941352	AE2-131 E (Suspended)	0.3986	Adder	0.47

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942121	AE2-224 C	3.9270	Adder	4.62
942122	AE2-224 E	2.6180	Adder	3.08
942361	AE2-249 C	0.9117	50/50	0.9117
942362	AE2-249 E	0.6078	50/50	0.6078
942511	AE2-264 C	2.4704	Adder	2.91
942512	AE2-264 E	1.6470	Adder	1.94
943711	AF1-039 C O1	0.5182	Adder	0.61
943712	AF1-039 E O1	0.3455	Adder	0.41
944181	AF1-086 C O1	1.1430	Adder	1.34
944182	AF1-086 E O1	4.9728	Adder	5.85
944691	AF1-134 C	0.5781	Adder	0.68
944692	AF1-134 E	0.3854	Adder	0.45
944751	AF1-140 C	1.0562	50/50	1.0562
944752	AF1-140 E	0.7042	50/50	0.7042
944781	AF1-143 C	4.6175	Adder	5.43
944782	AF1-143 E	2.4627	Adder	2.9
945671	AF1-232 C (Withdrawn : 01/19/2021)	11.4369	50/50	11.4369
945672	AF1-232 E (Withdrawn : 01/19/2021)	6.1583	50/50	6.1583
946571	AF1-321 C O1	1.4849	50/50	1.4849
946572	AF1-321 E O1	0.9899	50/50	0.9899
957001	AF2-001 C O1	1.4849	50/50	1.4849
957002	AF2-001 E O1	0.9899	50/50	0.9899
957011	AF2-002 C O1	0.7424	50/50	0.7424
957012	AF2-002 E O1	0.4950	50/50	0.4950
957512	AF2-045 E	2.0329	50/50	2.0329
957561	AF2-050 C	1.9635	Adder	2.31
957562	AF2-050 E	1.3090	Adder	1.54
957931	AF2-087 C (Suspended)	0.2111	Adder	0.25
957932	AF2-087 E (Suspended)	0.2906	Adder	0.34
957981	AF2-092 C	0.8031	50/50	0.8031
957982	AF2-092 E	0.5354	50/50	0.5354
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.2613	50/50	0.2613
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.1742	50/50	0.1742
958271	AF2-121 C	0.5979	Adder	0.7
958272	AF2-121 E	0.3986	Adder	0.47
958471	AF2-141	0.6157	Adder	0.72
959792	AF2-270 E	0.4188	50/50	0.4188
959802	AF2-271 E	0.1696	Adder	0.2
960051	AF2-296 C	0.5781	Adder	0.68
960052	AF2-296 E	0.3854	Adder	0.45
960451	AF2-336 C	1.3385	50/50	1.3385
960452	AF2-336 E	0.8923	50/50	0.8923
960461	AF2-337 C	1.3385	50/50	1.3385
960462	AF2-337 E	0.8923	50/50	0.8923
960471	AF2-338 C	1.3385	50/50	1.3385
960472	AF2-338 E	0.8923	50/50	0.8923
960481	AF2-339 C	1.3385	50/50	1.3385
960482	AF2-339 E	0.8923	50/50	0.8923
960901	AF2-381 C	9.7592	50/50	9.7592

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960902	AF2-381 E	5.1358	50/50	5.1358
961911	AG1-033 C	0.3842	50/50	0.3842
961912	AG1-033 E	0.2161	50/50	0.2161
961981	AG1-041 C	0.7978	50/50	0.7978
961982	AG1-041 E	0.5318	50/50	0.5318
962292	AG1-077 E	0.4406	50/50	0.4406
962411	AG1-090 C O1	1.5845	Adder	3.52
962412	AG1-090 E O1	1.0563	Adder	2.34
962641	AG1-113	0.3920	50/50	0.3920
962651	AG1-114	0.4079	Adder	0.91
962951	AG1-144 C	0.3169	Adder	0.7
962952	AG1-144 E	0.2113	Adder	0.47
963541	AG1-203 C	0.7160	50/50	0.7160
963542	AG1-203 E	0.3856	50/50	0.3856
963561	AG1-205 C	0.2651	Adder	0.59
963562	AG1-205 E	0.1428	Adder	0.32
963881	AG1-241 C	0.7805	50/50	0.7805
963882	AG1-241 E	0.4202	50/50	0.4202
963891	AG1-242 C	0.1660	Adder	0.37
963892	AG1-242 E	0.0894	Adder	0.2
964191	AG1-280 C	0.5239	Adder	1.16
964192	AG1-280 E	0.3493	Adder	0.78
964201	AG1-281 C	0.5224	Adder	1.16
964202	AG1-281 E	0.3483	Adder	0.77
964391	AG1-301 C	0.3358	Adder	0.75
964392	AG1-301 E	0.2238	Adder	0.5
964451	AG1-308 C O1	0.2037	Adder	0.45
964452	AG1-308 E O1	0.2847	Adder	0.63
964751	AG1-338 C	0.4778	50/50	0.4778
964752	AG1-338 E	0.0651	50/50	0.0651
964761	AG1-339 C	0.4995	50/50	0.4995
964762	AG1-339 E	0.0434	50/50	0.0434
964771	AG1-340 C	0.4778	50/50	0.4778
964772	AG1-340 E	0.0651	50/50	0.0651
964911	AG1-355 C	3.9820	50/50	3.9820
964912	AG1-355 E	2.6546	50/50	2.6546
964921	AG1-356 C	2.3706	50/50	2.3706
964922	AG1-356 E	1.5804	50/50	1.5804
965121	AG1-377 C O1	0.3169	Adder	0.7
965122	AG1-377 E O1	0.2113	Adder	0.47
965131	AG1-378 C O1	0.3169	Adder	0.7
965132	AG1-378 E O1	0.2113	Adder	0.47
965171	AG1-382 C	1.3248	50/50	1.3248
965172	AG1-382 E	0.8832	50/50	0.8832
965221	AG1-387 C	1.3248	50/50	1.3248
965222	AG1-387 E	0.8832	50/50	0.8832
965301	AG1-395 C	0.4072	Adder	0.9
965302	AG1-395 E	0.1210	Adder	0.27
965881	AG1-457 C	1.4138	Adder	3.14
965882	AG1-457 E	0.9425	Adder	2.09
966512	AG1-520 E	0.4950	50/50	0.4950
966783	AG1-549 BAT	3.1880	50/50	3.1880

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
G-007A	G-007A	1.3570	Confirmed LTF	1.3570
VFT	VFT	3.7410	Confirmed LTF	3.7410
CALDERWOOD	CALDERWOOD	0.2157	Confirmed LTF	0.2157
PRAIRIE	PRAIRIE	1.1908	Confirmed LTF	1.1908
CHEOAH	CHEOAH	0.2167	Confirmed LTF	0.2167
CBM-N	CBM-N	0.7380	Confirmed LTF	0.7380
COTTONWOOD	COTTONWOOD	0.9324	Confirmed LTF	0.9324
HAMLET	HAMLET	0.2171	Confirmed LTF	0.2171
GIBSON	GIBSON	0.2572	Confirmed LTF	0.2572
BLUEG	BLUEG	0.8229	Confirmed LTF	0.8229
TRIMBLE	TRIMBLE	0.2643	Confirmed LTF	0.2643
CATAWBA	CATAWBA	0.1386	Confirmed LTF	0.1386

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
165880163	200512	26LEWISTWN	PENELEC	200519	26REED TAP	PENELEC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	225.0	129.6	130.87	DC	6.39

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200812	26ALY HYDR	0.3605	50/50	0.3605
200852	26WARR RDG	0.1998	Adder	0.24
235003	AC1-025 E	0.1664	50/50	0.1664
236828	01GRAYMONT	0.4282	50/50	0.4282
290086	Q-036 E	2.0788	Adder	2.45
293301	N-039 E	3.2460	Adder	3.82
294515	O38_P22	2.8403	Adder	3.34
921642	AA2-000	23.0463	Adder	27.11
930511	AB2-092	0.8462	Adder	1.0
936421	AD2-055	1.7422	Adder	2.05
936991	AD2-133 C	0.9354	Adder	1.1
936992	AD2-133 E	4.2786	Adder	5.03
939171	AE1-147 C	1.2773	50/50	1.2773
939172	AE1-147 E	0.8515	50/50	0.8515
939591	AE1-188 C	-0.6130	Adder	-0.72
940201	AE2-001 C	1.2815	50/50	1.2815
940202	AE2-001 E	0.8543	50/50	0.8543
940681	AE2-055 C (Suspended)	1.3447	50/50	1.3447
940682	AE2-055 E (Suspended)	0.8965	50/50	0.8965
941231	AE2-117 C	0.9303	Adder	1.09
941232	AE2-117 E	0.6202	Adder	0.73
941241	AE2-118 C	0.8844	Adder	1.04
941242	AE2-118 E	0.5896	Adder	0.69
941261	AE2-120 C	1.2838	50/50	1.2838
941262	AE2-120 E	0.8558	50/50	0.8558
941271	AE2-121 C	0.6753	50/50	0.6753
941272	AE2-121 E	0.4509	50/50	0.4509
941321	AE2-126 C	0.6212	Adder	0.73
941322	AE2-126 E	0.4141	Adder	0.49
941331	AE2-129 C	0.6514	Adder	0.77
941332	AE2-129 E	0.4342	Adder	0.51
941351	AE2-131 C (Suspended)	0.6514	Adder	0.77
941352	AE2-131 E (Suspended)	0.4342	Adder	0.51
942121	AE2-224 C	2.6464	Adder	3.11
942122	AE2-224 E	1.7643	Adder	2.08
942351	AE2-248 C	1.0547	50/50	1.0547
942352	AE2-248 E	0.7031	50/50	0.7031
942491	AE2-262 C	3.7800	Adder	4.45
942492	AE2-262 E	2.5401	Adder	2.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942501	AE2-263 C	3.5532	Adder	4.18
942502	AE2-263 E	2.3723	Adder	2.79
942511	AE2-264 C	3.8801	Adder	4.56
942512	AE2-264 E	2.5867	Adder	3.04
943751	AF1-043	5.2265	Adder	6.15
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.4148	50/50	1.4148
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.7958	50/50	0.7958
944311	AF1-099 C	5.7380	Adder	6.75
944312	AF1-099 E	3.8253	Adder	4.5
944321	AF1-100 C	9.7346	Adder	11.45
944322	AF1-100 E	6.4898	Adder	7.64
944471	AF1-112 C	1.3115	50/50	1.3115
944472	AF1-112 E	0.8743	50/50	0.8743
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3308	50/50	1.3308
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.8872	50/50	0.8872
944691	AF1-134 C	0.5302	Adder	0.62
944692	AF1-134 E	0.3535	Adder	0.42
944771	AF1-142 C	9.1807	Adder	10.8
944772	AF1-142 E	6.1205	Adder	7.2
944881	AF1-153 C O1	0.5901	Adder	0.69
944882	AF1-153 E O1	0.3934	Adder	0.46
944901	AF1-155 C	0.5866	Adder	0.69
944902	AF1-155 E	0.3911	Adder	0.46
945011	AF1-166 C	-0.5009	Adder	-0.59
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.2836	50/50	1.2836
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.8558	50/50	0.8558
945591	AF1-224 C	-0.3844	Adder	-0.45
946421	AF1-306 C	2.5604	Adder	3.01
946422	AF1-306 E	10.2416	Adder	12.05
957451	AF2-039 C	0.4623	Adder	0.54
957452	AF2-039 E	0.3082	Adder	0.36
957561	AF2-050 C	1.3232	Adder	1.56
957562	AF2-050 E	0.8821	Adder	1.04
957931	AF2-087 C (Suspended)	0.1706	Adder	0.2
957932	AF2-087 E (Suspended)	0.2350	Adder	0.28
957941	AF2-088 C	0.2226	Adder	0.26
957942	AF2-088 E	0.1484	Adder	0.17
958071	AF2-101 C	-0.0823	Adder	-0.1
958271	AF2-121 C	0.6514	Adder	0.77
958272	AF2-121 E	0.4342	Adder	0.51
958601	AF2-151 C	-0.0812	Adder	-0.1
959241	AF2-215 C	-0.1404	Adder	-0.17
959802	AF2-271 E	0.2111	Adder	0.25
959843	AF2-275 BAT	0.0921	Merchant Transmission	0.0921
959853	AF2-276 BAT	0.0921	Merchant Transmission	0.0921

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960022	AF2-293 E	0.1239	50/50	0.1239
960041	AF2-295 C	0.5866	Adder	0.69
960042	AF2-295 E	0.3911	Adder	0.46
960051	AF2-296 C	0.5302	Adder	0.62
960052	AF2-296 E	0.3535	Adder	0.42
962411	AG1-090 C O1	1.7261	Adder	3.83
962412	AG1-090 E O1	1.1508	Adder	2.55
962951	AG1-144 C	0.3452	Adder	0.77
962952	AG1-144 E	0.2302	Adder	0.51
963571	AG1-206 C	0.1737	Adder	0.39
963572	AG1-206 E	0.0935	Adder	0.21
963891	AG1-242 C	0.1522	Adder	0.34
963892	AG1-242 E	0.0820	Adder	0.18
964031	AG1-257 C	0.9032	50/50	0.9032
964032	AG1-257 E	1.2623	50/50	1.2623
964041	AG1-258 C	0.9032	50/50	0.9032
964042	AG1-258 E	1.2623	50/50	1.2623
964191	AG1-280 C	0.2720	Adder	0.6
964192	AG1-280 E	0.1814	Adder	0.4
964201	AG1-281 C	0.2737	Adder	0.61
964202	AG1-281 E	0.1824	Adder	0.4
964391	AG1-301 C	0.5082	Adder	1.13
964392	AG1-301 E	0.3388	Adder	0.75
964451	AG1-308 C O1	0.2426	Adder	0.54
964452	AG1-308 E O1	0.3390	Adder	0.75
965121	AG1-377 C O1	0.3452	Adder	0.77
965122	AG1-377 E O1	0.2302	Adder	0.51
965131	AG1-378 C O1	0.3452	Adder	0.77
965132	AG1-378 E O1	0.2302	Adder	0.51
965201	AG1-385 C	0.4021	Adder	0.89
965202	AG1-385 E	0.1191	Adder	0.26
965301	AG1-395 C	0.4436	Adder	0.98
965302	AG1-395 E	0.1318	Adder	0.29
966041	AG1-473 C	4.4668	50/50	4.4668
966042	AG1-473 E	2.9779	50/50	2.9779
966152	AG1-484 BAT	0.6272	Merchant Transmission	0.6272
966463	AG1-515 BAT	0.3718	Merchant Transmission	0.3718
966891	AG1-560 BAT	12.4896	50/50	12.4896
966901	AG1-561 BAT	5.4371	50/50	5.4371
WEC	WEC	0.0394	Confirmed LTF	0.0394
LGEE	LGEE	0.0647	Confirmed LTF	0.0647
CALDERWOOD	CALDERWOOD	0.0055	Confirmed LTF	0.0055
CBM-W2	CBM-W2	0.5555	Confirmed LTF	0.5555
TVA	TVA	0.0322	Confirmed LTF	0.0322
O-066	O-066	1.7633	Confirmed LTF	1.7633
SIGE	SIGE	0.0381	Confirmed LTF	0.0381
CHEOAH	CHEOAH	0.0070	Confirmed LTF	0.0070
CBM-S1	CBM-S1	0.0144	Confirmed LTF	0.0144
G-007	G-007	0.3034	Confirmed LTF	0.3034
HAMLET	HAMLET	0.0878	Confirmed LTF	0.0878
MEC	MEC	0.1621	Confirmed LTF	0.1621
LAGN	LAGN	0.0543	Confirmed LTF	0.0543

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CATAWBA	CATAWBA	0.0374	Confirmed LTF	0.0374
CBM-W1	CBM-W1	2.1170	Confirmed LTF	2.1170

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
167578458	200513	26LEWISTWN	PENELEC	208005	JUNI BU2	PPL	1	Base Case	single	493.0	119.93	122.28	DC	11.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200503	26C.SLOPE (Deactivation : 07/06/2019)	0.8557	80/20	0.8557
200642	26SENECA#1	4.2722	80/20	4.2722
200643	26SENECA#2	4.0348	80/20	4.0348
200644	26SENECA#3	0.4409	80/20	0.4409
200649	26PENNTech	1.1029	80/20	1.1029
200665	26SHAWVL 3	6.3729	80/20	6.3729
200666	26SHAWVL 4	6.2717	80/20	6.2717
200715	26SHAWVL 1	4.1951	80/20	4.1951
200722	26SHAWVL 2	4.2924	80/20	4.2924
200794	26CONEMAGH	0.1398	80/20	0.1398
200805	26COLVER13 (Deactivation : 01/09/2020)	1.5315	80/20	1.5315
200812	26ALY HYDR	1.1034	80/20	1.1034
200846	26FORWARD	0.0425	80/20	0.0425
200870	26C_T85_W218	0.0875	80/20	0.0875
200886	26ARWF_N39	0.3040	80/20	0.3040
200888	26HIGHLAND	0.1284	80/20	0.1284
200889	26STNY CRK	0.1164	80/20	0.1164
200905	26Q36	0.2419	80/20	0.2419
200913	26SHAW-D	0.1919	80/20	0.1919
200915	26CHSTN_FL	0.1425	80/20	0.1425
200925	26R32	0.2013	80/20	0.2013
200945	26CT_V3-030	0.0955	80/20	0.0955
201201	26WRREN CT	0.9147	80/20	0.9147
203034	26NA_O38_P22	0.2671	80/20	0.2671
203349	26Z1-069 C	0.1788	80/20	0.1788
203351	26GROZ1-110	0.3013	80/20	0.3013
203352	26CANZ2-011	0.2957	80/20	0.2957
203905	26W1-045 C	0.1057	80/20	0.1057
921642	AA2-000	79.5110	80/20	79.5110
930511	AB2-092	2.9194	80/20	2.9194
931091	AB1-160 C	0.0511	80/20	0.0511
936421	AD2-055	6.0105	80/20	6.0105
936471	AD2-062 C O1	5.6817	80/20	5.6817
936991	AD2-133 C	3.3251	80/20	3.3251
938384	AE1-071-C	12.7777	80/20	12.7777
938993	AE1-128 C	7.0762	80/20	7.0762
939171	AE1-147 C	3.8969	80/20	3.8969
940201	AE2-001 C	3.9100	80/20	3.9100
940681	AE2-055 C (Suspended)	4.1081	80/20	4.1081

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
940861	AE2-074 C	1.4293	80/20	1.4293
941191	AE2-113 C	8.2732	80/20	8.2732
941231	AE2-117 C	3.3402	80/20	3.3402
941241	AE2-118 C	3.1730	80/20	3.1730
941261	AE2-120 C	3.9170	80/20	3.9170
941271	AE2-121 C	2.0598	80/20	2.0598
941321	AE2-126 C	2.2008	80/20	2.2008
941331	AE2-129 C	2.3147	80/20	2.3147
941351	AE2-131 C (Suspended)	2.3147	80/20	2.3147
942121	AE2-224 C	9.3540	80/20	9.3540
942351	AE2-248 C	3.2203	80/20	3.2203
942361	AE2-249 C	0.7961	80/20	0.7961
942491	AE2-262 C	13.4980	80/20	13.4980
942501	AE2-263 C	12.6881	80/20	12.6881
942511	AE2-264 C	13.9382	80/20	13.9382
942961	AE2-316 C	5.5293	80/20	5.5293
943751	AF1-043	18.0316	80/20	18.0316
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	4.3204	80/20	4.3204
944181	AF1-086 C O1	2.4905	80/20	2.4905
944311	AF1-099 C	20.4900	80/20	20.4900
944321	AF1-100 C	34.6260	80/20	34.6260
944381	AF1-103 O1	2.0342	80/20	2.0342
944471	AF1-112 C	4.0038	80/20	4.0038
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	4.0643	80/20	4.0643
944691	AF1-134 C	1.8748	80/20	1.8748
944751	AF1-140 C	1.1265	80/20	1.1265
944771	AF1-142 C	32.7839	80/20	32.7839
944881	AF1-153 C O1	2.0916	80/20	2.0916
944901	AF1-155 C	2.0792	80/20	2.0792
945121	AF1-177	0.0802	80/20	0.0802
945161	AF1-181	0.0293	80/20	0.0293
945171	AF1-182	0.1467	80/20	0.1467
945181	AF1-183	0.0344	80/20	0.0344
945491	AF1-214 C (Withdrawn : 12/03/2020)	3.9167	80/20	3.9167
945671	AF1-232 C (Withdrawn : 01/19/2021)	8.6757	80/20	8.6757
946111	AF1-276 C	6.8038	80/20	6.8038
946121	AF1-277 C	6.8038	80/20	6.8038
946131	AF1-278 C	5.4268	80/20	5.4268
946381	AF1-302 C	2.4145	80/20	2.4145
946421	AF1-306 C	9.0756	80/20	9.0756
946571	AF1-321 C O1	0.9763	80/20	0.9763
957001	AF2-001 C O1	0.9763	80/20	0.9763
957011	AF2-002 C O1	0.4882	80/20	0.4882
957451	AF2-039 C	1.6423	80/20	1.6423
957561	AF2-050 C	4.6770	80/20	4.6770
957931	AF2-087 C (Suspended)	0.6088	80/20	0.6088
957941	AF2-088 C	0.7907	80/20	0.7907

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957981	AF2-092 C	0.7347	80/20	0.7347
958271	AF2-121 C	2.3147	80/20	2.3147
958551	AF2-146 C	4.0781	80/20	4.0781
958571	AF2-148 C	2.2848	80/20	2.2848
958871	AF2-178	0.5091	80/20	0.5091
959381	AF2-229 C	1.4229	80/20	1.4229
960041	AF2-295 C	2.0792	80/20	2.0792
960051	AF2-296 C	1.8748	80/20	1.8748
960451	AF2-336 C	1.2245	80/20	1.2245
960461	AF2-337 C	1.2245	80/20	1.2245
960471	AF2-338 C	1.2245	80/20	1.2245
960481	AF2-339 C	1.2245	80/20	1.2245
960901	AF2-381 C	7.2310	80/20	7.2310
961481	AF2-439 C	3.3111	80/20	3.3111
961911	AG1-033 C	0.2795	80/20	0.2795
961981	AG1-041 C	0.7544	80/20	0.7544
962411	AG1-090 C O1	11.5734	80/20	11.5734
962951	AG1-144 C	2.3147	80/20	2.3147
963541	AG1-203 C	0.5492	80/20	0.5492
963571	AG1-206 C	1.1603	80/20	1.1603
963881	AG1-241 C	0.5677	80/20	0.5677
963891	AG1-242 C	1.0155	80/20	1.0155
964031	AG1-257 C	2.7571	80/20	2.7571
964041	AG1-258 C	2.7571	80/20	2.7571
964191	AG1-280 C	1.8227	80/20	1.8227
964201	AG1-281 C	1.8337	80/20	1.8337
964341	AG1-296 C	0.7943	80/20	0.7943
964391	AG1-301 C	3.4450	80/20	3.4450
964451	AG1-308 C O1	1.6263	80/20	1.6263
964751	AG1-338 C	0.4973	80/20	0.4973
964761	AG1-339 C	0.5199	80/20	0.5199
964771	AG1-340 C	0.4973	80/20	0.4973
964911	AG1-355 C	2.6801	80/20	2.6801
964921	AG1-356 C	1.7740	80/20	1.7740
965121	AG1-377 C O1	2.3147	80/20	2.3147
965131	AG1-378 C O1	2.3147	80/20	2.3147
965171	AG1-382 C	1.3836	80/20	1.3836
965201	AG1-385 C	2.6894	80/20	2.6894
965221	AG1-387 C	1.3836	80/20	1.3836
965241	AG1-389 C O1	1.0494	80/20	1.0494
965251	AG1-390 C O1	1.0494	80/20	1.0494
965261	AG1-391 C O1	1.0494	80/20	1.0494
965271	AG1-392 C O1	2.0988	80/20	2.0988
965301	AG1-395 C	2.9744	80/20	2.9744
966041	AG1-473 C	13.7044	80/20	13.7044
966121	AG1-481	1.5796	80/20	1.5796
WEC	WEC	0.4149	Confirmed LTF	0.4149
LGEE	LGEE	0.7998	Confirmed LTF	0.7998
CPL	CPL	0.5037	Confirmed LTF	0.5037
CBM-W2	CBM-W2	10.7162	Confirmed LTF	10.7162
NY	NY	0.1443	Confirmed LTF	0.1443
TVA	TVA	1.5736	Confirmed LTF	1.5736

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
SIGE	SIGE	0.5121	Confirmed LTF	0.5121
CBM-S2	CBM-S2	8.9262	Confirmed LTF	8.9262
CBM-S1	CBM-S1	0.4374	Confirmed LTF	0.4374
MEC	MEC	2.0244	Confirmed LTF	2.0244
LAGN	LAGN	1.9915	Confirmed LTF	1.9915
CBM-W1	CBM-W1	19.2214	Confirmed LTF	19.2214

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
165880071	200522	26SHADE GP	PENELEC	938380	AE1-071-POI	PENELEC	1	PL:10:P45:102437	breaker	160.0	195.09	197.11	DC	7.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200812	26ALY HYDR	0.4042	50/50	0.4042
200852	26WARR RDG	0.2636	50/50	0.2636
200883	Q-053 E	2.1510	Adder	2.53
235003	AC1-025 E	0.1866	50/50	0.1866
236828	01GRAYMONT	0.4801	50/50	0.4801
290086	Q-036 E	2.3338	Adder	2.75
293301	N-039 E	3.6448	Adder	4.29
294515	O38_P22	3.1892	Adder	3.75
921642	AA2-000	25.8759	Adder	30.44
930511	AB2-092	0.9501	Adder	1.12
936421	AD2-055	1.9561	Adder	2.3
936991	AD2-133 C	1.0502	Adder	1.24
936992	AD2-133 E	4.8035	Adder	5.65
939171	AE1-147 C	1.4321	50/50	1.4321
939172	AE1-147 E	0.9547	50/50	0.9547
939591	AE1-188 C	-0.6881	Adder	-0.81
940201	AE2-001 C	1.4368	50/50	1.4368
940202	AE2-001 E	0.9578	50/50	0.9578
940681	AE2-055 C (Suspended)	1.5077	50/50	1.5077
940682	AE2-055 E (Suspended)	1.0051	50/50	1.0051
941191	AE2-113 C	2.6637	Adder	3.13
941192	AE2-113 E	2.8679	Adder	3.37
941231	AE2-117 C	1.2276	50/50	1.2276
941232	AE2-117 E	0.8184	50/50	0.8184
941241	AE2-118 C	0.9922	Adder	1.17
941242	AE2-118 E	0.6614	Adder	0.78
941261	AE2-120 C	1.4393	50/50	1.4393
941262	AE2-120 E	0.9595	50/50	0.9595
941271	AE2-121 C	0.7571	50/50	0.7571
941272	AE2-121 E	0.5055	50/50	0.5055
941321	AE2-126 C	0.6973	Adder	0.82
941322	AE2-126 E	0.4648	Adder	0.55
941331	AE2-129 C	0.7311	Adder	0.86
941332	AE2-129 E	0.4874	Adder	0.57
941351	AE2-131 C (Suspended)	0.7311	Adder	0.86
941352	AE2-131 E (Suspended)	0.4874	Adder	0.57
942121	AE2-224 C	2.9733	Adder	3.5
942122	AE2-224 E	1.9822	Adder	2.33
942351	AE2-248 C	1.1824	50/50	1.1824
942352	AE2-248 E	0.7883	50/50	0.7883
942491	AE2-262 C	4.2394	Adder	4.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942492	AE2-262 E	2.8489	Adder	3.35
942501	AE2-263 C	3.9850	Adder	4.69
942502	AE2-263 E	2.6606	Adder	3.13
942511	AE2-264 C	5.1197	50/50	5.1197
942512	AE2-264 E	3.4131	50/50	3.4131
942961	AE2-316 C	1.7575	Adder	2.07
942962	AE2-316 E	2.5061	Adder	2.95
943751	AF1-043	5.8682	Adder	6.9
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.5860	50/50	1.5860
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8922	50/50	0.8922
944311	AF1-099 C	6.4354	Adder	7.57
944312	AF1-099 E	4.2902	Adder	5.05
944321	AF1-100 C	10.9204	Adder	12.85
944322	AF1-100 E	7.2802	Adder	8.56
944471	AF1-112 C	1.4704	50/50	1.4704
944472	AF1-112 E	0.9802	50/50	0.9802
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.4920	50/50	1.4920
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9946	50/50	0.9946
944691	AF1-134 C	0.5955	Adder	0.7
944692	AF1-134 E	0.3970	Adder	0.47
944771	AF1-142 C	10.2966	Adder	12.11
944772	AF1-142 E	6.8644	Adder	8.08
944881	AF1-153 C O1	0.6625	Adder	0.78
944882	AF1-153 E O1	0.4417	Adder	0.52
944901	AF1-155 C	0.6586	Adder	0.77
944902	AF1-155 E	0.4391	Adder	0.52
945011	AF1-166 C	-0.5622	Adder	-0.66
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4392	50/50	1.4392
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9594	50/50	0.9594
945591	AF1-224 C	-0.4314	Adder	-0.51
946381	AF1-302 C	0.7674	Adder	0.9
946382	AF1-302 E	1.0233	Adder	1.2
946421	AF1-306 C	2.8738	Adder	3.38
946422	AF1-306 E	11.4954	Adder	13.52
957451	AF2-039 C	0.5188	Adder	0.61
957452	AF2-039 E	0.3459	Adder	0.41
957561	AF2-050 C	1.4867	Adder	1.75
957562	AF2-050 E	0.9911	Adder	1.17
957931	AF2-087 C (Suspended)	0.1915	Adder	0.23
957932	AF2-087 E (Suspended)	0.2638	Adder	0.31
957941	AF2-088 C	0.2498	Adder	0.29
957942	AF2-088 E	0.1665	Adder	0.2
958071	AF2-101 C	-0.0937	Adder	-0.11
958271	AF2-121 C	0.7311	Adder	0.86
958272	AF2-121 E	0.4874	Adder	0.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958551	AF2-146 C	5.3006	50/50	5.3006
958552	AF2-146 E	3.5338	50/50	3.5338
958571	AF2-148 C	4.3049	50/50	4.3049
958572	AF2-148 E	2.8699	50/50	2.8699
958601	AF2-151 C	-0.0925	Adder	-0.11
959241	AF2-215 C	-0.1576	Adder	-0.19
959802	AF2-271 E	0.2368	Adder	0.28
959843	AF2-275 BAT	0.1034	Merchant Transmission	0.1034
959853	AF2-276 BAT	0.1034	Merchant Transmission	0.1034
960022	AF2-293 E	0.1389	50/50	0.1389
960041	AF2-295 C	0.6586	Adder	0.77
960042	AF2-295 E	0.4391	Adder	0.52
960051	AF2-296 C	0.5955	Adder	0.7
960052	AF2-296 E	0.3970	Adder	0.47
962411	AG1-090 C O1	1.9375	Adder	4.3
962412	AG1-090 E O1	1.2917	Adder	2.87
962951	AG1-144 C	0.3875	Adder	0.86
962952	AG1-144 E	0.2583	Adder	0.57
963571	AG1-206 C	0.1950	Adder	0.43
963572	AG1-206 E	0.1050	Adder	0.23
963891	AG1-242 C	0.1710	Adder	0.38
963892	AG1-242 E	0.0921	Adder	0.2
964031	AG1-257 C	1.0126	50/50	1.0126
964032	AG1-257 E	1.4152	50/50	1.4152
964041	AG1-258 C	1.0126	50/50	1.0126
964042	AG1-258 E	1.4152	50/50	1.4152
964191	AG1-280 C	0.3056	Adder	0.68
964192	AG1-280 E	0.2037	Adder	0.45
964201	AG1-281 C	0.3074	Adder	0.68
964202	AG1-281 E	0.2049	Adder	0.45
964391	AG1-301 C	1.2653	50/50	1.2653
964392	AG1-301 E	0.8435	50/50	0.8435
964451	AG1-308 C O1	0.2722	Adder	0.6
964452	AG1-308 E O1	0.3805	Adder	0.84
965121	AG1-377 C O1	0.3875	Adder	0.86
965122	AG1-377 E O1	0.2583	Adder	0.57
965131	AG1-378 C O1	0.3875	Adder	0.86
965132	AG1-378 E O1	0.2583	Adder	0.57
965201	AG1-385 C	0.4515	Adder	1.0
965202	AG1-385 E	0.1337	Adder	0.3
965301	AG1-395 C	0.4979	Adder	1.11
965302	AG1-395 E	0.1479	Adder	0.33
966041	AG1-473 C	5.0062	50/50	5.0062
966042	AG1-473 E	3.3375	50/50	3.3375
966152	AG1-484 BAT	0.7123	Merchant Transmission	0.7123
966463	AG1-515 BAT	0.4172	Merchant Transmission	0.4172
966891	AG1-560 BAT	13.9988	50/50	13.9988
966901	AG1-561 BAT	6.0982	50/50	6.0982
WEC	WEC	0.0460	Confirmed LTF	0.0460
LGEE	LGEE	0.0767	Confirmed LTF	0.0767
CALDERWOOD	CALDERWOOD	0.0045	Confirmed LTF	0.0045
CBM-W2	CBM-W2	0.6630	Confirmed LTF	0.6630

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
TVA	TVA	0.0420	Confirmed LTF	0.0420
O-066	O-066	1.9786	Confirmed LTF	1.9786
SIGE	SIGE	0.0434	Confirmed LTF	0.0434
CHEOAH	CHEOAH	0.0060	Confirmed LTF	0.0060
CBM-S1	CBM-S1	0.0179	Confirmed LTF	0.0179
G-007	G-007	0.3423	Confirmed LTF	0.3423
HAMLET	HAMLET	0.0982	Confirmed LTF	0.0982
MEC	MEC	0.1907	Confirmed LTF	0.1907
LAGN	LAGN	0.0683	Confirmed LTF	0.0683
CATAWBA	CATAWBA	0.0413	Confirmed LTF	0.0413
CBM-W1	CBM-W1	2.4535	Confirmed LTF	2.4535

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
165880279	200582	26RIDGWAY	PENELEC	200647	26FOREST	PENELEC	1	PN-P2_1-PN-345-997-DRT-051	breaker	277.0	103.18	104.29	DC	6.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200649	26PENNTech	4.8519	50/50	4.8519
203349	26Z1-069 C	0.5876	50/50	0.5876
916202	Z1-069 E	15.8783	50/50	15.8783
931091	AB1-160 C	0.1679	50/50	0.1679
931092	AB1-160 E	4.5366	50/50	4.5366
940861	AE2-074 C	6.0265	50/50	6.0265
940862	AE2-074 E	7.9329	50/50	7.9329
941191	AE2-113 C	38.4652	50/50	38.4652
941192	AE2-113 E	41.4146	50/50	41.4146
941321	AE2-126 C	5.0311	50/50	5.0311
941322	AE2-126 E	3.3541	50/50	3.3541
941331	AE2-129 C	0.6977	Adder	0.82
941332	AE2-129 E	0.4651	Adder	0.55
941351	AE2-131 C (Suspended)	0.6977	Adder	0.82
941352	AE2-131 E (Suspended)	0.4651	Adder	0.55
946111	AF1-276 C	34.7402	50/50	34.7402
946112	AF1-276 E	17.1108	50/50	17.1108
946121	AF1-277 C	34.7402	50/50	34.7402
946122	AF1-277 E	17.1108	50/50	17.1108
946131	AF1-278 C	27.7092	50/50	27.7092
946132	AF1-278 E	13.7716	50/50	13.7716
946423	AF1-306 BAT	18.4505	Merchant Transmission	18.4505
957451	AF2-039 C	0.6261	Adder	0.74
957452	AF2-039 E	0.4174	Adder	0.49
957941	AF2-088 C	0.3015	Adder	0.35
957942	AF2-088 E	0.2010	Adder	0.24
958271	AF2-121 C	0.6977	Adder	0.82
958272	AF2-121 E	0.4651	Adder	0.55
961211	AF2-412	8.1350	Adder	9.57
962411	AG1-090 C O1	1.8489	Adder	4.1
962412	AG1-090 E O1	1.2326	Adder	2.74
962951	AG1-144 C	0.3698	Adder	0.82
962952	AG1-144 E	0.2465	Adder	0.55
963571	AG1-206 C	3.2639	50/50	3.2639
963572	AG1-206 E	1.7575	50/50	1.7575
964451	AG1-308 C O1	0.2805	Adder	0.62
964452	AG1-308 E O1	0.3920	Adder	0.87
965121	AG1-377 C O1	0.3698	Adder	0.82
965122	AG1-377 E O1	0.2465	Adder	0.55

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965131	AG1-378 C O1	0.3698	Adder	0.82
965132	AG1-378 E O1	0.2465	Adder	0.55
965241	AG1-389 C O1	3.6982	50/50	3.6982
965242	AG1-389 E O1	2.4654	50/50	2.4654
965251	AG1-390 C O1	3.6982	50/50	3.6982
965252	AG1-390 E O1	2.4654	50/50	2.4654
965261	AG1-391 C O1	3.6982	50/50	3.6982
965262	AG1-391 E O1	2.4654	50/50	2.4654
965271	AG1-392 C O1	7.3963	50/50	7.3963
965272	AG1-392 E O1	4.9309	50/50	4.9309
965301	AG1-395 C	0.4752	Adder	1.05
965302	AG1-395 E	0.1411	Adder	0.31
G-007A	G-007A	0.5778	Confirmed LTF	0.5778
VFT	VFT	1.6125	Confirmed LTF	1.6125
CALDERWOOD	CALDERWOOD	0.0631	Confirmed LTF	0.0631
PRAIRIE	PRAIRIE	0.3978	Confirmed LTF	0.3978
CHEOAH	CHEOAH	0.0636	Confirmed LTF	0.0636
CBM-N	CBM-N	0.3300	Confirmed LTF	0.3300
COTTONWOOD	COTTONWOOD	0.2919	Confirmed LTF	0.2919
HAMLET	HAMLET	0.0537	Confirmed LTF	0.0537
GIBSON	GIBSON	0.0874	Confirmed LTF	0.0874
BLUEG	BLUEG	0.2743	Confirmed LTF	0.2743
TRIMBLE	TRIMBLE	0.0879	Confirmed LTF	0.0879
CATAWBA	CATAWBA	0.0364	Confirmed LTF	0.0364

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
167578492	200593	26GLADE	PENELEC	200811	26WARREN	PENELEC	1	Base Case	single	520.0	116.06	117.06	DC	5.23

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	13.0291	80/20	13.0291
200643	26SENECA#2	12.3053	80/20	12.3053
200644	26SENECA#3	1.3446	80/20	1.3446
200649	26PENNTech	1.1790	80/20	1.1790
200665	26SHAWVL 3	3.2386	80/20	3.2386
200666	26SHAWVL 4	3.1816	80/20	3.1816
200715	26SHAWVL 1	2.1742	80/20	2.1742
200722	26SHAWVL 2	2.2224	80/20	2.2224
200887	26ARMNA MT	0.1525	80/20	0.1525
200905	26Q36	0.0924	80/20	0.0924
200913	26SHAW-D	0.1019	80/20	0.1019
203261	26BLOSSBCT	0.2058	80/20	0.2058
203349	26Z1-069 C	0.2365	80/20	0.2365
203350	26MILZ1-092	0.1806	80/20	0.1806
203351	26GROZ1-110	0.2268	80/20	0.2268
203352	26CANZ2-011	0.2226	80/20	0.2226
203923	X1-109 G2	3.2527	80/20	3.2527
919201	AA1-144 OP	9.0058	80/20	9.0058
921642	AA2-000	44.8971	80/20	44.8971
930511	AB2-092	1.6485	80/20	1.6485
931091	AB1-160 C	0.0676	80/20	0.0676
936421	AD2-055	3.3939	80/20	3.3939
936991	AD2-133 C	1.2695	80/20	1.2695
939171	AE1-147 C	1.1237	80/20	1.1237
940201	AE2-001 C	1.1204	80/20	1.1204
940681	AE2-055 C (Suspended)	1.0698	80/20	1.0698
940861	AE2-074 C	2.1273	80/20	2.1273
941191	AE2-113 C	10.8048	80/20	10.8048
941261	AE2-120 C	1.1186	80/20	1.1186
941271	AE2-121 C	0.6005	80/20	0.6005
941321	AE2-126 C	1.7191	80/20	1.7191
941331	AE2-129 C	1.0459	80/20	1.0459
941351	AE2-131 C (Suspended)	1.0459	80/20	1.0459
941421	AE2-139 C	3.4775	80/20	3.4775
942351	AE2-248 C	0.8727	80/20	0.8727
942491	AE2-262 C	5.3825	80/20	5.3825
942501	AE2-263 C	5.0595	80/20	5.0595
942961	AE2-316 C	3.7786	80/20	3.7786
943751	AF1-043	10.1818	80/20	10.1818
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.1569	80/20	1.1569

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944311	AF1-099 C	8.1706	80/20	8.1706
944321	AF1-100 C	17.6985	80/20	17.6985
944411	AF1-106 O1	1.0902	80/20	1.0902
944471	AF1-112 C	1.0964	80/20	1.0964
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.0810	80/20	1.0810
944691	AF1-134 C	0.8854	80/20	0.8854
944771	AF1-142 C	13.0730	80/20	13.0730
944881	AF1-153 C O1	1.5793	80/20	1.5793
944901	AF1-155 C	1.5684	80/20	1.5684
945161	AF1-181	0.0149	80/20	0.0149
945171	AF1-182	0.0744	80/20	0.0744
945181	AF1-183	0.0178	80/20	0.0178
945331	AF1-198	0.0271	80/20	0.0271
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.1186	80/20	1.1186
946111	AF1-276 C	15.1413	80/20	15.1413
946121	AF1-277 C	15.1413	80/20	15.1413
946131	AF1-278 C	12.0769	80/20	12.0769
946211	AF1-286 C	0.4415	80/20	0.4415
946381	AF1-302 C	1.6501	80/20	1.6501
946421	AF1-306 C	7.8954	80/20	7.8954
957451	AF2-039 C	0.8716	80/20	0.8716
957941	AF2-088 C	0.4197	80/20	0.4197
958271	AF2-121 C	1.0459	80/20	1.0459
959471	AF2-238 C	0.7410	80/20	0.7410
959491	AF2-240 C	0.2060	80/20	0.2060
959501	AF2-241 C	0.6160	80/20	0.6160
959741	AF2-265 C	0.5311	80/20	0.5311
960041	AF2-295 C	1.5684	80/20	1.5684
960051	AF2-296 C	0.8854	80/20	0.8854
961141	AF2-405	0.5451	80/20	0.5451
961151	AF2-406	4.0883	80/20	4.0883
961211	AF2-412	8.2966	80/20	8.2966
962411	AG1-090 C O1	5.2296	80/20	5.2296
962951	AG1-144 C	1.0459	80/20	1.0459
963571	AG1-206 C	0.9896	80/20	0.9896
963891	AG1-242 C	0.4796	80/20	0.4796
963941	AG1-247 C	0.2671	80/20	0.2671
964031	AG1-257 C	0.7614	80/20	0.7614
964041	AG1-258 C	0.7614	80/20	0.7614
964341	AG1-296 C	0.5069	80/20	0.5069
964451	AG1-308 C O1	0.7750	80/20	0.7750
965121	AG1-377 C O1	1.0459	80/20	1.0459
965131	AG1-378 C O1	1.0459	80/20	1.0459
965201	AG1-385 C	2.0307	80/20	2.0307
965241	AG1-389 C O1	1.4326	80/20	1.4326
965251	AG1-390 C O1	1.4326	80/20	1.4326
965261	AG1-391 C O1	1.4326	80/20	1.4326
965271	AG1-392 C O1	2.8651	80/20	2.8651
965301	AG1-395 C	1.3440	80/20	1.3440
966041	AG1-473 C	2.2030	80/20	2.2030

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
G-007A	G-007A	3.3853	Confirmed LTF	3.3853
VFT	VFT	9.2816	Confirmed LTF	9.2816
CALDERWOOD	CALDERWOOD	0.4215	Confirmed LTF	0.4215
PRAIRIE	PRAIRIE	2.7018	Confirmed LTF	2.7018
CHEOAH	CHEOAH	0.4214	Confirmed LTF	0.4214
CBM-N	CBM-N	1.8096	Confirmed LTF	1.8096
COTTONWOOD	COTTONWOOD	1.9698	Confirmed LTF	1.9698
HAMLET	HAMLET	0.3442	Confirmed LTF	0.3442
GIBSON	GIBSON	0.5940	Confirmed LTF	0.5940
BLUEG	BLUEG	1.8627	Confirmed LTF	1.8627
TRIMBLE	TRIMBLE	0.5982	Confirmed LTF	0.5982
CATAWBA	CATAWBA	0.2359	Confirmed LTF	0.2359

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
164869470	200675	26E.TWANDA	PENELEC	200924	26CANYON	PENELEC	1	PN-P2-2-PN-230-007T	bus	615.0	180.45	181.19	DC	9.92

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200894	26K02	17.6960	50/50	17.6960
203283	26MANOR_T86	0.0582	50/50	0.0582
203350	26MILZ1-092	0.8988	50/50	0.8988
203351	26GROZ1-110	1.0826	50/50	1.0826
203352	26CANZ2-011	1.0623	50/50	1.0623
203922	X1-109 G1	24.7826	50/50	24.7826
203923	X1-109 G2	24.7826	50/50	24.7826
203932	AA2-133 GEN	2.1231	Adder	2.5
203999	P-047 E	17.6345	Adder	20.75
235003	AC1-025 E	0.1744	Adder	0.21
236828	01GRAYMONT	0.4701	Adder	0.55
916202	Z1-069 E	8.7970	Adder	10.35
919201	AA1-144 OP	66.0052	50/50	66.0052
921642	AA2-000	92.7912	Adder	109.17
930511	AB2-092	3.4070	Adder	4.01
931092	AB1-160 E	2.5134	Adder	2.96
936421	AD2-055	7.0145	Adder	8.25
938332	AE1-051 BAT	0.9479	Merchant Transmission	0.9479
939171	AE1-147 C	1.4127	Adder	1.66
939172	AE1-147 E	0.9418	Adder	1.11
940201	AE2-001 C	1.4114	Adder	1.66
940202	AE2-001 E	0.9409	Adder	1.11
940681	AE2-055 C (Suspended)	1.3908	Adder	1.64
940682	AE2-055 E (Suspended)	0.9272	Adder	1.09
940861	AE2-074 C	1.9758	Adder	2.32
940862	AE2-074 E	2.6009	Adder	3.06
941191	AE2-113 C	6.5799	Adder	7.74
941192	AE2-113 E	7.0845	Adder	8.33
941261	AE2-120 C	1.4106	Adder	1.66
941262	AE2-120 E	0.9404	Adder	1.11
941271	AE2-121 C	0.7523	Adder	0.89
941272	AE2-121 E	0.5023	Adder	0.59
941321	AE2-126 C	1.2282	Adder	1.44
941322	AE2-126 E	0.8188	Adder	0.96
941331	AE2-129 C	1.0121	Adder	1.19
941332	AE2-129 E	0.6748	Adder	0.79
941351	AE2-131 C (Suspended)	1.0121	Adder	1.19
941352	AE2-131 E (Suspended)	0.6748	Adder	0.79
941421	AE2-139 C	23.8022	50/50	23.8022
941422	AE2-139 E	15.8681	50/50	15.8681
942351	AE2-248 C	1.1195	Adder	1.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942352	AE2-248 E	0.7463	Adder	0.88
942491	AE2-262 C	6.1710	Adder	7.26
942492	AE2-262 E	4.1469	Adder	4.88
942501	AE2-263 C	5.8007	Adder	6.82
942502	AE2-263 E	3.8729	Adder	4.56
942961	AE2-316 C	3.3408	Adder	3.93
942962	AE2-316 E	4.7640	Adder	5.6
943751	AF1-043	21.0434	Adder	24.76
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.4899	Adder	1.75
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8381	Adder	0.99
944311	AF1-099 C	9.3676	Adder	11.02
944312	AF1-099 E	6.2451	Adder	7.35
944321	AF1-100 C	17.9903	Adder	21.17
944322	AF1-100 E	11.9935	Adder	14.11
944381	AF1-103 O1	1.6097	Adder	1.89
944411	AF1-106 O1	5.4258	50/50	5.4258
944471	AF1-112 C	1.4016	Adder	1.65
944472	AF1-112 E	0.9344	Adder	1.1
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3953	Adder	1.64
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9302	Adder	1.09
944691	AF1-134 C	0.9284	Adder	1.09
944692	AF1-134 E	0.6189	Adder	0.73
944771	AF1-142 C	14.9881	Adder	17.63
944772	AF1-142 E	9.9921	Adder	11.76
944881	AF1-153 C O1	1.2104	Adder	1.42
944882	AF1-153 E O1	0.8070	Adder	0.95
944901	AF1-155 C	1.2043	Adder	1.42
944902	AF1-155 E	0.8029	Adder	0.94
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4107	Adder	1.66
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9404	Adder	1.11
946111	AF1-276 C	6.4479	Adder	7.59
946112	AF1-276 E	3.1758	Adder	3.74
946121	AF1-277 C	6.4479	Adder	7.59
946122	AF1-277 E	3.1758	Adder	3.74
946131	AF1-278 C	5.1429	Adder	6.05
946132	AF1-278 E	2.5561	Adder	3.01
946211	AF1-286 C	2.1974	50/50	2.1974
946212	AF1-286 E	1.4921	50/50	1.4921
946381	AF1-302 C	1.4589	Adder	1.72
946382	AF1-302 E	1.9451	Adder	2.29
946421	AF1-306 C	5.2880	Adder	6.22
946422	AF1-306 E	21.1520	Adder	24.88
957451	AF2-039 C	0.8155	Adder	0.96
957452	AF2-039 E	0.5436	Adder	0.64
957941	AF2-088 C	0.3926	Adder	0.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957942	AF2-088 E	0.2618	Adder	0.31
958271	AF2-121 C	1.0121	Adder	1.19
958272	AF2-121 E	0.6748	Adder	0.79
959061	AF2-197 C O1	12.9326	50/50	12.9326
959062	AF2-197 E O1	19.3990	50/50	19.3990
959471	AF2-238 C	3.3199	50/50	3.3199
959472	AF2-238 E	2.2133	50/50	2.2133
959481	AF2-239 C	3.1511	50/50	3.1511
959482	AF2-239 E	2.5265	50/50	2.5265
959491	AF2-240 C	1.0255	50/50	1.0255
959492	AF2-240 E	0.8736	50/50	0.8736
959501	AF2-241 C	3.0656	50/50	3.0656
959502	AF2-241 E	2.3602	50/50	2.3602
959741	AF2-265 C	2.3793	50/50	2.3793
959742	AF2-265 E	1.7706	50/50	1.7706
959913	AF2-282 BAT	0.1422	Merchant Transmission	0.1422
959923	AF2-283 BAT	0.1422	Merchant Transmission	0.1422
960022	AF2-293 E	0.1373	Adder	0.16
960041	AF2-295 C	1.2043	Adder	1.42
960042	AF2-295 E	0.8029	Adder	0.94
960051	AF2-296 C	0.9284	Adder	1.09
960052	AF2-296 E	0.6189	Adder	0.73
960271	AF2-318 C	3.4066	50/50	3.4066
960272	AF2-318 E	2.2710	50/50	2.2710
961141	AF2-405	2.7129	50/50	2.7129
961151	AF2-406	20.3468	50/50	20.3468
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	54.2028	Adder	63.77
961211	AF2-412	25.5929	Adder	30.11
961451	AF2-436	0.1601	Adder	0.19
962411	AG1-090 C O1	2.6822	Adder	5.95
962412	AG1-090 E O1	1.7881	Adder	3.97
962951	AG1-144 C	0.5364	Adder	1.19
962952	AG1-144 E	0.3576	Adder	0.79
963571	AG1-206 C	0.3540	Adder	0.79
963572	AG1-206 E	0.1906	Adder	0.42
963891	AG1-242 C	0.2665	Adder	0.59
963892	AG1-242 E	0.1435	Adder	0.32
963941	AG1-247 C	1.3293	50/50	1.3293
963942	AG1-247 E	0.7054	50/50	0.7054
964031	AG1-257 C	0.5145	Adder	1.14
964032	AG1-257 E	0.7190	Adder	1.6
964041	AG1-258 C	0.5145	Adder	1.14
964042	AG1-258 E	0.7190	Adder	1.6
964341	AG1-296 C	0.2583	Adder	0.57
964342	AG1-296 E	0.1391	Adder	0.31
964451	AG1-308 C O1	0.3929	Adder	0.87
964452	AG1-308 E O1	0.5491	Adder	1.22
965121	AG1-377 C O1	0.5364	Adder	1.19
965122	AG1-377 E O1	0.3576	Adder	0.79
965131	AG1-378 C O1	0.5364	Adder	1.19
965132	AG1-378 E O1	0.3576	Adder	0.79

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965201	AG1-385 C	0.8249	Adder	1.83
965202	AG1-385 E	0.2443	Adder	0.54
965241	AG1-389 C O1	0.9501	Adder	2.11
965242	AG1-389 E O1	0.6334	Adder	1.41
965251	AG1-390 C O1	0.9501	Adder	2.11
965252	AG1-390 E O1	0.6334	Adder	1.41
965261	AG1-391 C O1	0.9501	Adder	2.11
965262	AG1-391 E O1	0.6334	Adder	1.41
965271	AG1-392 C O1	1.9001	Adder	4.22
965272	AG1-392 E O1	1.2667	Adder	2.81
965301	AG1-395 C	0.6893	Adder	1.53
965302	AG1-395 E	0.2047	Adder	0.45
966041	AG1-473 C	1.8943	Adder	4.2
966042	AG1-473 E	1.2629	Adder	2.8
966121	AG1-481	0.6625	Adder	1.47
WEC	WEC	0.3758	Confirmed LTF	0.3758
LGEE	LGEE	0.7219	Confirmed LTF	0.7219
CPL	CPL	0.4368	Confirmed LTF	0.4368
CBM-W2	CBM-W2	9.6410	Confirmed LTF	9.6410
TVA	TVA	1.4084	Confirmed LTF	1.4084
O-066	O-066	27.0075	Confirmed LTF	27.0075
SIG	SIG	0.5418	Confirmed LTF	0.5418
CBM-S2	CBM-S2	7.8300	Confirmed LTF	7.8300
CBM-S1	CBM-S1	0.3922	Confirmed LTF	0.3922
G-007	G-007	3.9427	Confirmed LTF	3.9427
MEC	MEC	1.8289	Confirmed LTF	1.8289
LAGN	LAGN	1.7850	Confirmed LTF	1.7850
CBM-W1	CBM-W1	17.4970	Confirmed LTF	17.4970

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
164869648	200701	26GROVER	PENELEC	941420	AE2-139 TAP	PENELEC	1	PN-P2-2-PN-230-007T	bus	621.0	101.81	102.75	DC	12.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.7762	50/50	5.7762
200666	26SHAWVL 4	5.6426	50/50	5.6426
200894	26K02	34.2826	50/50	34.2826
203351	26GROZ1-110	1.5966	50/50	1.5966
203352	26CANZ2-011	1.5667	50/50	1.5667
235003	AC1-025 E	0.3391	50/50	0.3391
236828	01GRAYMONT	0.9092	50/50	0.9092
290086	Q-036 E	3.3810	Adder	3.98
919201	AA1-144 OP	-23.7863	Adder	-27.98
921642	AA2-000	199.4187	50/50	199.4187
930511	AB2-092	7.3221	50/50	7.3221
936421	AD2-055	15.0748	50/50	15.0748
936991	AD2-133 C	1.5214	Adder	1.79
936992	AD2-133 E	6.9589	Adder	8.19
939171	AE1-147 C	2.7299	50/50	2.7299
939172	AE1-147 E	1.8199	50/50	1.8199
940201	AE2-001 C	2.7286	50/50	2.7286
940202	AE2-001 E	1.8190	50/50	1.8190
940681	AE2-055 C (Suspended)	2.7082	50/50	2.7082
940682	AE2-055 E (Suspended)	1.8054	50/50	1.8054
941191	AE2-113 C	4.6383	Adder	5.46
941192	AE2-113 E	4.9940	Adder	5.88
941261	AE2-120 C	2.7278	50/50	2.7278
941262	AE2-120 E	1.8186	50/50	1.8186
941271	AE2-121 C	1.4526	50/50	1.4526
941272	AE2-121 E	0.9699	50/50	0.9699
941321	AE2-126 C	1.5317	Adder	1.8
941322	AE2-126 E	1.0212	Adder	1.2
941331	AE2-129 C	1.3188	Adder	1.55
941332	AE2-129 E	0.8792	Adder	1.03
941351	AE2-131 C (Suspended)	1.3188	Adder	1.55
941352	AE2-131 E (Suspended)	0.8792	Adder	1.03
942351	AE2-248 C	2.1733	50/50	2.1733
942352	AE2-248 E	1.4489	50/50	1.4489
942491	AE2-262 C	11.6570	50/50	11.6570
942492	AE2-262 E	7.8335	50/50	7.8335
942501	AE2-263 C	10.9576	50/50	10.9576
942502	AE2-263 E	7.3159	50/50	7.3159
942961	AE2-316 C	3.8926	Adder	4.58
942962	AE2-316 E	5.5509	Adder	6.53
943751	AF1-043	45.2245	50/50	45.2245

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.8950	50/50	2.8950
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6284	50/50	1.6284
944181	AF1-086 C O1	1.2873	Adder	1.51
944182	AF1-086 E O1	5.6002	Adder	6.59
944311	AF1-099 C	17.6953	50/50	17.6953
944312	AF1-099 E	11.7969	50/50	11.7969
944321	AF1-100 C	32.5500	50/50	32.5500
944322	AF1-100 E	21.7000	50/50	21.7000
944412	AF1-106 BAT	2.0074	Merchant Transmission	2.0074
944471	AF1-112 C	2.7188	50/50	2.7188
944472	AF1-112 E	1.8126	50/50	1.8126
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.7126	50/50	2.7126
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8084	50/50	1.8084
944691	AF1-134 C	1.1553	Adder	1.36
944692	AF1-134 E	0.7702	Adder	0.91
944771	AF1-142 C	28.3125	50/50	28.3125
944772	AF1-142 E	18.8750	50/50	18.8750
944881	AF1-153 C O1	1.6013	Adder	1.88
944882	AF1-153 E O1	1.0675	Adder	1.26
944901	AF1-155 C	1.5893	Adder	1.87
944902	AF1-155 E	1.0595	Adder	1.25
945161	AF1-181	0.0265	50/50	0.0265
945171	AF1-182	0.1320	50/50	0.1320
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.7278	50/50	2.7278
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8186	50/50	1.8186
946381	AF1-302 C	1.6998	Adder	2.0
946382	AF1-302 E	2.2664	Adder	2.67
946421	AF1-306 C	6.9889	Adder	8.22
946422	AF1-306 E	27.9557	Adder	32.89
957451	AF2-039 C	1.1415	Adder	1.34
957452	AF2-039 E	0.7610	Adder	0.9
957941	AF2-088 C	0.5496	Adder	0.65
957942	AF2-088 E	0.3664	Adder	0.43
958271	AF2-121 C	1.3188	Adder	1.55
958272	AF2-121 E	0.8792	Adder	1.03
959063	AF2-197 BAT	13.5485	Merchant Transmission	13.5485
960022	AF2-293 E	0.2653	50/50	0.2653
960041	AF2-295 C	1.5893	Adder	1.87
960042	AF2-295 E	1.0595	Adder	1.25
960051	AF2-296 C	1.1553	Adder	1.36
960052	AF2-296 E	0.7702	Adder	0.91
961142	AF2-405 BAT	1.0037	Merchant Transmission	1.0037
961152	AF2-406 BAT	7.5277	Merchant Transmission	7.5277
961451	AF2-436	-0.1532	Adder	-0.18
962411	AG1-090 C O1	3.4947	Adder	7.76

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962412	AG1-090 E O1	2.3298	Adder	5.17
962951	AG1-144 C	0.6989	Adder	1.55
962952	AG1-144 E	0.4660	Adder	1.03
963571	AG1-206 C	0.4282	Adder	0.95
963572	AG1-206 E	0.2306	Adder	0.51
963891	AG1-242 C	0.3317	Adder	0.74
963892	AG1-242 E	0.1786	Adder	0.4
964031	AG1-257 C	1.8818	50/50	1.8818
964032	AG1-257 E	2.6300	50/50	2.6300
964041	AG1-258 C	1.8818	50/50	1.8818
964042	AG1-258 E	2.6300	50/50	2.6300
964341	AG1-296 C	0.2857	Adder	0.63
964342	AG1-296 E	0.1539	Adder	0.34
964451	AG1-308 C O1	0.5251	Adder	1.17
964452	AG1-308 E O1	0.7339	Adder	1.63
964703	AG1-333 BAT	0.2022	Merchant Transmission	0.2022
965121	AG1-377 C O1	0.6989	Adder	1.55
965122	AG1-377 E O1	0.4660	Adder	1.03
965131	AG1-378 C O1	0.6989	Adder	1.55
965132	AG1-378 E O1	0.4660	Adder	1.03
965201	AG1-385 C	1.0913	Adder	2.42
965202	AG1-385 E	0.3232	Adder	0.72
965301	AG1-395 C	0.8981	Adder	1.99
965302	AG1-395 E	0.2668	Adder	0.59
966041	AG1-473 C	7.2943	50/50	7.2943
966042	AG1-473 E	4.8629	50/50	4.8629
WEC	WEC	0.1877	Confirmed LTF	0.1877
LGEE	LGEE	0.3625	Confirmed LTF	0.3625
CPL	CPL	0.2396	Confirmed LTF	0.2396
CBM-W2	CBM-W2	4.8832	Confirmed LTF	4.8832
NY	NY	1.6994	Confirmed LTF	1.6994
TVA	TVA	0.7196	Confirmed LTF	0.7196
O-066	O-066	10.7209	Confirmed LTF	10.7209
SIGE	SIGE	0.2277	Confirmed LTF	0.2277
CBM-S2	CBM-S2	4.1864	Confirmed LTF	4.1864
CBM-S1	CBM-S1	0.1995	Confirmed LTF	0.1995
G-007	G-007	1.5666	Confirmed LTF	1.5666
MEC	MEC	0.9184	Confirmed LTF	0.9184
LAGN	LAGN	0.9100	Confirmed LTF	0.9100
CBM-W1	CBM-W1	8.6924	Confirmed LTF	8.6924

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
165880210	200713	26ROCKTON	PENELEC	200712	26DUBOIS	PENELEC	1	AP-P2-3-WP-230-443T *	breaker	190.0	121.97	129.06	DC	13.47

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	3.0960	50/50	3.0960
200666	26SHAWVL 4	3.0432	50/50	3.0432
200715	26SHAWVL 1	2.7655	50/50	2.7655
200722	26SHAWVL 2	2.8293	50/50	2.8293
200905	26Q36	0.1317	50/50	0.1317
200913	26SHAW-D	0.1681	50/50	0.1681
235003	AC1-025 E	0.0980	Adder	0.12
236828	01GRAYMONT	0.2686	Adder	0.32
290086	Q-036 E	4.0236	50/50	4.0236
921642	AA2-000	26.3797	Adder	31.03
930511	AB2-092	0.9686	Adder	1.14
936421	AD2-055	1.9941	Adder	2.35
936991	AD2-133 C	1.8106	50/50	1.8106
936992	AD2-133 E	8.2816	50/50	8.2816
939171	AE1-147 C	0.8091	Adder	0.95
939172	AE1-147 E	0.5394	Adder	0.63
940201	AE2-001 C	0.8071	Adder	0.95
940202	AE2-001 E	0.5381	Adder	0.63
940681	AE2-055 C (Suspended)	0.7776	Adder	0.91
940682	AE2-055 E (Suspended)	0.5184	Adder	0.61
941261	AE2-120 C	0.8061	Adder	0.95
941262	AE2-120 E	0.5374	Adder	0.63
941271	AE2-121 C	0.4319	Adder	0.51
941272	AE2-121 E	0.2884	Adder	0.34
941331	AE2-129 C	1.6170	50/50	1.6170
941332	AE2-129 E	1.0780	50/50	1.0780
941351	AE2-131 C (Suspended)	1.6170	50/50	1.6170
941352	AE2-131 E (Suspended)	1.0780	50/50	1.0780
942351	AE2-248 C	0.6320	Adder	0.74
942352	AE2-248 E	0.4213	Adder	0.5
942491	AE2-262 C	3.7795	Adder	4.45
942492	AE2-262 E	2.5398	Adder	2.99
942501	AE2-263 C	3.5528	Adder	4.18
942502	AE2-263 E	2.3720	Adder	2.79
943751	AF1-043	5.9824	Adder	7.04
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.8386	Adder	0.99
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.4717	Adder	0.55
944181	AF1-086 C O1	1.0997	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944182	AF1-086 E O1	4.7845	Adder	5.63
944311	AF1-099 C	5.7373	Adder	6.75
944312	AF1-099 E	3.8249	Adder	4.5
944321	AF1-100 C	16.2855	50/50	16.2855
944322	AF1-100 E	10.8570	50/50	10.8570
944382	AF1-103 BAT	1.3910	Merchant Transmission	1.3910
944471	AF1-112 C	0.7932	Adder	0.93
944472	AF1-112 E	0.5288	Adder	0.62
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.7842	Adder	0.92
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5228	Adder	0.62
944691	AF1-134 C	1.3462	50/50	1.3462
944692	AF1-134 E	0.8974	50/50	0.8974
944771	AF1-142 C	9.1797	Adder	10.8
944772	AF1-142 E	6.1198	Adder	7.2
944901	AF1-155 C	-1.0979	Adder	-1.29
945161	AF1-181	0.0142	50/50	0.0142
945171	AF1-182	0.0712	50/50	0.0712
945181	AF1-183	0.0227	50/50	0.0227
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8062	Adder	0.95
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5375	Adder	0.63
946423	AF1-306 BAT	32.6563	50/50	32.6563
957451	AF2-039 C	1.4369	50/50	1.4369
957452	AF2-039 E	0.9579	50/50	0.9579
957941	AF2-088 C	0.6918	50/50	0.6918
957942	AF2-088 E	0.4612	50/50	0.4612
958271	AF2-121 C	1.6170	50/50	1.6170
958272	AF2-121 E	1.0780	50/50	1.0780
959802	AF2-271 E	0.1375	Adder	0.16
960022	AF2-293 E	0.0787	Adder	0.09
960051	AF2-296 C	1.3462	50/50	1.3462
960052	AF2-296 E	0.8974	50/50	0.8974
962411	AG1-090 C O1	8.0850	50/50	8.0850
962412	AG1-090 E O1	5.3900	50/50	5.3900
962951	AG1-144 C	1.6170	50/50	1.6170
962952	AG1-144 E	1.0780	50/50	1.0780
963891	AG1-242 C	0.7292	50/50	0.7292
963892	AG1-242 E	0.3926	50/50	0.3926
964031	AG1-257 C	0.2917	Adder	0.65
964032	AG1-257 E	0.4077	Adder	0.9
964041	AG1-258 C	0.2917	Adder	0.65
964042	AG1-258 E	0.4077	Adder	0.9
964451	AG1-308 C O1	1.2243	50/50	1.2243
964452	AG1-308 E O1	1.7111	50/50	1.7111
965121	AG1-377 C O1	1.6170	50/50	1.6170
965122	AG1-377 E O1	1.0780	50/50	1.0780
965131	AG1-378 C O1	1.6170	50/50	1.6170
965132	AG1-378 E O1	1.0780	50/50	1.0780
965203	AG1-385 BAT	0.9227	50/50	0.9227

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965301	AG1-395 C	2.0778	50/50	2.0778
965302	AG1-395 E	0.6172	50/50	0.6172
966041	AG1-473 C	0.8280	Adder	1.84
966042	AG1-473 E	0.5520	Adder	1.23
966122	AG1-481 BAT	0.5640	Merchant Transmission	0.5640
G-007A	G-007A	1.2563	Confirmed LTF	1.2563
VFT	VFT	3.4120	Confirmed LTF	3.4120
CALDERWOOD	CALDERWOOD	0.1123	Confirmed LTF	0.1123
NY	NY	0.0265	Confirmed LTF	0.0265
PRAIRIE	PRAIRIE	0.7258	Confirmed LTF	0.7258
CHEOAH	CHEOAH	0.1121	Confirmed LTF	0.1121
CBM-N	CBM-N	0.6456	Confirmed LTF	0.6456
COTTONWOOD	COTTONWOOD	0.5271	Confirmed LTF	0.5271
HAMLET	HAMLET	0.0872	Confirmed LTF	0.0872
GIBSON	GIBSON	0.1605	Confirmed LTF	0.1605
BLUEG	BLUEG	0.5052	Confirmed LTF	0.5052
TRIMBLE	TRIMBLE	0.1625	Confirmed LTF	0.1625
CATAWBA	CATAWBA	0.0613	Confirmed LTF	0.0613

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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
165880201	200714	26SHAWVL 1	PENELEC	200713	26ROCKTON	PENELEC	1	AP-P2-3-WP-230-443T *	breaker	190.0	122.91	130.01	DC	13.47

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	3.0960	50/50	3.0960
200666	26SHAWVL 4	3.0432	50/50	3.0432
200715	26SHAWVL 1	2.7655	50/50	2.7655
200722	26SHAWVL 2	2.8293	50/50	2.8293
200905	26Q36	0.1317	50/50	0.1317
200913	26SHAW-D	0.1681	50/50	0.1681
235003	AC1-025 E	0.0980	Adder	0.12
236828	01GRAYMONT	0.2686	Adder	0.32
290086	Q-036 E	4.0236	50/50	4.0236
921642	AA2-000	26.3797	Adder	31.03
930511	AB2-092	0.9686	Adder	1.14
936421	AD2-055	1.9941	Adder	2.35
936991	AD2-133 C	1.8106	50/50	1.8106
936992	AD2-133 E	8.2816	50/50	8.2816
939171	AE1-147 C	0.8091	Adder	0.95
939172	AE1-147 E	0.5394	Adder	0.63
940201	AE2-001 C	0.8071	Adder	0.95
940202	AE2-001 E	0.5381	Adder	0.63
940681	AE2-055 C (Suspended)	0.7776	Adder	0.91
940682	AE2-055 E (Suspended)	0.5184	Adder	0.61
941261	AE2-120 C	0.8061	Adder	0.95
941262	AE2-120 E	0.5374	Adder	0.63
941271	AE2-121 C	0.4319	Adder	0.51
941272	AE2-121 E	0.2884	Adder	0.34
941331	AE2-129 C	1.6170	50/50	1.6170
941332	AE2-129 E	1.0780	50/50	1.0780
941351	AE2-131 C (Suspended)	1.6170	50/50	1.6170
941352	AE2-131 E (Suspended)	1.0780	50/50	1.0780
942351	AE2-248 C	0.6320	Adder	0.74
942352	AE2-248 E	0.4213	Adder	0.5
942491	AE2-262 C	3.7795	Adder	4.45
942492	AE2-262 E	2.5398	Adder	2.99
942501	AE2-263 C	3.5528	Adder	4.18
942502	AE2-263 E	2.3720	Adder	2.79
943751	AF1-043	5.9824	Adder	7.04
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.8386	Adder	0.99
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.4717	Adder	0.55
944181	AF1-086 C O1	1.0997	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944182	AF1-086 E O1	4.7845	Adder	5.63
944311	AF1-099 C	5.7373	Adder	6.75
944312	AF1-099 E	3.8249	Adder	4.5
944321	AF1-100 C	16.2855	50/50	16.2855
944322	AF1-100 E	10.8570	50/50	10.8570
944382	AF1-103 BAT	1.3910	Merchant Transmission	1.3910
944471	AF1-112 C	0.7932	Adder	0.93
944472	AF1-112 E	0.5288	Adder	0.62
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.7842	Adder	0.92
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5228	Adder	0.62
944691	AF1-134 C	1.3462	50/50	1.3462
944692	AF1-134 E	0.8974	50/50	0.8974
944771	AF1-142 C	9.1797	Adder	10.8
944772	AF1-142 E	6.1198	Adder	7.2
944901	AF1-155 C	-1.0979	Adder	-1.29
945161	AF1-181	0.0142	50/50	0.0142
945171	AF1-182	0.0712	50/50	0.0712
945181	AF1-183	0.0227	50/50	0.0227
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8062	Adder	0.95
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5375	Adder	0.63
946423	AF1-306 BAT	32.6563	50/50	32.6563
957451	AF2-039 C	1.4369	50/50	1.4369
957452	AF2-039 E	0.9579	50/50	0.9579
957941	AF2-088 C	0.6918	50/50	0.6918
957942	AF2-088 E	0.4612	50/50	0.4612
958271	AF2-121 C	1.6170	50/50	1.6170
958272	AF2-121 E	1.0780	50/50	1.0780
959802	AF2-271 E	0.1375	Adder	0.16
960022	AF2-293 E	0.0787	Adder	0.09
960051	AF2-296 C	1.3462	50/50	1.3462
960052	AF2-296 E	0.8974	50/50	0.8974
962411	AG1-090 C O1	8.0850	50/50	8.0850
962412	AG1-090 E O1	5.3900	50/50	5.3900
962951	AG1-144 C	1.6170	50/50	1.6170
962952	AG1-144 E	1.0780	50/50	1.0780
963891	AG1-242 C	0.7292	50/50	0.7292
963892	AG1-242 E	0.3926	50/50	0.3926
964031	AG1-257 C	0.2917	Adder	0.65
964032	AG1-257 E	0.4077	Adder	0.9
964041	AG1-258 C	0.2917	Adder	0.65
964042	AG1-258 E	0.4077	Adder	0.9
964451	AG1-308 C O1	1.2243	50/50	1.2243
964452	AG1-308 E O1	1.7111	50/50	1.7111
965121	AG1-377 C O1	1.6170	50/50	1.6170
965122	AG1-377 E O1	1.0780	50/50	1.0780
965131	AG1-378 C O1	1.6170	50/50	1.6170
965132	AG1-378 E O1	1.0780	50/50	1.0780
965203	AG1-385 BAT	0.9227	50/50	0.9227

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965301	AG1-395 C	2.0778	50/50	2.0778
965302	AG1-395 E	0.6172	50/50	0.6172
966041	AG1-473 C	0.8280	Adder	1.84
966042	AG1-473 E	0.5520	Adder	1.23
966122	AG1-481 BAT	0.5640	Merchant Transmission	0.5640
G-007A	G-007A	1.2563	Confirmed LTF	1.2563
VFT	VFT	3.4120	Confirmed LTF	3.4120
CALDERWOOD	CALDERWOOD	0.1123	Confirmed LTF	0.1123
NY	NY	0.0265	Confirmed LTF	0.0265
PRAIRIE	PRAIRIE	0.7258	Confirmed LTF	0.7258
CHEOAH	CHEOAH	0.1121	Confirmed LTF	0.1121
CBM-N	CBM-N	0.6456	Confirmed LTF	0.6456
COTTONWOOD	COTTONWOOD	0.5271	Confirmed LTF	0.5271
HAMLET	HAMLET	0.0872	Confirmed LTF	0.0872
GIBSON	GIBSON	0.1605	Confirmed LTF	0.1605
BLUEG	BLUEG	0.5052	Confirmed LTF	0.5052
TRIMBLE	TRIMBLE	0.1625	Confirmed LTF	0.1625
CATAWBA	CATAWBA	0.0613	Confirmed LTF	0.0613

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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
164248146	200726	26SHAWVL 2	PENELEC	235248	01SHINGL	AP	1	AP-P1-3-WP-230-005-B	single	666.0	106.33	107.72	DC	9.21

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	4.0414	80/20	4.0414
200643	26SENECA#2	3.8169	80/20	3.8169
200644	26SENECA#3	0.4171	80/20	0.4171
200649	26PENNTech	1.1387	80/20	1.1387
200665	26SHAWVL 3	7.5805	80/20	7.5805
200666	26SHAWVL 4	7.5205	80/20	7.5205
200715	26SHAWVL 1	4.7288	80/20	4.7288
200722	26SHAWVL 2	4.8596	80/20	4.8596
200887	26ARMNA MT	0.1495	80/20	0.1495
200905	26Q36	0.1376	80/20	0.1376
200913	26SHAW-D	0.2014	80/20	0.2014
201201	26WRREN CT	0.8390	80/20	0.8390
203261	26BLOSSBCT	0.2188	80/20	0.2188
203349	26Z1-069 C	0.1562	80/20	0.1562
203351	26GROZ1-110	0.3040	80/20	0.3040
203352	26CANZ2-011	0.2983	80/20	0.2983
203922	X1-109 G1	3.7747	80/20	3.7747
203923	X1-109 G2	3.7747	80/20	3.7747
919201	AA1-144 OP	10.7841	80/20	10.7841
921642	AA2-000	82.8168	80/20	82.8168
930511	AB2-092	3.0408	80/20	3.0408
931091	AB1-160 C	0.0446	80/20	0.0446
936421	AD2-055	6.2605	80/20	6.2605
936991	AD2-133 C	1.8916	80/20	1.8916
939171	AE1-147 C	-3.8683	Adder	-4.55
940861	AE2-074 C	1.2552	80/20	1.2552
941191	AE2-113 C	8.0128	80/20	8.0128
941321	AE2-126 C	2.2922	80/20	2.2922
941331	AE2-129 C	1.8420	80/20	1.8420
941351	AE2-131 C (Suspended)	1.8420	80/20	1.8420
941421	AE2-139 C	4.3778	80/20	4.3778
942491	AE2-262 C	11.8150	80/20	11.8150
942501	AE2-263 C	11.1061	80/20	11.1061
942961	AE2-316 C	5.4299	80/20	5.4299
943751	AF1-043	18.7813	80/20	18.7813
944181	AF1-086 C O1	1.8141	80/20	1.8141
944311	AF1-099 C	17.9352	80/20	17.9352
944321	AF1-100 C	39.9285	80/20	39.9285
944381	AF1-103 O1	1.8660	80/20	1.8660
944691	AF1-134 C	1.7010	80/20	1.7010
944771	AF1-142 C	28.6963	80/20	28.6963

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944881	AF1-153 C O1	2.2002	80/20	2.2002
944901	AF1-155 C	2.1844	80/20	2.1844
945121	AF1-177	0.0736	80/20	0.0736
945161	AF1-181	0.0348	80/20	0.0348
945171	AF1-182	0.1759	80/20	0.1759
945181	AF1-183	0.0388	80/20	0.0388
945331	AF1-198	0.0288	80/20	0.0288
946111	AF1-276 C	5.9322	80/20	5.9322
946121	AF1-277 C	5.9322	80/20	5.9322
946131	AF1-278 C	4.7316	80/20	4.7316
946381	AF1-302 C	2.3711	80/20	2.3711
946421	AF1-306 C	9.6628	80/20	9.6628
957451	AF2-039 C	1.7233	80/20	1.7233
957941	AF2-088 C	0.8297	80/20	0.8297
958271	AF2-121 C	1.8420	80/20	1.8420
959061	AF2-197 C O1	2.3958	80/20	2.3958
959471	AF2-238 C	0.7955	80/20	0.7955
959741	AF2-265 C	0.5701	80/20	0.5701
960041	AF2-295 C	2.1844	80/20	2.1844
960051	AF2-296 C	1.7010	80/20	1.7010
961211	AF2-412	7.6830	80/20	7.6830
962411	AG1-090 C O1	9.2100	80/20	9.2100
962951	AG1-144 C	1.8420	80/20	1.8420
963571	AG1-206 C	1.2059	80/20	1.2059
963891	AG1-242 C	0.9214	80/20	0.9214
964341	AG1-296 C	0.7563	80/20	0.7563
964451	AG1-308 C O1	1.4240	80/20	1.4240
965121	AG1-377 C O1	1.8420	80/20	1.8420
965131	AG1-378 C O1	1.8420	80/20	1.8420
965201	AG1-385 C	2.8291	80/20	2.8291
965241	AG1-389 C O1	0.9179	80/20	0.9179
965251	AG1-390 C O1	0.9179	80/20	0.9179
965261	AG1-391 C O1	0.9179	80/20	0.9179
965271	AG1-392 C O1	1.8358	80/20	1.8358
965301	AG1-395 C	2.3670	80/20	2.3670
966121	AG1-481	1.4489	80/20	1.4489
WEC	WEC	0.1383	Confirmed LTF	0.1383
LGEE	LGEE	0.2551	Confirmed LTF	0.2551
CPL	CPL	0.0369	Confirmed LTF	0.0369
CBM-W2	CBM-W2	3.1898	Confirmed LTF	3.1898
TVA	TVA	0.4298	Confirmed LTF	0.4298
SIGE	SIGE	0.1760	Confirmed LTF	0.1760
CBM-S2	CBM-S2	1.3572	Confirmed LTF	1.3572
CBM-S1	CBM-S1	0.1235	Confirmed LTF	0.1235
MEC	MEC	0.6515	Confirmed LTF	0.6515
LAGN	LAGN	0.5547	Confirmed LTF	0.5547
CBM-W1	CBM-W1	6.7436	Confirmed LTF	6.7436

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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
164247797	200763	26BLAIRSVL	PENELEC	235253	01SOCIAL	AP	1	PN-P2-3-PN-230-0201A-20	breaker	287.0	114.07	115.13	DC	6.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200503	26C.SLOPE (Deactivation : 07/06/2019)	0.8489	50/50	0.8489
200636	26IUP CO-G	0.3536	50/50	0.3536
200794	26CONEMAGH	0.2400	50/50	0.2400
200805	26COLVER13 (Deactivation : 01/09/2020)	2.1933	50/50	2.1933
200835	26ARN_Z1-066	0.5207	Adder	0.61
200846	26FORWARD	0.0529	50/50	0.0529
200852	26WARR RDG	0.1401	Adder	0.16
200864	K-013 E	2.4302	50/50	2.4302
200883	Q-053 E	3.8833	Adder	4.57
200888	26HIGHLAND	0.1341	50/50	0.1341
200925	26R32	0.2103	50/50	0.2103
200945	26CT_V3-030	0.0928	50/50	0.0928
202158	26CON.GEN1	0.0626	50/50	0.0626
202160	26CON.GEN2	0.1172	50/50	0.1172
203915	26BF_Z2-108	1.1715	Adder	1.38
290086	Q-036 E	2.5473	Adder	3.0
292350	K-023	2.1413	Adder	2.52
292542	L-013 1	2.0827	Adder	2.45
293301	N-039 E	4.3286	Adder	5.09
293393	V3-030E	3.1313	50/50	3.1313
293432	R-040 E	0.1172	Adder	0.14
293603	O-018 E	5.4579	50/50	5.4579
293902	O-048 E	1.8744	Adder	2.21
294515	O38_P22	3.7875	Adder	4.46
294903	P-060 E	3.4475	Adder	4.06
296332	R-032 E	6.2976	50/50	6.2976
913142	Y1-033 E OP1	1.6199	Adder	1.91
935191	AD1-154	1.3493	Adder	1.59
936881	AD2-112 C	-2.3978	Adder	-2.82
936882	AD2-112 E	-0.9515	Adder	-1.12
936991	AD2-133 C	1.1463	Adder	1.35
936992	AD2-133 E	5.2429	Adder	6.17
938351	AE1-053	0.6508	Adder	0.77
938362	AE1-054 BAT	1.0156	Merchant Transmission	1.0156
938881	AE1-116	0.3561	Adder	0.42
938993	AE1-128 C	7.2475	50/50	7.2475
938994	AE1-128 E	4.8317	50/50	4.8317

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941231	AE2-117 C	0.6834	Adder	0.8
941232	AE2-117 E	0.4556	Adder	0.54
941241	AE2-118 C	0.7152	Adder	0.84
941242	AE2-118 E	0.4768	Adder	0.56
941321	AE2-126 C	0.5215	Adder	0.61
941322	AE2-126 E	0.3477	Adder	0.41
941331	AE2-129 C	0.6856	Adder	0.81
941332	AE2-129 E	0.4571	Adder	0.54
941351	AE2-131 C (Suspended)	0.6856	Adder	0.81
941352	AE2-131 E (Suspended)	0.4571	Adder	0.54
942121	AE2-224 C	4.2162	Adder	4.96
942122	AE2-224 E	2.8108	Adder	3.31
942361	AE2-249 C	0.8153	50/50	0.8153
942362	AE2-249 E	0.5436	50/50	0.5436
942511	AE2-264 C	2.6569	Adder	3.13
942512	AE2-264 E	1.7713	Adder	2.08
943711	AF1-039 C O1	0.4286	Adder	0.5
943712	AF1-039 E O1	0.2857	Adder	0.34
944181	AF1-086 C O1	2.1898	50/50	2.1898
944182	AF1-086 E O1	9.5267	50/50	9.5267
944691	AF1-134 C	0.8737	Adder	1.03
944692	AF1-134 E	0.5825	Adder	0.69
944751	AF1-140 C	0.9867	50/50	0.9867
944752	AF1-140 E	0.6578	50/50	0.6578
944781	AF1-143 C	3.9051	Adder	4.59
944782	AF1-143 E	2.0827	Adder	2.45
945671	AF1-232 C (Withdrawn : 01/19/2021)	8.4298	Adder	9.92
945672	AF1-232 E (Withdrawn : 01/19/2021)	4.5391	Adder	5.34
945751	AF1-240 C O1	0.8096	Adder	0.95
945752	AF1-240 E O1	0.5397	Adder	0.63
946071	AF1-272 C O1	12.3704	50/50	12.3704
946072	AF1-272 E O1	8.2469	50/50	8.2469
946571	AF1-321 C O1	1.2670	50/50	1.2670
946572	AF1-321 E O1	0.8446	50/50	0.8446
957001	AF2-001 C O1	1.2670	50/50	1.2670
957002	AF2-001 E O1	0.8446	50/50	0.8446
957011	AF2-002 C O1	0.6335	50/50	0.6335
957012	AF2-002 E O1	0.4223	50/50	0.4223
957451	AF2-039 C	0.3980	Adder	0.47
957452	AF2-039 E	0.2653	Adder	0.31
957512	AF2-045 E	1.9370	50/50	1.9370
957561	AF2-050 C	2.1081	Adder	2.48
957562	AF2-050 E	1.4054	Adder	1.65
957931	AF2-087 C (Suspended)	0.2141	Adder	0.25
957932	AF2-087 E (Suspended)	0.2949	Adder	0.35
957941	AF2-088 C	0.1916	Adder	0.23
957942	AF2-088 E	0.1278	Adder	0.15
957981	AF2-092 C	0.7251	50/50	0.7251
957982	AF2-092 E	0.4834	50/50	0.4834
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.1899	Adder	0.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.1266	Adder	0.15
958271	AF2-121 C	0.6856	Adder	0.81
958272	AF2-121 E	0.4571	Adder	0.54
958471	AF2-141	0.5207	Adder	0.61
959792	AF2-270 E	0.3746	50/50	0.3746
959802	AF2-271 E	0.1790	Adder	0.21
960051	AF2-296 C	0.8737	Adder	1.03
960052	AF2-296 E	0.5825	Adder	0.69
960451	AF2-336 C	1.2085	50/50	1.2085
960452	AF2-336 E	0.8057	50/50	0.8057
960461	AF2-337 C	1.2085	50/50	1.2085
960462	AF2-337 E	0.8057	50/50	0.8057
960471	AF2-338 C	1.2085	50/50	1.2085
960472	AF2-338 E	0.8057	50/50	0.8057
960481	AF2-339 C	1.2085	50/50	1.2085
960482	AF2-339 E	0.8057	50/50	0.8057
960901	AF2-381 C	8.4816	50/50	8.4816
960902	AF2-381 E	4.4634	50/50	4.4634
961911	AG1-033 C	0.3406	50/50	0.3406
961912	AG1-033 E	0.1916	50/50	0.1916
961981	AG1-041 C	0.7254	50/50	0.7254
961982	AG1-041 E	0.4836	50/50	0.4836
962292	AG1-077 E	0.1725	Adder	0.38
962411	AG1-090 C O1	1.8170	Adder	4.03
962412	AG1-090 E O1	1.2113	Adder	2.69
962641	AG1-113	0.1510	Adder	0.34
962651	AG1-114	0.3449	Adder	0.77
962951	AG1-144 C	0.3634	Adder	0.81
962952	AG1-144 E	0.2423	Adder	0.54
963541	AG1-203 C	0.2804	Adder	0.62
963542	AG1-203 E	0.1510	Adder	0.34
963561	AG1-205 C	0.2242	Adder	0.5
963562	AG1-205 E	0.1207	Adder	0.27
963881	AG1-241 C	0.6918	50/50	0.6918
963882	AG1-241 E	0.3725	50/50	0.3725
963891	AG1-242 C	0.2508	Adder	0.56
963892	AG1-242 E	0.1351	Adder	0.3
964191	AG1-280 C	0.5034	Adder	1.12
964192	AG1-280 E	0.3356	Adder	0.74
964201	AG1-281 C	0.5023	Adder	1.11
964202	AG1-281 E	0.3349	Adder	0.74
964331	AG1-295 C	1.8203	50/50	1.8203
964332	AG1-295 E	0.9659	50/50	0.9659
964391	AG1-301 C	0.3565	Adder	0.79
964392	AG1-301 E	0.2376	Adder	0.53
964451	AG1-308 C O1	0.2406	Adder	0.53
964452	AG1-308 E O1	0.3363	Adder	0.75
964751	AG1-338 C	0.4438	50/50	0.4438
964752	AG1-338 E	0.0605	50/50	0.0605
964761	AG1-339 C	0.4640	50/50	0.4640
964762	AG1-339 E	0.0403	50/50	0.0403

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964771	AG1-340 C	0.4438	50/50	0.4438
964772	AG1-340 E	0.0605	50/50	0.0605
964911	AG1-355 C	3.4269	50/50	3.4269
964912	AG1-355 E	2.2846	50/50	2.2846
964921	AG1-356 C	0.9235	Adder	2.05
964922	AG1-356 E	0.6156	Adder	1.37
965121	AG1-377 C O1	0.3634	Adder	0.81
965122	AG1-377 E O1	0.2423	Adder	0.54
965131	AG1-378 C O1	0.3634	Adder	0.81
965132	AG1-378 E O1	0.2423	Adder	0.54
965171	AG1-382 C	1.3036	50/50	1.3036
965172	AG1-382 E	0.8690	50/50	0.8690
965221	AG1-387 C	1.3036	50/50	1.3036
965222	AG1-387 E	0.8690	50/50	0.8690
965301	AG1-395 C	0.4670	Adder	1.04
965302	AG1-395 E	0.1387	Adder	0.31
965881	AG1-457 C	1.2007	Adder	2.67
965882	AG1-457 E	0.8005	Adder	1.78
966453	AG1-514 BAT	0.2965	Merchant Transmission	0.2965
966512	AG1-520 E	0.4223	50/50	0.4223
966781	AG1-549 C O1	25.2758	50/50	25.2758
966782	AG1-549 E O1	7.6926	50/50	7.6926
G-007A	G-007A	1.9851	Confirmed LTF	1.9851
VFT	VFT	5.4631	Confirmed LTF	5.4631
CALDERWOOD	CALDERWOOD	0.3017	Confirmed LTF	0.3017
PRAIRIE	PRAIRIE	1.6583	Confirmed LTF	1.6583
CHEOAH	CHEOAH	0.3028	Confirmed LTF	0.3028
CBM-N	CBM-N	1.0728	Confirmed LTF	1.0728
COTTONWOOD	COTTONWOOD	1.3041	Confirmed LTF	1.3041
HAMLET	HAMLET	0.3043	Confirmed LTF	0.3043
GIBSON	GIBSON	0.3587	Confirmed LTF	0.3587
BLUEG	BLUEG	1.1475	Confirmed LTF	1.1475
TRIMBLE	TRIMBLE	0.3684	Confirmed LTF	0.3684
CATAWBA	CATAWBA	0.1942	Confirmed LTF	0.1942

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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
167504984	200767	26HOMER CT	PENELEC	200795	26SHELOCTA	PENELEC	1	ATSI-P2-3-CEI-345-004C	breaker	923.0	191.16	192.01	DC	17.16

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200809	26SITHE	2.1681	50/50	2.1681
200823	26MHP_X3-003	5.8518	Adder	6.88
200832	26HNSMLK 5	1.9218	50/50	1.9218
200833	26SEWRDB34	21.0061	50/50	21.0061
200835	26ARN_Z1-066	1.2266	Adder	1.44
200837	26HOMER C1	37.3397	50/50	37.3397
200838	26HOMER C2	31.6582	50/50	31.6582
200839	26HOMER C3	33.5144	50/50	33.5144
200846	26FORWARD	0.1221	50/50	0.1221
200852	26WARR RDG	0.3665	Adder	0.43
200864	K-013 E	5.6093	50/50	5.6093
200883	Q-053 E	8.5978	Adder	10.12
200886	26ARWF_N39	0.3909	50/50	0.3909
200888	26HIGHLAND	0.2971	50/50	0.2971
200894	26K02	6.8415	Adder	8.05
200925	26R32	0.4658	50/50	0.4658
203034	26NA_O38_P22	0.3434	50/50	0.3434
203915	26BF_Z2-108	2.7598	Adder	3.25
203932	AA2-133 GEN	2.1515	Adder	2.53
203999	P-047 E	12.3617	Adder	14.54
235003	AC1-025 E	0.1637	Adder	0.19
236828	01GRAYMONT	0.4444	Adder	0.52
290086	Q-036 E	6.2152	Adder	7.31
292350	K-023	5.0443	Adder	5.93
292542	L-013 1	4.9063	Adder	5.77
293301	N-039 E	14.8211	50/50	14.8211
293393	V3-030E	4.1799	Adder	4.92
293432	R-040 E	0.2760	Adder	0.32
293603	O-018 E	12.0895	50/50	12.0895
293902	O-048 E	4.4157	Adder	5.19
294515	O38_P22	12.9685	50/50	12.9685
294573	P-028 E	11.3261	Adder	13.32
294903	P-060 E	7.9086	Adder	9.3
296332	R-032 E	13.9494	50/50	13.9494
913142	Y1-033 E OP1	3.9223	Adder	4.61
915951	Y3-092 FTIR	200.7700	Merchant Transmission	200.7700
916202	Z1-069 E	10.0381	Adder	11.81
919201	AA1-144 OP	19.3347	Adder	22.75
920341	AA2-132 (Withdrawn : 12/07/2020)	2.6551	Adder	3.12

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
921642	AA2-000	57.6748	Adder	67.85
930511	AB2-092	2.1176	Adder	2.49
931092	AB1-160 E	2.8680	Adder	3.37
935191	AD1-154	2.4786	Adder	2.92
936421	AD2-055	4.3599	Adder	5.13
936991	AD2-133 C	2.7968	Adder	3.29
936992	AD2-133 E	12.7924	Adder	15.05
938351	AE1-053	1.5332	Adder	1.8
938881	AE1-116	0.8276	Adder	0.97
938951	AE1-123	2.4006	Adder	2.82
938993	AE1-128 C	13.9291	Adder	16.39
938994	AE1-128 E	9.2861	Adder	10.92
939171	AE1-147 C	1.3370	Adder	1.57
939172	AE1-147 E	0.8913	Adder	1.05
939291	AE1-160 C	1.9800	Adder	2.33
939292	AE1-160 E	1.1381	Adder	1.34
940201	AE2-001 C	1.3350	Adder	1.57
940202	AE2-001 E	0.8900	Adder	1.05
940681	AE2-055 C (Suspended)	1.3028	Adder	1.53
940682	AE2-055 E (Suspended)	0.8686	Adder	1.02
940861	AE2-074 C	2.7716	Adder	3.26
940862	AE2-074 E	3.6484	Adder	4.29
941191	AE2-113 C	10.7814	Adder	12.68
941192	AE2-113 E	11.6081	Adder	13.66
941231	AE2-117 C	1.7727	Adder	2.09
941232	AE2-117 E	1.1818	Adder	1.39
941241	AE2-118 C	1.8499	Adder	2.18
941242	AE2-118 E	1.2332	Adder	1.45
941261	AE2-120 C	1.3338	Adder	1.57
941262	AE2-120 E	0.8892	Adder	1.05
941271	AE2-121 C	0.7128	Adder	0.84
941272	AE2-121 E	0.4759	Adder	0.56
941321	AE2-126 C	1.7168	Adder	2.02
941322	AE2-126 E	1.1445	Adder	1.35
941331	AE2-129 C	1.7502	Adder	2.06
941332	AE2-129 E	1.1668	Adder	1.37
941351	AE2-131 C (Suspended)	1.7502	Adder	2.06
941352	AE2-131 E (Suspended)	1.1668	Adder	1.37
941421	AE2-139 C	3.8058	Adder	8.45
941422	AE2-139 E	2.5372	Adder	5.63
942121	AE2-224 C	14.5704	50/50	14.5704
942122	AE2-224 E	9.7136	50/50	9.7136
942351	AE2-248 C	1.0530	Adder	1.24
942352	AE2-248 E	0.7020	Adder	0.83
942361	AE2-249 C	1.5670	Adder	1.84
942362	AE2-249 E	1.0447	Adder	1.23
942491	AE2-262 C	6.0142	Adder	7.08
942492	AE2-262 E	4.0415	Adder	4.75
942501	AE2-263 C	5.6533	Adder	6.65
942502	AE2-263 E	3.7745	Adder	4.44
942511	AE2-264 C	7.4117	Adder	8.72
942512	AE2-264 E	4.9412	Adder	5.81

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942811	AE2-299 C	5.4849	Adder	6.45
942812	AE2-299 E	21.9395	Adder	25.81
942961	AE2-316 C	5.7639	Adder	6.78
942962	AE2-316 E	8.2194	Adder	9.67
943151	AE2-344 C	11.9941	Adder	14.11
943152	AE2-344 E	7.9961	Adder	9.41
943351	AF1-006 C	2.1827	Adder	2.57
943352	AF1-006 E	1.2278	Adder	1.44
943711	AF1-039 C O1	1.0376	Adder	1.22
943712	AF1-039 E O1	0.6918	Adder	0.81
943751	AF1-043	13.0796	Adder	15.39
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.3997	Adder	1.65
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.7873	Adder	0.93
944181	AF1-086 C O1	2.4818	Adder	2.92
944182	AF1-086 E O1	10.7971	Adder	12.7
944261	AF1-094 C	1.9802	Adder	2.33
944262	AF1-094 E	1.3202	Adder	1.55
944281	AF1-096 C	1.8709	Adder	2.2
944282	AF1-096 E	1.2473	Adder	1.47
944301	AF1-098 C	8.1930	Adder	9.64
944302	AF1-098 E	5.4620	Adder	6.43
944311	AF1-099 C	9.1295	Adder	10.74
944312	AF1-099 E	6.0863	Adder	7.16
944321	AF1-100 C	19.1531	Adder	22.53
944322	AF1-100 E	12.7687	Adder	15.02
944381	AF1-103 O1	3.4267	Adder	4.03
944391	AF1-104 O1	3.4156	Adder	4.02
944411	AF1-106 O1	2.8806	Adder	3.39
944471	AF1-112 C	1.3198	Adder	1.55
944472	AF1-112 E	0.8799	Adder	1.04
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3100	Adder	1.54
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.8733	Adder	1.03
944691	AF1-134 C	1.5185	Adder	1.79
944692	AF1-134 E	1.0123	Adder	1.19
944751	AF1-140 C	1.8520	Adder	2.18
944752	AF1-140 E	1.2346	Adder	1.45
944771	AF1-142 C	14.6072	Adder	17.18
944772	AF1-142 E	9.7382	Adder	11.46
944781	AF1-143 C	9.1994	Adder	10.82
944782	AF1-143 E	4.9063	Adder	5.77
944881	AF1-153 C O1	1.6418	Adder	1.93
944882	AF1-153 E O1	1.0945	Adder	1.29
944901	AF1-155 C	1.6416	Adder	1.93
944902	AF1-155 E	1.0944	Adder	1.29
945021	AF1-167 C	0.9946	Adder	1.17
945022	AF1-167 E	0.6643	Adder	0.78
945051	AF1-170 C	7.9750	Adder	9.38

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945052	AF1-170 E	5.3166	Adder	6.25
945451	AF1-210 C	1.0882	Adder	1.28
945452	AF1-210 E	0.7255	Adder	0.85
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.3339	Adder	1.57
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.8892	Adder	1.05
945671	AF1-232 C (Withdrawn : 01/19/2021)	19.4232	Adder	22.85
945672	AF1-232 E (Withdrawn : 01/19/2021)	10.4587	Adder	12.3
945751	AF1-240 C O1	1.4872	Adder	1.75
945752	AF1-240 E O1	0.9914	Adder	1.17
946111	AF1-276 C	12.8075	Adder	15.07
946112	AF1-276 E	6.3082	Adder	7.42
946121	AF1-277 C	12.8075	Adder	15.07
946122	AF1-277 E	6.3082	Adder	7.42
946131	AF1-278 C	10.2154	Adder	12.02
946132	AF1-278 E	5.0771	Adder	5.97
946211	AF1-286 C	1.1667	Adder	1.37
946212	AF1-286 E	0.7922	Adder	0.93
946221	AF1-287 C	2.0600	Adder	2.42
946222	AF1-287 E	1.3733	Adder	1.62
946381	AF1-302 C	2.5170	Adder	2.96
946382	AF1-302 E	3.3560	Adder	3.95
946401	AF1-304 C	9.1448	Adder	10.76
946402	AF1-304 E	6.0965	Adder	7.17
946421	AF1-306 C	6.9143	Adder	8.13
946422	AF1-306 E	27.6573	Adder	32.54
946571	AF1-321 C O1	2.9359	50/50	2.9359
946572	AF1-321 E O1	1.9573	50/50	1.9573
946771	AF1-217 C	2.0600	Adder	2.42
946772	AF1-217 E	1.3733	Adder	1.62
957001	AF2-001 C O1	2.9359	50/50	2.9359
957002	AF2-001 E O1	1.9573	50/50	1.9573
957011	AF2-002 C O1	1.4680	50/50	1.4680
957012	AF2-002 E O1	0.9786	50/50	0.9786
957161	AF2-010 C	7.5709	Adder	8.91
957162	AF2-010 E	5.1022	Adder	6.0
957451	AF2-039 C	1.0866	Adder	1.28
957452	AF2-039 E	0.7244	Adder	0.85
957512	AF2-045 E	3.4137	Adder	4.02
957561	AF2-050 C	7.2852	50/50	7.2852
957562	AF2-050 E	4.8568	50/50	4.8568
957571	AF2-051 C	5.7578	Adder	6.77
957572	AF2-051 E	2.9662	Adder	3.49
957931	AF2-087 C (Suspended)	0.5174	Adder	0.61
957932	AF2-087 E (Suspended)	0.7124	Adder	0.84
957941	AF2-088 C	0.5232	Adder	0.62
957942	AF2-088 E	0.3488	Adder	0.41
957981	AF2-092 C	1.3864	Adder	1.63
957982	AF2-092 E	0.9242	Adder	1.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.4414	Adder	0.52
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.2943	Adder	0.35
958271	AF2-121 C	1.7502	Adder	2.06
958272	AF2-121 E	1.1668	Adder	1.37
958361	AF2-130 C	1.7045	Adder	2.01
958362	AF2-130 E	1.1363	Adder	1.34
958471	AF2-141	1.2266	Adder	1.44
958731	AF2-164 C O1	9.2893	Adder	10.93
958732	AF2-164 E O1	6.1929	Adder	7.29
958741	AF2-165 C	1.8326	Adder	2.16
958742	AF2-165 E	1.2218	Adder	1.44
958751	AF2-166 C	1.7045	Adder	2.01
958752	AF2-166 E	1.1363	Adder	1.34
959061	AF2-197 C O1	4.9259	Adder	5.8
959062	AF2-197 E O1	7.3889	Adder	8.69
959441	AF2-235 C	0.9354	Adder	1.1
959442	AF2-235 E	0.6236	Adder	0.73
959471	AF2-238 C	1.7521	Adder	2.06
959472	AF2-238 E	1.1680	Adder	1.37
959481	AF2-239 C	1.3267	Adder	1.56
959482	AF2-239 E	1.0638	Adder	1.25
959491	AF2-240 C	0.5444	Adder	0.64
959492	AF2-240 E	0.4638	Adder	0.55
959501	AF2-241 C	1.6276	Adder	1.91
959502	AF2-241 E	1.2531	Adder	1.47
959521	AF2-243 C	1.3745	Adder	1.62
959522	AF2-243 E	0.9163	Adder	1.08
959741	AF2-265 C	1.2556	Adder	1.48
959742	AF2-265 E	0.9344	Adder	1.1
959792	AF2-270 E	0.7199	Adder	0.85
959802	AF2-271 E	0.4533	Adder	0.53
959822	AF2-273 E	0.4364	Adder	0.51
960022	AF2-293 E	0.1300	Adder	0.15
960031	AF2-294 C	1.6011	Adder	1.88
960032	AF2-294 E	1.0674	Adder	1.26
960041	AF2-295 C	1.6416	Adder	1.93
960042	AF2-295 E	1.0944	Adder	1.29
960051	AF2-296 C	1.5185	Adder	1.79
960052	AF2-296 E	1.0123	Adder	1.19
960271	AF2-318 C	1.4343	Adder	1.69
960272	AF2-318 E	0.9562	Adder	1.12
960451	AF2-336 C	2.3106	Adder	2.72
960452	AF2-336 E	1.5404	Adder	1.81
960461	AF2-337 C	2.3106	Adder	2.72
960462	AF2-337 E	1.5404	Adder	1.81
960471	AF2-338 C	2.3106	Adder	2.72
960472	AF2-338 E	1.5404	Adder	1.81
960481	AF2-339 C	2.3106	Adder	2.72
960482	AF2-339 E	1.5404	Adder	1.81
960901	AF2-381 C	19.4652	50/50	19.4652
960902	AF2-381 E	10.2436	50/50	10.2436

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961141	AF2-405	1.4403	Adder	1.69
961151	AF2-406	10.8024	Adder	12.71
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	53.7208	Adder	63.2
961211	AF2-412	21.6116	Adder	25.43
961451	AF2-436	0.1623	Adder	0.19
961911	AG1-033 C	0.7710	50/50	0.7710
961912	AG1-033 E	0.4337	50/50	0.4337
961971	AG1-040 C	1.0995	Adder	2.44
961972	AG1-040 E	0.7330	Adder	1.63
961981	AG1-041 C	0.7322	Adder	1.63
961982	AG1-041 E	0.4882	Adder	1.08
962292	AG1-077 E	0.3970	Adder	0.88
962411	AG1-090 C O1	4.6381	Adder	10.3
962412	AG1-090 E O1	3.0921	Adder	6.86
962511	AG1-100 C	1.0931	Adder	2.43
962512	AG1-100 E	0.7288	Adder	1.62
962641	AG1-113	0.3509	Adder	0.78
962651	AG1-114	0.8126	Adder	1.8
962891	AG1-138 C	0.3576	Adder	0.79
962892	AG1-138 E	0.0188	Adder	0.04
962901	AG1-139 C	0.3845	Adder	0.85
962902	AG1-139 E	0.0202	Adder	0.04
962911	AG1-140 C	0.1635	Adder	0.36
962912	AG1-140 E	0.0745	Adder	0.17
962951	AG1-144 C	0.9276	Adder	2.06
962952	AG1-144 E	0.6184	Adder	1.37
963281	AG1-177 C O1	1.0495	Adder	2.33
963282	AG1-177 E O1	0.6997	Adder	1.55
963441	AG1-193 C	1.0618	Adder	2.36
963442	AG1-193 E	0.7079	Adder	1.57
963481	AG1-197 C	0.8260	Adder	1.83
963482	AG1-197 E	0.5507	Adder	1.22
963491	AG1-198 C	0.6297	Adder	1.4
963492	AG1-198 E	0.4198	Adder	0.93
963531	AG1-202 C	0.5992	Adder	1.33
963532	AG1-202 E	0.3087	Adder	0.69
963541	AG1-203 C	0.6451	Adder	1.43
963542	AG1-203 E	0.3473	Adder	0.77
963561	AG1-205 C	0.5282	Adder	1.17
963562	AG1-205 E	0.2844	Adder	0.63
963571	AG1-206 C	0.5006	Adder	1.11
963572	AG1-206 E	0.2696	Adder	0.6
963881	AG1-241 C	1.5662	50/50	1.5662
963882	AG1-241 E	0.8433	50/50	0.8433
963891	AG1-242 C	0.4359	Adder	0.97
963892	AG1-242 E	0.2347	Adder	0.52
963941	AG1-247 C	0.3741	Adder	0.83
963942	AG1-247 E	0.1985	Adder	0.44
963991	AG1-253 C	0.2453	Adder	0.54
963992	AG1-253 E	0.1181	Adder	0.26
964031	AG1-257 C	0.4849	Adder	1.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964032	AG1-257 E	0.6776	Adder	1.5
964041	AG1-258 C	0.4849	Adder	1.08
964042	AG1-258 E	0.6776	Adder	1.5
964191	AG1-280 C	1.1543	Adder	2.56
964192	AG1-280 E	0.7695	Adder	1.71
964201	AG1-281 C	1.1530	Adder	2.56
964202	AG1-281 E	0.7687	Adder	1.71
964341	AG1-296 C	0.4830	Adder	1.07
964342	AG1-296 E	0.2601	Adder	0.58
964391	AG1-301 C	0.9323	Adder	2.07
964392	AG1-301 E	0.6215	Adder	1.38
964411	AG1-303 C O1	2.4413	Adder	5.42
964412	AG1-303 E O1	1.6275	Adder	3.61
964451	AG1-308 C O1	0.6260	Adder	1.39
964452	AG1-308 E O1	0.8749	Adder	1.94
964701	AG1-333 C	0.3111	Adder	0.69
964702	AG1-333 E	0.0424	Adder	0.09
964751	AG1-338 C	0.4428	Adder	0.98
964752	AG1-338 E	0.0604	Adder	0.13
964761	AG1-339 C	0.4629	Adder	1.03
964762	AG1-339 E	0.0403	Adder	0.09
964771	AG1-340 C	0.4428	Adder	0.98
964772	AG1-340 E	0.0604	Adder	0.13
964911	AG1-355 C	7.8994	50/50	7.8994
964912	AG1-355 E	5.2663	50/50	5.2663
964921	AG1-356 C	2.1313	Adder	4.73
964922	AG1-356 E	1.4209	Adder	3.15
965121	AG1-377 C O1	0.9276	Adder	2.06
965122	AG1-377 E O1	0.6184	Adder	1.37
965131	AG1-378 C O1	0.9276	Adder	2.06
965132	AG1-378 E O1	0.6184	Adder	1.37
965171	AG1-382 C	1.1370	Adder	2.52
965172	AG1-382 E	0.7580	Adder	1.68
965201	AG1-385 C	1.1189	Adder	2.48
965202	AG1-385 E	0.3314	Adder	0.74
965221	AG1-387 C	1.1370	Adder	2.52
965222	AG1-387 E	0.7580	Adder	1.68
965241	AG1-389 C O1	1.1356	Adder	2.52
965242	AG1-389 E O1	0.7571	Adder	1.68
965251	AG1-390 C O1	1.1356	Adder	2.52
965252	AG1-390 E O1	0.7571	Adder	1.68
965261	AG1-391 C O1	1.1356	Adder	2.52
965262	AG1-391 E O1	0.7571	Adder	1.68
965271	AG1-392 C O1	2.2712	Adder	5.04
965272	AG1-392 E O1	1.5141	Adder	3.36
965301	AG1-395 C	1.1920	Adder	2.65
965302	AG1-395 E	0.3540	Adder	0.79
965861	AG1-455	3.1814	Adder	7.06
965881	AG1-457 C	2.8139	Adder	6.25
965882	AG1-457 E	1.8759	Adder	4.16
966041	AG1-473 C	1.6275	Adder	3.61
966042	AG1-473 E	1.0850	Adder	2.41

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966121	AG1-481	1.4102	Adder	3.13
966512	AG1-520 E	0.9786	50/50	0.9786
966771	AG1-548 C	10.0957	Adder	22.41
966772	AG1-548 E	3.0726	Adder	6.82
966783	AG1-549 BAT	1.9509	Merchant Transmission	1.9509
G-007A	G-007A	2.5605	Confirmed LTF	2.5605
VFT	VFT	7.3272	Confirmed LTF	7.3272
CALDERWOOD	CALDERWOOD	0.6670	Confirmed LTF	0.6670
PRAIRIE	PRAIRIE	3.6394	Confirmed LTF	3.6394
CHEOAH	CHEOAH	0.6702	Confirmed LTF	0.6702
CBM-N	CBM-N	1.5900	Confirmed LTF	1.5900
COTTONWOOD	COTTONWOOD	2.8770	Confirmed LTF	2.8770
HAMLET	HAMLET	0.7022	Confirmed LTF	0.7022
GIBSON	GIBSON	0.7813	Confirmed LTF	0.7813
BLUEG	BLUEG	2.4912	Confirmed LTF	2.4912
TRIMBLE	TRIMBLE	0.7991	Confirmed LTF	0.7991
CATAWBA	CATAWBA	0.4407	Confirmed LTF	0.4407

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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
167504982	200795	26SHELOCTA	PENELEC	200810	26KEYSTONE	PENELEC	1	ATSI-P2-3-CEI-345-004D	breaker	923.0	187.73	188.71	DC	19.91

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200636	26IUP CO-G	0.6646	50/50	0.6646
200805	26COLVER13 (Deactivation : 01/09/2020)	4.5894	50/50	4.5894
200809	26SITHE	2.0742	50/50	2.0742
200835	26ARN_Z1-066	1.3692	Adder	1.61
200837	26HOMER C1	35.7218	50/50	35.7218
200838	26HOMER C2	30.7825	50/50	30.7825
200839	26HOMER C3	32.5873	50/50	32.5873
200846	26FORWARD	0.1356	50/50	0.1356
200852	26WARR RDG	0.3980	Adder	0.47
200864	K-013 E	6.2294	50/50	6.2294
200883	Q-053 E	9.8263	Adder	11.56
200894	26K02	7.0491	Adder	8.29
202158	26CON.GEN1	0.1138	50/50	0.1138
203915	26BF_Z2-108	3.0808	Adder	3.62
203932	AA2-133 GEN	2.1346	Adder	2.51
203999	P-047 E	12.2344	Adder	14.39
235003	AC1-025 E	0.1776	Adder	0.21
236828	01GRAYMONT	0.4823	Adder	0.57
290086	Q-036 E	7.1437	Adder	8.4
292350	K-023	5.6310	Adder	6.62
292542	L-013 1	5.4770	Adder	6.44
293301	N-039 E	13.0930	Adder	15.4
293393	V3-030E	6.0349	Adder	7.1
293432	R-040 E	0.3081	Adder	0.36
293603	O-018 E	11.5711	Adder	13.61
293902	O-048 E	4.9293	Adder	5.8
294515	O38_P22	11.4564	Adder	13.48
294903	P-060 E	8.8350	Adder	10.39
296332	R-032 E	13.3513	Adder	15.71
913142	Y1-033 E OP1	4.4072	Adder	5.18
915951	Y3-092 FTIR	223.8400	Merchant Transmission	223.8400
916202	Z1-069 E	9.9831	Adder	11.74
919201	AA1-144 OP	19.3180	Adder	22.73
920341	AA2-132 (Withdrawn : 12/07/2020)	2.6210	Adder	3.08
921642	AA2-000	61.0711	Adder	71.85
930511	AB2-092	2.2424	Adder	2.64
931092	AB1-160 E	2.8523	Adder	3.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
935191	AD1-154	3.8588	Adder	4.54
936421	AD2-055	4.6166	Adder	5.43
936991	AD2-133 C	3.2147	Adder	3.78
936992	AD2-133 E	14.7036	Adder	17.3
938351	AE1-053	1.7116	Adder	2.01
938881	AE1-116	0.9208	Adder	1.08
938951	AE1-123	3.0346	Adder	3.57
938993	AE1-128 C	15.6317	Adder	18.39
938994	AE1-128 E	10.4211	Adder	12.26
939171	AE1-147 C	1.4512	Adder	1.71
939172	AE1-147 E	0.9674	Adder	1.14
939291	AE1-160 C	2.2092	Adder	2.6
939292	AE1-160 E	1.2699	Adder	1.49
940201	AE2-001 C	1.4488	Adder	1.7
940202	AE2-001 E	0.9659	Adder	1.14
940681	AE2-055 C (Suspended)	1.4132	Adder	1.66
940682	AE2-055 E (Suspended)	0.9421	Adder	1.11
940861	AE2-074 C	2.7658	Adder	3.25
940862	AE2-074 E	3.6408	Adder	4.28
941191	AE2-113 C	11.0656	Adder	13.02
941192	AE2-113 E	11.9140	Adder	14.02
941231	AE2-117 C	1.9341	Adder	2.28
941232	AE2-117 E	1.2894	Adder	1.52
941241	AE2-118 C	2.0112	Adder	2.37
941242	AE2-118 E	1.3408	Adder	1.58
941261	AE2-120 C	1.4475	Adder	1.7
941262	AE2-120 E	0.9650	Adder	1.14
941271	AE2-121 C	0.7736	Adder	0.91
941272	AE2-121 E	0.5166	Adder	0.61
941321	AE2-126 C	1.9141	Adder	2.25
941322	AE2-126 E	1.2761	Adder	1.5
941331	AE2-129 C	2.0311	Adder	2.39
941332	AE2-129 E	1.3541	Adder	1.59
941351	AE2-131 C (Suspended)	2.0311	Adder	2.39
941352	AE2-131 E (Suspended)	1.3541	Adder	1.59
941421	AE2-139 C	3.8159	Adder	8.47
941422	AE2-139 E	2.5439	Adder	5.65
942121	AE2-224 C	12.8301	Adder	15.09
942122	AE2-224 E	8.5534	Adder	10.06
942351	AE2-248 C	1.1425	Adder	1.34
942352	AE2-248 E	0.7617	Adder	0.9
942361	AE2-249 C	1.7586	Adder	2.07
942362	AE2-249 E	1.1724	Adder	1.38
942491	AE2-262 C	6.5378	Adder	7.69
942492	AE2-262 E	4.3934	Adder	5.17
942501	AE2-263 C	6.1455	Adder	7.23
942502	AE2-263 E	4.1031	Adder	4.83
942511	AE2-264 C	7.8222	Adder	9.2
942512	AE2-264 E	5.2148	Adder	6.14
942811	AE2-299 C	5.3081	Adder	6.24
942812	AE2-299 E	21.2323	Adder	24.98
942961	AE2-316 C	6.2569	Adder	7.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	8.9224	Adder	10.5
943151	AE2-344 C	12.4284	Adder	14.62
943152	AE2-344 E	8.2856	Adder	9.75
943351	AF1-006 C	2.2417	Adder	2.64
943352	AF1-006 E	1.2610	Adder	1.48
943711	AF1-039 C O1	1.1659	Adder	1.37
943712	AF1-039 E O1	0.7773	Adder	0.91
943751	AF1-043	13.8498	Adder	16.29
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.5185	Adder	1.79
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8542	Adder	1.0
944181	AF1-086 C O1	4.2272	Adder	4.97
944182	AF1-086 E O1	18.3905	Adder	21.64
944261	AF1-094 C	2.0435	Adder	2.4
944262	AF1-094 E	1.3623	Adder	1.6
944281	AF1-096 C	2.0874	Adder	2.46
944282	AF1-096 E	1.3916	Adder	1.64
944301	AF1-098 C	8.0804	Adder	9.51
944302	AF1-098 E	5.3870	Adder	6.34
944311	AF1-099 C	9.9243	Adder	11.68
944312	AF1-099 E	6.6162	Adder	7.78
944321	AF1-100 C	21.0745	Adder	24.79
944322	AF1-100 E	14.0496	Adder	16.53
944381	AF1-103 O1	3.4221	Adder	4.03
944391	AF1-104 O1	3.7072	Adder	4.36
944411	AF1-106 O1	2.8506	Adder	3.35
944471	AF1-112 C	1.4320	Adder	1.68
944472	AF1-112 E	0.9547	Adder	1.12
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.4211	Adder	1.67
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9474	Adder	1.11
944691	AF1-134 C	2.2226	Adder	2.61
944692	AF1-134 E	1.4817	Adder	1.74
944751	AF1-140 C	2.0998	Adder	2.47
944752	AF1-140 E	1.3999	Adder	1.65
944771	AF1-142 C	15.8789	Adder	18.68
944772	AF1-142 E	10.5860	Adder	12.45
944781	AF1-143 C	10.2694	Adder	12.08
944782	AF1-143 E	5.4770	Adder	6.44
944881	AF1-153 C O1	1.7866	Adder	2.1
944882	AF1-153 E O1	1.1911	Adder	1.4
944901	AF1-155 C	1.7872	Adder	2.1
944902	AF1-155 E	1.1915	Adder	1.4
945021	AF1-167 C	1.1677	Adder	1.37
945022	AF1-167 E	0.7799	Adder	0.92
945051	AF1-170 C	8.4564	Adder	9.95
945052	AF1-170 E	5.6376	Adder	6.63
945451	AF1-210 C	1.2813	Adder	1.51
945452	AF1-210 E	0.8542	Adder	1.0

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4476	Adder	1.7
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9651	Adder	1.14
945671	AF1-232 C (Withdrawn : 01/19/2021)	21.6677	Adder	25.49
945672	AF1-232 E (Withdrawn : 01/19/2021)	11.6672	Adder	13.73
945751	AF1-240 C O1	2.3153	Adder	2.72
945752	AF1-240 E O1	1.5435	Adder	1.82
946071	AF1-272 C O1	22.6670	50/50	22.6670
946072	AF1-272 E O1	15.1114	50/50	15.1114
946111	AF1-276 C	12.7727	Adder	15.03
946112	AF1-276 E	6.2911	Adder	7.4
946121	AF1-277 C	12.7727	Adder	15.03
946122	AF1-277 E	6.2911	Adder	7.4
946131	AF1-278 C	10.1877	Adder	11.99
946132	AF1-278 E	5.0633	Adder	5.96
946211	AF1-286 C	1.1545	Adder	1.36
946212	AF1-286 E	0.7839	Adder	0.92
946221	AF1-287 C	2.1338	Adder	2.51
946222	AF1-287 E	1.4226	Adder	1.67
946381	AF1-302 C	2.7323	Adder	3.21
946382	AF1-302 E	3.6430	Adder	4.29
946401	AF1-304 C	10.5218	Adder	12.38
946402	AF1-304 E	7.0145	Adder	8.25
946421	AF1-306 C	7.4222	Adder	8.73
946422	AF1-306 E	29.6889	Adder	34.93
946571	AF1-321 C O1	3.2539	50/50	3.2539
946572	AF1-321 E O1	2.1693	50/50	2.1693
946771	AF1-217 C	2.1338	Adder	2.51
946772	AF1-217 E	1.4226	Adder	1.67
957001	AF2-001 C O1	3.2539	50/50	3.2539
957002	AF2-001 E O1	2.1693	50/50	2.1693
957011	AF2-002 C O1	1.6270	50/50	1.6270
957012	AF2-002 E O1	1.0846	50/50	1.0846
957161	AF2-010 C	7.8411	Adder	9.22
957162	AF2-010 E	5.2842	Adder	6.22
957451	AF2-039 C	1.2786	Adder	1.5
957452	AF2-039 E	0.8524	Adder	1.0
957512	AF2-045 E	3.9422	Adder	4.64
957561	AF2-050 C	6.4150	Adder	7.55
957562	AF2-050 E	4.2767	Adder	5.03
957571	AF2-051 C	6.1800	Adder	7.27
957572	AF2-051 E	3.1836	Adder	3.75
957931	AF2-087 C (Suspended)	0.5746	Adder	0.68
957932	AF2-087 E (Suspended)	0.7912	Adder	0.93
957941	AF2-088 C	0.6156	Adder	0.72
957942	AF2-088 E	0.4104	Adder	0.48
957981	AF2-092 C	1.5593	Adder	1.83
957982	AF2-092 E	1.0395	Adder	1.22
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.4911	Adder	0.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.3274	Adder	0.39
958271	AF2-121 C	2.0311	Adder	2.39
958272	AF2-121 E	1.3541	Adder	1.59
958361	AF2-130 C	2.0649	Adder	2.43
958362	AF2-130 E	1.3766	Adder	1.62
958471	AF2-141	1.3692	Adder	1.61
958731	AF2-164 C O1	9.7993	Adder	11.53
958732	AF2-164 E O1	6.5329	Adder	7.69
958741	AF2-165 C	2.1235	Adder	2.5
958742	AF2-165 E	1.4157	Adder	1.67
958751	AF2-166 C	2.0649	Adder	2.43
958752	AF2-166 E	1.3766	Adder	1.62
959061	AF2-197 C O1	4.8988	Adder	5.76
959062	AF2-197 E O1	7.3483	Adder	8.65
959441	AF2-235 C	1.0437	Adder	1.23
959442	AF2-235 E	0.6958	Adder	0.82
959471	AF2-238 C	1.7410	Adder	2.05
959472	AF2-238 E	1.1607	Adder	1.37
959481	AF2-239 C	1.3189	Adder	1.55
959482	AF2-239 E	1.0575	Adder	1.24
959491	AF2-240 C	0.5388	Adder	0.63
959492	AF2-240 E	0.4589	Adder	0.54
959501	AF2-241 C	1.6106	Adder	1.89
959502	AF2-241 E	1.2400	Adder	1.46
959521	AF2-243 C	1.5927	Adder	1.87
959522	AF2-243 E	1.0618	Adder	1.25
959741	AF2-265 C	1.2477	Adder	1.47
959742	AF2-265 E	0.9286	Adder	1.09
959792	AF2-270 E	0.8079	Adder	0.95
959802	AF2-271 E	0.5015	Adder	0.59
959822	AF2-273 E	0.5133	Adder	0.6
960022	AF2-293 E	0.1411	Adder	0.17
960031	AF2-294 C	1.5805	Adder	1.86
960032	AF2-294 E	1.0537	Adder	1.24
960041	AF2-295 C	1.7872	Adder	2.1
960042	AF2-295 E	1.1915	Adder	1.4
960051	AF2-296 C	2.2226	Adder	2.61
960052	AF2-296 E	1.4817	Adder	1.74
960271	AF2-318 C	1.4259	Adder	1.68
960272	AF2-318 E	0.9506	Adder	1.12
960451	AF2-336 C	2.5989	Adder	3.06
960452	AF2-336 E	1.7326	Adder	2.04
960461	AF2-337 C	2.5989	Adder	3.06
960462	AF2-337 E	1.7326	Adder	2.04
960471	AF2-338 C	2.5989	Adder	3.06
960472	AF2-338 E	1.7326	Adder	2.04
960481	AF2-339 C	2.5989	Adder	3.06
960482	AF2-339 E	1.7326	Adder	2.04
960901	AF2-381 C	21.6798	50/50	21.6798
960902	AF2-381 E	11.4090	50/50	11.4090
961141	AF2-405	1.4253	Adder	1.68

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961151	AF2-406	10.6896	Adder	12.58
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	52.8437	Adder	62.17
961211	AF2-412	21.3486	Adder	25.12
961451	AF2-436	0.1610	Adder	0.19
961911	AG1-033 C	0.8602	50/50	0.8602
961912	AG1-033 E	0.4838	50/50	0.4838
961971	AG1-040 C	1.1606	Adder	2.58
961972	AG1-040 E	0.7737	Adder	1.72
961981	AG1-041 C	0.8249	Adder	1.83
961982	AG1-041 E	0.5500	Adder	1.22
962292	AG1-077 E	0.4430	Adder	0.98
962411	AG1-090 C O1	5.3825	Adder	11.95
962412	AG1-090 E O1	3.5883	Adder	7.97
962511	AG1-100 C	1.1449	Adder	2.54
962512	AG1-100 E	0.7633	Adder	1.69
962641	AG1-113	0.3904	Adder	0.87
962651	AG1-114	0.9071	Adder	2.01
962891	AG1-138 C	0.4332	Adder	0.96
962892	AG1-138 E	0.0228	Adder	0.05
962901	AG1-139 C	0.4455	Adder	0.99
962902	AG1-139 E	0.0234	Adder	0.05
962911	AG1-140 C	0.1582	Adder	0.35
962912	AG1-140 E	0.0721	Adder	0.16
962951	AG1-144 C	1.0765	Adder	2.39
962952	AG1-144 E	0.7177	Adder	1.59
963281	AG1-177 C O1	1.0830	Adder	2.4
963282	AG1-177 E O1	0.7220	Adder	1.6
963441	AG1-193 C	1.1848	Adder	2.63
963442	AG1-193 E	0.7899	Adder	1.75
963481	AG1-197 C	0.8755	Adder	1.94
963482	AG1-197 E	0.5837	Adder	1.3
963491	AG1-198 C	0.6498	Adder	1.44
963492	AG1-198 E	0.4332	Adder	0.96
963531	AG1-202 C	0.6396	Adder	1.42
963532	AG1-202 E	0.3295	Adder	0.73
963541	AG1-203 C	0.7199	Adder	1.6
963542	AG1-203 E	0.3877	Adder	0.86
963561	AG1-205 C	0.5896	Adder	1.31
963562	AG1-205 E	0.3175	Adder	0.7
963571	AG1-206 C	0.5510	Adder	1.22
963572	AG1-206 E	0.2967	Adder	0.66
963881	AG1-241 C	1.7472	50/50	1.7472
963882	AG1-241 E	0.9408	50/50	0.9408
963891	AG1-242 C	0.6381	Adder	1.42
963892	AG1-242 E	0.3436	Adder	0.76
963941	AG1-247 C	0.3701	Adder	0.82
963942	AG1-247 E	0.1964	Adder	0.44
963991	AG1-253 C	0.2374	Adder	0.53
963992	AG1-253 E	0.1143	Adder	0.25
964031	AG1-257 C	0.5261	Adder	1.17
964032	AG1-257 E	0.7353	Adder	1.63

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964041	AG1-258 C	0.5261	Adder	1.17
964042	AG1-258 E	0.7353	Adder	1.63
964191	AG1-280 C	1.2954	Adder	2.88
964192	AG1-280 E	0.8636	Adder	1.92
964201	AG1-281 C	1.2937	Adder	2.87
964202	AG1-281 E	0.8624	Adder	1.91
964331	AG1-295 C	0.5652	Adder	1.25
964332	AG1-295 E	0.2999	Adder	0.67
964341	AG1-296 C	0.5250	Adder	1.17
964342	AG1-296 E	0.2827	Adder	0.63
964391	AG1-301 C	1.0124	Adder	2.25
964392	AG1-301 E	0.6750	Adder	1.5
964411	AG1-303 C O1	2.6203	Adder	5.82
964412	AG1-303 E O1	1.7469	Adder	3.88
964451	AG1-308 C O1	0.7292	Adder	1.62
964452	AG1-308 E O1	1.0191	Adder	2.26
964701	AG1-333 C	0.3071	Adder	0.68
964702	AG1-333 E	0.0419	Adder	0.09
964751	AG1-338 C	0.5014	Adder	1.11
964752	AG1-338 E	0.0684	Adder	0.15
964761	AG1-339 C	0.5242	Adder	1.16
964762	AG1-339 E	0.0456	Adder	0.1
964771	AG1-340 C	0.5014	Adder	1.11
964772	AG1-340 E	0.0684	Adder	0.15
964911	AG1-355 C	8.7681	50/50	8.7681
964912	AG1-355 E	5.8454	50/50	5.8454
964921	AG1-356 C	2.3765	Adder	5.28
964922	AG1-356 E	1.5843	Adder	3.52
965121	AG1-377 C O1	1.0765	Adder	2.39
965122	AG1-377 E O1	0.7177	Adder	1.59
965131	AG1-378 C O1	1.0765	Adder	2.39
965132	AG1-378 E O1	0.7177	Adder	1.59
965171	AG1-382 C	1.3685	Adder	3.04
965172	AG1-382 E	0.9123	Adder	2.03
965201	AG1-385 C	1.2176	Adder	2.7
965202	AG1-385 E	0.3606	Adder	0.8
965221	AG1-387 C	1.3685	Adder	3.04
965222	AG1-387 E	0.9123	Adder	2.03
965241	AG1-389 C O1	1.1303	Adder	2.51
965242	AG1-389 E O1	0.7535	Adder	1.67
965251	AG1-390 C O1	1.1303	Adder	2.51
965252	AG1-390 E O1	0.7535	Adder	1.67
965261	AG1-391 C O1	1.1303	Adder	2.51
965262	AG1-391 E O1	0.7535	Adder	1.67
965271	AG1-392 C O1	2.2606	Adder	5.02
965272	AG1-392 E O1	1.5070	Adder	3.35
965301	AG1-395 C	1.3833	Adder	3.07
965302	AG1-395 E	0.4109	Adder	0.91
965861	AG1-455	3.3735	Adder	7.49
965881	AG1-457 C	3.1370	Adder	6.96
965882	AG1-457 E	2.0913	Adder	4.64
966121	AG1-481	1.4083	Adder	3.13

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966512	AG1-520 E	1.0846	50/50	1.0846
966771	AG1-548 C	10.3636	Adder	23.0
966772	AG1-548 E	3.1541	Adder	7.0
966781	AG1-549 C O1	45.4434	50/50	45.4434
966782	AG1-549 E O1	13.8306	50/50	13.8306
G-007A	G-007A	2.0523	Confirmed LTF	2.0523
VFT	VFT	5.9533	Confirmed LTF	5.9533
CALDERWOOD	CALDERWOOD	0.6247	Confirmed LTF	0.6247
PRAIRIE	PRAIRIE	3.3889	Confirmed LTF	3.3889
CHEOAH	CHEOAH	0.6281	Confirmed LTF	0.6281
CBM-N	CBM-N	1.3320	Confirmed LTF	1.3320
COTTONWOOD	COTTONWOOD	2.6880	Confirmed LTF	2.6880
HAMLET	HAMLET	0.6653	Confirmed LTF	0.6653
GIBSON	GIBSON	0.7267	Confirmed LTF	0.7267
BLUEG	BLUEG	2.3158	Confirmed LTF	2.3158
TRIMBLE	TRIMBLE	0.7429	Confirmed LTF	0.7429
CATAWBA	CATAWBA	0.4158	Confirmed LTF	0.4158

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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
164869505	200810	26KEYSTONE	PENELEC	999332	KEYSTONE	PENELEC	4	APS-P2-2-WP-500-DRT19	bus	634.0	139.13	140.03	DC	12.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200636	26IUP CO-G	0.4562	50/50	0.4562
200794	26CONEMAGH	0.3075	50/50	0.3075
200809	26SITHE	1.4282	50/50	1.4282
200833	26SEWRDB34	14.8354	50/50	14.8354
200835	26ARN_Z1-066	0.9301	Adder	1.09
200837	26HOMER C1	24.5961	50/50	24.5961
200838	26HOMER C2	20.3806	50/50	20.3806
200839	26HOMER C3	21.5755	50/50	21.5755
200846	26FORWARD	0.0922	50/50	0.0922
200852	26WARR RDG	0.2604	Adder	0.31
200864	K-013 E	4.2361	50/50	4.2361
200883	Q-053 E	6.5672	Adder	7.73
200888	26HIGHLAND	0.2265	50/50	0.2265
200894	26K02	4.1917	Adder	4.93
200906	26KEYSTN#3	0.7604	50/50	0.7604
200925	26R32	0.3551	50/50	0.3551
202158	26CON.GEN1	0.0793	50/50	0.0793
202160	26CON.GEN2	0.0555	50/50	0.0555
203915	26BF_Z2-108	2.0927	Adder	2.46
203999	P-047 E	7.4720	Adder	8.79
235003	AC1-025 E	0.1061	Adder	0.12
236828	01GRAYMONT	0.2879	Adder	0.34
290086	Q-036 E	4.6070	Adder	5.42
292350	K-023	3.8251	Adder	4.5
292542	L-013 1	3.7204	Adder	4.38
293301	N-039 E	8.8150	Adder	10.37
293393	V3-030E	4.0181	Adder	4.73
293432	R-040 E	0.2093	Adder	0.25
293603	O-018 E	9.2165	50/50	9.2165
293902	O-048 E	3.3484	Adder	3.94
294515	O38_P22	7.7131	Adder	9.07
294903	P-060 E	5.9947	Adder	7.05
296332	R-032 E	10.6344	50/50	10.6344
913142	Y1-033 E OP1	2.9894	Adder	3.52
916202	Z1-069 E	6.0533	Adder	7.12
919201	AA1-144 OP	11.5038	Adder	13.53
920341	AA2-132 (Withdrawn : 12/07/2020)	1.5694	Adder	1.85
921642	AA2-000	36.2420	Adder	42.64
930511	AB2-092	1.3307	Adder	1.57
931092	AB1-160 E	1.7295	Adder	2.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
935191	AD1-154	2.3759	Adder	2.8
936421	AD2-055	2.7397	Adder	3.22
936991	AD2-133 C	2.0731	Adder	2.44
936992	AD2-133 E	9.4824	Adder	11.16
938351	AE1-053	1.1626	Adder	1.37
938881	AE1-116	0.6259	Adder	0.74
938951	AE1-123	1.7193	Adder	2.02
938993	AE1-128 C	10.5852	Adder	12.45
938994	AE1-128 E	7.0568	Adder	8.3
939171	AE1-147 C	0.8659	Adder	1.02
939172	AE1-147 E	0.5773	Adder	0.68
939291	AE1-160 C	1.0615	Adder	1.25
939292	AE1-160 E	0.6101	Adder	0.72
940201	AE2-001 C	0.8646	Adder	1.02
940202	AE2-001 E	0.5764	Adder	0.68
940681	AE2-055 C (Suspended)	0.8447	Adder	0.99
940682	AE2-055 E (Suspended)	0.5631	Adder	0.66
940861	AE2-074 C	1.6654	Adder	1.96
940862	AE2-074 E	2.1923	Adder	2.58
941191	AE2-113 C	6.5539	Adder	7.71
941192	AE2-113 E	7.0564	Adder	8.3
941231	AE2-117 C	1.2652	Adder	1.49
941232	AE2-117 E	0.8435	Adder	0.99
941241	AE2-118 C	1.3245	Adder	1.56
941242	AE2-118 E	0.8830	Adder	1.04
941261	AE2-120 C	0.8638	Adder	1.02
941262	AE2-120 E	0.5759	Adder	0.68
941271	AE2-121 C	0.4616	Adder	0.54
941272	AE2-121 E	0.3082	Adder	0.36
941321	AE2-126 C	1.1448	Adder	1.35
941322	AE2-126 E	0.7632	Adder	0.9
941331	AE2-129 C	1.2830	Adder	1.51
941332	AE2-129 E	0.8553	Adder	1.01
941351	AE2-131 C (Suspended)	1.2830	Adder	1.51
941352	AE2-131 E (Suspended)	0.8553	Adder	1.01
941421	AE2-139 C	2.2721	Adder	5.04
941422	AE2-139 E	1.5147	Adder	3.36
942121	AE2-224 C	8.6669	Adder	10.2
942122	AE2-224 E	5.7780	Adder	6.8
942351	AE2-248 C	0.6823	Adder	0.8
942352	AE2-248 E	0.4549	Adder	0.54
942361	AE2-249 C	1.1908	Adder	1.4
942362	AE2-249 E	0.7939	Adder	0.93
942491	AE2-262 C	3.8837	Adder	4.57
942492	AE2-262 E	2.6098	Adder	3.07
942501	AE2-263 C	3.6506	Adder	4.29
942502	AE2-263 E	2.4374	Adder	2.87
942511	AE2-264 C	5.1632	Adder	6.07
942512	AE2-264 E	3.4422	Adder	4.05
942811	AE2-299 C	2.2301	Adder	2.62
942812	AE2-299 E	8.9205	Adder	10.49
942961	AE2-316 C	3.6572	Adder	4.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.2151	Adder	6.14
943151	AE2-344 C	4.8233	Adder	5.67
943152	AE2-344 E	3.2155	Adder	3.78
943711	AF1-039 C O1	0.7909	Adder	0.93
943712	AF1-039 E O1	0.5272	Adder	0.62
943751	AF1-043	8.2190	Adder	9.67
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.9072	Adder	1.07
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.5103	Adder	0.6
944181	AF1-086 C O1	2.7629	Adder	3.25
944182	AF1-086 E O1	12.0200	Adder	14.14
944261	AF1-094 C	0.8818	Adder	1.04
944262	AF1-094 E	0.5879	Adder	0.69
944281	AF1-096 C	1.0030	Adder	1.18
944282	AF1-096 E	0.6686	Adder	0.79
944301	AF1-098 C	3.4305	Adder	4.04
944302	AF1-098 E	2.2870	Adder	2.69
944311	AF1-099 C	5.8954	Adder	6.94
944312	AF1-099 E	3.9303	Adder	4.62
944321	AF1-100 C	12.5371	Adder	14.75
944322	AF1-100 E	8.3580	Adder	9.83
944381	AF1-103 O1	1.7331	Adder	2.04
944411	AF1-106 O1	1.7177	Adder	2.02
944471	AF1-112 C	0.8552	Adder	1.01
944472	AF1-112 E	0.5701	Adder	0.67
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.8490	Adder	1.0
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5660	Adder	0.67
944691	AF1-134 C	1.4199	Adder	1.67
944692	AF1-134 E	0.9466	Adder	1.11
944751	AF1-140 C	1.4160	Adder	1.67
944752	AF1-140 E	0.9440	Adder	1.11
944771	AF1-142 C	9.4326	Adder	11.1
944772	AF1-142 E	6.2884	Adder	7.4
944781	AF1-143 C	6.9758	Adder	8.21
944782	AF1-143 E	3.7204	Adder	4.38
944881	AF1-153 C O1	1.0402	Adder	1.22
944882	AF1-153 E O1	0.6935	Adder	0.82
944901	AF1-155 C	1.0404	Adder	1.22
944902	AF1-155 E	0.6936	Adder	0.82
945021	AF1-167 C	0.6719	Adder	0.79
945022	AF1-167 E	0.4488	Adder	0.53
945051	AF1-170 C	3.0798	Adder	3.62
945052	AF1-170 E	2.0532	Adder	2.42
945451	AF1-210 C	0.7376	Adder	0.87
945452	AF1-210 E	0.4917	Adder	0.58
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8639	Adder	1.02

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5760	Adder	0.68
945671	AF1-232 C (Withdrawn : 01/19/2021)	14.7115	Adder	17.31
945672	AF1-232 E (Withdrawn : 01/19/2021)	7.9216	Adder	9.32
945751	AF1-240 C O1	1.4256	Adder	1.68
945752	AF1-240 E O1	0.9504	Adder	1.12
946071	AF1-272 C O1	15.6902	50/50	15.6902
946072	AF1-272 E O1	10.4601	50/50	10.4601
946111	AF1-276 C	7.4656	Adder	8.78
946112	AF1-276 E	3.6771	Adder	4.33
946121	AF1-277 C	7.4656	Adder	8.78
946122	AF1-277 E	3.6771	Adder	4.33
946131	AF1-278 C	5.9546	Adder	7.01
946132	AF1-278 E	2.9595	Adder	3.48
946211	AF1-286 C	0.6957	Adder	0.82
946212	AF1-286 E	0.4724	Adder	0.56
946221	AF1-287 C	0.8326	Adder	0.98
946222	AF1-287 E	0.5551	Adder	0.65
946381	AF1-302 C	1.5970	Adder	1.88
946382	AF1-302 E	2.1294	Adder	2.51
946401	AF1-304 C	5.2474	Adder	6.17
946402	AF1-304 E	3.4983	Adder	4.12
946421	AF1-306 C	4.3103	Adder	5.07
946422	AF1-306 E	17.2414	Adder	20.28
946571	AF1-321 C O1	2.2145	50/50	2.2145
946572	AF1-321 E O1	1.4763	50/50	1.4763
946771	AF1-217 C	0.8327	Adder	0.98
946772	AF1-217 E	0.5552	Adder	0.65
957001	AF2-001 C O1	2.2145	50/50	2.2145
957002	AF2-001 E O1	1.4763	50/50	1.4763
957011	AF2-002 C O1	1.1072	50/50	1.1072
957012	AF2-002 E O1	0.7382	50/50	0.7382
957161	AF2-010 C	3.4025	Adder	4.0
957162	AF2-010 E	2.2930	Adder	2.7
957451	AF2-039 C	0.7842	Adder	0.92
957452	AF2-039 E	0.5228	Adder	0.62
957512	AF2-045 E	2.6604	Adder	3.13
957561	AF2-050 C	4.3335	Adder	5.1
957562	AF2-050 E	2.8890	Adder	3.4
957571	AF2-051 C	2.5983	Adder	3.06
957572	AF2-051 E	1.3385	Adder	1.57
957931	AF2-087 C (Suspended)	0.3821	Adder	0.45
957932	AF2-087 E (Suspended)	0.5262	Adder	0.62
957941	AF2-088 C	0.3776	Adder	0.44
957942	AF2-088 E	0.2517	Adder	0.3
957981	AF2-092 C	1.0550	Adder	1.24
957982	AF2-092 E	0.7033	Adder	0.83
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.3338	Adder	0.39
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.2225	Adder	0.26

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958271	AF2-121 C	1.2830	Adder	1.51
958272	AF2-121 E	0.8553	Adder	1.01
958361	AF2-130 C	1.1065	Adder	1.3
958362	AF2-130 E	0.7377	Adder	0.87
958471	AF2-141	0.9301	Adder	1.09
958731	AF2-164 C O1	4.8576	Adder	5.71
958732	AF2-164 E O1	3.2384	Adder	3.81
958741	AF2-165 C	1.0641	Adder	1.25
958742	AF2-165 E	0.7094	Adder	0.83
958751	AF2-166 C	1.1065	Adder	1.3
958752	AF2-166 E	0.7377	Adder	0.87
959061	AF2-197 C O1	2.9265	Adder	3.44
959062	AF2-197 E O1	4.3897	Adder	5.16
959441	AF2-235 C	0.5015	Adder	0.59
959442	AF2-235 E	0.3343	Adder	0.39
959471	AF2-238 C	1.0580	Adder	1.24
959472	AF2-238 E	0.7054	Adder	0.83
959481	AF2-239 C	0.7866	Adder	0.93
959482	AF2-239 E	0.6307	Adder	0.74
959491	AF2-240 C	0.3246	Adder	0.38
959492	AF2-240 E	0.2765	Adder	0.33
959501	AF2-241 C	0.9705	Adder	1.14
959502	AF2-241 E	0.7472	Adder	0.88
959521	AF2-243 C	0.7980	Adder	0.94
959522	AF2-243 E	0.5320	Adder	0.63
959741	AF2-265 C	0.7583	Adder	0.89
959742	AF2-265 E	0.5643	Adder	0.66
959792	AF2-270 E	0.5470	Adder	0.64
959802	AF2-271 E	0.3276	Adder	0.39
959822	AF2-273 E	0.2954	Adder	0.35
960022	AF2-293 E	0.0842	Adder	0.1
960031	AF2-294 C	0.9464	Adder	1.11
960032	AF2-294 E	0.6309	Adder	0.74
960041	AF2-295 C	1.0404	Adder	1.22
960042	AF2-295 E	0.6936	Adder	0.82
960051	AF2-296 C	1.4199	Adder	1.67
960052	AF2-296 E	0.9466	Adder	1.11
960271	AF2-318 C	0.8504	Adder	1.0
960272	AF2-318 E	0.5669	Adder	0.67
960451	AF2-336 C	1.7583	Adder	2.07
960452	AF2-336 E	1.1722	Adder	1.38
960461	AF2-337 C	1.7583	Adder	2.07
960462	AF2-337 E	1.1722	Adder	1.38
960471	AF2-338 C	1.7583	Adder	2.07
960472	AF2-338 E	1.1722	Adder	1.38
960481	AF2-339 C	1.7583	Adder	2.07
960482	AF2-339 E	1.1722	Adder	1.38
960901	AF2-381 C	14.7256	50/50	14.7256
960902	AF2-381 E	7.7494	50/50	7.7494
961141	AF2-405	0.8588	Adder	1.01
961151	AF2-406	6.4413	Adder	7.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	32.8440	Adder	38.64
961211	AF2-412	13.1241	Adder	15.44
961911	AG1-033 C	0.5844	50/50	0.5844
961912	AG1-033 E	0.3287	50/50	0.3287
961971	AG1-040 C	0.4649	Adder	1.03
961972	AG1-040 E	0.3099	Adder	0.69
961981	AG1-041 C	0.5577	Adder	1.24
961982	AG1-041 E	0.3718	Adder	0.83
962292	AG1-077 E	0.3007	Adder	0.67
962411	AG1-090 C O1	3.3998	Adder	7.55
962412	AG1-090 E O1	2.2666	Adder	5.03
962511	AG1-100 C	0.4405	Adder	0.98
962512	AG1-100 E	0.2937	Adder	0.65
962641	AG1-113	0.2654	Adder	0.59
962651	AG1-114	0.6162	Adder	1.37
962891	AG1-138 C	0.2321	Adder	0.52
962892	AG1-138 E	0.0122	Adder	0.03
962901	AG1-139 C	0.2232	Adder	0.5
962902	AG1-139 E	0.0117	Adder	0.03
962911	AG1-140 C	0.0665	Adder	0.15
962912	AG1-140 E	0.0303	Adder	0.07
962951	AG1-144 C	0.6800	Adder	1.51
962952	AG1-144 E	0.4533	Adder	1.01
963281	AG1-177 C O1	0.4673	Adder	1.04
963282	AG1-177 E O1	0.3116	Adder	0.69
963441	AG1-193 C	0.5502	Adder	1.22
963442	AG1-193 E	0.3668	Adder	0.81
963481	AG1-197 C	0.3527	Adder	0.78
963482	AG1-197 E	0.2351	Adder	0.52
963491	AG1-198 C	0.2804	Adder	0.62
963492	AG1-198 E	0.1869	Adder	0.41
963541	AG1-203 C	0.4887	Adder	1.08
963542	AG1-203 E	0.2631	Adder	0.58
963561	AG1-205 C	0.4005	Adder	0.89
963562	AG1-205 E	0.2157	Adder	0.48
963571	AG1-206 C	0.3274	Adder	0.73
963572	AG1-206 E	0.1763	Adder	0.39
963881	AG1-241 C	1.1871	50/50	1.1871
963882	AG1-241 E	0.6392	50/50	0.6392
963891	AG1-242 C	0.4076	Adder	0.9
963892	AG1-242 E	0.2195	Adder	0.49
963941	AG1-247 C	0.2230	Adder	0.5
963942	AG1-247 E	0.1183	Adder	0.26
963991	AG1-253 C	0.0997	Adder	0.22
963992	AG1-253 E	0.0480	Adder	0.11
964031	AG1-257 C	0.3141	Adder	0.7
964032	AG1-257 E	0.4390	Adder	0.97
964041	AG1-258 C	0.3141	Adder	0.7
964042	AG1-258 E	0.4390	Adder	0.97
964191	AG1-280 C	0.8695	Adder	1.93
964192	AG1-280 E	0.5797	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964201	AG1-281 C	0.8682	Adder	1.93
964202	AG1-281 E	0.5788	Adder	1.28
964331	AG1-295 C	0.8622	50/50	0.8622
964332	AG1-295 E	0.4575	50/50	0.4575
964341	AG1-296 C	0.3072	Adder	0.68
964342	AG1-296 E	0.1654	Adder	0.37
964391	AG1-301 C	0.6626	Adder	1.47
964392	AG1-301 E	0.4417	Adder	0.98
964411	AG1-303 C O1	1.1017	Adder	2.45
964412	AG1-303 E O1	0.7344	Adder	1.63
964451	AG1-308 C O1	0.4567	Adder	1.01
964452	AG1-308 E O1	0.6383	Adder	1.42
964701	AG1-333 C	0.1839	Adder	0.41
964702	AG1-333 E	0.0251	Adder	0.06
964751	AG1-338 C	0.3383	Adder	0.75
964752	AG1-338 E	0.0461	Adder	0.1
964761	AG1-339 C	0.3537	Adder	0.79
964762	AG1-339 E	0.0308	Adder	0.07
964771	AG1-340 C	0.3383	Adder	0.75
964772	AG1-340 E	0.0461	Adder	0.1
964911	AG1-355 C	5.9652	50/50	5.9652
964912	AG1-355 E	3.9768	50/50	3.9768
964921	AG1-356 C	1.6139	Adder	3.58
964922	AG1-356 E	1.0759	Adder	2.39
965121	AG1-377 C O1	0.6800	Adder	1.51
965122	AG1-377 E O1	0.4533	Adder	1.01
965131	AG1-378 C O1	0.6800	Adder	1.51
965132	AG1-378 E O1	0.4533	Adder	1.01
965171	AG1-382 C	0.9204	Adder	2.04
965172	AG1-382 E	0.6136	Adder	1.36
965201	AG1-385 C	0.7089	Adder	1.57
965202	AG1-385 E	0.2100	Adder	0.47
965221	AG1-387 C	0.9204	Adder	2.04
965222	AG1-387 E	0.6136	Adder	1.36
965241	AG1-389 C O1	0.6842	Adder	1.52
965242	AG1-389 E O1	0.4562	Adder	1.01
965251	AG1-390 C O1	0.6842	Adder	1.52
965252	AG1-390 E O1	0.4562	Adder	1.01
965261	AG1-391 C O1	0.6842	Adder	1.52
965262	AG1-391 E O1	0.4562	Adder	1.01
965271	AG1-392 C O1	1.3685	Adder	3.04
965272	AG1-392 E O1	0.9123	Adder	2.03
965301	AG1-395 C	0.8738	Adder	1.94
965302	AG1-395 E	0.2595	Adder	0.58
965861	AG1-455	1.2286	Adder	2.73
965881	AG1-457 C	2.1315	Adder	4.73
965882	AG1-457 E	1.4210	Adder	3.15
966121	AG1-481	0.7133	Adder	1.58
966512	AG1-520 E	0.7382	50/50	0.7382
966771	AG1-548 C	4.4368	Adder	9.85
966772	AG1-548 E	1.3503	Adder	3.0
966781	AG1-549 C O1	31.9953	50/50	31.9953

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966782	AG1-549 E O1	9.7377	50/50	9.7377
VFT	VFT	0.1032	Confirmed LTF	0.1032
CALDERWOOD	CALDERWOOD	0.2704	Confirmed LTF	0.2704
PRAIRIE	PRAIRIE	1.2295	Confirmed LTF	1.2295
CHEOAH	CHEOAH	0.2733	Confirmed LTF	0.2733
CBM-N	CBM-N	0.1548	Confirmed LTF	0.1548
COTTONWOOD	COTTONWOOD	1.0752	Confirmed LTF	1.0752
G-007	G-007	0.0252	Confirmed LTF	0.0252
HAMLET	HAMLET	0.3465	Confirmed LTF	0.3465
GIBSON	GIBSON	0.2555	Confirmed LTF	0.2555
BLUEG	BLUEG	0.8333	Confirmed LTF	0.8333
TRIMBLE	TRIMBLE	0.2671	Confirmed LTF	0.2671
CATAWBA	CATAWBA	0.2051	Confirmed LTF	0.2051

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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
164869667	200857	26MARSHALL	PENELEC	200701	26GROVER	PENELEC	1	PN-P2-2-PN-230-007T	bus	666.0	100.06	100.97	DC	13.33

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.9776	50/50	5.9776
200666	26SHAWVL 4	5.8392	50/50	5.8392
200715	26SHAWVL 1	3.7606	50/50	3.7606
200722	26SHAWVL 2	3.8301	50/50	3.8301
200894	26K02	35.7073	50/50	35.7073
200913	26SHAW-D	0.1621	50/50	0.1621
235003	AC1-025 E	0.3513	50/50	0.3513
236828	01GRAYMONT	0.9420	50/50	0.9420
290086	Q-036 E	3.4779	Adder	4.09
919201	AA1-144 OP	-22.7374	Adder	-26.75
921642	AA2-000	207.4055	50/50	207.4055
930511	AB2-092	7.6153	50/50	7.6153
936421	AD2-055	15.6786	50/50	15.6786
936991	AD2-133 C	1.5650	Adder	1.84
936992	AD2-133 E	7.1583	Adder	8.42
939171	AE1-147 C	2.8283	50/50	2.8283
939172	AE1-147 E	1.8855	50/50	1.8855
940201	AE2-001 C	2.8268	50/50	2.8268
940202	AE2-001 E	1.8846	50/50	1.8846
940681	AE2-055 C (Suspended)	2.8057	50/50	2.8057
940682	AE2-055 E (Suspended)	1.8705	50/50	1.8705
941191	AE2-113 C	4.6085	Adder	5.42
941192	AE2-113 E	4.9619	Adder	5.84
941261	AE2-120 C	2.8261	50/50	2.8261
941262	AE2-120 E	1.8841	50/50	1.8841
941271	AE2-121 C	1.5050	50/50	1.5050
941272	AE2-121 E	1.0049	50/50	1.0049
941321	AE2-126 C	1.8534	50/50	1.8534
941322	AE2-126 E	1.2356	50/50	1.2356
941331	AE2-129 C	1.3596	Adder	1.6
941332	AE2-129 E	0.9064	Adder	1.07
941351	AE2-131 C (Suspended)	1.3596	Adder	1.6
941352	AE2-131 E (Suspended)	0.9064	Adder	1.07
942351	AE2-248 C	2.2517	50/50	2.2517
942352	AE2-248 E	1.5011	50/50	1.5011
942491	AE2-262 C	12.0765	50/50	12.0765
942492	AE2-262 E	8.1154	50/50	8.1154
942501	AE2-263 C	11.3519	50/50	11.3519
942502	AE2-263 E	7.5792	50/50	7.5792
942961	AE2-316 C	4.0026	Adder	4.71
942962	AE2-316 E	5.7078	Adder	6.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943751	AF1-043	47.0358	50/50	47.0358
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.9994	50/50	2.9994
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6872	50/50	1.6872
944181	AF1-086 C O1	1.3199	Adder	1.55
944182	AF1-086 E O1	5.7423	Adder	6.76
944311	AF1-099 C	18.3321	50/50	18.3321
944312	AF1-099 E	12.2214	50/50	12.2214
944321	AF1-100 C	33.6960	50/50	33.6960
944322	AF1-100 E	22.4640	50/50	22.4640
944412	AF1-106 BAT	2.0686	Merchant Transmission	2.0686
944471	AF1-112 C	2.8169	50/50	2.8169
944472	AF1-112 E	1.8779	50/50	1.8779
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.8104	50/50	2.8104
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8736	50/50	1.8736
944691	AF1-134 C	1.1898	Adder	1.4
944692	AF1-134 E	0.7932	Adder	0.93
944771	AF1-142 C	29.3314	50/50	29.3314
944772	AF1-142 E	19.5543	50/50	19.5543
944881	AF1-153 C O1	1.9432	50/50	1.9432
944882	AF1-153 E O1	1.2954	50/50	1.2954
944901	AF1-155 C	1.9284	50/50	1.9284
944902	AF1-155 E	1.2856	50/50	1.2856
945161	AF1-181	0.0275	50/50	0.0275
945171	AF1-182	0.1366	50/50	0.1366
945181	AF1-183	0.0308	50/50	0.0308
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.8261	50/50	2.8261
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8841	50/50	1.8841
946381	AF1-302 C	1.7479	Adder	2.06
946382	AF1-302 E	2.3305	Adder	2.74
946421	AF1-306 C	8.4791	50/50	8.4791
946422	AF1-306 E	33.9164	50/50	33.9164
957451	AF2-039 C	1.3868	50/50	1.3868
957452	AF2-039 E	0.9245	50/50	0.9245
957941	AF2-088 C	0.6677	50/50	0.6677
957942	AF2-088 E	0.4451	50/50	0.4451
958271	AF2-121 C	1.3596	Adder	1.6
958272	AF2-121 E	0.9064	Adder	1.07
959063	AF2-197 BAT	13.6765	Merchant Transmission	13.6765
960022	AF2-293 E	0.2749	50/50	0.2749
960041	AF2-295 C	1.9284	50/50	1.9284
960042	AF2-295 E	1.2856	50/50	1.2856
960051	AF2-296 C	1.1898	Adder	1.4
960052	AF2-296 E	0.7932	Adder	0.93
961142	AF2-405 BAT	1.0343	Merchant Transmission	1.0343
961152	AF2-406 BAT	7.7573	Merchant Transmission	7.7573

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961212	AF2-412 BAT	10.1049	Merchant Transmission	10.1049
961451	AF2-436	-0.1533	Adder	-0.18
962411	AG1-090 C O1	3.6028	Adder	8.0
962412	AG1-090 E O1	2.4019	Adder	5.33
962951	AG1-144 C	0.7206	Adder	1.6
962952	AG1-144 E	0.4804	Adder	1.07
963571	AG1-206 C	0.9764	50/50	0.9764
963572	AG1-206 E	0.5257	50/50	0.5257
963891	AG1-242 C	0.3416	Adder	0.76
963892	AG1-242 E	0.1839	Adder	0.41
964031	AG1-257 C	1.9497	50/50	1.9497
964032	AG1-257 E	2.7248	50/50	2.7248
964041	AG1-258 C	1.9497	50/50	1.9497
964042	AG1-258 E	2.7248	50/50	2.7248
964341	AG1-296 C	0.2934	Adder	0.65
964342	AG1-296 E	0.1580	Adder	0.35
964451	AG1-308 C O1	1.2023	50/50	1.2023
964452	AG1-308 E O1	1.6804	50/50	1.6804
964703	AG1-333 BAT	0.2076	Merchant Transmission	0.2076
965121	AG1-377 C O1	0.7206	Adder	1.6
965122	AG1-377 E O1	0.4804	Adder	1.07
965131	AG1-378 C O1	0.7206	Adder	1.6
965132	AG1-378 E O1	0.4804	Adder	1.07
965201	AG1-385 C	2.4986	50/50	2.4986
965202	AG1-385 E	0.7400	50/50	0.7400
965301	AG1-395 C	0.9259	Adder	2.06
965302	AG1-395 E	0.2750	Adder	0.61
966041	AG1-473 C	7.5598	50/50	7.5598
966042	AG1-473 E	5.0399	50/50	5.0399
WEC	WEC	0.1893	Confirmed LTF	0.1893
LGEE	LGEE	0.3657	Confirmed LTF	0.3657
CPL	CPL	0.2457	Confirmed LTF	0.2457
CBM-W2	CBM-W2	4.9280	Confirmed LTF	4.9280
NY	NY	1.7630	Confirmed LTF	1.7630
TVA	TVA	0.7280	Confirmed LTF	0.7280
O-066	O-066	10.4180	Confirmed LTF	10.4180
SIGE	SIGE	0.2235	Confirmed LTF	0.2235
CBM-S2	CBM-S2	4.2595	Confirmed LTF	4.2595
CBM-S1	CBM-S1	0.2018	Confirmed LTF	0.2018
G-007	G-007	1.5214	Confirmed LTF	1.5214
MEC	MEC	0.9264	Confirmed LTF	0.9264
LAGN	LAGN	0.9205	Confirmed LTF	0.9205
CBM-W1	CBM-W1	8.7625	Confirmed LTF	8.7625

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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
164869495	200924	26CANYON	PENELEC	200706	26N.MESHPN	PENELEC	1	PN-P2-2-PN-230-007T	bus	666.0	165.37	166.05	DC	9.92

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200894	26K02	17.6960	50/50	17.6960
203283	26MANOR_T86	0.0582	50/50	0.0582
203350	26MILZ1-092	0.8988	50/50	0.8988
203351	26GROZ1-110	1.0826	50/50	1.0826
203352	26CANZ2-011	1.0623	50/50	1.0623
203922	X1-109 G1	24.7826	50/50	24.7826
203923	X1-109 G2	24.7826	50/50	24.7826
203932	AA2-133 GEN	2.1231	Adder	2.5
203999	P-047 E	17.6345	Adder	20.75
235003	AC1-025 E	0.1744	Adder	0.21
236828	01GRAYMONT	0.4701	Adder	0.55
916202	Z1-069 E	8.7970	Adder	10.35
919201	AA1-144 OP	66.0052	50/50	66.0052
921642	AA2-000	92.7912	Adder	109.17
930511	AB2-092	3.4070	Adder	4.01
931092	AB1-160 E	2.5134	Adder	2.96
936421	AD2-055	7.0145	Adder	8.25
938332	AE1-051 BAT	0.9479	Merchant Transmission	0.9479
939171	AE1-147 C	1.4127	Adder	1.66
939172	AE1-147 E	0.9418	Adder	1.11
940201	AE2-001 C	1.4114	Adder	1.66
940202	AE2-001 E	0.9409	Adder	1.11
940681	AE2-055 C (Suspended)	1.3908	Adder	1.64
940682	AE2-055 E (Suspended)	0.9272	Adder	1.09
940861	AE2-074 C	1.9758	Adder	2.32
940862	AE2-074 E	2.6009	Adder	3.06
941191	AE2-113 C	6.5799	Adder	7.74
941192	AE2-113 E	7.0845	Adder	8.33
941261	AE2-120 C	1.4106	Adder	1.66
941262	AE2-120 E	0.9404	Adder	1.11
941271	AE2-121 C	0.7523	Adder	0.89
941272	AE2-121 E	0.5023	Adder	0.59
941321	AE2-126 C	1.2282	Adder	1.44
941322	AE2-126 E	0.8188	Adder	0.96
941331	AE2-129 C	1.0121	Adder	1.19
941332	AE2-129 E	0.6748	Adder	0.79
941351	AE2-131 C (Suspended)	1.0121	Adder	1.19
941352	AE2-131 E (Suspended)	0.6748	Adder	0.79
941421	AE2-139 C	23.8022	50/50	23.8022
941422	AE2-139 E	15.8681	50/50	15.8681
942351	AE2-248 C	1.1195	Adder	1.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942352	AE2-248 E	0.7463	Adder	0.88
942491	AE2-262 C	6.1710	Adder	7.26
942492	AE2-262 E	4.1469	Adder	4.88
942501	AE2-263 C	5.8007	Adder	6.82
942502	AE2-263 E	3.8729	Adder	4.56
942961	AE2-316 C	3.3408	Adder	3.93
942962	AE2-316 E	4.7640	Adder	5.6
943751	AF1-043	21.0434	Adder	24.76
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.4899	Adder	1.75
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8381	Adder	0.99
944311	AF1-099 C	9.3676	Adder	11.02
944312	AF1-099 E	6.2451	Adder	7.35
944321	AF1-100 C	17.9903	Adder	21.17
944322	AF1-100 E	11.9935	Adder	14.11
944381	AF1-103 O1	1.6097	Adder	1.89
944411	AF1-106 O1	5.4258	50/50	5.4258
944471	AF1-112 C	1.4016	Adder	1.65
944472	AF1-112 E	0.9344	Adder	1.1
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3953	Adder	1.64
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9302	Adder	1.09
944691	AF1-134 C	0.9284	Adder	1.09
944692	AF1-134 E	0.6189	Adder	0.73
944771	AF1-142 C	14.9881	Adder	17.63
944772	AF1-142 E	9.9921	Adder	11.76
944881	AF1-153 C O1	1.2104	Adder	1.42
944882	AF1-153 E O1	0.8070	Adder	0.95
944901	AF1-155 C	1.2043	Adder	1.42
944902	AF1-155 E	0.8029	Adder	0.94
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4107	Adder	1.66
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9404	Adder	1.11
946111	AF1-276 C	6.4479	Adder	7.59
946112	AF1-276 E	3.1758	Adder	3.74
946121	AF1-277 C	6.4479	Adder	7.59
946122	AF1-277 E	3.1758	Adder	3.74
946131	AF1-278 C	5.1429	Adder	6.05
946132	AF1-278 E	2.5561	Adder	3.01
946211	AF1-286 C	2.1974	50/50	2.1974
946212	AF1-286 E	1.4921	50/50	1.4921
946381	AF1-302 C	1.4589	Adder	1.72
946382	AF1-302 E	1.9451	Adder	2.29
946421	AF1-306 C	5.2880	Adder	6.22
946422	AF1-306 E	21.1520	Adder	24.88
957451	AF2-039 C	0.8155	Adder	0.96
957452	AF2-039 E	0.5436	Adder	0.64
957941	AF2-088 C	0.3926	Adder	0.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957942	AF2-088 E	0.2618	Adder	0.31
958271	AF2-121 C	1.0121	Adder	1.19
958272	AF2-121 E	0.6748	Adder	0.79
959061	AF2-197 C O1	12.9326	50/50	12.9326
959062	AF2-197 E O1	19.3990	50/50	19.3990
959471	AF2-238 C	3.3199	50/50	3.3199
959472	AF2-238 E	2.2133	50/50	2.2133
959481	AF2-239 C	3.1511	50/50	3.1511
959482	AF2-239 E	2.5265	50/50	2.5265
959491	AF2-240 C	1.0255	50/50	1.0255
959492	AF2-240 E	0.8736	50/50	0.8736
959501	AF2-241 C	3.0656	50/50	3.0656
959502	AF2-241 E	2.3602	50/50	2.3602
959741	AF2-265 C	2.3793	50/50	2.3793
959742	AF2-265 E	1.7706	50/50	1.7706
959913	AF2-282 BAT	0.1422	Merchant Transmission	0.1422
959923	AF2-283 BAT	0.1422	Merchant Transmission	0.1422
960022	AF2-293 E	0.1373	Adder	0.16
960041	AF2-295 C	1.2043	Adder	1.42
960042	AF2-295 E	0.8029	Adder	0.94
960051	AF2-296 C	0.9284	Adder	1.09
960052	AF2-296 E	0.6189	Adder	0.73
960271	AF2-318 C	3.4066	50/50	3.4066
960272	AF2-318 E	2.2710	50/50	2.2710
961141	AF2-405	2.7129	50/50	2.7129
961151	AF2-406	20.3468	50/50	20.3468
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	54.2028	Adder	63.77
961211	AF2-412	25.5929	Adder	30.11
961451	AF2-436	0.1601	Adder	0.19
962411	AG1-090 C O1	2.6822	Adder	5.95
962412	AG1-090 E O1	1.7881	Adder	3.97
962951	AG1-144 C	0.5364	Adder	1.19
962952	AG1-144 E	0.3576	Adder	0.79
963571	AG1-206 C	0.3540	Adder	0.79
963572	AG1-206 E	0.1906	Adder	0.42
963891	AG1-242 C	0.2665	Adder	0.59
963892	AG1-242 E	0.1435	Adder	0.32
963941	AG1-247 C	1.3293	50/50	1.3293
963942	AG1-247 E	0.7054	50/50	0.7054
964031	AG1-257 C	0.5145	Adder	1.14
964032	AG1-257 E	0.7190	Adder	1.6
964041	AG1-258 C	0.5145	Adder	1.14
964042	AG1-258 E	0.7190	Adder	1.6
964341	AG1-296 C	0.2583	Adder	0.57
964342	AG1-296 E	0.1391	Adder	0.31
964451	AG1-308 C O1	0.3929	Adder	0.87
964452	AG1-308 E O1	0.5491	Adder	1.22
965121	AG1-377 C O1	0.5364	Adder	1.19
965122	AG1-377 E O1	0.3576	Adder	0.79
965131	AG1-378 C O1	0.5364	Adder	1.19
965132	AG1-378 E O1	0.3576	Adder	0.79

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965201	AG1-385 C	0.8249	Adder	1.83
965202	AG1-385 E	0.2443	Adder	0.54
965241	AG1-389 C O1	0.9501	Adder	2.11
965242	AG1-389 E O1	0.6334	Adder	1.41
965251	AG1-390 C O1	0.9501	Adder	2.11
965252	AG1-390 E O1	0.6334	Adder	1.41
965261	AG1-391 C O1	0.9501	Adder	2.11
965262	AG1-391 E O1	0.6334	Adder	1.41
965271	AG1-392 C O1	1.9001	Adder	4.22
965272	AG1-392 E O1	1.2667	Adder	2.81
965301	AG1-395 C	0.6893	Adder	1.53
965302	AG1-395 E	0.2047	Adder	0.45
966041	AG1-473 C	1.8943	Adder	4.2
966042	AG1-473 E	1.2629	Adder	2.8
966121	AG1-481	0.6625	Adder	1.47
WEC	WEC	0.3758	Confirmed LTF	0.3758
LGEE	LGEE	0.7219	Confirmed LTF	0.7219
CPL	CPL	0.4368	Confirmed LTF	0.4368
CBM-W2	CBM-W2	9.6410	Confirmed LTF	9.6410
TVA	TVA	1.4084	Confirmed LTF	1.4084
O-066	O-066	27.0075	Confirmed LTF	27.0075
SIGE	SIGE	0.5418	Confirmed LTF	0.5418
CBM-S2	CBM-S2	7.8300	Confirmed LTF	7.8300
CBM-S1	CBM-S1	0.3922	Confirmed LTF	0.3922
G-007	G-007	3.9427	Confirmed LTF	3.9427
MEC	MEC	1.8289	Confirmed LTF	1.8289
LAGN	LAGN	1.7850	Confirmed LTF	1.7850
CBM-W1	CBM-W1	17.4970	Confirmed LTF	17.4970

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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
164869515	200940	26SCOTCHLLW	PENELEC	200675	26E.TWANDA	PENELEC	1	PN-P2-2-PN-230-007T	bus	570.0	149.26	150.29	DC	12.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.7762	50/50	5.7762
200666	26SHAWVL 4	5.6426	50/50	5.6426
200894	26K02	34.2826	50/50	34.2826
203351	26GROZ1-110	1.5966	50/50	1.5966
203352	26CANZ2-011	1.5667	50/50	1.5667
235003	AC1-025 E	0.3391	50/50	0.3391
236828	01GRAYMONT	0.9092	50/50	0.9092
290086	Q-036 E	3.3810	Adder	3.98
919201	AA1-144 OP	135.0162	50/50	135.0162
921642	AA2-000	199.4187	50/50	199.4187
930511	AB2-092	7.3221	50/50	7.3221
936421	AD2-055	15.0748	50/50	15.0748
936991	AD2-133 C	1.5214	Adder	1.79
936992	AD2-133 E	6.9589	Adder	8.19
939171	AE1-147 C	2.7299	50/50	2.7299
939172	AE1-147 E	1.8199	50/50	1.8199
940201	AE2-001 C	2.7286	50/50	2.7286
940202	AE2-001 E	1.8190	50/50	1.8190
940681	AE2-055 C (Suspended)	2.7082	50/50	2.7082
940682	AE2-055 E (Suspended)	1.8054	50/50	1.8054
941191	AE2-113 C	4.6383	Adder	5.46
941192	AE2-113 E	4.9940	Adder	5.88
941261	AE2-120 C	2.7278	50/50	2.7278
941262	AE2-120 E	1.8186	50/50	1.8186
941271	AE2-121 C	1.4526	50/50	1.4526
941272	AE2-121 E	0.9699	50/50	0.9699
941321	AE2-126 C	1.5317	Adder	1.8
941322	AE2-126 E	1.0212	Adder	1.2
941331	AE2-129 C	1.3188	Adder	1.55
941332	AE2-129 E	0.8792	Adder	1.03
941351	AE2-131 C (Suspended)	1.3188	Adder	1.55
941352	AE2-131 E (Suspended)	0.8792	Adder	1.03
941421	AE2-139 C	48.3926	50/50	48.3926
941422	AE2-139 E	32.2617	50/50	32.2617
942351	AE2-248 C	2.1733	50/50	2.1733
942352	AE2-248 E	1.4489	50/50	1.4489
942491	AE2-262 C	11.6570	50/50	11.6570
942492	AE2-262 E	7.8335	50/50	7.8335
942501	AE2-263 C	10.9576	50/50	10.9576
942502	AE2-263 E	7.3159	50/50	7.3159
942961	AE2-316 C	3.8926	Adder	4.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.5509	Adder	6.53
943751	AF1-043	45.2245	50/50	45.2245
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.8950	50/50	2.8950
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6284	50/50	1.6284
944311	AF1-099 C	17.6953	50/50	17.6953
944312	AF1-099 E	11.7969	50/50	11.7969
944321	AF1-100 C	32.5500	50/50	32.5500
944322	AF1-100 E	21.7000	50/50	21.7000
944412	AF1-106 BAT	2.0074	Merchant Transmission	2.0074
944471	AF1-112 C	2.7188	50/50	2.7188
944472	AF1-112 E	1.8126	50/50	1.8126
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.7126	50/50	2.7126
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8084	50/50	1.8084
944691	AF1-134 C	1.1553	Adder	1.36
944692	AF1-134 E	0.7702	Adder	0.91
944771	AF1-142 C	28.3125	50/50	28.3125
944772	AF1-142 E	18.8750	50/50	18.8750
944881	AF1-153 C O1	1.6013	Adder	1.88
944882	AF1-153 E O1	1.0675	Adder	1.26
944901	AF1-155 C	1.5893	Adder	1.87
944902	AF1-155 E	1.0595	Adder	1.25
945161	AF1-181	0.0265	50/50	0.0265
945171	AF1-182	0.1320	50/50	0.1320
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.7278	50/50	2.7278
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8186	50/50	1.8186
946381	AF1-302 C	1.6998	Adder	2.0
946382	AF1-302 E	2.2664	Adder	2.67
946421	AF1-306 C	6.9889	Adder	8.22
946422	AF1-306 E	27.9557	Adder	32.89
957451	AF2-039 C	1.1415	Adder	1.34
957452	AF2-039 E	0.7610	Adder	0.9
957941	AF2-088 C	0.5496	Adder	0.65
957942	AF2-088 E	0.3664	Adder	0.43
958271	AF2-121 C	1.3188	Adder	1.55
958272	AF2-121 E	0.8792	Adder	1.03
959063	AF2-197 BAT	13.5485	Merchant Transmission	13.5485
960022	AF2-293 E	0.2653	50/50	0.2653
960041	AF2-295 C	1.5893	Adder	1.87
960042	AF2-295 E	1.0595	Adder	1.25
960051	AF2-296 C	1.1553	Adder	1.36
960052	AF2-296 E	0.7702	Adder	0.91
961142	AF2-405 BAT	1.0037	Merchant Transmission	1.0037
961152	AF2-406 BAT	7.5277	Merchant Transmission	7.5277
961451	AF2-436	-0.1532	Adder	-0.18
962411	AG1-090 C O1	3.4947	Adder	7.76

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962412	AG1-090 E O1	2.3298	Adder	5.17
962951	AG1-144 C	0.6989	Adder	1.55
962952	AG1-144 E	0.4660	Adder	1.03
963571	AG1-206 C	0.4282	Adder	0.95
963572	AG1-206 E	0.2306	Adder	0.51
963891	AG1-242 C	0.3317	Adder	0.74
963892	AG1-242 E	0.1786	Adder	0.4
964031	AG1-257 C	1.8818	50/50	1.8818
964032	AG1-257 E	2.6300	50/50	2.6300
964041	AG1-258 C	1.8818	50/50	1.8818
964042	AG1-258 E	2.6300	50/50	2.6300
964341	AG1-296 C	0.2857	Adder	0.63
964342	AG1-296 E	0.1539	Adder	0.34
964451	AG1-308 C O1	0.5251	Adder	1.17
964452	AG1-308 E O1	0.7339	Adder	1.63
964703	AG1-333 BAT	0.2022	Merchant Transmission	0.2022
965121	AG1-377 C O1	0.6989	Adder	1.55
965122	AG1-377 E O1	0.4660	Adder	1.03
965131	AG1-378 C O1	0.6989	Adder	1.55
965132	AG1-378 E O1	0.4660	Adder	1.03
965201	AG1-385 C	1.0913	Adder	2.42
965202	AG1-385 E	0.3232	Adder	0.72
965301	AG1-395 C	0.8981	Adder	1.99
965302	AG1-395 E	0.2668	Adder	0.59
966041	AG1-473 C	7.2943	50/50	7.2943
966042	AG1-473 E	4.8629	50/50	4.8629
WEC	WEC	0.1877	Confirmed LTF	0.1877
LGEE	LGEE	0.3625	Confirmed LTF	0.3625
CPL	CPL	0.2396	Confirmed LTF	0.2396
CBM-W2	CBM-W2	4.8832	Confirmed LTF	4.8832
NY	NY	1.6994	Confirmed LTF	1.6994
TVA	TVA	0.7196	Confirmed LTF	0.7196
O-066	O-066	10.7209	Confirmed LTF	10.7209
SIGE	SIGE	0.2277	Confirmed LTF	0.2277
CBM-S2	CBM-S2	4.1864	Confirmed LTF	4.1864
CBM-S1	CBM-S1	0.1995	Confirmed LTF	0.1995
G-007	G-007	1.5666	Confirmed LTF	1.5666
MEC	MEC	0.9184	Confirmed LTF	0.9184
LAGN	LAGN	0.9100	Confirmed LTF	0.9100
CBM-W1	CBM-W1	8.6924	Confirmed LTF	8.6924

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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
164247863	235175	01ELKO	AP	235971	01SQUABHLLW	AP	1	PN-P2-3-PN-230-14BT	breaker	621.0	105.61	108.19	DC	16.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	9.6307	50/50	9.6307
200666	26SHAWVL 4	9.4768	50/50	9.4768
200715	26SHAWVL 1	5.4583	50/50	5.4583
200722	26SHAWVL 2	5.5813	50/50	5.5813
200894	26K02	9.2098	50/50	9.2098
200905	26Q36	0.1562	50/50	0.1562
200913	26SHAW-D	0.1993	50/50	0.1993
235003	AC1-025 E	0.5392	50/50	0.5392
236828	01GRAYMONT	1.4401	50/50	1.4401
290086	Q-036 E	4.7704	50/50	4.7704
921642	AA2-000	121.0699	50/50	121.0699
930511	AB2-092	4.4453	50/50	4.4453
936421	AD2-055	9.1521	50/50	9.1521
936991	AD2-133 C	2.1467	50/50	2.1467
936992	AD2-133 E	9.8187	50/50	9.8187
939171	AE1-147 C	4.3214	50/50	4.3214
939172	AE1-147 E	2.8810	50/50	2.8810
940201	AE2-001 C	4.3208	50/50	4.3208
940202	AE2-001 E	2.8806	50/50	2.8806
940681	AE2-055 C (Suspended)	4.3114	50/50	4.3114
940682	AE2-055 E (Suspended)	2.8742	50/50	2.8742
941261	AE2-120 C	4.3205	50/50	4.3205
941262	AE2-120 E	2.8803	50/50	2.8803
941271	AE2-121 C	2.2981	50/50	2.2981
941272	AE2-121 E	1.5345	50/50	1.5345
941331	AE2-129 C	1.9278	50/50	1.9278
941332	AE2-129 E	1.2852	50/50	1.2852
941351	AE2-131 C (Suspended)	1.9278	50/50	1.9278
941352	AE2-131 E (Suspended)	1.2852	50/50	1.2852
942351	AE2-248 C	3.4523	50/50	3.4523
942352	AE2-248 E	2.3015	50/50	2.3015
942491	AE2-262 C	18.1380	50/50	18.1380
942492	AE2-262 E	12.1887	50/50	12.1887
942501	AE2-263 C	17.0497	50/50	17.0497
942502	AE2-263 E	11.3834	50/50	11.3834
943751	AF1-043	27.4564	50/50	27.4564
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	4.6017	50/50	4.6017
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	2.5885	50/50	2.5885

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944311	AF1-099 C	27.5335	50/50	27.5335
944312	AF1-099 E	18.3557	50/50	18.3557
944321	AF1-100 C	53.1015	50/50	53.1015
944322	AF1-100 E	35.4010	50/50	35.4010
944382	AF1-103 BAT	3.1934	50/50	3.1934
944471	AF1-112 C	4.3163	50/50	4.3163
944472	AF1-112 E	2.8775	50/50	2.8775
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	4.3134	50/50	4.3134
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	2.8756	50/50	2.8756
944691	AF1-134 C	1.6358	50/50	1.6358
944692	AF1-134 E	1.0906	50/50	1.0906
944771	AF1-142 C	44.0536	50/50	44.0536
944772	AF1-142 E	29.3690	50/50	29.3690
944881	AF1-153 C O1	2.8615	50/50	2.8615
944882	AF1-153 E O1	1.9077	50/50	1.9077
944901	AF1-155 C	2.7005	50/50	2.7005
944902	AF1-155 E	1.8003	50/50	1.8003
945161	AF1-181	0.0442	50/50	0.0442
945171	AF1-182	0.2217	50/50	0.2217
945181	AF1-183	0.0447	50/50	0.0447
945491	AF1-214 C (Withdrawn : 12/03/2020)	4.3205	50/50	4.3205
945492	AF1-214 E (Withdrawn : 12/03/2020)	2.8803	50/50	2.8803
946423	AF1-306 BAT	109.4041	50/50	109.4041
957451	AF2-039 C	1.7066	50/50	1.7066
957452	AF2-039 E	1.1377	50/50	1.1377
957941	AF2-088 C	0.8217	50/50	0.8217
957942	AF2-088 E	0.5478	50/50	0.5478
958271	AF2-121 C	1.9278	50/50	1.9278
958272	AF2-121 E	1.2852	50/50	1.2852
960022	AF2-293 E	0.4199	50/50	0.4199
960041	AF2-295 C	2.7005	50/50	2.7005
960042	AF2-295 E	1.8003	50/50	1.8003
960051	AF2-296 C	1.6358	50/50	1.6358
960052	AF2-296 E	1.0906	50/50	1.0906
962411	AG1-090 C O1	9.6390	50/50	9.6390
962412	AG1-090 E O1	6.4260	50/50	6.4260
962951	AG1-144 C	1.9278	50/50	1.9278
962952	AG1-144 E	1.2852	50/50	1.2852
963891	AG1-242 C	0.8861	50/50	0.8861
963892	AG1-242 E	0.4771	50/50	0.4771
964031	AG1-257 C	2.9860	50/50	2.9860
964032	AG1-257 E	4.1732	50/50	4.1732
964041	AG1-258 C	2.9860	50/50	2.9860
964042	AG1-258 E	4.1732	50/50	4.1732
964451	AG1-308 C O1	1.4617	50/50	1.4617
964452	AG1-308 E O1	2.0429	50/50	2.0429
965121	AG1-377 C O1	1.9278	50/50	1.9278
965122	AG1-377 E O1	1.2852	50/50	1.2852

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965131	AG1-378 C O1	1.9278	50/50	1.9278
965132	AG1-378 E O1	1.2852	50/50	1.2852
965201	AG1-385 C	3.6794	50/50	3.6794
965202	AG1-385 E	1.0898	50/50	1.0898
965301	AG1-395 C	2.4772	50/50	2.4772
965302	AG1-395 E	0.7358	50/50	0.7358
966041	AG1-473 C	11.6198	50/50	11.6198
966042	AG1-473 E	7.7465	50/50	7.7465
966122	AG1-481 BAT	2.4430	50/50	2.4430
G-007A	G-007A	1.4984	Confirmed LTF	1.4984
VFT	VFT	4.1925	Confirmed LTF	4.1925
CALDERWOOD	CALDERWOOD	0.1730	Confirmed LTF	0.1730
PRAIRIE	PRAIRIE	1.0771	Confirmed LTF	1.0771
CHEOAH	CHEOAH	0.1732	Confirmed LTF	0.1732
CBM-N	CBM-N	0.8616	Confirmed LTF	0.8616
COTTONWOOD	COTTONWOOD	0.7959	Confirmed LTF	0.7959
HAMLET	HAMLET	0.1502	Confirmed LTF	0.1502
GIBSON	GIBSON	0.2359	Confirmed LTF	0.2359
BLUEG	BLUEG	0.7413	Confirmed LTF	0.7413
TRIMBLE	TRIMBLE	0.2376	Confirmed LTF	0.2376
CATAWBA	CATAWBA	0.1004	Confirmed LTF	0.1004

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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
167280539	235197	01KARNSC	AP	235152	01BUTLER	AP	1	ATSI-P2-3-CEI-345-004D	breaker	179.0	228.28	229.67	DC	5.49

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200608	26PINEY #1	0.7388	50/50	0.7388
200662	26SCRUB GR	1.6803	50/50	1.6803
235030	01MHNG-T155	0.1596	50/50	0.1596
236828	01GRAYMONT	0.1716	Adder	0.2
290086	Q-036 E	1.7010	Adder	2.0
293393	V3-030E	1.2402	Adder	1.46
915951	Y3-092 FTIR	95.0500	Merchant Transmission	95.0500
916202	Z1-069 E	2.6874	Adder	3.16
921642	AA2-000	21.5351	Adder	25.34
930511	AB2-092	0.7907	Adder	0.93
931092	AB1-160 E	0.7678	Adder	0.9
935191	AD1-154	2.3032	50/50	2.3032
936421	AD2-055	1.6279	Adder	1.92
936991	AD2-133 C	0.7655	Adder	0.9
936992	AD2-133 E	3.5011	Adder	4.12
938951	AE1-123	2.7911	50/50	2.7911
939171	AE1-147 C	0.5172	Adder	0.61
939172	AE1-147 E	0.3448	Adder	0.41
939291	AE1-160 C	1.4995	50/50	1.4995
939292	AE1-160 E	0.8619	50/50	0.8619
940201	AE2-001 C	0.5159	Adder	0.61
940202	AE2-001 E	0.3439	Adder	0.4
940861	AE2-074 C	0.7659	Adder	0.9
940862	AE2-074 E	1.0081	Adder	1.19
941191	AE2-113 C	3.5353	Adder	4.16
941192	AE2-113 E	3.8063	Adder	4.48
941261	AE2-120 C	0.5152	Adder	0.61
941262	AE2-120 E	0.3435	Adder	0.4
941271	AE2-121 C	0.2762	Adder	0.32
941272	AE2-121 E	0.1844	Adder	0.22
941321	AE2-126 C	0.6680	Adder	0.79
941322	AE2-126 E	0.4453	Adder	0.52
941331	AE2-129 C	0.5598	Adder	0.66
941332	AE2-129 E	0.3732	Adder	0.44
941351	AE2-131 C (Suspended)	0.5598	Adder	0.66
941352	AE2-131 E (Suspended)	0.3732	Adder	0.44
942491	AE2-262 C	2.4259	Adder	2.85
942492	AE2-262 E	1.6302	Adder	1.92
942501	AE2-263 C	2.2803	Adder	2.68
942502	AE2-263 E	1.5225	Adder	1.79
942811	AE2-299 C	2.0656	Adder	2.43

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942812	AE2-299 E	8.2623	Adder	9.72
942961	AE2-316 C	4.3499	50/50	4.3499
942962	AE2-316 E	6.2031	50/50	6.2031
943151	AE2-344 C	5.2796	Adder	6.21
943152	AE2-344 E	3.5197	Adder	4.14
943351	AF1-006 C	0.9302	Adder	1.09
943352	AF1-006 E	0.5233	Adder	0.62
943751	AF1-043	4.8838	Adder	5.75
944181	AF1-086 C O1	1.0729	Adder	1.26
944182	AF1-086 E O1	4.6675	Adder	5.49
944261	AF1-094 C	0.9660	Adder	1.14
944262	AF1-094 E	0.6440	Adder	0.76
944281	AF1-096 C	1.4168	50/50	1.4168
944282	AF1-096 E	0.9446	50/50	0.9446
944301	AF1-098 C	3.2077	Adder	3.77
944302	AF1-098 E	2.1385	Adder	2.52
944311	AF1-099 C	3.6825	Adder	4.33
944312	AF1-099 E	2.4550	Adder	2.89
944321	AF1-100 C	7.9114	Adder	9.31
944322	AF1-100 E	5.2742	Adder	6.2
944381	AF1-103 O1	1.2386	Adder	1.46
944391	AF1-104 O1	1.5677	Adder	1.84
944691	AF1-134 C	0.6241	Adder	0.73
944692	AF1-134 E	0.4161	Adder	0.49
944771	AF1-142 C	5.8920	Adder	6.93
944772	AF1-142 E	3.9280	Adder	4.62
944881	AF1-153 C O1	0.9010	Adder	1.06
944882	AF1-153 E O1	0.6006	Adder	0.71
944901	AF1-155 C	0.9096	Adder	1.07
944902	AF1-155 E	0.6064	Adder	0.71
945021	AF1-167 C	1.5046	50/50	1.5046
945022	AF1-167 E	1.0049	50/50	1.0049
945051	AF1-170 C	3.6027	Adder	4.24
945052	AF1-170 E	2.4018	Adder	2.83
945451	AF1-210 C	1.7061	50/50	1.7061
945452	AF1-210 E	1.1374	50/50	1.1374
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.5153	Adder	0.61
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.3435	Adder	0.4
945751	AF1-240 C O1	1.3819	50/50	1.3819
945752	AF1-240 E O1	0.9213	50/50	0.9213
946111	AF1-276 C	3.7393	Adder	4.4
946112	AF1-276 E	1.8418	Adder	2.17
946121	AF1-277 C	3.7393	Adder	4.4
946122	AF1-277 E	1.8418	Adder	2.17
946131	AF1-278 C	2.9825	Adder	3.51
946132	AF1-278 E	1.4823	Adder	1.74
946221	AF1-287 C	0.9076	Adder	1.07
946222	AF1-287 E	0.6051	Adder	0.71
946381	AF1-302 C	1.8995	50/50	1.8995
946382	AF1-302 E	2.5327	50/50	2.5327
946401	AF1-304 C	7.6224	50/50	7.6224

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946402	AF1-304 E	5.0816	50/50	5.0816
946421	AF1-306 C	3.1031	Adder	3.65
946422	AF1-306 E	12.4123	Adder	14.6
946771	AF1-217 C	0.9076	Adder	1.07
946772	AF1-217 E	0.6051	Adder	0.71
957161	AF2-010 C	3.7466	Adder	4.41
957162	AF2-010 E	2.5249	Adder	2.97
957451	AF2-039 C	0.4190	Adder	0.49
957452	AF2-039 E	0.2793	Adder	0.33
957571	AF2-051 C	2.7680	Adder	3.26
957572	AF2-051 E	1.4259	Adder	1.68
957941	AF2-088 C	0.2017	Adder	0.24
957942	AF2-088 E	0.1345	Adder	0.16
958271	AF2-121 C	0.5598	Adder	0.66
958272	AF2-121 E	0.3732	Adder	0.44
958361	AF2-130 C	1.7143	50/50	1.7143
958362	AF2-130 E	1.1429	50/50	1.1429
958731	AF2-164 C O1	3.9772	Adder	4.68
958732	AF2-164 E O1	2.6515	Adder	3.12
958741	AF2-165 C	1.5448	50/50	1.5448
958742	AF2-165 E	1.0298	50/50	1.0298
958751	AF2-166 C	1.7143	50/50	1.7143
958752	AF2-166 E	1.1429	50/50	1.1429
959441	AF2-235 C	0.7084	50/50	0.7084
959442	AF2-235 E	0.4723	50/50	0.4723
959521	AF2-243 C	1.1586	50/50	1.1586
959522	AF2-243 E	0.7724	50/50	0.7724
959822	AF2-273 E	0.6750	50/50	0.6750
960022	AF2-293 E	0.0503	Adder	0.06
960041	AF2-295 C	0.9096	Adder	1.07
960042	AF2-295 E	0.6064	Adder	0.71
960051	AF2-296 C	0.6241	Adder	0.73
960052	AF2-296 E	0.4161	Adder	0.49
960891	AF2-380 C	3.6836	50/50	3.6836
960892	AF2-380 E	2.4557	50/50	2.4557
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	12.7653	Adder	15.02
961971	AG1-040 C	0.5056	Adder	1.12
961972	AG1-040 E	0.3370	Adder	0.75
962411	AG1-090 C O1	1.4834	Adder	3.29
962412	AG1-090 E O1	0.9889	Adder	2.2
962511	AG1-100 C	0.4897	Adder	1.09
962512	AG1-100 E	0.3265	Adder	0.72
962891	AG1-138 C	0.6786	50/50	0.6786
962892	AG1-138 E	0.0357	50/50	0.0357
962901	AG1-139 C	0.6115	50/50	0.6115
962902	AG1-139 E	0.0322	50/50	0.0322
962911	AG1-140 C	0.0616	Adder	0.14
962912	AG1-140 E	0.0281	Adder	0.06
962951	AG1-144 C	0.2967	Adder	0.66
962952	AG1-144 E	0.1978	Adder	0.44
963281	AG1-177 C O1	0.5120	Adder	1.14

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963282	AG1-177 E O1	0.3413	Adder	0.76
963441	AG1-193 C	1.3675	50/50	1.3675
963442	AG1-193 E	0.9117	50/50	0.9117
963481	AG1-197 C	0.3834	Adder	0.85
963482	AG1-197 E	0.2556	Adder	0.57
963491	AG1-198 C	0.3072	Adder	0.68
963492	AG1-198 E	0.2048	Adder	0.45
963531	AG1-202 C	0.2719	Adder	0.6
963532	AG1-202 E	0.1401	Adder	0.31
963571	AG1-206 C	0.1952	Adder	0.43
963572	AG1-206 E	0.1051	Adder	0.23
963891	AG1-242 C	0.1792	Adder	0.4
963892	AG1-242 E	0.0965	Adder	0.21
963991	AG1-253 C	0.0924	Adder	0.21
963992	AG1-253 E	0.0445	Adder	0.1
964341	AG1-296 C	0.7284	50/50	0.7284
964342	AG1-296 E	0.3922	50/50	0.3922
964411	AG1-303 C O1	1.1736	Adder	2.61
964412	AG1-303 E O1	0.7824	Adder	1.74
964451	AG1-308 C O1	0.2120	Adder	0.47
964452	AG1-308 E O1	0.2963	Adder	0.66
965121	AG1-377 C O1	0.2967	Adder	0.66
965122	AG1-377 E O1	0.1978	Adder	0.44
965131	AG1-378 C O1	0.2967	Adder	0.66
965132	AG1-378 E O1	0.1978	Adder	0.44
965201	AG1-385 C	0.6140	Adder	1.36
965202	AG1-385 E	0.1819	Adder	0.4
965241	AG1-389 C O1	0.3064	Adder	0.68
965242	AG1-389 E O1	0.2043	Adder	0.45
965251	AG1-390 C O1	0.3064	Adder	0.68
965252	AG1-390 E O1	0.2043	Adder	0.45
965261	AG1-391 C O1	0.3064	Adder	0.68
965262	AG1-391 E O1	0.2043	Adder	0.45
965271	AG1-392 C O1	0.6128	Adder	1.36
965272	AG1-392 E O1	0.4085	Adder	0.91
965301	AG1-395 C	0.3812	Adder	0.85
965302	AG1-395 E	0.1132	Adder	0.25
965861	AG1-455	1.4372	Adder	3.19
966121	AG1-481	0.5097	Adder	1.13
966771	AG1-548 C	4.8243	Adder	10.71
966772	AG1-548 E	1.4683	Adder	3.26
G-007A	G-007A	1.8820	Confirmed LTF	1.8820
VFT	VFT	5.1923	Confirmed LTF	5.1923
CALDERWOOD	CALDERWOOD	0.2798	Confirmed LTF	0.2798
PRAIRIE	PRAIRIE	1.6660	Confirmed LTF	1.6660
CHEOAH	CHEOAH	0.2803	Confirmed LTF	0.2803
CBM-N	CBM-N	1.0296	Confirmed LTF	1.0296
COTTONWOOD	COTTONWOOD	1.2579	Confirmed LTF	1.2579
HAMLET	HAMLET	0.2535	Confirmed LTF	0.2535
GIBSON	GIBSON	0.3647	Confirmed LTF	0.3647
BLUEG	BLUEG	1.1562	Confirmed LTF	1.1562
TRIMBLE	TRIMBLE	0.3712	Confirmed LTF	0.3712

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CATAWBA	CATAWBA	0.1677	Confirmed LTF	0.1677

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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
167821108	235203	01KISSNG	AP	235197	01KARNSC	AP	1	ATSI-P1-2-CEI-345-700T	single	268.0	137.23	137.82	DC	3.51

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200608	26PINEY #1	0.7758	80/20	0.7758
200642	26SENECA#1	2.8936	80/20	2.8936
200643	26SENECA#2	2.7329	80/20	2.7329
200644	26SENECA#3	0.2986	80/20	0.2986
200649	26PENNTech	0.5029	80/20	0.5029
200662	26SCRUB GR	1.7506	80/20	1.7506
200665	26SHAWVL 3	1.8285	80/20	1.8285
200666	26SHAWVL 4	1.7954	80/20	1.7954
200805	26COLVER13 (Deactivation : 01/09/2020)	1.1511	80/20	1.1511
200828	26HNSMLK 1	0.8374	80/20	0.8374
200829	26HNSMLK 2	0.8374	80/20	0.8374
200830	26HNSMLK 3	0.8374	80/20	0.8374
200831	26HNSMLK 4	0.8374	80/20	0.8374
200832	26HNSMLK 5	0.8374	80/20	0.8374
200849	26LAKVU GN	0.0712	80/20	0.0712
201201	26WRREN CT	0.7342	80/20	0.7342
235030	01MHNG-T155	0.0751	80/20	0.0751
235134	01AL&D6	0.0844	80/20	0.0844
915951	Y3-092 FTIR	92.3700	80/20	92.3700
921642	AA2-000	23.1250	Adder	27.21
930511	AB2-092	0.8491	Adder	1.0
935191	AD1-154	2.4200	80/20	2.4200
936421	AD2-055	1.7481	Adder	2.06
936991	AD2-133 C	0.8153	Adder	0.96
938951	AE1-123	2.9308	80/20	2.9308
939171	AE1-147 C	0.5544	Adder	0.65
939291	AE1-160 C	1.5949	80/20	1.5949
940201	AE2-001 C	0.5529	Adder	0.65
940681	AE2-055 C (Suspended)	0.5319	Adder	0.63
940861	AE2-074 C	0.8292	Adder	0.98
941191	AE2-113 C	4.4991	80/20	4.4991
941261	AE2-120 C	0.5522	Adder	0.65
941271	AE2-121 C	0.2960	Adder	0.35
941321	AE2-126 C	0.8448	80/20	0.8448
941331	AE2-129 C	0.5975	Adder	0.7
941351	AE2-131 C (Suspended)	0.5975	Adder	0.7
942351	AE2-248 C	0.4326	Adder	0.51
942491	AE2-262 C	2.6006	Adder	3.06
942501	AE2-263 C	2.4445	Adder	2.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942811	AE2-299 C	2.8198	80/20	2.8198
942961	AE2-316 C	4.5989	80/20	4.5989
943151	AE2-344 C	6.6468	80/20	6.6468
943351	AF1-006 C	1.1808	80/20	1.1808
943751	AF1-043	5.2443	Adder	6.17
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.5739	Adder	0.68
944181	AF1-086 C O1	1.1348	Adder	1.34
944261	AF1-094 C	1.2530	80/20	1.2530
944281	AF1-096 C	1.5070	80/20	1.5070
944301	AF1-098 C	4.2893	80/20	4.2893
944311	AF1-099 C	3.9477	Adder	4.64
944321	AF1-100 C	9.9765	80/20	9.9765
944381	AF1-103 O1	1.6328	80/20	1.6328
944391	AF1-104 O1	1.8556	80/20	1.8556
944471	AF1-112 C	0.5429	Adder	0.64
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.5365	Adder	0.63
944691	AF1-134 C	0.6635	Adder	0.78
944771	AF1-142 C	6.3163	Adder	7.43
944881	AF1-153 C O1	1.1297	80/20	1.1297
944901	AF1-155 C	1.1402	80/20	1.1402
945021	AF1-167 C	1.4331	80/20	1.4331
945051	AF1-170 C	4.4040	80/20	4.4040
945121	AF1-177	0.0644	80/20	0.0644
945161	AF1-181	0.0084	80/20	0.0084
945171	AF1-182	0.0420	80/20	0.0420
945451	AF1-210 C	1.2796	80/20	1.2796
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.5522	Adder	0.65
945751	AF1-240 C O1	1.4520	80/20	1.4520
946111	AF1-276 C	4.8046	80/20	4.8046
946121	AF1-277 C	4.8046	80/20	4.8046
946131	AF1-278 C	3.8322	80/20	3.8322
946221	AF1-287 C	1.1434	80/20	1.1434
946381	AF1-302 C	2.0083	80/20	2.0083
946401	AF1-304 C	8.0226	80/20	8.0226
946421	AF1-306 C	3.9208	80/20	3.9208
946771	AF1-217 C	1.1434	80/20	1.1434
957161	AF2-010 C	4.8493	80/20	4.8493
957451	AF2-039 C	0.4483	Adder	0.53
957571	AF2-051 C	3.3653	80/20	3.3653
957941	AF2-088 C	0.2158	Adder	0.25
958271	AF2-121 C	0.5975	Adder	0.7
958361	AF2-130 C	1.7996	80/20	1.7996
958731	AF2-164 C O1	4.7621	80/20	4.7621
958741	AF2-165 C	1.6175	80/20	1.6175
958751	AF2-166 C	1.7996	80/20	1.7996
959441	AF2-235 C	0.7535	80/20	0.7535
959521	AF2-243 C	1.2131	80/20	1.2131
960041	AF2-295 C	1.1402	80/20	1.1402

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960051	AF2-296 C	0.6635	Adder	0.78
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	13.7037	Adder	16.12
961211	AF2-412	5.8311	Adder	6.86
961971	AG1-040 C	1.1778	80/20	1.1778
962411	AG1-090 C O1	1.5834	Adder	3.51
962511	AG1-100 C	1.1488	80/20	1.1488
962891	AG1-138 C	0.7124	80/20	0.7124
962901	AG1-139 C	0.6403	80/20	0.6403
962911	AG1-140 C	0.1586	80/20	0.1586
962951	AG1-144 C	0.3167	Adder	0.7
963281	AG1-177 C O1	1.2530	80/20	1.2530
963441	AG1-193 C	1.4104	80/20	1.4104
963481	AG1-197 C	0.8893	80/20	0.8893
963491	AG1-198 C	0.7518	80/20	0.7518
963531	AG1-202 C	0.6215	80/20	0.6215
963571	AG1-206 C	0.4663	80/20	0.4663
963891	AG1-242 C	0.1905	Adder	0.42
963991	AG1-253 C	0.2379	80/20	0.2379
964031	AG1-257 C	0.1997	Adder	0.44
964041	AG1-258 C	0.1997	Adder	0.44
964341	AG1-296 C	0.7684	80/20	0.7684
964411	AG1-303 C O1	2.6923	80/20	2.6923
964451	AG1-308 C O1	0.2264	Adder	0.5
965121	AG1-377 C O1	0.3167	Adder	0.7
965131	AG1-378 C O1	0.3167	Adder	0.7
965201	AG1-385 C	1.4526	80/20	1.4526
965241	AG1-389 C O1	0.3312	Adder	0.74
965251	AG1-390 C O1	0.3312	Adder	0.74
965261	AG1-391 C O1	0.3312	Adder	0.74
965271	AG1-392 C O1	0.6623	Adder	1.47
965301	AG1-395 C	0.4069	Adder	0.9
965861	AG1-455	3.3148	80/20	3.3148
966121	AG1-481	1.2679	80/20	1.2679
966771	AG1-548 C	11.8415	80/20	11.8415
G-007A	G-007A	2.0547	Confirmed LTF	2.0547
VFT	VFT	5.6696	Confirmed LTF	5.6696
CALDERWOOD	CALDERWOOD	0.3012	Confirmed LTF	0.3012
PRAIRIE	PRAIRIE	1.8004	Confirmed LTF	1.8004
CHEOAH	CHEOAH	0.3018	Confirmed LTF	0.3018
CBM-N	CBM-N	1.1232	Confirmed LTF	1.1232
COTTONWOOD	COTTONWOOD	1.3566	Confirmed LTF	1.3566
HAMLET	HAMLET	0.2720	Confirmed LTF	0.2720
GIBSON	GIBSON	0.3937	Confirmed LTF	0.3937
BLUEG	BLUEG	1.2499	Confirmed LTF	1.2499
TRIMBLE	TRIMBLE	0.4012	Confirmed LTF	0.4012
CATAWBA	CATAWBA	0.1803	Confirmed LTF	0.1803

11.6.23 Index 23

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
164247620	235219	01MILESB	AP	235970	01DALE	AP	1	PN-P2-2-PN-230-014T	bus	688.0	120.34	122.0	DC	11.42

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	3.7018	50/50	3.7018
200643	26SENECA#2	3.4961	50/50	3.4961
200649	26PENNTech	1.0086	50/50	1.0086
200665	26SHAWVL 3	6.8835	50/50	6.8835
200715	26SHAWVL 1	3.9935	50/50	3.9935
200722	26SHAWVL 2	3.1565	50/50	3.1565
200894	26K02	7.7935	50/50	7.7935
200913	26SHAW-D	0.1520	50/50	0.1520
203999	P-047 E	4.2909	Adder	5.05
235007	AC1-025 BAT	0.3070	50/50	0.3070
236828	01GRAYMONT	0.5585	50/50	0.5585
290086	Q-036 E	2.6054	Adder	3.07
916202	Z1-069 E	3.4633	Adder	4.07
919201	AA1-144 OP	10.0657	Adder	11.84
921642	AA2-000	93.7205	50/50	93.7205
930511	AB2-092	3.4411	50/50	3.4411
931092	AB1-160 E	0.9895	Adder	1.16
936421	AD2-055	7.0847	50/50	7.0847
936991	AD2-133 C	1.1724	Adder	1.38
936992	AD2-133 E	5.3626	Adder	6.31
939171	AE1-147 C	2.2660	50/50	2.2660
939172	AE1-147 E	1.5106	50/50	1.5106
940201	AE2-001 C	1.9669	50/50	1.9669
940202	AE2-001 E	1.3113	50/50	1.3113
940861	AE2-074 C	1.0026	Adder	1.18
940862	AE2-074 E	1.3197	Adder	1.55
941191	AE2-113 C	7.1990	50/50	7.1990
941192	AE2-113 E	7.7510	50/50	7.7510
941261	AE2-120 C	1.7585	50/50	1.7585
941262	AE2-120 E	1.1723	50/50	1.1723
941271	AE2-121 C	1.6020	50/50	1.6020
941272	AE2-121 E	1.0697	50/50	1.0697
941321	AE2-126 C	1.8682	50/50	1.8682
941322	AE2-126 E	1.2454	50/50	1.2454
941331	AE2-129 C	1.3698	50/50	1.3698
941332	AE2-129 E	0.9132	50/50	0.9132
941351	AE2-131 C (Suspended)	1.3698	50/50	1.3698
941352	AE2-131 E (Suspended)	0.9132	50/50	0.9132
941421	AE2-139 C	2.1748	Adder	4.83
941422	AE2-139 E	1.4499	Adder	3.22
942491	AE2-262 C	18.7645	50/50	18.7645

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942492	AE2-262 E	12.6097	50/50	12.6097
942501	AE2-263 C	17.6386	50/50	17.6386
942502	AE2-263 E	11.7766	50/50	11.7766
942961	AE2-316 C	4.9777	50/50	4.9777
942962	AE2-316 E	7.0983	50/50	7.0983
943751	AF1-043	21.2541	50/50	21.2541
944181	AF1-086 C O1	1.1809	Adder	1.39
944182	AF1-086 E O1	5.1377	Adder	6.04
944311	AF1-099 C	28.4845	50/50	28.4845
944312	AF1-099 E	18.9897	50/50	18.9897
944321	AF1-100 C	38.2935	50/50	38.2935
944322	AF1-100 E	25.5290	50/50	25.5290
944381	AF1-103 O1	1.4535	Adder	1.71
944411	AF1-106 O1	1.0414	Adder	1.23
944691	AF1-134 C	1.2902	50/50	1.2902
944692	AF1-134 E	0.8602	50/50	0.8602
944771	AF1-142 C	45.5752	50/50	45.5752
944772	AF1-142 E	30.3835	50/50	30.3835
944881	AF1-153 C O1	2.0210	50/50	2.0210
944882	AF1-153 E O1	1.3474	50/50	1.3474
944901	AF1-155 C	2.0063	50/50	2.0063
944902	AF1-155 E	1.3375	50/50	1.3375
945161	AF1-181	0.0316	50/50	0.0316
945181	AF1-183	0.0327	50/50	0.0327
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.7706	50/50	1.7706
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.1804	50/50	1.1804
946111	AF1-276 C	4.6460	Adder	5.47
946112	AF1-276 E	2.2883	Adder	2.69
946121	AF1-277 C	4.6460	Adder	5.47
946122	AF1-277 E	2.2883	Adder	2.69
946131	AF1-278 C	3.7057	Adder	4.36
946132	AF1-278 E	1.8418	Adder	2.17
946211	AF1-286 C	0.4218	Adder	0.5
946212	AF1-286 E	0.2864	Adder	0.34
946381	AF1-302 C	2.1737	50/50	2.1737
946382	AF1-302 E	2.8982	50/50	2.8982
946421	AF1-306 C	8.8641	50/50	8.8641
946422	AF1-306 E	35.4566	50/50	35.4566
957451	AF2-039 C	1.2996	50/50	1.2996
957452	AF2-039 E	0.8664	50/50	0.8664
957941	AF2-088 C	0.6258	50/50	0.6258
957942	AF2-088 E	0.4172	50/50	0.4172
958271	AF2-121 C	1.3698	50/50	1.3698
958272	AF2-121 E	0.9132	50/50	0.9132
959061	AF2-197 C O1	2.2129	Adder	2.6
959062	AF2-197 E O1	3.3194	Adder	3.91
959471	AF2-238 C	0.7201	Adder	0.85
959472	AF2-238 E	0.4801	Adder	0.56
959481	AF2-239 C	0.5920	Adder	0.7
959482	AF2-239 E	0.4747	Adder	0.56
959491	AF2-240 C	0.1968	Adder	0.23

Bus #	Bus	Gendoliv MW Impact	Type	Full MW Impact
959492	AF2-240 E	0.1677	Adder	0.2
959501	AF2-241 C	0.5884	Adder	0.69
959502	AF2-241 E	0.4530	Adder	0.53
959741	AF2-265 C	0.5161	Adder	0.61
959742	AF2-265 E	0.3841	Adder	0.45
960022	AF2-293 E	0.2458	50/50	0.2458
960041	AF2-295 C	2.0063	50/50	2.0063
960042	AF2-295 E	1.3375	50/50	1.3375
960051	AF2-296 C	1.2902	50/50	1.2902
960052	AF2-296 E	0.8602	50/50	0.8602
960271	AF2-318 C	0.6400	Adder	0.75
960272	AF2-318 E	0.4267	Adder	0.5
961141	AF2-405	0.5207	Adder	0.61
961151	AF2-406	3.9053	Adder	4.59
961211	AF2-412	6.7062	Adder	7.89
962411	AG1-090 C O1	6.8490	50/50	6.8490
962412	AG1-090 E O1	4.5660	50/50	4.5660
962951	AG1-144 C	1.3698	50/50	1.3698
962952	AG1-144 E	0.9132	50/50	0.9132
963571	AG1-206 C	1.0039	50/50	1.0039
963572	AG1-206 E	0.5406	50/50	0.5406
963891	AG1-242 C	0.6989	50/50	0.6989
963892	AG1-242 E	0.3763	50/50	0.3763
963941	AG1-247 C	0.1352	Adder	0.3
963942	AG1-247 E	0.0718	Adder	0.16
964341	AG1-296 C	0.6929	50/50	0.6929
964342	AG1-296 E	0.3731	50/50	0.3731
964451	AG1-308 C O1	1.0636	50/50	1.0636
964452	AG1-308 E O1	1.4865	50/50	1.4865
965121	AG1-377 C O1	1.3698	50/50	1.3698
965122	AG1-377 E O1	0.9132	50/50	0.9132
965131	AG1-378 C O1	1.3698	50/50	1.3698
965132	AG1-378 E O1	0.9132	50/50	0.9132
965201	AG1-385 C	2.5987	50/50	2.5987
965202	AG1-385 E	0.7697	50/50	0.7697
965241	AG1-389 C O1	0.3964	Adder	0.88
965242	AG1-389 E O1	0.2643	Adder	0.59
965251	AG1-390 C O1	0.3964	Adder	0.88
965252	AG1-390 E O1	0.2643	Adder	0.59
965261	AG1-391 C O1	0.3964	Adder	0.88
965262	AG1-391 E O1	0.2643	Adder	0.59
965271	AG1-392 C O1	0.7928	Adder	1.76
965272	AG1-392 E O1	0.5286	Adder	1.17
965301	AG1-395 C	1.7602	50/50	1.7602
965302	AG1-395 E	0.5228	50/50	0.5228
966121	AG1-481	0.5982	Adder	1.33
966891	AG1-560 BAT	1.4842	Merchant Transmission	1.4842
WEC	WEC	0.1257	Confirmed LTF	0.1257
LGEE	LGEE	0.2318	Confirmed LTF	0.2318
CPL	CPL	0.0362	Confirmed LTF	0.0362
CBM-W2	CBM-W2	2.9030	Confirmed LTF	2.9030
TVA	TVA	0.3920	Confirmed LTF	0.3920

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	7.1405	Confirmed LTF	7.1405
SIGE	SIGE	0.1501	Confirmed LTF	0.1501
CBM-S2	CBM-S2	1.2632	Confirmed LTF	1.2632
CBM-S1	CBM-S1	0.1125	Confirmed LTF	0.1125
G-007	G-007	1.1529	Confirmed LTF	1.1529
MEC	MEC	0.5927	Confirmed LTF	0.5927
LAGN	LAGN	0.5057	Confirmed LTF	0.5057
CBM-W1	CBM-W1	6.1267	Confirmed LTF	6.1267

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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
164248049	235248	01SHINGL	AP	966040	AG1-473 TAP	AP	1	Base Case	single	520.0	134.92	136.96	DC	10.64

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	5.0275	80/20	5.0275
200643	26SENECA#2	4.7482	80/20	4.7482
200644	26SENECA#3	0.5188	80/20	0.5188
200649	26PENNTech	1.3993	80/20	1.3993
200665	26SHAWVL 3	8.7683	80/20	8.7683
200666	26SHAWVL 4	8.6326	80/20	8.6326
200715	26SHAWVL 1	5.4751	80/20	5.4751
200722	26SHAWVL 2	5.6011	80/20	5.6011
200887	26ARMNA MT	0.1941	80/20	0.1941
200905	26Q36	0.1579	80/20	0.1579
200913	26SHAW-D	0.2335	80/20	0.2335
201201	26WRREN CT	1.0438	80/20	1.0438
203261	26BLOSSBCT	0.2856	80/20	0.2856
203283	26MANOR_T86	0.0156	80/20	0.0156
203349	26Z1-069 C	0.1974	80/20	0.1974
203351	26GROZ1-110	0.4022	80/20	0.4022
203352	26CANZ2-011	0.3947	80/20	0.3947
203922	X1-109 G1	4.9828	80/20	4.9828
203923	X1-109 G2	4.9828	80/20	4.9828
919201	AA1-144 OP	14.2495	80/20	14.2495
921642	AA2-000	110.6570	80/20	110.6570
930511	AB2-092	4.0630	80/20	4.0630
931091	AB1-160 C	0.0564	80/20	0.0564
936421	AD2-055	8.3650	80/20	8.3650
936991	AD2-133 C	2.1703	80/20	2.1703
939171	AE1-147 C	5.7880	80/20	5.7880
940201	AE2-001 C	5.8100	80/20	5.8100
940681	AE2-055 C (Suspended)	6.1463	80/20	6.1463
940861	AE2-074 C	1.5726	80/20	1.5726
941191	AE2-113 C	9.8927	80/20	9.8927
941261	AE2-120 C	5.8220	80/20	5.8220
941271	AE2-121 C	3.0568	80/20	3.0568
941321	AE2-126 C	2.7310	80/20	2.7310
941331	AE2-129 C	2.1270	80/20	2.1270
941351	AE2-131 C (Suspended)	2.1270	80/20	2.1270
941421	AE2-139 C	5.7936	80/20	5.7936
942351	AE2-248 C	4.8048	80/20	4.8048
942491	AE2-262 C	19.4670	80/20	19.4670
942501	AE2-263 C	18.2990	80/20	18.2990
942961	AE2-316 C	6.7630	80/20	6.7630
943751	AF1-043	25.0950	80/20	25.0950

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	6.4515	80/20	6.4515
944181	AF1-086 C O1	2.1136	80/20	2.1136
944311	AF1-099 C	29.5509	80/20	29.5509
944321	AF1-100 C	47.8020	80/20	47.8020
944381	AF1-103 O1	2.3214	80/20	2.3214
944471	AF1-112 C	5.9693	80/20	5.9693
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	6.0721	80/20	6.0721
944691	AF1-134 C	1.9754	80/20	1.9754
944771	AF1-142 C	47.2815	80/20	47.2815
944881	AF1-153 C O1	2.7431	80/20	2.7431
944901	AF1-155 C	2.7232	80/20	2.7232
945121	AF1-177	0.0916	80/20	0.0916
945161	AF1-181	0.0403	80/20	0.0403
945171	AF1-182	0.2020	80/20	0.2020
945181	AF1-183	0.0449	80/20	0.0449
945331	AF1-198	0.0376	80/20	0.0376
945491	AF1-214 C (Withdrawn : 12/03/2020)	5.8213	80/20	5.8213
946111	AF1-276 C	7.3894	80/20	7.3894
946121	AF1-277 C	7.3894	80/20	7.3894
946131	AF1-278 C	5.8939	80/20	5.8939
946381	AF1-302 C	2.9533	80/20	2.9533
946421	AF1-306 C	12.0405	80/20	12.0405
957451	AF2-039 C	1.9978	80/20	1.9978
957941	AF2-088 C	0.9619	80/20	0.9619
958271	AF2-121 C	2.1270	80/20	2.1270
959061	AF2-197 C O1	3.1534	80/20	3.1534
959471	AF2-238 C	1.0396	80/20	1.0396
959481	AF2-239 C	0.8430	80/20	0.8430
959741	AF2-265 C	0.7450	80/20	0.7450
960041	AF2-295 C	2.7232	80/20	2.7232
960051	AF2-296 C	1.9754	80/20	1.9754
960271	AF2-318 C	0.9114	80/20	0.9114
961211	AF2-412	9.9125	80/20	9.9125
962411	AG1-090 C O1	10.6350	80/20	10.6350
962951	AG1-144 C	2.1270	80/20	2.1270
963571	AG1-206 C	1.4479	80/20	1.4479
963891	AG1-242 C	1.0700	80/20	1.0700
964031	AG1-257 C	4.1081	80/20	4.1081
964041	AG1-258 C	4.1081	80/20	4.1081
964341	AG1-296 C	0.9417	80/20	0.9417
964451	AG1-308 C O1	1.6468	80/20	1.6468
965121	AG1-377 C O1	2.1270	80/20	2.1270
965131	AG1-378 C O1	2.1270	80/20	2.1270
965201	AG1-385 C	3.5271	80/20	3.5271
965241	AG1-389 C O1	1.1574	80/20	1.1574
965251	AG1-390 C O1	1.1574	80/20	1.1574
965261	AG1-391 C O1	1.1574	80/20	1.1574
965271	AG1-392 C O1	2.3148	80/20	2.3148

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965301	AG1-395 C	2.7332	80/20	2.7332
966121	AG1-481	1.8026	80/20	1.8026
WEC	WEC	0.1701	Confirmed LTF	0.1701
LGEE	LGEE	0.3135	Confirmed LTF	0.3135
CPL	CPL	0.0437	Confirmed LTF	0.0437
CBM-W2	CBM-W2	3.9155	Confirmed LTF	3.9155
TVA	TVA	0.5264	Confirmed LTF	0.5264
SIGE	SIGE	0.2138	Confirmed LTF	0.2138
CBM-S2	CBM-S2	1.6495	Confirmed LTF	1.6495
CBM-S1	CBM-S1	0.1512	Confirmed LTF	0.1512
MEC	MEC	0.7993	Confirmed LTF	0.7993
LAGN	LAGN	0.6808	Confirmed LTF	0.6808
CBM-W1	CBM-W1	8.2858	Confirmed LTF	8.2858

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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
164247767	235970	01DALE	AP	235248	01SHINGL	AP	1	PN-P2-3-PN-230-21AT	breaker	554.0	139.75	141.83	DC	11.47

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	3.7206	50/50	3.7206
200643	26SENECA#2	3.5139	50/50	3.5139
200649	26PENNTech	1.0138	50/50	1.0138
200665	26SHAWVL 3	6.9192	50/50	6.9192
200715	26SHAWVL 1	4.0141	50/50	4.0141
200722	26SHAWVL 2	3.1785	50/50	3.1785
200894	26K02	7.8338	50/50	7.8338
200913	26SHAW-D	0.1528	50/50	0.1528
235003	AC1-025 E	0.2216	50/50	0.2216
236828	01GRAYMONT	1.3124	50/50	1.3124
290086	Q-036 E	2.6187	Adder	3.08
916202	Z1-069 E	3.4811	Adder	4.1
919201	AA1-144 OP	10.1183	Adder	11.9
921642	AA2-000	94.2066	50/50	94.2066
930511	AB2-092	3.4590	50/50	3.4590
931092	AB1-160 E	0.9946	Adder	1.17
936421	AD2-055	7.1215	50/50	7.1215
936991	AD2-133 C	1.1784	Adder	1.39
936992	AD2-133 E	5.3899	Adder	6.34
939171	AE1-147 C	4.3690	50/50	4.3690
939172	AE1-147 E	2.9126	50/50	2.9126
940201	AE2-001 C	4.0692	50/50	4.0692
940202	AE2-001 E	2.7128	50/50	2.7128
940861	AE2-074 C	1.0077	Adder	1.19
940862	AE2-074 E	1.3265	Adder	1.56
941191	AE2-113 C	7.2366	50/50	7.2366
941192	AE2-113 E	7.7914	50/50	7.7914
941261	AE2-120 C	3.9748	50/50	3.9748
941262	AE2-120 E	2.6498	50/50	2.6498
941271	AE2-121 C	2.4155	50/50	2.4155
941272	AE2-121 E	1.6129	50/50	1.6129
941321	AE2-126 C	1.8779	50/50	1.8779
941322	AE2-126 E	1.2519	50/50	1.2519
941331	AE2-129 C	1.3769	50/50	1.3769
941332	AE2-129 E	0.9179	50/50	0.9179
941351	AE2-131 C (Suspended)	1.3769	50/50	1.3769
941352	AE2-131 E (Suspended)	0.9179	50/50	0.9179
941421	AE2-139 C	2.1860	Adder	4.85
941422	AE2-139 E	1.4573	Adder	3.23
942351	AE2-248 C	1.4184	50/50	1.4184
942352	AE2-248 E	0.9456	50/50	0.9456

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942491	AE2-262 C	18.8615	50/50	18.8615
942492	AE2-262 E	12.6749	50/50	12.6749
942501	AE2-263 C	17.7298	50/50	17.7298
942502	AE2-263 E	11.8375	50/50	11.8375
942961	AE2-316 C	5.0037	50/50	5.0037
942962	AE2-316 E	7.1353	50/50	7.1353
943751	AF1-043	21.3643	50/50	21.3643
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.8034	Adder	0.95
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.4519	Adder	0.53
944181	AF1-086 C O1	1.1870	Adder	1.4
944182	AF1-086 E O1	5.1642	Adder	6.08
944311	AF1-099 C	28.6318	50/50	28.6318
944312	AF1-099 E	19.0878	50/50	19.0878
944321	AF1-100 C	38.4915	50/50	38.4915
944322	AF1-100 E	25.6610	50/50	25.6610
944381	AF1-103 O1	1.4610	Adder	1.72
944471	AF1-112 C	2.0885	50/50	2.0885
944472	AF1-112 E	1.3923	50/50	1.3923
944691	AF1-134 C	1.2970	50/50	1.2970
944692	AF1-134 E	0.8646	50/50	0.8646
944771	AF1-142 C	45.8108	50/50	45.8108
944772	AF1-142 E	30.5405	50/50	30.5405
944881	AF1-153 C O1	2.0315	50/50	2.0315
944882	AF1-153 E O1	1.3543	50/50	1.3543
944901	AF1-155 C	2.0166	50/50	2.0166
944902	AF1-155 E	1.3444	50/50	1.3444
945161	AF1-181	0.0318	50/50	0.0318
945181	AF1-183	0.0329	50/50	0.0329
945491	AF1-214 C (Withdrawn : 12/03/2020)	3.9803	50/50	3.9803
945492	AF1-214 E (Withdrawn : 12/03/2020)	2.6535	50/50	2.6535
946111	AF1-276 C	4.6699	Adder	5.49
946112	AF1-276 E	2.3001	Adder	2.71
946121	AF1-277 C	4.6699	Adder	5.49
946122	AF1-277 E	2.3001	Adder	2.71
946131	AF1-278 C	3.7248	Adder	4.38
946132	AF1-278 E	1.8512	Adder	2.18
946381	AF1-302 C	2.1850	50/50	2.1850
946382	AF1-302 E	2.9134	50/50	2.9134
946421	AF1-306 C	8.9100	50/50	8.9100
946422	AF1-306 E	35.6400	50/50	35.6400
957451	AF2-039 C	1.3064	50/50	1.3064
957452	AF2-039 E	0.8709	50/50	0.8709
957941	AF2-088 C	0.6290	50/50	0.6290
957942	AF2-088 E	0.4193	50/50	0.4193
958271	AF2-121 C	1.3769	50/50	1.3769
958272	AF2-121 E	0.9179	50/50	0.9179
959061	AF2-197 C O1	2.2243	Adder	2.62
959062	AF2-197 E O1	3.3364	Adder	3.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959471	AF2-238 C	0.7238	Adder	0.85
959472	AF2-238 E	0.4825	Adder	0.57
959741	AF2-265 C	0.5187	Adder	0.61
959742	AF2-265 E	0.3860	Adder	0.45
960022	AF2-293 E	0.4202	50/50	0.4202
960041	AF2-295 C	2.0166	50/50	2.0166
960042	AF2-295 E	1.3444	50/50	1.3444
960051	AF2-296 C	1.2970	50/50	1.2970
960052	AF2-296 E	0.8646	50/50	0.8646
962411	AG1-090 C O1	6.8844	50/50	6.8844
962412	AG1-090 E O1	4.5896	50/50	4.5896
962951	AG1-144 C	1.3769	50/50	1.3769
962952	AG1-144 E	0.9179	50/50	0.9179
963571	AG1-206 C	1.0091	50/50	1.0091
963572	AG1-206 E	0.5434	50/50	0.5434
963891	AG1-242 C	0.7025	50/50	0.7025
963892	AG1-242 E	0.3783	50/50	0.3783
964031	AG1-257 C	1.7588	50/50	1.7588
964032	AG1-257 E	2.4580	50/50	2.4580
964041	AG1-258 C	1.7588	50/50	1.7588
964042	AG1-258 E	2.4580	50/50	2.4580
964341	AG1-296 C	0.6965	50/50	0.6965
964342	AG1-296 E	0.3750	50/50	0.3750
964451	AG1-308 C O1	1.0692	50/50	1.0692
964452	AG1-308 E O1	1.4943	50/50	1.4943
965121	AG1-377 C O1	1.3769	50/50	1.3769
965122	AG1-377 E O1	0.9179	50/50	0.9179
965131	AG1-378 C O1	1.3769	50/50	1.3769
965132	AG1-378 E O1	0.9179	50/50	0.9179
965201	AG1-385 C	2.6121	50/50	2.6121
965202	AG1-385 E	0.7737	50/50	0.7737
965241	AG1-389 C O1	0.3985	Adder	0.88
965242	AG1-389 E O1	0.2657	Adder	0.59
965251	AG1-390 C O1	0.3985	Adder	0.88
965252	AG1-390 E O1	0.2657	Adder	0.59
965261	AG1-391 C O1	0.3985	Adder	0.88
965262	AG1-391 E O1	0.2657	Adder	0.59
965271	AG1-392 C O1	0.7970	Adder	1.77
965272	AG1-392 E O1	0.5313	Adder	1.18
965301	AG1-395 C	1.7693	50/50	1.7693
965302	AG1-395 E	0.5255	50/50	0.5255
966121	AG1-481	0.6013	Adder	1.33
966891	AG1-560 BAT	1.4921	Merchant Transmission	1.4921
WEC	WEC	0.1263	Confirmed LTF	0.1263
LGEE	LGEE	0.2331	Confirmed LTF	0.2331
CPL	CPL	0.0362	Confirmed LTF	0.0362
CBM-W2	CBM-W2	2.9210	Confirmed LTF	2.9210
TVA	TVA	0.3934	Confirmed LTF	0.3934
O-066	O-066	7.1809	Confirmed LTF	7.1809
SIGE	SIGE	0.1509	Confirmed LTF	0.1509
CBM-S2	CBM-S2	1.2632	Confirmed LTF	1.2632
CBM-S1	CBM-S1	0.1132	Confirmed LTF	0.1132

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
G-007	G-007	1.1592	Confirmed LTF	1.1592
MEC	MEC	0.5943	Confirmed LTF	0.5943
LAGN	LAGN	0.5075	Confirmed LTF	0.5075
CBM-W1	CBM-W1	6.1548	Confirmed LTF	6.1548

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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
164869555	919200	AA1-144 TAP	PENELEC	200940	26SCOTCHHLLW	PENELEC	1	PN-P2-2-PN-230-007T	bus	621.0	139.24	140.18	DC	12.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.7762	50/50	5.7762
200666	26SHAWVL 4	5.6426	50/50	5.6426
200894	26K02	34.2826	50/50	34.2826
203351	26GROZ1-110	1.5966	50/50	1.5966
203352	26CANZ2-011	1.5667	50/50	1.5667
235003	AC1-025 E	0.3391	50/50	0.3391
236828	01GRAYMONT	0.9092	50/50	0.9092
290086	Q-036 E	3.3810	Adder	3.98
919201	AA1-144 OP	135.0162	50/50	135.0162
921642	AA2-000	199.4187	50/50	199.4187
930511	AB2-092	7.3221	50/50	7.3221
936421	AD2-055	15.0748	50/50	15.0748
936991	AD2-133 C	1.5214	Adder	1.79
936992	AD2-133 E	6.9589	Adder	8.19
939171	AE1-147 C	2.7299	50/50	2.7299
939172	AE1-147 E	1.8199	50/50	1.8199
940201	AE2-001 C	2.7286	50/50	2.7286
940202	AE2-001 E	1.8190	50/50	1.8190
940681	AE2-055 C (Suspended)	2.7082	50/50	2.7082
940682	AE2-055 E (Suspended)	1.8054	50/50	1.8054
941191	AE2-113 C	4.6383	Adder	5.46
941192	AE2-113 E	4.9940	Adder	5.88
941261	AE2-120 C	2.7278	50/50	2.7278
941262	AE2-120 E	1.8186	50/50	1.8186
941271	AE2-121 C	1.4526	50/50	1.4526
941272	AE2-121 E	0.9699	50/50	0.9699
941321	AE2-126 C	1.5317	Adder	1.8
941322	AE2-126 E	1.0212	Adder	1.2
941331	AE2-129 C	1.3188	Adder	1.55
941332	AE2-129 E	0.8792	Adder	1.03
941351	AE2-131 C (Suspended)	1.3188	Adder	1.55
941352	AE2-131 E (Suspended)	0.8792	Adder	1.03
941421	AE2-139 C	48.3926	50/50	48.3926
941422	AE2-139 E	32.2617	50/50	32.2617
942351	AE2-248 C	2.1733	50/50	2.1733
942352	AE2-248 E	1.4489	50/50	1.4489
942491	AE2-262 C	11.6570	50/50	11.6570
942492	AE2-262 E	7.8335	50/50	7.8335
942501	AE2-263 C	10.9576	50/50	10.9576
942502	AE2-263 E	7.3159	50/50	7.3159
942961	AE2-316 C	3.8926	Adder	4.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.5509	Adder	6.53
943751	AF1-043	45.2245	50/50	45.2245
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.8950	50/50	2.8950
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6284	50/50	1.6284
944311	AF1-099 C	17.6953	50/50	17.6953
944312	AF1-099 E	11.7969	50/50	11.7969
944321	AF1-100 C	32.5500	50/50	32.5500
944322	AF1-100 E	21.7000	50/50	21.7000
944412	AF1-106 BAT	2.0074	Merchant Transmission	2.0074
944471	AF1-112 C	2.7188	50/50	2.7188
944472	AF1-112 E	1.8126	50/50	1.8126
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.7126	50/50	2.7126
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8084	50/50	1.8084
944691	AF1-134 C	1.1553	Adder	1.36
944692	AF1-134 E	0.7702	Adder	0.91
944771	AF1-142 C	28.3125	50/50	28.3125
944772	AF1-142 E	18.8750	50/50	18.8750
944881	AF1-153 C O1	1.6013	Adder	1.88
944882	AF1-153 E O1	1.0675	Adder	1.26
944901	AF1-155 C	1.5893	Adder	1.87
944902	AF1-155 E	1.0595	Adder	1.25
945161	AF1-181	0.0265	50/50	0.0265
945171	AF1-182	0.1320	50/50	0.1320
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.7278	50/50	2.7278
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8186	50/50	1.8186
946381	AF1-302 C	1.6998	Adder	2.0
946382	AF1-302 E	2.2664	Adder	2.67
946421	AF1-306 C	6.9889	Adder	8.22
946422	AF1-306 E	27.9557	Adder	32.89
957451	AF2-039 C	1.1415	Adder	1.34
957452	AF2-039 E	0.7610	Adder	0.9
957941	AF2-088 C	0.5496	Adder	0.65
957942	AF2-088 E	0.3664	Adder	0.43
958271	AF2-121 C	1.3188	Adder	1.55
958272	AF2-121 E	0.8792	Adder	1.03
959063	AF2-197 BAT	13.5485	Merchant Transmission	13.5485
960022	AF2-293 E	0.2653	50/50	0.2653
960041	AF2-295 C	1.5893	Adder	1.87
960042	AF2-295 E	1.0595	Adder	1.25
960051	AF2-296 C	1.1553	Adder	1.36
960052	AF2-296 E	0.7702	Adder	0.91
961142	AF2-405 BAT	1.0037	Merchant Transmission	1.0037
961152	AF2-406 BAT	7.5277	Merchant Transmission	7.5277
961451	AF2-436	-0.1532	Adder	-0.18
962411	AG1-090 C O1	3.4947	Adder	7.76

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962412	AG1-090 E O1	2.3298	Adder	5.17
962951	AG1-144 C	0.6989	Adder	1.55
962952	AG1-144 E	0.4660	Adder	1.03
963571	AG1-206 C	0.4282	Adder	0.95
963572	AG1-206 E	0.2306	Adder	0.51
963891	AG1-242 C	0.3317	Adder	0.74
963892	AG1-242 E	0.1786	Adder	0.4
964031	AG1-257 C	1.8818	50/50	1.8818
964032	AG1-257 E	2.6300	50/50	2.6300
964041	AG1-258 C	1.8818	50/50	1.8818
964042	AG1-258 E	2.6300	50/50	2.6300
964341	AG1-296 C	0.2857	Adder	0.63
964342	AG1-296 E	0.1539	Adder	0.34
964451	AG1-308 C O1	0.5251	Adder	1.17
964452	AG1-308 E O1	0.7339	Adder	1.63
964703	AG1-333 BAT	0.2022	Merchant Transmission	0.2022
965121	AG1-377 C O1	0.6989	Adder	1.55
965122	AG1-377 E O1	0.4660	Adder	1.03
965131	AG1-378 C O1	0.6989	Adder	1.55
965132	AG1-378 E O1	0.4660	Adder	1.03
965201	AG1-385 C	1.0913	Adder	2.42
965202	AG1-385 E	0.3232	Adder	0.72
965301	AG1-395 C	0.8981	Adder	1.99
965302	AG1-395 E	0.2668	Adder	0.59
966041	AG1-473 C	7.2943	50/50	7.2943
966042	AG1-473 E	4.8629	50/50	4.8629
WEC	WEC	0.1877	Confirmed LTF	0.1877
LGEE	LGEE	0.3625	Confirmed LTF	0.3625
CPL	CPL	0.2396	Confirmed LTF	0.2396
CBM-W2	CBM-W2	4.8832	Confirmed LTF	4.8832
NY	NY	1.6994	Confirmed LTF	1.6994
TVA	TVA	0.7196	Confirmed LTF	0.7196
O-066	O-066	10.7209	Confirmed LTF	10.7209
SIGE	SIGE	0.2277	Confirmed LTF	0.2277
CBM-S2	CBM-S2	4.1864	Confirmed LTF	4.1864
CBM-S1	CBM-S1	0.1995	Confirmed LTF	0.1995
G-007	G-007	1.5666	Confirmed LTF	1.5666
MEC	MEC	0.9184	Confirmed LTF	0.9184
LAGN	LAGN	0.9100	Confirmed LTF	0.9100
CBM-W1	CBM-W1	8.6924	Confirmed LTF	8.6924

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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
165880061	938380	AE1-071-POI	PENELEC	200520	26ROXBURY	PENELEC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	160.0	230.27	232.29	DC	7.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200812	26ALY HYDR	0.4036	50/50	0.4036
200852	26WARR RDG	0.2631	50/50	0.2631
200883	Q-053 E	2.1432	Adder	2.52
235003	AC1-025 E	0.1863	50/50	0.1863
236828	01GRAYMONT	0.4794	50/50	0.4794
290086	Q-036 E	2.3276	Adder	2.74
293301	N-039 E	3.6339	Adder	4.28
294515	O38_P22	3.1797	Adder	3.74
921642	AA2-000	25.8051	Adder	30.36
930511	AB2-092	0.9475	Adder	1.11
936421	AD2-055	1.9507	Adder	2.29
936991	AD2-133 C	1.0474	Adder	1.23
936992	AD2-133 E	4.7909	Adder	5.64
938384	AE1-071-C	40.3905	50/50	40.3905
938385	AE1-071-E	24.7156	50/50	24.7156
939171	AE1-147 C	1.4302	50/50	1.4302
939172	AE1-147 E	0.9534	50/50	0.9534
939591	AE1-188 C	-0.6863	Adder	-0.81
940201	AE2-001 C	1.4348	50/50	1.4348
940202	AE2-001 E	0.9566	50/50	0.9566
940681	AE2-055 C (Suspended)	1.5056	50/50	1.5056
940682	AE2-055 E (Suspended)	1.0038	50/50	1.0038
941231	AE2-117 C	1.2254	50/50	1.2254
941232	AE2-117 E	0.8170	50/50	0.8170
941241	AE2-118 C	0.9903	Adder	1.17
941242	AE2-118 E	0.6602	Adder	0.78
941261	AE2-120 C	1.4374	50/50	1.4374
941262	AE2-120 E	0.9582	50/50	0.9582
941271	AE2-121 C	0.7560	50/50	0.7560
941272	AE2-121 E	0.5048	50/50	0.5048
941321	AE2-126 C	0.6954	Adder	0.82
941322	AE2-126 E	0.4636	Adder	0.55
941331	AE2-129 C	0.7293	Adder	0.86
941332	AE2-129 E	0.4862	Adder	0.57
941351	AE2-131 C (Suspended)	0.7293	Adder	0.86
941352	AE2-131 E (Suspended)	0.4862	Adder	0.57
942121	AE2-224 C	2.9631	Adder	3.49
942122	AE2-224 E	1.9754	Adder	2.32
942351	AE2-248 C	1.1809	50/50	1.1809

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942352	AE2-248 E	0.7873	50/50	0.7873
942491	AE2-262 C	4.2321	Adder	4.98
942492	AE2-262 E	2.8440	Adder	3.35
942501	AE2-263 C	3.9782	Adder	4.68
942502	AE2-263 E	2.6561	Adder	3.12
942511	AE2-264 C	5.1106	50/50	5.1106
942512	AE2-264 E	3.4070	50/50	3.4070
943751	AF1-043	5.8521	Adder	6.88
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.5840	50/50	1.5840
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8910	50/50	0.8910
944311	AF1-099 C	6.4244	Adder	7.56
944312	AF1-099 E	4.2829	Adder	5.04
944321	AF1-100 C	10.8987	Adder	12.82
944322	AF1-100 E	7.2658	Adder	8.55
944471	AF1-112 C	1.4683	50/50	1.4683
944472	AF1-112 E	0.9789	50/50	0.9789
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.4900	50/50	1.4900
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9934	50/50	0.9934
944691	AF1-134 C	0.5935	Adder	0.7
944692	AF1-134 E	0.3957	Adder	0.47
944771	AF1-142 C	10.2790	Adder	12.09
944772	AF1-142 E	6.8527	Adder	8.06
944881	AF1-153 C O1	0.6607	Adder	0.78
944882	AF1-153 E O1	0.4404	Adder	0.52
944901	AF1-155 C	0.6569	Adder	0.77
944902	AF1-155 E	0.4379	Adder	0.52
945011	AF1-166 C	-0.5608	Adder	-0.66
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4371	50/50	1.4371
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9581	50/50	0.9581
945591	AF1-224 C	-0.4303	Adder	-0.51
946421	AF1-306 C	2.8667	Adder	3.37
946422	AF1-306 E	11.4669	Adder	13.49
957451	AF2-039 C	0.5175	Adder	0.61
957452	AF2-039 E	0.3450	Adder	0.41
957561	AF2-050 C	1.4816	Adder	1.74
957562	AF2-050 E	0.9877	Adder	1.16
957931	AF2-087 C (Suspended)	0.1910	Adder	0.22
957932	AF2-087 E (Suspended)	0.2631	Adder	0.31
957941	AF2-088 C	0.2492	Adder	0.29
957942	AF2-088 E	0.1661	Adder	0.2
958071	AF2-101 C	-0.0921	Adder	-0.11
958271	AF2-121 C	0.7293	Adder	0.86
958272	AF2-121 E	0.4862	Adder	0.57
958551	AF2-146 C	5.3162	50/50	5.3162
958552	AF2-146 E	3.5442	50/50	3.5442

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958571	AF2-148 C	4.3078	50/50	4.3078
958572	AF2-148 E	2.8719	50/50	2.8719
958601	AF2-151 C	-0.0909	Adder	-0.11
959241	AF2-215 C	-0.1572	Adder	-0.18
959802	AF2-271 E	0.2363	Adder	0.28
959843	AF2-275 BAT	0.1031	Merchant Transmission	0.1031
959853	AF2-276 BAT	0.1031	Merchant Transmission	0.1031
960022	AF2-293 E	0.1387	50/50	0.1387
960041	AF2-295 C	0.6569	Adder	0.77
960042	AF2-295 E	0.4379	Adder	0.52
960051	AF2-296 C	0.5935	Adder	0.7
960052	AF2-296 E	0.3957	Adder	0.47
962411	AG1-090 C O1	1.9326	Adder	4.29
962412	AG1-090 E O1	1.2884	Adder	2.86
962951	AG1-144 C	0.3865	Adder	0.86
962952	AG1-144 E	0.2577	Adder	0.57
963571	AG1-206 C	0.1945	Adder	0.43
963572	AG1-206 E	0.1047	Adder	0.23
963891	AG1-242 C	0.1704	Adder	0.38
963892	AG1-242 E	0.0918	Adder	0.2
964031	AG1-257 C	1.0113	50/50	1.0113
964032	AG1-257 E	1.4133	50/50	1.4133
964041	AG1-258 C	1.0113	50/50	1.0113
964042	AG1-258 E	1.4133	50/50	1.4133
964191	AG1-280 C	0.3046	Adder	0.68
964192	AG1-280 E	0.2030	Adder	0.45
964201	AG1-281 C	0.3064	Adder	0.68
964202	AG1-281 E	0.2042	Adder	0.45
964391	AG1-301 C	1.2631	50/50	1.2631
964392	AG1-301 E	0.8421	50/50	0.8421
964451	AG1-308 C O1	0.2716	Adder	0.6
964452	AG1-308 E O1	0.3795	Adder	0.84
965121	AG1-377 C O1	0.3865	Adder	0.86
965122	AG1-377 E O1	0.2577	Adder	0.57
965131	AG1-378 C O1	0.3865	Adder	0.86
965132	AG1-378 E O1	0.2577	Adder	0.57
965201	AG1-385 C	0.4502	Adder	1.0
965202	AG1-385 E	0.1333	Adder	0.3
965301	AG1-395 C	0.4967	Adder	1.1
965302	AG1-395 E	0.1475	Adder	0.33
966041	AG1-473 C	5.0011	50/50	5.0011
966042	AG1-473 E	3.3340	50/50	3.3340
966152	AG1-484 BAT	0.7022	Merchant Transmission	0.7022
966463	AG1-515 BAT	0.4163	Merchant Transmission	0.4163
966901	AG1-561 BAT	6.0877	50/50	6.0877
WEC	WEC	0.0441	Confirmed LTF	0.0441
LGEE	LGEE	0.0729	Confirmed LTF	0.0729
CALDERWOOD	CALDERWOOD	0.0060	Confirmed LTF	0.0060
CBM-W2	CBM-W2	0.6182	Confirmed LTF	0.6182
TVA	TVA	0.0364	Confirmed LTF	0.0364
O-066	O-066	1.9719	Confirmed LTF	1.9719
SIGE	SIGE	0.0427	Confirmed LTF	0.0427

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CHEOAH	CHEOAH	0.0080	Confirmed LTF	0.0080
CBM-S1	CBM-S1	0.0163	Confirmed LTF	0.0163
G-007	G-007	0.3402	Confirmed LTF	0.3402
HAMLET	HAMLET	0.0982	Confirmed LTF	0.0982
MEC	MEC	0.1827	Confirmed LTF	0.1827
LAGN	LAGN	0.0595	Confirmed LTF	0.0595
CATAWBA	CATAWBA	0.0416	Confirmed LTF	0.0416
CBM-W1	CBM-W1	2.3694	Confirmed LTF	2.3694

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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
165880253	941190	AE2-113 TAP	PENELEC	200668	26FARM VLY	PENELEC	1	PN-P2-3-PN-230-8M_SUM_WIN	breaker	160.0	120.16	122.08	DC	6.79

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200649	26PENNTech	1.5387	50/50	1.5387
235003	AC1-025 E	0.0786	Adder	0.09
236828	01GRAYMONT	0.2175	Adder	0.26
290086	Q-036 E	1.7241	Adder	2.03
921642	AA2-000	20.9211	Adder	24.61
930511	AB2-092	0.7682	Adder	0.9
936421	AD2-055	1.5815	Adder	1.86
936991	AD2-133 C	0.7759	Adder	0.91
936992	AD2-133 E	3.5487	Adder	4.17
939171	AE1-147 C	0.6562	Adder	0.77
939172	AE1-147 E	0.4374	Adder	0.51
940201	AE2-001 C	0.6541	Adder	0.77
940202	AE2-001 E	0.4361	Adder	0.51
940681	AE2-055 C (Suspended)	0.6221	Adder	0.73
940682	AE2-055 E (Suspended)	0.4147	Adder	0.49
941191	AE2-113 C	33.8240	50/50	33.8240
941192	AE2-113 E	36.4176	50/50	36.4176
941261	AE2-120 C	0.6530	Adder	0.77
941262	AE2-120 E	0.4353	Adder	0.51
941271	AE2-121 C	0.3508	Adder	0.41
941272	AE2-121 E	0.2342	Adder	0.28
941321	AE2-126 C	1.9456	50/50	1.9456
941322	AE2-126 E	1.2970	50/50	1.2970
941331	AE2-129 C	0.6925	Adder	0.81
941332	AE2-129 E	0.4617	Adder	0.54
941351	AE2-131 C (Suspended)	0.6925	Adder	0.81
941352	AE2-131 E (Suspended)	0.4617	Adder	0.54
942351	AE2-248 C	0.5084	Adder	0.6
942352	AE2-248 E	0.3389	Adder	0.4
942491	AE2-262 C	3.1765	Adder	3.74
942492	AE2-262 E	2.1346	Adder	2.51
942501	AE2-263 C	2.9859	Adder	3.51
942502	AE2-263 E	1.9935	Adder	2.35
942961	AE2-316 C	2.2774	Adder	2.68
942962	AE2-316 E	3.2476	Adder	3.82
943751	AF1-043	4.7445	Adder	5.58
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.6736	Adder	0.79
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.3789	Adder	0.45
944311	AF1-099 C	4.8219	Adder	5.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944312	AF1-099 E	3.2146	Adder	3.78
944321	AF1-100 C	10.8235	Adder	12.73
944322	AF1-100 E	7.2157	Adder	8.49
944382	AF1-103 BAT	1.1770	Merchant Transmission	1.1770
944471	AF1-112 C	0.6389	Adder	0.75
944472	AF1-112 E	0.4260	Adder	0.5
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.6292	Adder	0.74
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.4195	Adder	0.49
944691	AF1-134 C	0.5831	Adder	0.69
944692	AF1-134 E	0.3888	Adder	0.46
944771	AF1-142 C	7.7150	Adder	9.08
944772	AF1-142 E	5.1433	Adder	6.05
944881	AF1-153 C O1	0.9734	Adder	1.15
944882	AF1-153 E O1	0.6489	Adder	0.76
944901	AF1-155 C	0.9669	Adder	1.14
944902	AF1-155 E	0.6446	Adder	0.76
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.6530	Adder	0.77
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.4353	Adder	0.51
946381	AF1-302 C	0.9945	Adder	1.17
946382	AF1-302 E	1.3260	Adder	1.56
946421	AF1-306 C	5.7301	50/50	5.7301
946422	AF1-306 E	22.9206	50/50	22.9206
957451	AF2-039 C	0.6136	Adder	0.72
957452	AF2-039 E	0.4091	Adder	0.48
957941	AF2-088 C	0.2954	Adder	0.35
957942	AF2-088 E	0.1970	Adder	0.23
958271	AF2-121 C	0.6925	Adder	0.81
958272	AF2-121 E	0.4617	Adder	0.54
960022	AF2-293 E	0.0639	Adder	0.08
960041	AF2-295 C	0.9669	Adder	1.14
960042	AF2-295 E	0.6446	Adder	0.76
960051	AF2-296 C	0.5831	Adder	0.69
960052	AF2-296 E	0.3888	Adder	0.46
962411	AG1-090 C O1	1.8351	Adder	4.07
962412	AG1-090 E O1	1.2234	Adder	2.72
962951	AG1-144 C	0.3670	Adder	0.81
962952	AG1-144 E	0.2447	Adder	0.54
963571	AG1-206 C	1.1736	50/50	1.1736
963572	AG1-206 E	0.6320	50/50	0.6320
963891	AG1-242 C	0.1674	Adder	0.37
963892	AG1-242 E	0.0901	Adder	0.2
964031	AG1-257 C	0.2353	Adder	0.52
964032	AG1-257 E	0.3288	Adder	0.73
964041	AG1-258 C	0.2353	Adder	0.52
964042	AG1-258 E	0.3288	Adder	0.73
964341	AG1-296 C	0.1602	Adder	0.36
964342	AG1-296 E	0.0863	Adder	0.19
964451	AG1-308 C O1	0.2778	Adder	0.62

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964452	AG1-308 E O1	0.3883	Adder	0.86
965121	AG1-377 C O1	0.3670	Adder	0.81
965122	AG1-377 E O1	0.2447	Adder	0.54
965131	AG1-378 C O1	0.3670	Adder	0.81
965132	AG1-378 E O1	0.2447	Adder	0.54
965201	AG1-385 C	0.6634	Adder	1.47
965202	AG1-385 E	0.1965	Adder	0.44
965301	AG1-395 C	0.4716	Adder	1.05
965302	AG1-395 E	0.1401	Adder	0.31
966122	AG1-481 BAT	0.4772	Merchant Transmission	0.4772
G-007A	G-007A	0.5922	Confirmed LTF	0.5922
VFT	VFT	1.5803	Confirmed LTF	1.5803
CALDERWOOD	CALDERWOOD	0.0601	Confirmed LTF	0.0601
NY	NY	0.4761	Confirmed LTF	0.4761
PRAIRIE	PRAIRIE	0.4004	Confirmed LTF	0.4004
CHEOAH	CHEOAH	0.0601	Confirmed LTF	0.0601
CBM-N	CBM-N	0.2820	Confirmed LTF	0.2820
COTTONWOOD	COTTONWOOD	0.2856	Confirmed LTF	0.2856
HAMLET	HAMLET	0.0445	Confirmed LTF	0.0445
GIBSON	GIBSON	0.0890	Confirmed LTF	0.0890
BLUEG	BLUEG	0.2778	Confirmed LTF	0.2778
TRIMBLE	TRIMBLE	0.0896	Confirmed LTF	0.0896
CATAWBA	CATAWBA	0.0319	Confirmed LTF	0.0319

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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
164869608	941420	AE2-139 TAP	PENELEC	919200	AA1-144 TAP	PENELEC	1	PN-P2-2-PN-230-007T	bus	621.0	113.68	114.62	DC	12.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.7762	50/50	5.7762
200666	26SHAWVL 4	5.6426	50/50	5.6426
200894	26K02	34.2826	50/50	34.2826
203351	26GROZ1-110	1.5966	50/50	1.5966
203352	26CANZ2-011	1.5667	50/50	1.5667
235003	AC1-025 E	0.3391	50/50	0.3391
236828	01GRAYMONT	0.9092	50/50	0.9092
290086	Q-036 E	3.3810	Adder	3.98
919201	AA1-144 OP	-23.7863	Adder	-27.98
921642	AA2-000	199.4187	50/50	199.4187
930511	AB2-092	7.3221	50/50	7.3221
936421	AD2-055	15.0748	50/50	15.0748
936991	AD2-133 C	1.5214	Adder	1.79
936992	AD2-133 E	6.9589	Adder	8.19
939171	AE1-147 C	2.7299	50/50	2.7299
939172	AE1-147 E	1.8199	50/50	1.8199
940201	AE2-001 C	2.7286	50/50	2.7286
940202	AE2-001 E	1.8190	50/50	1.8190
940681	AE2-055 C (Suspended)	2.7082	50/50	2.7082
940682	AE2-055 E (Suspended)	1.8054	50/50	1.8054
941191	AE2-113 C	4.6383	Adder	5.46
941192	AE2-113 E	4.9940	Adder	5.88
941261	AE2-120 C	2.7278	50/50	2.7278
941262	AE2-120 E	1.8186	50/50	1.8186
941271	AE2-121 C	1.4526	50/50	1.4526
941272	AE2-121 E	0.9699	50/50	0.9699
941321	AE2-126 C	1.5317	Adder	1.8
941322	AE2-126 E	1.0212	Adder	1.2
941331	AE2-129 C	1.3188	Adder	1.55
941332	AE2-129 E	0.8792	Adder	1.03
941351	AE2-131 C (Suspended)	1.3188	Adder	1.55
941352	AE2-131 E (Suspended)	0.8792	Adder	1.03
941421	AE2-139 C	48.3926	50/50	48.3926
941422	AE2-139 E	32.2617	50/50	32.2617
942351	AE2-248 C	2.1733	50/50	2.1733
942352	AE2-248 E	1.4489	50/50	1.4489
942491	AE2-262 C	11.6570	50/50	11.6570
942492	AE2-262 E	7.8335	50/50	7.8335
942501	AE2-263 C	10.9576	50/50	10.9576
942502	AE2-263 E	7.3159	50/50	7.3159
942961	AE2-316 C	3.8926	Adder	4.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.5509	Adder	6.53
943751	AF1-043	45.2245	50/50	45.2245
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.8950	50/50	2.8950
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6284	50/50	1.6284
944311	AF1-099 C	17.6953	50/50	17.6953
944312	AF1-099 E	11.7969	50/50	11.7969
944321	AF1-100 C	32.5500	50/50	32.5500
944322	AF1-100 E	21.7000	50/50	21.7000
944412	AF1-106 BAT	2.0074	Merchant Transmission	2.0074
944471	AF1-112 C	2.7188	50/50	2.7188
944472	AF1-112 E	1.8126	50/50	1.8126
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.7126	50/50	2.7126
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8084	50/50	1.8084
944691	AF1-134 C	1.1553	Adder	1.36
944692	AF1-134 E	0.7702	Adder	0.91
944771	AF1-142 C	28.3125	50/50	28.3125
944772	AF1-142 E	18.8750	50/50	18.8750
944881	AF1-153 C O1	1.6013	Adder	1.88
944882	AF1-153 E O1	1.0675	Adder	1.26
944901	AF1-155 C	1.5893	Adder	1.87
944902	AF1-155 E	1.0595	Adder	1.25
945161	AF1-181	0.0265	50/50	0.0265
945171	AF1-182	0.1320	50/50	0.1320
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.7278	50/50	2.7278
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8186	50/50	1.8186
946381	AF1-302 C	1.6998	Adder	2.0
946382	AF1-302 E	2.2664	Adder	2.67
946421	AF1-306 C	6.9889	Adder	8.22
946422	AF1-306 E	27.9557	Adder	32.89
957451	AF2-039 C	1.1415	Adder	1.34
957452	AF2-039 E	0.7610	Adder	0.9
957941	AF2-088 C	0.5496	Adder	0.65
957942	AF2-088 E	0.3664	Adder	0.43
958271	AF2-121 C	1.3188	Adder	1.55
958272	AF2-121 E	0.8792	Adder	1.03
959063	AF2-197 BAT	13.5485	Merchant Transmission	13.5485
960022	AF2-293 E	0.2653	50/50	0.2653
960041	AF2-295 C	1.5893	Adder	1.87
960042	AF2-295 E	1.0595	Adder	1.25
960051	AF2-296 C	1.1553	Adder	1.36
960052	AF2-296 E	0.7702	Adder	0.91
961142	AF2-405 BAT	1.0037	Merchant Transmission	1.0037
961152	AF2-406 BAT	7.5277	Merchant Transmission	7.5277
961451	AF2-436	-0.1532	Adder	-0.18
962411	AG1-090 C O1	3.4947	Adder	7.76

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962412	AG1-090 E O1	2.3298	Adder	5.17
962951	AG1-144 C	0.6989	Adder	1.55
962952	AG1-144 E	0.4660	Adder	1.03
963571	AG1-206 C	0.4282	Adder	0.95
963572	AG1-206 E	0.2306	Adder	0.51
963891	AG1-242 C	0.3317	Adder	0.74
963892	AG1-242 E	0.1786	Adder	0.4
964031	AG1-257 C	1.8818	50/50	1.8818
964032	AG1-257 E	2.6300	50/50	2.6300
964041	AG1-258 C	1.8818	50/50	1.8818
964042	AG1-258 E	2.6300	50/50	2.6300
964341	AG1-296 C	0.2857	Adder	0.63
964342	AG1-296 E	0.1539	Adder	0.34
964451	AG1-308 C O1	0.5251	Adder	1.17
964452	AG1-308 E O1	0.7339	Adder	1.63
964703	AG1-333 BAT	0.2022	Merchant Transmission	0.2022
965121	AG1-377 C O1	0.6989	Adder	1.55
965122	AG1-377 E O1	0.4660	Adder	1.03
965131	AG1-378 C O1	0.6989	Adder	1.55
965132	AG1-378 E O1	0.4660	Adder	1.03
965201	AG1-385 C	1.0913	Adder	2.42
965202	AG1-385 E	0.3232	Adder	0.72
965301	AG1-395 C	0.8981	Adder	1.99
965302	AG1-395 E	0.2668	Adder	0.59
966041	AG1-473 C	7.2943	50/50	7.2943
966042	AG1-473 E	4.8629	50/50	4.8629
WEC	WEC	0.1877	Confirmed LTF	0.1877
LGEE	LGEE	0.3625	Confirmed LTF	0.3625
CPL	CPL	0.2396	Confirmed LTF	0.2396
CBM-W2	CBM-W2	4.8832	Confirmed LTF	4.8832
NY	NY	1.6994	Confirmed LTF	1.6994
TVA	TVA	0.7196	Confirmed LTF	0.7196
O-066	O-066	10.7209	Confirmed LTF	10.7209
SIGE	SIGE	0.2277	Confirmed LTF	0.2277
CBM-S2	CBM-S2	4.1864	Confirmed LTF	4.1864
CBM-S1	CBM-S1	0.1995	Confirmed LTF	0.1995
G-007	G-007	1.5666	Confirmed LTF	1.5666
MEC	MEC	0.9184	Confirmed LTF	0.9184
LAGN	LAGN	0.9100	Confirmed LTF	0.9100
CBM-W1	CBM-W1	8.6924	Confirmed LTF	8.6924

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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
164247792	942490	AE2-262 TAP	AP	235219	01MILES B	AP	1	PN-P2-3-PN-230-21AT	breaker	688.0	132.4	134.19	DC	12.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	3.9857	50/50	3.9857
200643	26SENECA#2	3.7642	50/50	3.7642
200649	26PENNTech	1.0859	50/50	1.0859
200665	26SHAWVL 3	7.4117	50/50	7.4117
200715	26SHAWVL 1	4.3002	50/50	4.3002
200722	26SHAWVL 2	3.4048	50/50	3.4048
200894	26K02	8.3916	50/50	8.3916
200913	26SHAW-D	0.1636	50/50	0.1636
235007	AC1-025 BAT	0.6161	50/50	0.6161
236828	01GRAYMONT	-1.5076	Adder	-1.77
290086	Q-036 E	2.8053	Adder	3.3
921642	AA2-000	100.9155	50/50	100.9155
930511	AB2-092	3.7053	50/50	3.7053
936421	AD2-055	7.6286	50/50	7.6286
936991	AD2-133 C	1.2624	Adder	1.49
936992	AD2-133 E	5.7741	Adder	6.79
939171	AE1-147 C	-4.5753	Adder	-5.38
940861	AE2-074 C	1.0795	Adder	1.27
940862	AE2-074 E	1.4210	Adder	1.67
941191	AE2-113 C	7.7518	50/50	7.7518
941192	AE2-113 E	8.3461	50/50	8.3461
941321	AE2-126 C	2.0116	50/50	2.0116
941322	AE2-126 E	1.3410	50/50	1.3410
941331	AE2-129 C	1.4749	50/50	1.4749
941332	AE2-129 E	0.9833	50/50	0.9833
941351	AE2-131 C (Suspended)	1.4749	50/50	1.4749
941352	AE2-131 E (Suspended)	0.9833	50/50	0.9833
941421	AE2-139 C	2.3416	Adder	5.2
941422	AE2-139 E	1.5611	Adder	3.47
942491	AE2-262 C	20.2045	50/50	20.2045
942492	AE2-262 E	13.5774	50/50	13.5774
942501	AE2-263 C	18.9922	50/50	18.9922
942502	AE2-263 E	12.6803	50/50	12.6803
942961	AE2-316 C	5.3598	50/50	5.3598
942962	AE2-316 E	7.6432	50/50	7.6432
943751	AF1-043	22.8858	50/50	22.8858
944311	AF1-099 C	30.6704	50/50	30.6704
944312	AF1-099 E	20.4470	50/50	20.4470
944321	AF1-100 C	41.2320	50/50	41.2320
944322	AF1-100 E	27.4880	50/50	27.4880
944381	AF1-103 O1	1.5650	Adder	1.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944691	AF1-134 C	1.3892	50/50	1.3892
944692	AF1-134 E	0.9262	50/50	0.9262
944771	AF1-142 C	49.0727	50/50	49.0727
944772	AF1-142 E	32.7151	50/50	32.7151
944881	AF1-153 C O1	2.1761	50/50	2.1761
944882	AF1-153 E O1	1.4507	50/50	1.4507
944901	AF1-155 C	2.1602	50/50	2.1602
944902	AF1-155 E	1.4402	50/50	1.4402
945161	AF1-181	0.0340	50/50	0.0340
945181	AF1-183	0.0353	50/50	0.0353
946111	AF1-276 C	5.0025	Adder	5.89
946112	AF1-276 E	2.4639	Adder	2.9
946121	AF1-277 C	5.0025	Adder	5.89
946122	AF1-277 E	2.4639	Adder	2.9
946131	AF1-278 C	3.9900	Adder	4.69
946132	AF1-278 E	1.9831	Adder	2.33
946381	AF1-302 C	2.3405	50/50	2.3405
946382	AF1-302 E	3.1207	50/50	3.1207
946421	AF1-306 C	9.5445	50/50	9.5445
946422	AF1-306 E	38.1779	50/50	38.1779
957451	AF2-039 C	1.3994	50/50	1.3994
957452	AF2-039 E	0.9329	50/50	0.9329
957941	AF2-088 C	0.6738	50/50	0.6738
957942	AF2-088 E	0.4492	50/50	0.4492
958271	AF2-121 C	1.4749	50/50	1.4749
958272	AF2-121 E	0.9833	50/50	0.9833
960023	AF2-293 BAT	0.5246	50/50	0.5246
960041	AF2-295 C	2.1602	50/50	2.1602
960042	AF2-295 E	1.4402	50/50	1.4402
960051	AF2-296 C	1.3892	50/50	1.3892
960052	AF2-296 E	0.9262	50/50	0.9262
962411	AG1-090 C O1	7.3746	50/50	7.3746
962412	AG1-090 E O1	4.9164	50/50	4.9164
962951	AG1-144 C	1.4749	50/50	1.4749
962952	AG1-144 E	0.9833	50/50	0.9833
963571	AG1-206 C	1.0810	50/50	1.0810
963572	AG1-206 E	0.5821	50/50	0.5821
963891	AG1-242 C	0.7525	50/50	0.7525
963892	AG1-242 E	0.4052	50/50	0.4052
964341	AG1-296 C	0.7461	50/50	0.7461
964342	AG1-296 E	0.4018	50/50	0.4018
964451	AG1-308 C O1	1.1453	50/50	1.1453
964452	AG1-308 E O1	1.6007	50/50	1.6007
965121	AG1-377 C O1	1.4749	50/50	1.4749
965122	AG1-377 E O1	0.9833	50/50	0.9833
965131	AG1-378 C O1	1.4749	50/50	1.4749
965132	AG1-378 E O1	0.9833	50/50	0.9833
965201	AG1-385 C	2.7981	50/50	2.7981
965202	AG1-385 E	0.8287	50/50	0.8287
965241	AG1-389 C O1	0.4269	Adder	0.95
965242	AG1-389 E O1	0.2846	Adder	0.63
965251	AG1-390 C O1	0.4269	Adder	0.95

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965252	AG1-390 E O1	0.2846	Adder	0.63
965261	AG1-391 C O1	0.4269	Adder	0.95
965262	AG1-391 E O1	0.2846	Adder	0.63
965271	AG1-392 C O1	0.8537	Adder	1.9
965272	AG1-392 E O1	0.5691	Adder	1.26
965301	AG1-395 C	1.8953	50/50	1.8953
965302	AG1-395 E	0.5629	50/50	0.5629
966121	AG1-481	0.6441	Adder	1.43
WEC	WEC	0.1355	Confirmed LTF	0.1355
LGEE	LGEE	0.2501	Confirmed LTF	0.2501
CPL	CPL	0.0389	Confirmed LTF	0.0389
CBM-W2	CBM-W2	3.1270	Confirmed LTF	3.1270
TVA	TVA	0.4228	Confirmed LTF	0.4228
O-066	O-066	7.6924	Confirmed LTF	7.6924
SIGE	SIGE	0.1617	Confirmed LTF	0.1617
CBM-S2	CBM-S2	1.3676	Confirmed LTF	1.3676
CBM-S1	CBM-S1	0.1212	Confirmed LTF	0.1212
G-007	G-007	1.2411	Confirmed LTF	1.2411
MEC	MEC	0.6372	Confirmed LTF	0.6372
LAGN	LAGN	0.5460	Confirmed LTF	0.5460
CBM-W1	CBM-W1	6.6034	Confirmed LTF	6.6034

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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
164248039	966040	AG1-473 TAP	AP	200513	26LEWISTWN	PENELEC	1	Base Case	single	520.0	134.82	136.87	DC	10.64

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	5.0275	80/20	5.0275
200643	26SENECA#2	4.7482	80/20	4.7482
200644	26SENECA#3	0.5188	80/20	0.5188
200649	26PENNTech	1.3993	80/20	1.3993
200665	26SHAWVL 3	8.7683	80/20	8.7683
200666	26SHAWVL 4	8.6326	80/20	8.6326
200715	26SHAWVL 1	5.4751	80/20	5.4751
200722	26SHAWVL 2	5.6011	80/20	5.6011
200887	26ARMNA MT	0.1941	80/20	0.1941
200905	26Q36	0.1579	80/20	0.1579
200913	26SHAW-D	0.2335	80/20	0.2335
201201	26WRREN CT	1.0438	80/20	1.0438
203261	26BLOSSBCT	0.2856	80/20	0.2856
203283	26MANOR_T86	0.0156	80/20	0.0156
203349	26Z1-069 C	0.1974	80/20	0.1974
203351	26GROZ1-110	0.4022	80/20	0.4022
203352	26CANZ2-011	0.3947	80/20	0.3947
203922	X1-109 G1	4.9828	80/20	4.9828
203923	X1-109 G2	4.9828	80/20	4.9828
919201	AA1-144 OP	14.2495	80/20	14.2495
921642	AA2-000	110.6570	80/20	110.6570
930511	AB2-092	4.0630	80/20	4.0630
931091	AB1-160 C	0.0564	80/20	0.0564
936421	AD2-055	8.3650	80/20	8.3650
936991	AD2-133 C	2.1703	80/20	2.1703
939171	AE1-147 C	5.7880	80/20	5.7880
940201	AE2-001 C	5.8100	80/20	5.8100
940681	AE2-055 C (Suspended)	6.1463	80/20	6.1463
940861	AE2-074 C	1.5726	80/20	1.5726
941191	AE2-113 C	9.8927	80/20	9.8927
941261	AE2-120 C	5.8220	80/20	5.8220
941271	AE2-121 C	3.0568	80/20	3.0568
941321	AE2-126 C	2.7310	80/20	2.7310
941331	AE2-129 C	2.1270	80/20	2.1270
941351	AE2-131 C (Suspended)	2.1270	80/20	2.1270
941421	AE2-139 C	5.7936	80/20	5.7936
942351	AE2-248 C	4.8048	80/20	4.8048
942491	AE2-262 C	19.4670	80/20	19.4670
942501	AE2-263 C	18.2990	80/20	18.2990
942961	AE2-316 C	6.7630	80/20	6.7630
943751	AF1-043	25.0950	80/20	25.0950

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	6.4515	80/20	6.4515
944181	AF1-086 C O1	2.1136	80/20	2.1136
944311	AF1-099 C	29.5509	80/20	29.5509
944321	AF1-100 C	47.8020	80/20	47.8020
944381	AF1-103 O1	2.3214	80/20	2.3214
944471	AF1-112 C	5.9693	80/20	5.9693
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	6.0721	80/20	6.0721
944691	AF1-134 C	1.9754	80/20	1.9754
944771	AF1-142 C	47.2815	80/20	47.2815
944881	AF1-153 C O1	2.7431	80/20	2.7431
944901	AF1-155 C	2.7232	80/20	2.7232
945121	AF1-177	0.0916	80/20	0.0916
945161	AF1-181	0.0403	80/20	0.0403
945171	AF1-182	0.2020	80/20	0.2020
945181	AF1-183	0.0449	80/20	0.0449
945331	AF1-198	0.0376	80/20	0.0376
945491	AF1-214 C (Withdrawn : 12/03/2020)	5.8213	80/20	5.8213
946111	AF1-276 C	7.3894	80/20	7.3894
946121	AF1-277 C	7.3894	80/20	7.3894
946131	AF1-278 C	5.8939	80/20	5.8939
946381	AF1-302 C	2.9533	80/20	2.9533
946421	AF1-306 C	12.0405	80/20	12.0405
957451	AF2-039 C	1.9978	80/20	1.9978
957941	AF2-088 C	0.9619	80/20	0.9619
958271	AF2-121 C	2.1270	80/20	2.1270
959061	AF2-197 C O1	3.1534	80/20	3.1534
959471	AF2-238 C	1.0396	80/20	1.0396
959481	AF2-239 C	0.8430	80/20	0.8430
959741	AF2-265 C	0.7450	80/20	0.7450
960041	AF2-295 C	2.7232	80/20	2.7232
960051	AF2-296 C	1.9754	80/20	1.9754
960271	AF2-318 C	0.9114	80/20	0.9114
961211	AF2-412	9.9125	80/20	9.9125
962411	AG1-090 C O1	10.6350	80/20	10.6350
962951	AG1-144 C	2.1270	80/20	2.1270
963571	AG1-206 C	1.4479	80/20	1.4479
963891	AG1-242 C	1.0700	80/20	1.0700
964031	AG1-257 C	4.1081	80/20	4.1081
964041	AG1-258 C	4.1081	80/20	4.1081
964341	AG1-296 C	0.9417	80/20	0.9417
964451	AG1-308 C O1	1.6468	80/20	1.6468
965121	AG1-377 C O1	2.1270	80/20	2.1270
965131	AG1-378 C O1	2.1270	80/20	2.1270
965201	AG1-385 C	3.5271	80/20	3.5271
965241	AG1-389 C O1	1.1574	80/20	1.1574
965251	AG1-390 C O1	1.1574	80/20	1.1574
965261	AG1-391 C O1	1.1574	80/20	1.1574
965271	AG1-392 C O1	2.3148	80/20	2.3148

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965301	AG1-395 C	2.7332	80/20	2.7332
966041	AG1-473 C	21.0892	80/20	21.0892
966121	AG1-481	1.8026	80/20	1.8026
WEC	WEC	0.1701	Confirmed LTF	0.1701
LGEE	LGEE	0.3135	Confirmed LTF	0.3135
CPL	CPL	0.0437	Confirmed LTF	0.0437
CBM-W2	CBM-W2	3.9155	Confirmed LTF	3.9155
TVA	TVA	0.5264	Confirmed LTF	0.5264
SIG	SIG	0.2138	Confirmed LTF	0.2138
CBM-S2	CBM-S2	1.6495	Confirmed LTF	1.6495
CBM-S1	CBM-S1	0.1512	Confirmed LTF	0.1512
MEC	MEC	0.7993	Confirmed LTF	0.7993
LAGN	LAGN	0.6808	Confirmed LTF	0.6808
CBM-W1	CBM-W1	8.2858	Confirmed LTF	8.2858

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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
164869510	999332	KEYSTONE	PENELEC	200011	KEYSTONE	PENELEC	4	APS-P2-2-WP-500-DRT19	bus	634.0	138.65	139.56	DC	12.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200636	26IUP CO-G	0.4562	50/50	0.4562
200794	26CONEMAGH	0.3075	50/50	0.3075
200809	26SITHE	1.4282	50/50	1.4282
200833	26SEWRDB34	14.8354	50/50	14.8354
200835	26ARN_Z1-066	0.9301	Adder	1.09
200837	26HOMER C1	24.5961	50/50	24.5961
200838	26HOMER C2	20.3806	50/50	20.3806
200839	26HOMER C3	21.5755	50/50	21.5755
200846	26FORWARD	0.0922	50/50	0.0922
200852	26WARR RDG	0.2604	Adder	0.31
200864	K-013 E	4.2361	50/50	4.2361
200883	Q-053 E	6.5672	Adder	7.73
200888	26HIGHLAND	0.2265	50/50	0.2265
200894	26K02	4.1917	Adder	4.93
200906	26KEYSTN#3	0.7604	50/50	0.7604
200925	26R32	0.3551	50/50	0.3551
202158	26CON.GEN1	0.0793	50/50	0.0793
202160	26CON.GEN2	0.0555	50/50	0.0555
203915	26BF_Z2-108	2.0927	Adder	2.46
203999	P-047 E	7.4720	Adder	8.79
235003	AC1-025 E	0.1061	Adder	0.12
236828	01GRAYMONT	0.2879	Adder	0.34
290086	Q-036 E	4.6070	Adder	5.42
292350	K-023	3.8251	Adder	4.5
292542	L-013 1	3.7204	Adder	4.38
293301	N-039 E	8.8150	Adder	10.37
293393	V3-030E	4.0181	Adder	4.73
293432	R-040 E	0.2093	Adder	0.25
293603	O-018 E	9.2165	50/50	9.2165
293902	O-048 E	3.3484	Adder	3.94
294515	O38_P22	7.7131	Adder	9.07
294903	P-060 E	5.9947	Adder	7.05
296332	R-032 E	10.6344	50/50	10.6344
913142	Y1-033 E OP1	2.9894	Adder	3.52
916202	Z1-069 E	6.0533	Adder	7.12
919201	AA1-144 OP	11.5038	Adder	13.53
920341	AA2-132 (Withdrawn : 12/07/2020)	1.5694	Adder	1.85
921642	AA2-000	36.2420	Adder	42.64
930511	AB2-092	1.3307	Adder	1.57
931092	AB1-160 E	1.7295	Adder	2.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
935191	AD1-154	2.3759	Adder	2.8
936421	AD2-055	2.7397	Adder	3.22
936991	AD2-133 C	2.0731	Adder	2.44
936992	AD2-133 E	9.4824	Adder	11.16
938351	AE1-053	1.1626	Adder	1.37
938881	AE1-116	0.6259	Adder	0.74
938951	AE1-123	1.7193	Adder	2.02
938993	AE1-128 C	10.5852	Adder	12.45
938994	AE1-128 E	7.0568	Adder	8.3
939171	AE1-147 C	0.8659	Adder	1.02
939172	AE1-147 E	0.5773	Adder	0.68
939291	AE1-160 C	1.0615	Adder	1.25
939292	AE1-160 E	0.6101	Adder	0.72
940201	AE2-001 C	0.8646	Adder	1.02
940202	AE2-001 E	0.5764	Adder	0.68
940681	AE2-055 C (Suspended)	0.8447	Adder	0.99
940682	AE2-055 E (Suspended)	0.5631	Adder	0.66
940861	AE2-074 C	1.6654	Adder	1.96
940862	AE2-074 E	2.1923	Adder	2.58
941191	AE2-113 C	6.5539	Adder	7.71
941192	AE2-113 E	7.0564	Adder	8.3
941231	AE2-117 C	1.2652	Adder	1.49
941232	AE2-117 E	0.8435	Adder	0.99
941241	AE2-118 C	1.3245	Adder	1.56
941242	AE2-118 E	0.8830	Adder	1.04
941261	AE2-120 C	0.8638	Adder	1.02
941262	AE2-120 E	0.5759	Adder	0.68
941271	AE2-121 C	0.4616	Adder	0.54
941272	AE2-121 E	0.3082	Adder	0.36
941321	AE2-126 C	1.1448	Adder	1.35
941322	AE2-126 E	0.7632	Adder	0.9
941331	AE2-129 C	1.2830	Adder	1.51
941332	AE2-129 E	0.8553	Adder	1.01
941351	AE2-131 C (Suspended)	1.2830	Adder	1.51
941352	AE2-131 E (Suspended)	0.8553	Adder	1.01
941421	AE2-139 C	2.2721	Adder	5.04
941422	AE2-139 E	1.5147	Adder	3.36
942121	AE2-224 C	8.6669	Adder	10.2
942122	AE2-224 E	5.7780	Adder	6.8
942351	AE2-248 C	0.6823	Adder	0.8
942352	AE2-248 E	0.4549	Adder	0.54
942361	AE2-249 C	1.1908	Adder	1.4
942362	AE2-249 E	0.7939	Adder	0.93
942491	AE2-262 C	3.8837	Adder	4.57
942492	AE2-262 E	2.6098	Adder	3.07
942501	AE2-263 C	3.6506	Adder	4.29
942502	AE2-263 E	2.4374	Adder	2.87
942511	AE2-264 C	5.1632	Adder	6.07
942512	AE2-264 E	3.4422	Adder	4.05
942811	AE2-299 C	2.2301	Adder	2.62
942812	AE2-299 E	8.9205	Adder	10.49
942961	AE2-316 C	3.6572	Adder	4.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.2151	Adder	6.14
943151	AE2-344 C	4.8233	Adder	5.67
943152	AE2-344 E	3.2155	Adder	3.78
943711	AF1-039 C O1	0.7909	Adder	0.93
943712	AF1-039 E O1	0.5272	Adder	0.62
943751	AF1-043	8.2190	Adder	9.67
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.9072	Adder	1.07
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.5103	Adder	0.6
944181	AF1-086 C O1	2.7629	Adder	3.25
944182	AF1-086 E O1	12.0200	Adder	14.14
944261	AF1-094 C	0.8818	Adder	1.04
944262	AF1-094 E	0.5879	Adder	0.69
944281	AF1-096 C	1.0030	Adder	1.18
944282	AF1-096 E	0.6686	Adder	0.79
944301	AF1-098 C	3.4305	Adder	4.04
944302	AF1-098 E	2.2870	Adder	2.69
944311	AF1-099 C	5.8954	Adder	6.94
944312	AF1-099 E	3.9303	Adder	4.62
944321	AF1-100 C	12.5371	Adder	14.75
944322	AF1-100 E	8.3580	Adder	9.83
944381	AF1-103 O1	1.7331	Adder	2.04
944411	AF1-106 O1	1.7177	Adder	2.02
944471	AF1-112 C	0.8552	Adder	1.01
944472	AF1-112 E	0.5701	Adder	0.67
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.8490	Adder	1.0
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5660	Adder	0.67
944691	AF1-134 C	1.4199	Adder	1.67
944692	AF1-134 E	0.9466	Adder	1.11
944751	AF1-140 C	1.4160	Adder	1.67
944752	AF1-140 E	0.9440	Adder	1.11
944771	AF1-142 C	9.4326	Adder	11.1
944772	AF1-142 E	6.2884	Adder	7.4
944781	AF1-143 C	6.9758	Adder	8.21
944782	AF1-143 E	3.7204	Adder	4.38
944881	AF1-153 C O1	1.0402	Adder	1.22
944882	AF1-153 E O1	0.6935	Adder	0.82
944901	AF1-155 C	1.0404	Adder	1.22
944902	AF1-155 E	0.6936	Adder	0.82
945021	AF1-167 C	0.6719	Adder	0.79
945022	AF1-167 E	0.4488	Adder	0.53
945051	AF1-170 C	3.0798	Adder	3.62
945052	AF1-170 E	2.0532	Adder	2.42
945451	AF1-210 C	0.7376	Adder	0.87
945452	AF1-210 E	0.4917	Adder	0.58
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8639	Adder	1.02

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5760	Adder	0.68
945671	AF1-232 C (Withdrawn : 01/19/2021)	14.7115	Adder	17.31
945672	AF1-232 E (Withdrawn : 01/19/2021)	7.9216	Adder	9.32
945751	AF1-240 C O1	1.4256	Adder	1.68
945752	AF1-240 E O1	0.9504	Adder	1.12
946071	AF1-272 C O1	15.6902	50/50	15.6902
946072	AF1-272 E O1	10.4601	50/50	10.4601
946111	AF1-276 C	7.4656	Adder	8.78
946112	AF1-276 E	3.6771	Adder	4.33
946121	AF1-277 C	7.4656	Adder	8.78
946122	AF1-277 E	3.6771	Adder	4.33
946131	AF1-278 C	5.9546	Adder	7.01
946132	AF1-278 E	2.9595	Adder	3.48
946211	AF1-286 C	0.6957	Adder	0.82
946212	AF1-286 E	0.4724	Adder	0.56
946221	AF1-287 C	0.8326	Adder	0.98
946222	AF1-287 E	0.5551	Adder	0.65
946381	AF1-302 C	1.5970	Adder	1.88
946382	AF1-302 E	2.1294	Adder	2.51
946401	AF1-304 C	5.2474	Adder	6.17
946402	AF1-304 E	3.4983	Adder	4.12
946421	AF1-306 C	4.3103	Adder	5.07
946422	AF1-306 E	17.2414	Adder	20.28
946571	AF1-321 C O1	2.2145	50/50	2.2145
946572	AF1-321 E O1	1.4763	50/50	1.4763
946771	AF1-217 C	0.8327	Adder	0.98
946772	AF1-217 E	0.5552	Adder	0.65
957001	AF2-001 C O1	2.2145	50/50	2.2145
957002	AF2-001 E O1	1.4763	50/50	1.4763
957011	AF2-002 C O1	1.1072	50/50	1.1072
957012	AF2-002 E O1	0.7382	50/50	0.7382
957161	AF2-010 C	3.4025	Adder	4.0
957162	AF2-010 E	2.2930	Adder	2.7
957451	AF2-039 C	0.7842	Adder	0.92
957452	AF2-039 E	0.5228	Adder	0.62
957512	AF2-045 E	2.6604	Adder	3.13
957561	AF2-050 C	4.3335	Adder	5.1
957562	AF2-050 E	2.8890	Adder	3.4
957571	AF2-051 C	2.5983	Adder	3.06
957572	AF2-051 E	1.3385	Adder	1.57
957931	AF2-087 C (Suspended)	0.3821	Adder	0.45
957932	AF2-087 E (Suspended)	0.5262	Adder	0.62
957941	AF2-088 C	0.3776	Adder	0.44
957942	AF2-088 E	0.2517	Adder	0.3
957981	AF2-092 C	1.0550	Adder	1.24
957982	AF2-092 E	0.7033	Adder	0.83
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.3338	Adder	0.39
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.2225	Adder	0.26

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958271	AF2-121 C	1.2830	Adder	1.51
958272	AF2-121 E	0.8553	Adder	1.01
958361	AF2-130 C	1.1065	Adder	1.3
958362	AF2-130 E	0.7377	Adder	0.87
958471	AF2-141	0.9301	Adder	1.09
958731	AF2-164 C O1	4.8576	Adder	5.71
958732	AF2-164 E O1	3.2384	Adder	3.81
958741	AF2-165 C	1.0641	Adder	1.25
958742	AF2-165 E	0.7094	Adder	0.83
958751	AF2-166 C	1.1065	Adder	1.3
958752	AF2-166 E	0.7377	Adder	0.87
959061	AF2-197 C O1	2.9265	Adder	3.44
959062	AF2-197 E O1	4.3897	Adder	5.16
959441	AF2-235 C	0.5015	Adder	0.59
959442	AF2-235 E	0.3343	Adder	0.39
959471	AF2-238 C	1.0580	Adder	1.24
959472	AF2-238 E	0.7054	Adder	0.83
959481	AF2-239 C	0.7866	Adder	0.93
959482	AF2-239 E	0.6307	Adder	0.74
959491	AF2-240 C	0.3246	Adder	0.38
959492	AF2-240 E	0.2765	Adder	0.33
959501	AF2-241 C	0.9705	Adder	1.14
959502	AF2-241 E	0.7472	Adder	0.88
959521	AF2-243 C	0.7980	Adder	0.94
959522	AF2-243 E	0.5320	Adder	0.63
959741	AF2-265 C	0.7583	Adder	0.89
959742	AF2-265 E	0.5643	Adder	0.66
959792	AF2-270 E	0.5470	Adder	0.64
959802	AF2-271 E	0.3276	Adder	0.39
959822	AF2-273 E	0.2954	Adder	0.35
960022	AF2-293 E	0.0842	Adder	0.1
960031	AF2-294 C	0.9464	Adder	1.11
960032	AF2-294 E	0.6309	Adder	0.74
960041	AF2-295 C	1.0404	Adder	1.22
960042	AF2-295 E	0.6936	Adder	0.82
960051	AF2-296 C	1.4199	Adder	1.67
960052	AF2-296 E	0.9466	Adder	1.11
960271	AF2-318 C	0.8504	Adder	1.0
960272	AF2-318 E	0.5669	Adder	0.67
960451	AF2-336 C	1.7583	Adder	2.07
960452	AF2-336 E	1.1722	Adder	1.38
960461	AF2-337 C	1.7583	Adder	2.07
960462	AF2-337 E	1.1722	Adder	1.38
960471	AF2-338 C	1.7583	Adder	2.07
960472	AF2-338 E	1.1722	Adder	1.38
960481	AF2-339 C	1.7583	Adder	2.07
960482	AF2-339 E	1.1722	Adder	1.38
960901	AF2-381 C	14.7256	50/50	14.7256
960902	AF2-381 E	7.7494	50/50	7.7494
961141	AF2-405	0.8588	Adder	1.01
961151	AF2-406	6.4413	Adder	7.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	32.8440	Adder	38.64
961211	AF2-412	13.1241	Adder	15.44
961911	AG1-033 C	0.5844	50/50	0.5844
961912	AG1-033 E	0.3287	50/50	0.3287
961971	AG1-040 C	0.4649	Adder	1.03
961972	AG1-040 E	0.3099	Adder	0.69
961981	AG1-041 C	0.5577	Adder	1.24
961982	AG1-041 E	0.3718	Adder	0.83
962292	AG1-077 E	0.3007	Adder	0.67
962411	AG1-090 C O1	3.3998	Adder	7.55
962412	AG1-090 E O1	2.2666	Adder	5.03
962511	AG1-100 C	0.4405	Adder	0.98
962512	AG1-100 E	0.2937	Adder	0.65
962641	AG1-113	0.2654	Adder	0.59
962651	AG1-114	0.6162	Adder	1.37
962891	AG1-138 C	0.2321	Adder	0.52
962892	AG1-138 E	0.0122	Adder	0.03
962901	AG1-139 C	0.2232	Adder	0.5
962902	AG1-139 E	0.0117	Adder	0.03
962911	AG1-140 C	0.0665	Adder	0.15
962912	AG1-140 E	0.0303	Adder	0.07
962951	AG1-144 C	0.6800	Adder	1.51
962952	AG1-144 E	0.4533	Adder	1.01
963281	AG1-177 C O1	0.4673	Adder	1.04
963282	AG1-177 E O1	0.3116	Adder	0.69
963441	AG1-193 C	0.5502	Adder	1.22
963442	AG1-193 E	0.3668	Adder	0.81
963481	AG1-197 C	0.3527	Adder	0.78
963482	AG1-197 E	0.2351	Adder	0.52
963491	AG1-198 C	0.2804	Adder	0.62
963492	AG1-198 E	0.1869	Adder	0.41
963541	AG1-203 C	0.4887	Adder	1.08
963542	AG1-203 E	0.2631	Adder	0.58
963561	AG1-205 C	0.4005	Adder	0.89
963562	AG1-205 E	0.2157	Adder	0.48
963571	AG1-206 C	0.3274	Adder	0.73
963572	AG1-206 E	0.1763	Adder	0.39
963881	AG1-241 C	1.1871	50/50	1.1871
963882	AG1-241 E	0.6392	50/50	0.6392
963891	AG1-242 C	0.4076	Adder	0.9
963892	AG1-242 E	0.2195	Adder	0.49
963941	AG1-247 C	0.2230	Adder	0.5
963942	AG1-247 E	0.1183	Adder	0.26
963991	AG1-253 C	0.0997	Adder	0.22
963992	AG1-253 E	0.0480	Adder	0.11
964031	AG1-257 C	0.3141	Adder	0.7
964032	AG1-257 E	0.4390	Adder	0.97
964041	AG1-258 C	0.3141	Adder	0.7
964042	AG1-258 E	0.4390	Adder	0.97
964191	AG1-280 C	0.8695	Adder	1.93
964192	AG1-280 E	0.5797	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964201	AG1-281 C	0.8682	Adder	1.93
964202	AG1-281 E	0.5788	Adder	1.28
964331	AG1-295 C	0.8622	50/50	0.8622
964332	AG1-295 E	0.4575	50/50	0.4575
964341	AG1-296 C	0.3072	Adder	0.68
964342	AG1-296 E	0.1654	Adder	0.37
964391	AG1-301 C	0.6626	Adder	1.47
964392	AG1-301 E	0.4417	Adder	0.98
964411	AG1-303 C O1	1.1017	Adder	2.45
964412	AG1-303 E O1	0.7344	Adder	1.63
964451	AG1-308 C O1	0.4567	Adder	1.01
964452	AG1-308 E O1	0.6383	Adder	1.42
964701	AG1-333 C	0.1839	Adder	0.41
964702	AG1-333 E	0.0251	Adder	0.06
964751	AG1-338 C	0.3383	Adder	0.75
964752	AG1-338 E	0.0461	Adder	0.1
964761	AG1-339 C	0.3537	Adder	0.79
964762	AG1-339 E	0.0308	Adder	0.07
964771	AG1-340 C	0.3383	Adder	0.75
964772	AG1-340 E	0.0461	Adder	0.1
964911	AG1-355 C	5.9652	50/50	5.9652
964912	AG1-355 E	3.9768	50/50	3.9768
964921	AG1-356 C	1.6139	Adder	3.58
964922	AG1-356 E	1.0759	Adder	2.39
965121	AG1-377 C O1	0.6800	Adder	1.51
965122	AG1-377 E O1	0.4533	Adder	1.01
965131	AG1-378 C O1	0.6800	Adder	1.51
965132	AG1-378 E O1	0.4533	Adder	1.01
965171	AG1-382 C	0.9204	Adder	2.04
965172	AG1-382 E	0.6136	Adder	1.36
965201	AG1-385 C	0.7089	Adder	1.57
965202	AG1-385 E	0.2100	Adder	0.47
965221	AG1-387 C	0.9204	Adder	2.04
965222	AG1-387 E	0.6136	Adder	1.36
965241	AG1-389 C O1	0.6842	Adder	1.52
965242	AG1-389 E O1	0.4562	Adder	1.01
965251	AG1-390 C O1	0.6842	Adder	1.52
965252	AG1-390 E O1	0.4562	Adder	1.01
965261	AG1-391 C O1	0.6842	Adder	1.52
965262	AG1-391 E O1	0.4562	Adder	1.01
965271	AG1-392 C O1	1.3685	Adder	3.04
965272	AG1-392 E O1	0.9123	Adder	2.03
965301	AG1-395 C	0.8738	Adder	1.94
965302	AG1-395 E	0.2595	Adder	0.58
965861	AG1-455	1.2286	Adder	2.73
965881	AG1-457 C	2.1315	Adder	4.73
965882	AG1-457 E	1.4210	Adder	3.15
966121	AG1-481	0.7133	Adder	1.58
966512	AG1-520 E	0.7382	50/50	0.7382
966771	AG1-548 C	4.4368	Adder	9.85
966772	AG1-548 E	1.3503	Adder	3.0
966781	AG1-549 C O1	31.9953	50/50	31.9953

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966782	AG1-549 E O1	9.7377	50/50	9.7377
VFT	VFT	0.1032	Confirmed LTF	0.1032
CALDERWOOD	CALDERWOOD	0.2704	Confirmed LTF	0.2704
PRAIRIE	PRAIRIE	1.2295	Confirmed LTF	1.2295
CHEOAH	CHEOAH	0.2733	Confirmed LTF	0.2733
CBM-N	CBM-N	0.1548	Confirmed LTF	0.1548
COTTONWOOD	COTTONWOOD	1.0752	Confirmed LTF	1.0752
G-007	G-007	0.0252	Confirmed LTF	0.0252
HAMLET	HAMLET	0.3465	Confirmed LTF	0.3465
GIBSON	GIBSON	0.2555	Confirmed LTF	0.2555
BLUEG	BLUEG	0.8333	Confirmed LTF	0.8333
TRIMBLE	TRIMBLE	0.2671	Confirmed LTF	0.2671
CATAWBA	CATAWBA	0.2051	Confirmed LTF	0.2051

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
AA1-144	East Towanda-Grover 230kV	Engineering and Procurement
AA2-000	N/A	N/A
AA2-132	Thompson 34.5kV	Withdrawn
AA2-133	Wyalusing 34.5kV	In Service
AB1-160	Gold-Sabinsville 115kV	In Service
AB2-092	Bergen 138kV	Partially in Service - Under Construction
AC1-025	Dale Summit	In Service
AD1-154	Timblin 34.5 kV	Active
AD2-055	Moshannon-East Towanda 230 kV	Active
AD2-062	Roxbury-Greene 138 kV	Active
AD2-112	Springdale CC II 138kV	Engineering and Procurement
AD2-133	Eagle Valley 115kV	Active
AE1-051	East Carbondale-Lackawanna 69kV	Active
AE1-053	Meyersdale North	Active
AE1-054	Mill Run 25kV	Active
AE1-071	Shade Gap-Roxbury 115 kV	Active
AE1-116	Somerset Windpower 23 kV	Active
AE1-123	Emlenton 34.5 kV	Engineering and Procurement
AE1-128	Bedford North-Wills Mounain 115 kV	Active
AE1-147	Bellefonte 46 kV	Engineering and Procurement
AE1-160	Venango 34.5 kV	Engineering and Procurement
AE1-188	Fayetteville 34.5 kV	Engineering and Procurement
AE2-001	Nittany-Zion 46 kV	Active
AE2-055	Shingletown-Boalsburg 46 kV	Suspended
AE2-074	Potter 46 kV	Active
AE2-113	Farmers Valley-Ridgeway 115 kV	Active
AE2-117	ABW Tap-Alexandria 46 kV	Active
AE2-118	ABW Tap-Williamsburg 46 kV	Active
AE2-120	Graymont-Zion 46 kV	Active
AE2-121	Milesburg-Tanney Junction 46 kV	Active
AE2-126	Dubois-Curwensville 34.5 kV	Engineering and Procurement
AE2-129	Philipsburg-Clarence 34.5 kV	Engineering and Procurement
AE2-131	Philipsburg-Karthauss 34.5	Suspended
AE2-139	East Towanda-Grover 230 kV	Active
AE2-224	Bearrock-Johnstown 230 kV	Active
AE2-248	Fillmore-Thompson Farm 46 kV	Active
AE2-249	Bedford North-Pennsylvania Hollow 23 kV	Engineering and Procurement
AE2-262	Moshannon-Milesburg 230 kV	Active
AE2-263	Moshannon-Milesburg 230 kV	Active

Queue Number	Project Name	Status
AE2-264	Altoona-Raystown 230 kV	Active
AE2-299	Erie East 230 kV	Active
AE2-316	Brookville-Squab Hollow 138 kV	Active
AE2-344	Edinboro South-Venango Junction 115 kV	Active
AF1-006	Fairview East 34.5 kV	Active
AF1-039	Listonburg-Highpoint 24.9 kV	Active
AF1-043	Moshannon-East Towanda 230 kV	Active
AF1-068	Boalsburg-Centre Hall 46 kV	Withdrawn
AF1-086	Madera-Westover South 115 kV	Active
AF1-094	Union City-Cambridge Springs 34.5 kV	Active
AF1-096	Titusville-Oil Creek 34.5 kV	Active
AF1-098	Four Mile Jct-Corry East 115 kV	Active
AF1-099	Moshannon-Milesburg 230 kV	Active
AF1-100	Shawville-Moshannon 230 kV	Active
AF1-103	Warren 34.5 kV	Active
AF1-104	Erie West 34.5 kV	Active
AF1-106	East Sayre 34.5 kV	Active
AF1-112	Centre Hall-Boalsburg 46 kV	Active
AF1-132	Shingletown-Boalsburg 46 kV	Withdrawn
AF1-134	Philipsburg-Madera 34.5 kV	Active
AF1-140	Claysburg 23 kV	Engineering and Procurement
AF1-142	Moshannon-Milesburg 230 kV	Active
AF1-143	Lick Run 115 kV	Active
AF1-153	Motion-Ridgeway 46 kV	Active
AF1-155	Paper City-Wilcox 46 kV	Engineering and Procurement
AF1-166	Target-Chambers No.5 34.5 kV	Engineering and Procurement
AF1-167	West Freedom-C&K Coal 25 kV	Active
AF1-170	Springboro-Venango Junction 115 kV	Active
AF1-177	Warren 115 kV	Partially in Service - Under Construction
AF1-181	Shawville 3 230 kV	Partially in Service - Under Construction
AF1-182	Shawville 4 230 kV	Partially in Service - Under Construction
AF1-183	Shawville 1 230 kV	Partially in Service - Under Construction
AF1-198	Blossburg #1 CT 34.5 kV	Partially in Service - Under Construction
AF1-210	Burma 23 kV	Engineering and Procurement
AF1-214	Nittany-Zion 46 kV	Withdrawn
AF1-217	Edinboro -Cambridge Springs 34.5 kV	Active
AF1-224	Fayetteville 34.5 kV	Engineering and Procurement
AF1-232	Allegheny-Somerset 115 kV	Withdrawn
AF1-240	Timblin 34.5 kV	Active
AF1-272	Lucerne 115 kV	Active
AF1-276	Lewis Run-Pierce Brook 230 kV	Active
AF1-277	Lewis Run-Pierce Brook 2 230 kV	Active
AF1-278	Lewis Run-Pierce Brook 3 230 kV	Active
AF1-286	East Sayre 34.5 kV II	Active
AF1-287	Edinboro South 34.5 kV II	Active
AF1-302	Brookville-Squab Hollow 138 kV	Active
AF1-304	Titusville-Grandview 115 kV	Active
AF1-306	Squab Hollow 230 kV	Active
AF1-321	Hooversville 115 kV I	Active
AF2-001	Hooversville 115 kV II	Active
AF2-002	Hooversville 115 kV III	Active
AF2-010	Union City-Titusville 115 kV	Active

Queue Number	Project Name	Status
AF2-039	Shawville-Clearfield 34.5 kV	Active
AF2-045	Cambria Nug 115 kV	Engineering and Procurement
AF2-050	Bearrock-Johnstown 230 kV	Active
AF2-051	Geneva 115 kV	Active
AF2-087	East Altoona-Pinecroft 12.47 kV	Suspended
AF2-088	Shawville-Clearfield 34.5 kV II	Active
AF2-092	Snake Spring-Bedford Area 23 kV	Active
AF2-101	Allen 13.2 kV	Engineering and Procurement
AF2-104	Somerset 23 kV	Withdrawn
AF2-121	Philipsburg-Shawville 34.5 kV	Active
AF2-130	Wolfs Corners 34.5 kV	Active
AF2-141	Lick Run 115 kV	Active
AF2-146	Hill Valley-Valley REC 46 kV	Active
AF2-148	Shade Gap-Three Springs KTS 23 kV	Active
AF2-151	Dillsburg 13.2 kV	Engineering and Procurement
AF2-164	Handsome Lake 345 kV	Active
AF2-165	Clark Summit-Emlenton 34.5 kV	Active
AF2-166	Clark Summit-Emlenton 34 kV	Active
AF2-178	Roxbury 23 kV II	In Service
AF2-197	East Towanda 115 kV	Active
AF2-215	Saint Thomas-LeMasters Junction 34.5 kV	Engineering and Procurement
AF2-229	Roxbury 23 kV	Active
AF2-235	Titusville-Oil Creek 34.5 kV	Active
AF2-238	Mansfield-South Troy 34.5 kV	Active
AF2-239	Wyalusing-Hollenback WRC 34.5 kV	Active
AF2-240	North Orwell 12.47 kV	Active
AF2-241	Athens-Milan 34.5 kV	Active
AF2-243	Clark Summit 34.5 kV	Active
AF2-265	South Troy-Athens 34.5 kV	Active
AF2-270	Bedford South RCB-Bedford Area 23 kV	Engineering and Procurement
AF2-271	Pemberton-Sinking Valley 12.47 kV	Engineering and Procurement
AF2-273	Sligo 25 kV	Engineering and Procurement
AF2-275	Guilford 12.47 kV	Active
AF2-276	Guilford 12.47 kV	Active
AF2-282	Edelle 12.47 kV	Engineering and Procurement
AF2-283	Greenfield 12.47 kV	Engineering and Procurement
AF2-293	Beech Creek 12.47 kV	Active
AF2-294	Thompson 34.5 kV	Active
AF2-295	Wilcox-Paper City 46 kV	Active
AF2-296	Madera 34.5 kV	Active
AF2-318	East Towanda-New Albany 34.5 kV	Active
AF2-336	Snake Spring 115 kV I	Active
AF2-337	Snake Spring 115 kV II	Active
AF2-338	Snake Spring 115 kV III	Active
AF2-339	Snake Spring 115 kV IV	Active
AF2-380	Karns City-Bear Creek 25 kV	Active
AF2-381	Bedford North-Central City West 115 kV	Active
AF2-405	East Sayre 34.5 kV III	Active
AF2-406	Sayre 115 kV	Active
AF2-411	Mainesburg 345 kV	Withdrawn
AF2-412	Mainesburg 115 kV	Active
AF2-436	Wyalusing 34.5 kV II	Engineering and Procurement

Queue Number	Project Name	Status
AF2-439	Roxbury-Carlisle 115 kV	Active
AG1-033	Scalp Level 23 kV	Active
AG1-040	Morgan Street-Mount Hope 34.5 kV	Active
AG1-041	Osterburg-Bedford North 23 kV	Active
AG1-077	Allegheny Tunnel 23 kV	Active
AG1-090	Philipsburg 115 kV	Active
AG1-100	Venango-Saegertown 34.5 kV	Active
AG1-113	Somerset Windpower 22.86 kV	Active
AG1-114	Meyersdale North 115 kV	Active
AG1-138	Wolfs Corners 34.5 kV	Active
AG1-139	Clark Summit-Emlenton 34.5 kV	Active
AG1-140	Union City 34.5 kV	Active
AG1-144	Phillipsburg 34.5 kV	Active
AG1-177	Union City 34.5 kV	Active
AG1-193	Utica Junction 34.5 kV	Active
AG1-197	Morgan Street-Cochran 34.5 kV	Active
AG1-198	Union City 34.5 kV	Active
AG1-202	Springboro 12.47 kV	Active
AG1-203	Reels Corner 23 kV	Active
AG1-205	Rockwood 23 kV	Active
AG1-206	Snyder Twp 34.5 kV	Active
AG1-241	Scalp Level 23 kV	Active
AG1-242	Beccaria 34.5 kV	Active
AG1-247	North Orwell 12.47 kV	Active
AG1-253	Erie East-Union City 34.5 kV	Active
AG1-257	Madisonburg Jct-Millheim 46 kV	Active
AG1-258	Madisonburg Jct-Millheim 46 kV	Active
AG1-280	Claysburg-Puzzletown 46 kV	Active
AG1-281	Claysburg-HCR Tap 46 kV	Active
AG1-295	Blairsville East 23 kV	Active
AG1-296	Snyder Township 34.5 kV	Active
AG1-301	Miller REC-Warrior Ridge 46 kV	Active
AG1-303	Geneva 115 kV	Active
AG1-308	Shawville-Philipsburg 115 kV	Active
AG1-333	Lake Como-Pine Mills 12.47 kV	Active
AG1-338	Curryville-RKB-Yellow Creek 23 kV I	Active
AG1-339	Curryville-RKB-Yellow Creek 23 kV II	Active
AG1-340	Curryville 23 kV	Active
AG1-355	Scalp Level-Hooversville 115 kV	Active
AG1-356	Somerset-Allegheny 115 kV	Active
AG1-377	Philipsburg 115 kV	Active
AG1-378	Philipsburg 115 kV	Active
AG1-382	SGC Tap-Reese REC 46 kV	Active
AG1-385	Motion-Ridgeway 46 kV	Active
AG1-387	Beth 33-Lilly 46 kV	Active
AG1-389	Gold 115 kV I	Active
AG1-390	Gold 115 kV II	Active
AG1-391	Gold 115 kV III	Active
AG1-392	Gold 115 kV IV	Active
AG1-395	Philipsburg-Kartha 34.5 kV 2	Active
AG1-455	Springboro-Venango Junction 115 kV	Active
AG1-457	Somerset-Rockwood 115 kV	Active

Queue Number	Project Name	Status
AG1-473	Shingletown-Lewistown 230 kV	Active
AG1-481	Warren 34.5 kV	Active
AG1-484	Mountain 115 kV	Active
AG1-514	Springdale CT III 138 kV	Active
AG1-515	Guilford 138 kV	Active
AG1-520	Hooversville-Rockingham 23 kV	Active
AG1-548	Erie South-Union City 115 kV	Active
AG1-549	Shelocta 115 kV	Active
AG1-560	Shade Gap-Roxbury 115 kV II	Active
AG1-561	Roxbury-Greene 138 kV II	Active
V3-030	St. Benedict-Patton 46kV	In Service
W1-045	Roxbury 23 kV	In Service
X1-109	E. Towanda 230kV	In Service
X3-003	Mehoopany II 115 kV	In Service
Y1-033	Penn Mar-Rock Wood 115kV	In Service
Y3-092	Erie West 345kV	Engineering and Procurement
Z1-066	Arnold 34.5kV	In Service
Z1-069	Gold-Sabinsville 115kV	In Service
Z1-092	Milan 34kV	In Service
Z1-110	Grover 34kV	In Service
Z2-011	Canton 34.5kV	In Service
Z2-108	Meyersdale North 115kV	In Service

11.8 Contingency Descriptions - Primary POI

Contingency Name	Contingency Definition
PN-P1-3-PN-500-003	CONTINGENCY 'PN-P1-3-PN-500-003' /* CONEMAUGH #1 500/230 KV XFMR OPEN BRANCH FROM BUS 200005 TO BUS 200912 CKT 3 /* CONEM-GH 500.00 26CONEMAGH 230.00 END
PN-P2-3-PN-230-8M_SUM_WIN	CONTINGENCY 'PN-P2-3-PN-230-8M_SUM_WIN' /* GLADE STUCK BREAKER B42 (FOREST/SENECA) DISCONNECT BRANCH FROM BUS 200581 TO BUS 200593 CKT 1 /* 26FOREST 230 26GLADE 230 DISCONNECT BRANCH FROM BUS 200593 TO BUS 200594 CKT 1 /* 26GLADE 230 26SENECA 230 DISCONNECT BRANCH FROM BUS 200594 TO BUS 200642 CKT 1 /* 26SENECA 230 26SENECA#1 14 DISCONNECT BRANCH FROM BUS 200594 TO BUS 200643 CKT 1 /* 26SENECA 230 26SENECA#2 14 DISCONNECT BRANCH FROM BUS 200594 TO BUS 200644 CKT 1 /* 26SENECA 230 26SENECA#3 14 REMOVE MACHINE 1G FROM BUS 200642 /* 26SENECA#1 14 REMOVE MACHINE 2G FROM BUS 200643 /* 26SENECA#2 14 REMOVE MACHINE 3 FROM BUS 200644 /* 26SENECA#3 14 END
AP-P2-3-WP-230-443T *	CONTINGENCY 'AP-P2-3-WP-230-443T *' / UPDATED CON AJK 3-31-16 DISCONNECT BRANCH FROM BUS 200726 TO BUS 235175 CKT 1 DISCONNECT BRANCH FROM BUS 235175 TO BUS 235236 CKT 1 DISCONNECT BUS 235158 END
PL:10:P45:102437	CONTINGENCY 'PL:10:P45:102437' /* JUNI BU2 230KV BUS; BUS_SEC_1-2 CB @ JUNI 230KV DISCONNECT BUS 208004 /* JUNI BU1 230 DISCONNECT BUS 208005 /* JUNI BU2 230 END
PN-P1-2-PN-115-094_NON	CONTINGENCY 'PN-P1-2-PN-115-094_NON' /* ROXBURY - AE1-071 - SHADE GAP 115KV DISCONNECT BRANCH FROM BUS 200520 TO BUS 938380 CKT 1 /* 26ROXBURY 115 26AE1-071-POI 115 DISCONNECT BRANCH FROM BUS 200522 TO BUS 938380 CKT 1 /* 26SHADE GP 115 26AE1-071-POI 115 END

Contingency Name	Contingency Definition
AP-P1-3-WP-230-326T-B	CONTINGENCY 'AP-P1-3-WP-230-326T-B' /* SHINGLETOWN #82 230/46KV XFMR DISCONNECT BRANCH FROM BUS 966040 TO BUS 200513 CKT 1 /* AG1-473 TAP 230 26LEWISTWN 230 END
AP-P1-3-WP-230-326T-A	CONTINGENCY 'AP-P1-3-WP-230-326T-A' /* SHINGLETOWN #82 230/46KV XFMR DISCONNECT BRANCH FROM BUS 235248 TO BUS 236711 CKT 82 /* 01SHINGL 230 01SHINGLTN 46 DISCONNECT BRANCH FROM BUS 235248 TO BUS 966040 CKT 1 /* 01SHINGL 230 AG1- 473 TAP 230 DISCONNECT BRANCH FROM BUS 235248 TO BUS 235970 CKT 1 /* 01SHINGL 230 01DALE 230 END
AP-P1-2-WP-230-323T-A	CONTINGENCY 'AP-P1-2-WP-230-323T-A' /* SHINGLETOWN-LEWISTOWN 230KV APS-PN TIE DISCONNECT BRANCH FROM BUS 235248 TO BUS 966040 CKT 1 /* 01SHINGL 230 AG1- 473 TAP 230 END
PN-P2-2-PN-230-007T	CONTINGENCY 'PN-P2-2-PN-230-007T' /* LEWISTOWN #2 230KV BUS DISCONNECT BRANCH FROM BUS 200513 TO BUS 200531 CKT 2 /* 26LEWISTWN 230 26YEAGRTWN 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 /* 26LEWISTWN 230 AG1-473 TAP 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200517 CKT 1 /* 26LEWISTWN 230 26RAYSTOWN 230 END
PN-P2-3-PN-230-14BT	CONTINGENCY 'PN-P2-3-PN-230-14BT' /* LEWISTOWN STUCK 230KV BREAKER B5 (RAYSTOWN) DISCONNECT BRANCH FROM BUS 200513 TO BUS 200517 CKT 1 /* 26LEWISTWN 230 26RAYSTOWN 230 DISCONNECT BRANCH FROM BUS 200517 TO BUS 200539 CKT 1 /* 26RAYSTOWN 230 26RAYSTOWN 46 DISCONNECT BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 /* 26LEWISTWN 230 AG1-473 TAP 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200531 CKT 2 /* 26LEWISTWN 230 26YEAGRTWN 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200548 CKT 1 /* 26LEWISTWN 230 26LEWISTWN 46.00 END
PN-P1-2-PN-115-052A	CONTINGENCY 'PN-P1-2-PN-115-052A' /* EAGLE VALLEY - TYRONE NORTH 115KV DISCONNECT BRANCH FROM BUS 200904 TO BUS 200527 CKT 1 /* 26EAGL VAL 115 26TYRONE N 115 END

Contingency Name	Contingency Definition
PN-P1-2-PN-115-100-A	CONTINGENCY 'PN-P1-2-PN-115-100-A' /* CORRY EAST - FOUR MILE JCT. 115KV LINE DISCONNECT BRANCH FROM BUS 200927 TO BUS 944300 CKT 1 /* 26FOURMILE 115 AF1-098 TAP 115 END
ATSI-P2-3-CEI-345-004D	CONTINGENCY 'ATSI-P2-3-CEI-345-004D' /* ERIE WEST 345KV BKR 8 DISCONNECT BRANCH FROM BUS 200599 TO BUS 200600 CKT 1 /* 26ERIE W 345 26ERIE SO 345 DISCONNECT BRANCH FROM BUS 200599 TO BUS 238547 CKT 1 /* 26ERIE W 345 02AT 345 DISCONNECT BRANCH FROM BUS 238547 TO BUS 239036 CKT 1 /* 02AT 345 02PERRY 345 DISCONNECT BRANCH FROM BUS 238547 TO BUS 239082 CKT 1 /* 02AT 345 02S8-ATT 345 DISCONNECT BUS 200600 /* 26ERIE SO 345 DISCONNECT BUS 238547 /* 02AT 345 END
PN-P1-2-PN-230-002	CONTINGENCY 'PN-P1-2-PN-230-002' /* HOMER CITY - KEYSTONE 230KV OR SHELOCTA 230/115 KV TRANSFORMER FAULT DISCONNECT BRANCH FROM BUS 200767 TO BUS 200795 CKT 1 /* 26HOMER CT 230 26SHELOCTA 230 DISCONNECT BRANCH FROM BUS 200795 TO BUS 200810 CKT 1 /* 26SHELOCTA 230 26KEYSTONE 230 DISCONNECT BRANCH FROM BUS 200795 TO BUS 200739 CKT 2 /* 26SHELOCTA 230 26SHELOCTA 115 DISCONNECT BUS 200795 /* 26SHELOCTA 230 END
PN-P2_3-PN-230-0347-16-DRT-029	CONTINGENCY 'PN-P2_3-PN-230-0347-16-DRT-029' /* 26LEWISTOWN- 26RAYSTOWN 230 AND B5 FAULT DISCONNECT BRANCH FROM BUS 200513 TO BUS 208005 CKT 1 /* 26LEWISTOWN- 08JUNITA 230 AND B89 FAULT OPEN BUS 200531 /* 26LEWISTOWN 230 BUS 2 END
PN-P1-2-PN-230-006	CONTINGENCY 'PN-P1-2-PN-230-006' /* GLADE - FOREST 230KV DISCONNECT BRANCH FROM BUS 200593 TO BUS 200581 CKT 1 /* 26GLADE 230 26FOREST 230 END

Contingency Name	Contingency Definition
ATSI-P2-3-CEI-345-004C	CONTINGENCY 'ATSI-P2-3-CEI-345-004C' /* ERIE WEST 345KV BKR 7 DISCONNECT BRANCH FROM BUS 200599 TO BUS 238547 CKT 1 /* 26ERIE W 345 02AT 345 DISCONNECT BRANCH FROM BUS 238547 TO BUS 239036 CKT 1 /* 02AT 345 02PERRY 345 DISCONNECT BRANCH FROM BUS 238547 TO BUS 239082 CKT 1 /* 02AT 345 02S8-ATT 345 DISCONNECT BUS 238547 /* 02AT 345 END
PN-P2-3-PN-230-0183-209	CONTINGENCY 'PN-P2-3-PN-230-0183-209' /* HOMER CITY 230 KV STUCK BREAKER 209 (SHELOCTA/SOUTH BUS) DISCONNECT BRANCH FROM BUS 200767 TO BUS 200769 TO BUS 202641 CKT S/* 26HOMER CT 230 26HOMER CY 345 26HOMERCITYS 23.00 DISCONNECT BRANCH FROM BUS 200767 TO BUS 200795 CKT 1 /* 26HOMER CT 230 26SHELOCTA 230 END
AP-P2-2-WP-230-001T	CONTINGENCY 'AP-P2-2-WP-230-001T' /* ELKO #2 230KV BUS DISCONNECT BRANCH FROM BUS 235175 TO BUS 235158 CKT 1 /* 01ELKO 230 01CARB 230 DISCONNECT BRANCH FROM BUS 235175 TO BUS 235236 CKT 1 /* 01ELKO 230 01QUEHAN 230 DISCONNECT BRANCH FROM BUS 235175 TO BUS 200726 CKT 1 /* 01ELKO 230 26SHAWVL 2 230 END
PL:10:P13:001633	CONTINGENCY 'PL:10:P13:001633' /* DAUPHIN 230/69KV T2 DISCONNECT BRANCH FROM BUS 207953 TO BUS 207955 CKT 1 /* DAUP TR1-DAUP TR2 230 DISCONNECT BRANCH FROM BUS 207955 TO BUS 208005 CKT 1 /* DAUP TR2-JUNI BU2 230 DISCONNECT BRANCH FROM BUS 207955 TO BUS 209866 CKT 2 /* DAUP TR2-DAUP 230-69 END
AP-P1-2-WP-230-322T	CONTINGENCY 'AP-P1-2-WP-230-322T' /* SHINGLETOWN-SHAWVILLE 230KV APS-PN TIE DISCONNECT BRANCH FROM BUS 235248 TO BUS 200726 CKT 1 /* 01SHINGL 230 26SHAWVL 2 230 END

Contingency Name	Contingency Definition
PN-P1-2-PN-345-107T	CONTINGENCY 'PN-P1-2-PN-345-107T' /* ERIE WEST - ASHTABULA - PERRY 345KV DISCONNECT BRANCH FROM BUS 200599 TO BUS 238547 CKT 1 /* 26ERIE W 345 02AT 345 DISCONNECT BRANCH FROM BUS 238547 TO BUS 239082 CKT 1 /* 02AT 345 02S8-ATT 345 DISCONNECT BRANCH FROM BUS 238547 TO BUS 239036 CKT 1 /* 02AT 345 02PERRY 345 DISCONNECT BUS 238547 /* 02AT 345 END
AP-P1-2-WP-230-005A-B	CONTINGENCY 'AP-P1-2-WP-230-005A-B' /* MILESBUrg - MOSHANNON 230KV DISCONNECT BRANCH FROM BUS 942490 TO BUS 235219 CKT 1 /* AE2-262 TAP 230 01MILES B 230 END
PN-P2-2-PN-500-001T	CONTINGENCY 'PN-P2-2-PN-500-001T' /* CONEMAUGH #1 500KV BUS DISCONNECT BRANCH FROM BUS 200005 TO BUS 200912 CKT 3 /* CONEM-GH 500 26CONEMAGH 230 END
AP-P1-3-WP-230-001	CONTINGENCY 'AP-P1-3-WP-230-001' /* ELKO #1 230/138KV XFMR DISCONNECT BRANCH FROM BUS 235174 TO BUS 235175 CKT 1 /* 01ELKO 138 01ELKO 230 DISCONNECT BRANCH FROM BUS 235175 TO BUS 235971 CKT 1 /* 01ELKO 230 01SQUABHLLW 230 END
PN-P2_3-PN-230-0347-A	CONTINGENCY 'PN-P2_3-PN-230-0347-A' /* SEWARD FAULTED 230 KV BRK A (CONEMAUGH/HOMER CITY) OPEN BRANCH FROM BUS 200793 TO BUS 200767 CKT 1 /* 26SEWARD 2 230.00 26HOMER CT 230.00 OPEN BRANCH FROM BUS 200793 TO BUS 200912 CKT 1 /* 26SEWARD 2 230.00 26CONEMAGH 230.00 END
PN-P2-2-PN-230-014T	CONTINGENCY 'PN-P2-2-PN-230-014T' /* SHAWVILLE #2 230KV BUS DISCONNECT BRANCH FROM BUS 200726 TO BUS 235248 CKT 1 /* 26SHAWVL 2 230 01SHINGL 230 DISCONNECT BRANCH FROM BUS 200726 TO BUS 235175 CKT 1 /* 26SHAWVL 2 230 01ELKO 230 DISCONNECT BRANCH FROM BUS 200726 TO BUS 200666 CKT 1 /* 26SHAWVL 2 230 26SHAWVL 4 22 DISCONNECT BRANCH FROM BUS 200726 TO BUS 200710 CKT ZB /* 26SHAWVL 2 230 26SHAWVL 1 230 END

Contingency Name	Contingency Definition
APS-P2-2-WP-500-DRT19	CONTINGENCY 'APS-P2-2-WP-500-DRT19' /* KEYSTONE 500 KV BUS 1 FAULT OPEN BRANCH FROM BUS 200011 TO BUS 200810 CKT 3 /* KEYSTONE 500.00 26KEYSTONE 230.00 END
PN-P2-3-PN-230-0201A-20	CONTINGENCY 'PN-P2-3-PN-230-0201A-20' /* KEYSTONE STUCK 230 KV BREAKER 20 (SHELOCTA/#4 XFMR) DISCONNECT BRANCH FROM BUS 200795 TO BUS 200810 CKT 1 /* 26SHELOCTA 230 26KEYSTONE 230 DISCONNECT BRANCH FROM BUS 200011 TO BUS 200810 TO BUS 200907 CKT 4/* KEYSTONE 500 26KEYSTONE 230 26KEYSTN#4 20.00 END
AP-P1-3-WP-230-325T	CONTINGENCY 'AP-P1-3-WP-230-325T' /* SHINGLETOWN #81 230/46KV XFMR DISCONNECT BRANCH FROM BUS 235248 TO BUS 236711 CKT 81 /* 01SHINGL 230 01SHINGLTN 46 DISCONNECT BRANCH FROM BUS 235248 TO BUS 200726 CKT 1 /* 01SHINGL 230 26SHAWVL 2 230 END
Base Case	
PN-P1-2-PN-230-025	CONTINGENCY 'PN-P1-2-PN-230-025' /* CONEMAUGH - SEWARD 230KV DISCONNECT BRANCH FROM BUS 200912 TO BUS 200793 CKT 1 /* 26CONEMAGH 230 26SEWARD 2 230 END
PN-P2-3-PN-230-0183-208	CONTINGENCY 'PN-P2-3-PN-230-0183-208' /* HOMER CITY 230 KV STUCK BREAKER 208 (HOOVERSVILLE/SHELOCTA) DISCONNECT BRANCH FROM BUS 200767 TO BUS 200768 CKT 1 /* 26HOMER CT 230 26QUEMAHON 230 DISCONNECT BRANCH FROM BUS 200768 TO BUS 200796 CKT 1 /* 26QUEMAHON 230 26HOOVRSVL 230 OPEN BRANCH FROM BUS 200767 TO BUS 200795 CKT 1 /* 26HOMER CT 230.00 26SHELOCTA 230.00 END
PN-P1-2-PN-230-103AT	CONTINGENCY 'PN-P1-2-PN-230-103AT' /* LEWISTOWN - JUNIATA (PPL) 230KV DISCONNECT BRANCH FROM BUS 200513 TO BUS 208005 CKT 1 /* 26LEWISTWN 230 JUNI BU1 230 END
PN-P1-2-PN-345-003	CONTINGENCY 'PN-P1-2-PN-345-003' /* HANDSOME LAKE - WAYNE 345KV DISCONNECT BRANCH FROM BUS 200826 TO BUS 200595 CKT 1 /* 26HANDSMLK 345 26WAYNE 345 END

Contingency Name	Contingency Definition
ATSI-P1-2-CEI-345-700T	CONTINGENCY 'ATSI-P1-2-CEI-345-700T' /* PN/ATSI ERIE WEST - ASHTABULA - PERRY 345KV DISCONNECT BRANCH FROM BUS 239036 TO BUS 238547 CKT 1 /* 02PERRY 345 02AT 345 DISCONNECT BRANCH FROM BUS 238547 TO BUS 239082 CKT 1 /* 02AT 345 02S8-ATT 345 DISCONNECT BRANCH FROM BUS 239082 TO BUS 238544 CKT 8 /* 02S8-ATT 345 02ASH_3 138 DISCONNECT BRANCH FROM BUS 238547 TO BUS 200599 CKT 1 /* 02AT 345 26ERIE W 345 END
PL:10:P13:100618	CONTINGENCY 'PL:10:P13:100618' /* JUNIATA 230/69KV TR4 OUT" DISCONNECT BRANCH FROM BUS 208005 TO BUS 209997 CKT 4 /* DISCONNECT BRANCH FROM BUS 208005 TO BUS 207955 CKT 1 /* DISCONNECT BRANCH FROM BUS 208005 TO BUS 200009 CKT 2 /* REMOVE SHUNT 1 FROM BUS 208004 /* DISCONNECT BRANCH FROM BUS 208005 TO BUS 208004 CKT 1 /* DISCONNECT BRANCH FROM BUS 208005 TO BUS 200513 CKT 1 /* END
AP-P2-3-WP-230-446T	CONTINGENCY 'AP-P2-3-WP-230-446T' DISCONNECT BRANCH FROM BUS 200726 TO BUS 235175 CKT 1 DISCONNECT BRANCH FROM BUS 235158 TO BUS 235175 CKT 1 DISCONNECT BRANCH FROM BUS 235175 TO BUS 235236 CKT 1 DISCONNECT BRANCH FROM BUS 235220 TO BUS 235236 CKT 1 DISCONNECT BRANCH FROM BUS 235236 TO BUS 236732 CKT 81 OPEN BUS 235158 END
PL:10:P24:100548	CONTINGENCY 'PL:10:P24:100548' /* JUNI 230KV BUS_SEC_1-2 CB DISCONNECT BUS 208005 /* JUNI BU2 230 DISCONNECT BUS 208004 /* JUNI BU1 230 /* JUNI BU1 230 END
AP-P1-3-WP-230-005-B	CONTINGENCY 'AP-P1-3-WP-230-005-B' /* MILESBERG #82 230/46KV XFMR DISCONNECT BRANCH FROM BUS 235219 TO BUS 236745 CKT 82 /* 01MILES B 230 01MILES B 46 DISCONNECT BRANCH FROM BUS 942490 TO BUS 235219 CKT 1 /* AE2-262 TAP 230 01MILES B 230 END

Contingency Name	Contingency Definition
PN-P2-3-PN-230-21AT	CONTINGENCY 'PN-P2-3-PN-230-21AT' /* 745 DISCONNECT BRANCH FROM BUS 200726 TO BUS 200727 TO BUS 200722 CKT 2A/* 26SHAWVL 2 230 26SHAW. 2 115 26SHAWVL 2 18.00 DISCONNECT BRANCH FROM BUS 200666 TO BUS 200726 CKT 1 /* 26SHAWVL 4 22 26SHAWVL 2 230 DISCONNECT BRANCH FROM BUS 200726 TO BUS 235175 CKT 1 /* 26SHAWVL 2 230 01ELKO 230 DISCONNECT BRANCH FROM BUS 200726 TO BUS 235248 CKT 1 /* 26SHAWVL 2 230 01SHINGL 230 DISCONNECT BRANCH FROM BUS 200710 TO BUS 200726 CKT ZB /* 26SHAWVL 1 230 26SHAWVL 2 230 END
PN-P2_1-PN-345-997-DRT-051	CONTINGENCY 'PN-P2_1-PN-345-997-DRT-051' /* B8 INTERNAL FAULT DISCONNECT BRANCH FROM BUS 946110 TO BUS 200704 CKT 1 /* AF1-276 TAP - PIERCEBRK 345 DISCONNECT BRANCH FROM BUS 200942 TO BUS 200943 CKT 1 /* 26PIERCEBRK XFMR BK_1 END
PN-P2-3-PN-230-14CT	CONTINGENCY 'PN-P2-3-PN-230-14CT' /* LEWISTOWN STUCK 230KV BREAKER - SHINGLETOWN DISCONNECT BRANCH FROM BUS 200513 TO BUS 200517 CKT 1 /* 26LEWISTWN 230 26RAYSTOWN 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 /* 26LEWISTWN 230 AG1-473 TAP 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200531 CKT 2 /* 26LEWISTWN 230 26YEAGRTWN 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200548 CKT 2 /* 26LEWISTWN 230 26LEWISTWN 46.00 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200512 CKT 3 /* 26LEWISTWN 230 26LEWISTWN 115 END
PN-P2_3-PN-230-0347-12-DRT-025	CONTINGENCY 'PN-P2_3-PN-230-0347-12-DRT-025' /* 26LEWISTOWN- 26RAYSTOWN 230 AND B5 FAULT DISCONNECT BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 /* 26LEWISTOWN-AG1- 473 TAP 230 AND B57 FAULT OPEN BUS 200531 /* 26LEWISTOWN 230 BUS 2 END

Contingency Name	Contingency Definition
PL:10:P13:001616	CONTINGENCY 'PL:10:P13:001616' /* JUNIATA 230/69KV T3 DISCONNECT BRANCH FROM BUS 208004 TO BUS 208005 CKT 1 /* JUNI BU1-JUNI BU2 230 DISCONNECT BRANCH FROM BUS 207950 TO BUS 208004 CKT 1 /* DISCONNECT BRANCH FROM BUS 208004 TO BUS 209997 CKT 3 /* JUNI BU1-JUNI 230- 69 DISCONNECT BRANCH FROM BUS 207950 TO BUS 208004 CKT 1 /* CUMB TR2-JUNI BU1 230 DISCONNECT BRANCH FROM BUS 200009 TO BUS 208004 CKT 1 /* JUNIATA-JUNI BU1 500-230 END
PL:03:P12:000193	CONTINGENCY 'PL:03:P12:000193' /* NMES-LACK 230KV LINE DISCONNECT BRANCH FROM BUS 200706 TO BUS 200677 CKT 4 /* DISCONNECT BUS 200708 /* OXBOW 230KV BUS END

12 Short Circuit Analysis - Primary POI

The following Breakers are overdutied:

None.

12.1 System Reinforcements - Short Circuit

None.

13 Summer Peak - Load Flow Analysis - Secondary POI

The Queue Project AG1-090 was evaluated as a 100.0 MW (Capacity 60.0 MW) injection tapping the Shingletown to Shawville 230 kV line in the PENELEC area. Project AG1-090 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-090 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 PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
166132851	200519	26REED TAP	115.0	PENELEC	200522	26SHADE GP	115.0	PENELEC	1	PN-P1-2-PN-230-103AT	single	225.0	99.23	101.94	DC	6.09
176732943	962410	AG1-090 TAP	230.0	PENELEC	235248	01SHING L	230.0	AP	1	AP-P1-2-WP-230-005A-A	single	666.0	96.0	100.51	DC	30.08

13.2 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 IMPAC T
164869649	200701	26GROVE R	230.0	PENELEC	941420	AE2-139 TAP	230.0	PENELEC	1	AP-P2-2-WP-230-005T	bus	621.0	99.59	102.97	DC	21.03
165729208	999326	26SHAWV L2	1.0	PENELEC	200727	26SHAW .2	115.0	PENELEC	2A	AP-P2-2-WP-230-001T	bus	166.0	98.61	101.14	DC	9.29
165880430	999326	26SHAWV L2	1.0	PENELEC	200727	26SHAW .2	115.0	PENELEC	2A	AP-P2-3-WP-230-446T	breaker	166.0	98.67	101.2	DC	9.29
165880431	999326	26SHAWV L2	1.0	PENELEC	200727	26SHAW .2	115.0	PENELEC	2A	AP-P2-3-WP-230-443T *	breaker	166.0	98.55	101.08	DC	9.29
165880433	999326	26SHAWV L2	1.0	PENELEC	200727	26SHAW .2	115.0	PENELEC	2A	AP-P2-3-WP-230-460T	breaker	166.0	94.05	100.23	DC	10.27

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 PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
165729089	200512	26LEWISTW N	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PL:10:P24:100 548	bus	225.0	127.5	132.02	DC	10.17

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 LOADI NG %	POST PROJE CT LOADI NG %	AC D C	MW IMPA CT
165880163	200512	26LEWISTW N	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	225.0	129.6	134.11	DC	10.17
165880164	200512	26LEWISTW N	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PL:10:P45:102437	breaker	225.0	127.5	132.02	DC	10.17
166132827	200512	26LEWISTW N	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PL:10:P13:100618	single	225.0	106.72	109.43	DC	6.1
166132828	200512	26LEWISTW N	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PN-P1-2-PN-230-103AT	single	225.0	105.36	108.07	DC	6.09
164869490	200513	26LEWISTW N	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	PN-P2-2-PN-115-030	bus	618.0	155.33	160.86	DC	34.2
164869491	200513	26LEWISTW N	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	PN-P2-2-PN-115-031	bus	618.0	151.9	157.32	DC	33.44
164869836	200513	26LEWISTW N	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	PL:48:P71:102649	tower	618.0	147.21	152.22	DC	30.97
164869837	200513	26LEWISTW N	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	PECO_P7-1_220-9091/*\$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT	tower	618.0	146.53	151.54	DC	30.97
167578458	200513	26LEWISTW N	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	Base Case	single	493.0	119.93	123.7	DC	18.59
174170754	200513	26LEWISTW N	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	PL:11:P42:000135	breaker	618.0	157.39	162.19	DC	29.69
165729099	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PL:10:P24:100548	bus	225.0	121.41	125.93	DC	10.17
165880185	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	225.0	123.46	127.98	DC	10.17
165880186	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PL:10:P45:102437	breaker	225.0	121.41	125.93	DC	10.17
166132850	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PL:10:P13:100618	single	225.0	100.63	103.34	DC	6.1
165729028	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PL:10:P24:100548	bus	160.0	195.09	202.22	DC	11.4
165880071	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PL:10:P45:102437	breaker	160.0	195.09	202.22	DC	11.4
165880072	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	160.0	190.14	197.26	DC	11.38
166132716	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PL:10:P13:100618	single	160.0	150.57	154.84	DC	6.83
166132717	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PN-P1-2-PN-230-103AT	single	160.0	148.46	152.73	DC	6.83
164869500	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	621.0	156.13	158.73	DC	16.08
164869501	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	AP-P2-2-WP-230-005T	bus	621.0	155.24	157.82	DC	15.99
164869877	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	AP-P7-1-WPP-138-20T	tower	621.0	139.09	139.87	DC	10.77
164869878	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	ATSI-P7-1-OEE-345-003A_NON	tower	621.0	136.38	137.09	DC	9.75
167578492	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	Base Case	single	520.0	116.06	117.18	DC	5.86
173976022	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	PN-P2-3-PN-345-004J	breaker	621.0	154.24	154.99	DC	10.31
164247630	200599	26ERIE W	345.0	PENEL EC	238547	02AT	345.0	ATSI	1	PN-P2-2-PN-230-007T	bus	1900.0	111.93	112.42	DC	20.96
164247834	200599	26ERIE W	345.0	PENEL EC	238547	02AT	345.0	ATSI	1	PN-P2-3-PN-230-14CT	breaker	1900.0	111.99	112.49	DC	20.96
164247835	200599	26ERIE W	345.0	PENEL EC	238547	02AT	345.0	ATSI	1	PN-P2-3-PN-230-14BT	breaker	1900.0	111.92	112.42	DC	20.96
164869470	200675	26E.TWAND A	230.0	PENEL EC	200924	26CANYON	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	615.0	180.45	181.46	DC	13.61

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 LOADI NG %	POST PROJE CT LOADI NG %	AC D C	MW IMPA CT
1648694 71	2006 75	26E.TWAND A	230. 0	PENEL EC	2009 24	26CANYON	230. 0	PENEL EC	1	AP-P2-2-WP-230-005T	bus	615. 0	177.47	178.44	DC	13.09
1648698 21	2006 75	26E.TWAND A	230. 0	PENEL EC	2009 24	26CANYON	230. 0	PENEL EC	1	PL:48:P71:102 649	tower	615. 0	166.74	167.33	DC	8.04
1648698 22	2006 75	26E.TWAND A	230. 0	PENEL EC	2009 24	26CANYON	230. 0	PENEL EC	1	PECO_P7-1_220-9091/* \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT	tower	615. 0	160.68	161.28	DC	8.07
1739759 91	2006 75	26E.TWAND A	230. 0	PENEL EC	2009 24	26CANYON	230. 0	PENEL EC	1	PL:02:P42:001 063	break er	615. 0	175.13	175.72	DC	7.99
1648696 48	2007 01	26GROVER	230. 0	PENEL EC	9414 20	AE2-139 TAP	230. 0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	621. 0	101.81	105.35	DC	21.93
1739761 95	2007 01	26GROVER	230. 0	PENEL EC	9414 20	AE2-139 TAP	230. 0	PENEL EC	1	PN-P2-3-PN-230-14BT	break er	621. 0	101.81	105.34	DC	21.94
1648695 35	2007 06	26N.MESHP N	230. 0	PENEL EC	2007 08	26OXBOW	230. 0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	984. 0	145.58	146.34	DC	16.32
1648695 36	2007 06	26N.MESHP N	230. 0	PENEL EC	2007 08	26OXBOW	230. 0	PENEL EC	1	AP-P2-2-WP-230-005T	bus	984. 0	143.28	144.01	DC	15.73
1648695 40	2007 08	26OXBOW	230. 0	PENEL EC	2080 09	LACK	230. 0	PPL	1	PN-P2-2-PN-230-007T	bus	984. 0	144.31	145.07	DC	16.53
1648695 41	2007 08	26OXBOW	230. 0	PENEL EC	2080 09	LACK	230. 0	PPL	1	AP-P2-2-WP-230-005T	bus	984. 0	141.99	142.73	DC	15.93
1657290 98	2007 13	26ROCKTON	115. 0	PENEL EC	2007 12	26DUBOIS	115. 0	PENEL EC	1	AP-P2-2-WP-230-001T	bus	190. 0	122.07	124.16	DC	8.79
1658802 09	2007 13	26ROCKTON	115. 0	PENEL EC	2007 12	26DUBOIS	115. 0	PENEL EC	1	AP-P2-3-WP-230-446T	break er	190. 0	122.07	124.16	DC	8.79
1658802 10	2007 13	26ROCKTON	115. 0	PENEL EC	2007 12	26DUBOIS	115. 0	PENEL EC	1	AP-P2-3-WP-230-443T *	break er	190. 0	121.97	124.05	DC	8.79
1657290 97	2007 14	26SHAWVL 1	115. 0	PENEL EC	2007 13	26ROCKTON	115. 0	PENEL EC	1	AP-P2-2-WP-230-001T	bus	190. 0	123.01	125.1	DC	8.79
1658802 00	2007 14	26SHAWVL 1	115. 0	PENEL EC	2007 13	26ROCKTON	115. 0	PENEL EC	1	AP-P2-3-WP-230-446T	break er	190. 0	123.02	125.11	DC	8.79
1658802 01	2007 14	26SHAWVL 1	115. 0	PENEL EC	2007 13	26ROCKTON	115. 0	PENEL EC	1	AP-P2-3-WP-230-443T *	break er	190. 0	122.91	125.0	DC	8.79
1760673 68	2007 27	26SHAW. 2	115. 0	PENEL EC	2007 16	26PHILIPSB	115. 0	PENEL EC	1	AP-P1-3-WP-230-326T-B	single	202. 0	101.77	104.93	DC	6.4
1760673 69	2007 27	26SHAW. 2	115. 0	PENEL EC	2007 16	26PHILIPSB	115. 0	PENEL EC	1	AP-P1-2-WP-230-323T-A	single	202. 0	101.82	104.98	DC	6.4
1648694 75	2007 67	26HOMER CT	230. 0	PENEL EC	2007 95	26SHELOCTA	230. 0	PENEL EC	1	PN-P2-2-PN-500-001T	bus	923. 0	170.83	171.53	DC	14.18
1648694 76	2007 67	26HOMER CT	230. 0	PENEL EC	2007 95	26SHELOCTA	230. 0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	923. 0	157.47	158.17	DC	14.17
1741707 25	2007 67	26HOMER CT	230. 0	PENEL EC	2007 95	26SHELOCTA	230. 0	PENEL EC	1	PN-P2_3-PN-230-0347-A	break er	923. 0	182.47	183.14	DC	13.46
1648695 05	2008 10	26KEYSTONE	230. 0	PENEL EC	9993 32	KEYSTONE	1.0	PENEL EC	4	APS-P2-2-WP-500-DRT19	bus	634. 0	139.12	139.75	DC	8.77
1648695 06	2008 10	26KEYSTONE	230. 0	PENEL EC	9993 32	KEYSTONE	1.0	PENEL EC	4	PN-P2-2-PN-500-001T	bus	634. 0	121.17	121.73	DC	7.79
1648695 07	2008 10	26KEYSTONE	230. 0	PENEL EC	9993 32	KEYSTONE	1.0	PENEL EC	4	PN-P2-2-PN-230-007T	bus	634. 0	110.75	111.34	DC	8.17
1648695 08	2008 10	26KEYSTONE	230. 0	PENEL EC	9993 32	KEYSTONE	1.0	PENEL EC	4	PN-P2-2-PN-230-006AT	bus	634. 0	105.18	105.79	DC	8.56
1648695 09	2008 10	26KEYSTONE	230. 0	PENEL EC	9993 32	KEYSTONE	1.0	PENEL EC	4	PL:10:P22:100 582	bus	634. 0	104.86	105.48	DC	8.56
1648696 67	2008 57	26MARSHAL L	230. 0	PENEL EC	2007 01	26GROVER	230. 0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	666. 0	100.06	103.48	DC	22.72
1739762 04	2008 57	26MARSHAL L	230. 0	PENEL EC	2007 01	26GROVER	230. 0	PENEL EC	1	PN-P2-3-PN-230-14BT	break er	666. 0	100.06	103.48	DC	22.72
1648694 95	2009 24	26CANYON	230. 0	PENEL EC	2007 06	26N.MESHP N	230. 0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	666. 0	165.37	166.3	DC	13.61
1648694 96	2009 24	26CANYON	230. 0	PENEL EC	2007 06	26N.MESHP N	230. 0	PENEL EC	1	AP-P2-2-WP-230-005T	bus	666. 0	162.62	163.51	DC	13.09
1648698 41	2009 24	26CANYON	230. 0	PENEL EC	2007 06	26N.MESHP N	230. 0	PENEL EC	1	PL:48:P71:102 649	tower	666. 0	152.71	153.26	DC	8.04

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 PROJECTIONS T LOADING %	POST PROJECTIONS T LOADING %	AC/D C	MW IMPACT
164869842	200924	26CANYON	230.0	PENEL EC	200706	26N.MESHPN	230.0	PENEL EC	1	PECO_P7-1_220-9091/* \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT	tower	666.0	147.12	147.67	DC	8.07
164869515	200940	26SCOTCHHLLW	230.0	PENEL EC	200675	26E.TWANDA	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	570.0	149.26	153.11	DC	21.93
164869516	200940	26SCOTCHHLLW	230.0	PENEL EC	200675	26E.TWANDA	230.0	PENEL EC	1	AP-P2-2-WP-230-005T	bus	570.0	146.88	150.57	DC	21.03
164869929	200940	26SCOTCHHLLW	230.0	PENEL EC	200675	26E.TWANDA	230.0	PENEL EC	1	PN-P7-1-PN-230-002A	tower	570.0	119.76	120.84	DC	13.54
164869930	200940	26SCOTCHHLLW	230.0	PENEL EC	200675	26E.TWANDA	230.0	PENEL EC	1	AP-P7-1-WPP-138-20T	tower	570.0	117.37	118.34	DC	12.22
164247657	235175	01ELKO	230.0	AP	235971	01SQUABHLLW	230.0	AP	1	PN-P2-2-PN-230-007T	bus	621.0	105.62	111.36	DC	35.62
164247862	235175	01ELKO	230.0	AP	235971	01SQUABHLLW	230.0	AP	1	PN-P2-3-PN-230-14CT	breaker	621.0	105.64	111.38	DC	35.62
164247863	235175	01ELKO	230.0	AP	235971	01SQUABHLLW	230.0	AP	1	PN-P2-3-PN-230-14BT	breaker	621.0	105.61	111.34	DC	35.62
164247864	235175	01ELKO	230.0	AP	235971	01SQUABHLLW	230.0	AP	1	PN-P2_3-PN-230-0347-12-DRT-025	breaker	621.0	104.85	110.57	DC	35.52
167280539	235197	01KARNSC	138.0	AP	235152	01BUTLER	138.0	AP	1	ATSI-P2-3-CEI-345-004D	breaker	179.0	228.28	229.61	DC	5.27
167821085	235197	01KARNSC	138.0	AP	235152	01BUTLER	138.0	AP	1	PN-P1-2-PN-345-107T	single	179.0	178.03	178.84	DC	3.21
167821107	235203	01KISSNG	138.0	AP	235197	01KARNSC	138.0	AP	1	PN-P1-2-PN-345-107T	single	268.0	137.23	137.8	DC	3.39
164248049	235248	01SHINGL	230.0	AP	966040	AG1-473 TAP	230.0	AP	1	Base Case	single	520.0	134.92	140.17	DC	27.31
164248050	235248	01SHINGL	230.0	AP	966040	AG1-473 TAP	230.0	AP	1	PL:03:P12:000193	single	621.0	132.34	136.85	DC	27.97
176732898	235970	01DALE	230.0	AP	235248	01SHINGL	230.0	AP	1	AP-P1-2-WP-230-325T-A	single	554.0	106.82	109.26	DC	13.52
176732899	235970	01DALE	230.0	AP	235248	01SHINGL	230.0	AP	1	AP-P1-2-WP-230-322T-A1	single	554.0	106.81	109.21	DC	13.31
164869555	919200	AA1-144 TAP	230.0	PENEL EC	200940	26SCOTCHHLLW	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	621.0	139.24	142.78	DC	21.93
164869556	919200	AA1-144 TAP	230.0	PENEL EC	200940	26SCOTCHHLLW	230.0	PENEL EC	1	AP-P2-2-WP-230-005T	bus	621.0	137.04	140.43	DC	21.03
164869965	919200	AA1-144 TAP	230.0	PENEL EC	200940	26SCOTCHHLLW	230.0	PENEL EC	1	PN-P7-1-PN-230-002A	tower	621.0	112.17	113.15	DC	13.54
164869966	919200	AA1-144 TAP	230.0	PENEL EC	200940	26SCOTCHHLLW	230.0	PENEL EC	1	AP-P7-1-WPP-138-20T	tower	621.0	109.97	110.86	DC	12.22
165503114	936470	AD2-062 TAP	138.0	AP	235188	01GREENE	138.0	AP	1	PN-P2-2-PN-230-006AT	bus	206.0	102.74	104.37	DC	7.44
165503115	936470	AD2-062 TAP	138.0	AP	235188	01GREENE	138.0	AP	1	PL:10:P22:100582	bus	206.0	101.95	103.58	DC	7.44
165503116	936470	AD2-062 TAP	138.0	AP	235188	01GREENE	138.0	AP	1	PL:10:P24:100548	bus	206.0	100.44	102.07	DC	7.44
165729023	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PL:10:P24:100548	bus	160.0	227.95	235.08	DC	11.4
165880061	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	160.0	230.27	237.39	DC	11.38
165880062	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PL:10:P45:102437	breaker	160.0	227.95	235.08	DC	11.4
166132704	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PL:10:P13:100618	single	160.0	175.24	179.51	DC	6.83
166132705	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PN-P1-2-PN-230-103AT	single	160.0	173.14	177.41	DC	6.83
166132713	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	Base Case	single	131.0	104.74	107.32	DC	3.38

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 C T LOADI NG %	POST PROJE C T LOADI NG %	AC DC	MW IMPA CT
165880253	941190	AE2-113 TAP	115.0	PENEL EC	200668	26FARM VLY	115.0	PENEL EC	1	PN-P2-3-PN-230-8M_SUM_WI N	breaker	160.0	120.16	122.09	DC	6.85
164869608	941420	AE2-139 TAP	230.0	PENEL EC	919200	AA1-144 TAP	230.0	PENEL EC	1	PN-P2-2-PN-230-007T	bus	621.0	113.68	117.22	DC	21.93
164869609	941420	AE2-139 TAP	230.0	PENEL EC	919200	AA1-144 TAP	230.0	PENEL EC	1	AP-P2-2-WP-230-005T	bus	621.0	111.49	114.88	DC	21.03
176732924	942490	AE2-262 TAP	230.0	AP	235219	01MILESB	230.0	AP	1	AP-P1-3-WP-230-325T-A	single	688.0	112.66	114.73	DC	14.24
176732926	942490	AE2-262 TAP	230.0	AP	235219	01MILESB	230.0	AP	1	AP-P1-2-WP-230-322T-A1	single	688.0	111.29	113.36	DC	14.26
175197276	962410	AG1-090 TAP	230.0	PENEL EC	235248	01SHINGL	230.0	AP	1	AP-P1-3-WP-230-005-B	single	666.0	106.33	110.85	DC	30.08
176732940	962410	AG1-090 TAP	230.0	PENEL EC	235248	01SHINGL	230.0	AP	1	AP-P1-2-WP-230-005A-B	single	666.0	106.33	110.85	DC	30.08
164248039	966040	AG1-473 TAP	230.0	AP	200513	26LEWISTW N	230.0	PENEL EC	1	Base Case	single	520.0	134.84	140.09	DC	27.31
164248040	966040	AG1-473 TAP	230.0	AP	200513	26LEWISTW N	230.0	PENEL EC	1	PL:03:P12:000193	single	621.0	132.28	136.79	DC	27.97
165729127	999327	26SHAWVL 1	1.0	PENEL EC	200714	26SHAWVL 1	115.0	PENEL EC	1A	AP-P2-2-WP-230-001T	bus	126.0	128.7	131.92	DC	9.0
165880174	999327	26SHAWVL 1	1.0	PENEL EC	200714	26SHAWVL 1	115.0	PENEL EC	1A	PN-P2-3-PN-230-21HT	breaker	126.0	139.93	141.8	DC	5.21
165880175	999327	26SHAWVL 1	1.0	PENEL EC	200714	26SHAWVL 1	115.0	PENEL EC	1A	AP-P2-3-WP-230-446T	breaker	126.0	128.78	132.0	DC	9.0
166132893	999327	26SHAWVL 1	1.0	PENEL EC	200714	26SHAWVL 1	115.0	PENEL EC	1A	AP-P1-3-WP-230-326T-B	single	126.0	107.61	111.95	DC	5.47
166132894	999327	26SHAWVL 1	1.0	PENEL EC	200714	26SHAWVL 1	115.0	PENEL EC	1A	AP-P1-2-WP-230-323T-A	single	126.0	107.69	112.03	DC	5.47
164869510	999332	KEYSTONE	1.0	PENEL EC	200011	KEYSTONE	500.0	PENEL EC	4	APS-P2-2-WP-500-DRT19	bus	634.0	138.65	139.28	DC	8.77
164869511	999332	KEYSTONE	1.0	PENEL EC	200011	KEYSTONE	500.0	PENEL EC	4	PN-P2-2-PN-500-001T	bus	634.0	120.7	121.26	DC	7.79
164869512	999332	KEYSTONE	1.0	PENEL EC	200011	KEYSTONE	500.0	PENEL EC	4	PN-P2-2-PN-230-007T	bus	634.0	110.26	110.85	DC	8.17
164869513	999332	KEYSTONE	1.0	PENEL EC	200011	KEYSTONE	500.0	PENEL EC	4	PN-P2-2-PN-230-006AT	bus	634.0	104.69	105.3	DC	8.56
164869514	999332	KEYSTONE	1.0	PENEL EC	200011	KEYSTONE	500.0	PENEL EC	4	PL:10:P22:100582	bus	634.0	104.38	104.99	DC	8.56

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	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE C T LOADI NG %	POST PROJE C T LOADI NG %	AC DC	MW IMPA CT
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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 LOAD NG %	POST PROJECT LOAD NG %	AC/DC	MW IMPACT
166132825	200512	26LEWISTWN	115.0	PENEL EC	200519	26REED TAP	115.0	PENEL EC	1	PL:10:P13:100618	operation	225.0	126.23	130.75	DC	10.16
167578456	200513	26LEWISTWN	230.0	PENEL EC	208005	JUNI BU2	230.0	PPL	1	Base Case	operation	493.0	177.88	184.17	DC	30.99
166132848	200519	26REED TAP	115.0	PENEL EC	200522	26SHADE GP	115.0	PENEL EC	1	PL:10:P13:100618	operation	225.0	120.14	124.66	DC	10.16
166132714	200522	26SHADE GP	115.0	PENEL EC	938380	AE1-071-POI	115.0	PENEL EC	1	PL:10:P13:100618	operation	160.0	189.59	196.7	DC	11.39
167578490	200593	26GLADE	230.0	PENEL EC	200811	26WARREN	230.0	PENEL EC	1	Base Case	operation	520.0	159.72	160.57	DC	9.77
167578470	200675	26E.TWANDA	230.0	PENEL EC	200924	26CANYON	230.0	PENEL EC	1	Base Case	operation	515.0	188.17	188.89	DC	8.08
166132810	200714	26SHAWVL 1	115.0	PENEL EC	200872	26BIOEN TP	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	185.0	125.32	131.23	DC	10.94
166132839	200716	26PHILIPSB	115.0	PENEL EC	200904	26EAGL VAL	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	244.0	103.97	108.34	DC	10.66
176067365	200727	26SHAW. 2	115.0	PENEL EC	200716	26PHILIPSB	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	202.0	123.13	128.41	DC	10.66
166132852	200755	26WESTOVER	115.0	PENEL EC	200801	26GARMAN	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	246.0	118.5	122.95	DC	10.94
167578479	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	Base Case	operation	809.0	153.8	154.4	DC	10.54
175386509	200767	26HOMER CT	230.0	PENEL EC	200795	26SHELOCTA	230.0	PENEL EC	1	AP-P1-2-WP-345-311T	operation	923.0	157.94	158.48	DC	10.84
167578657	200793	26SEWARD 2	230.0	PENEL EC	200912	26CONEMAGH	230.0	PENEL EC	1	PN-P1-2-PN-230-002	operation	1147.0	107.31	107.83	DC	13.03
167578466	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	Base Case	operation	809.0	149.88	150.55	DC	11.83
175386410	200795	26SHELOCTA	230.0	PENEL EC	200810	26KEYSTONE	230.0	PENEL EC	1	PN-P1-2-PN-345-107T	operation	923.0	186.6	187.33	DC	14.85
167578611	200811	26WARREN	230.0	PENEL EC	200918	26ERIE S TIE	230.0	PENEL EC	1	PN-P1-2-PN-115-100-A	operation	621.0	119.81	120.45	DC	8.84
167578612	200811	26WARREN	230.0	PENEL EC	200918	26ERIE S TIE	230.0	PENEL EC	1	Base Case	operation	520.0	118.87	119.55	DC	7.73
167578776	200857	26MARSHALL	230.0	PENEL EC	200701	26GROVER	230.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	666.0	97.69	101.07	DC	22.51
166132775	200904	26EAGL VAL	115.0	PENEL EC	200527	26TYRONE N	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	242.0	139.89	144.29	DC	10.66
167578598	200912	26CONEMAGH	230.0	PENEL EC	200005	CONEM-GH	500.0	PENEL EC	3	PN-P1-2-PN-230-002	operation	1066.0	115.47	116.02	DC	13.03
167578483	200924	26CANYON	230.0	PENEL EC	200706	26N.MESHPN	230.0	PENEL EC	1	Base Case	operation	546.0	175.95	176.62	DC	8.08
167578516	200940	26SCOTCHHLW	230.0	PENEL EC	200675	26E.TWANDA	230.0	PENEL EC	1	Base Case	operation	491.0	131.16	132.22	DC	11.5
167578769	208004	JUNI BU1	230.0	PPL	207950	CUMB TR2	230.0	PPL	1	PL:10:P13:001633	operation	618.0	100.28	100.78	DC	6.87
167578604	208005	JUNI BU2	230.0	PPL	208004	JUNI BU1	230.0	PPL	1	PL:10:P13:001633	operation	641.0	116.93	119.8	DC	18.41
167578646	208005	JUNI BU2	230.0	PPL	207955	DAUP TR2	230.0	PPL	1	PL:10:P12:000195	operation	531.0	104.93	105.49	DC	6.53
167821407	235157	01CARB	138.0	AP	235159	01CARB J	138.0	AP	1	AP-P1-3-WP-230-001	operation	299.0	109.43	114.86	DC	16.22
167821346	235159	01CARB J	138.0	AP	235174	01ELKO	138.0	AP	1	AP-P1-3-WP-230-001	operation	192.0	119.66	126.09	DC	12.32
164248205	235175	01ELKO	230.0	AP	235971	01SQUABHLW	230.0	AP	1	AP-P1-3-WP-230-326T-B	operation	621.0	104.77	110.49	DC	35.52
167821083	235197	01KARNSC	138.0	AP	235152	01BUTLER	138.0	AP	1	PN-P1-2-PN-345-107T	operation	179.0	226.5	227.85	DC	5.35
167821106	235203	01KISSNG	138.0	AP	235197	01KARNSC	138.0	AP	1	PN-P1-2-PN-345-107T	operation	268.0	173.13	174.08	DC	5.64
176732982	235219	01MILESB	230.0	AP	235970	01DALE	230.0	AP	1	AP-P1-2-WP-230-322T-A1	operation	688.0	121.36	124.58	DC	22.07
176733061	235220	01MOSHAN	230.0	AP	942490	AE2-262 TAP	230.0	AP	1	AP-P1-3-WP-230-325T-A	operation	688.0	105.4	108.85	DC	23.74
164248044	235248	01SHINGL	230.0	AP	966040	AG1-473 TAP	230.0	AP	1	PL:03:P12:000193	operation	621.0	179.67	187.19	DC	46.62

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 LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
164248046	235248	01SHINGL	230.0	AP	966040	AG1-473 TAP	230.0	AP	1	Base Case	operation	520.0	175.97	184.73	DC	45.52
176732893	235970	01DALE	230.0	AP	235248	01SHINGL	230.0	AP	1	AP-P1-3-WP-230-325T-A	operation	554.0	140.44	144.51	DC	22.53
169558873	919200	AA1-144 TAP	230.0	PENEL EC	200940	26SCOTCHHL LW	230.0	PENEL EC	1	Base Case	operation	520.0	126.5	127.5	DC	11.5
166132702	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	PL:10:P13:100618	operation	160.0	225.92	233.04	DC	11.39
166132709	938380	AE1-071-POI	115.0	PENEL EC	200520	26ROXBURY	115.0	PENEL EC	1	Base Case	operation	131.0	130.25	132.18	DC	5.64
166132969	941190	AE2-113 TAP	115.0	PENEL EC	200668	26FARM VLY	115.0	PENEL EC	1	PN-P1-2-PN-230-006	operation	160.0	104.93	106.86	DC	6.87
169559023	941420	AE2-139 TAP	230.0	PENEL EC	919200	AA1-144 TAP	230.0	PENEL EC	1	Base Case	operation	520.0	99.18	100.18	DC	11.5
176732921	942490	AE2-262 TAP	230.0	AP	235219	01MILESB	230.0	AP	1	AP-P1-3-WP-230-325T-A	operation	688.0	134.12	137.57	DC	23.74
166132829	944180	AF1-086 TAP	115.0	PENEL EC	200755	26WESTOVER	115.0	PENEL EC	1	AP-P1-3-WP-230-326T-B	operation	237.0	123.8	128.42	DC	10.94
166132832	944180	AF1-086 TAP	115.0	PENEL EC	200755	26WESTOVER	115.0	PENEL EC	1	Base Case	operation	175.0	107.9	109.48	DC	6.13
175197275	962410	AG1-090 TAP	230.0	PENEL EC	235248	01SHINGL	230.0	AP	1	AP-P1-3-WP-230-005-B	operation	666.0	125.88	133.42	DC	50.13
176732937	962410	AG1-090 TAP	230.0	PENEL EC	235248	01SHINGL	230.0	AP	1	AP-P1-2-WP-230-005A-B	operation	666.0	125.88	133.42	DC	50.13
164248034	966040	AG1-473 TAP	230.0	AP	200513	26LEWISTWN	230.0	PENEL EC	1	PL:03:P12:000193	operation	621.0	179.61	187.12	DC	46.62
164248036	966040	AG1-473 TAP	230.0	AP	200513	26LEWISTWN	230.0	PENEL EC	1	Base Case	operation	520.0	175.9	184.66	DC	45.52
166132889	999327	26SHAWVL 1	1.0	PENEL EC	200714	26SHAWVL 1	115.0	PENEL EC	1A	AP-P1-3-WP-230-326T-B	operation	126.0	123.73	126.99	DC	9.12

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
165880185	200519	26REED TAP	PENELEC	200522	26SHADE GP	PENELEC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	225.0	123.46	127.98	DC	10.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200812	26ALY HYDR	0.3605	50/50	0.3605
200852	26WARR RDG	0.1998	Adder	0.24
235003	AC1-025 E	0.1664	50/50	0.1664
236828	01GRAYMONT	0.4282	50/50	0.4282
290086	Q-036 E	2.0788	Adder	2.45
293301	N-039 E	3.2460	Adder	3.82
294515	O38_P22	2.8403	Adder	3.34
921642	AA2-000	23.0463	Adder	27.11
930511	AB2-092	0.8462	Adder	1.0
936421	AD2-055	1.7422	Adder	2.05
936991	AD2-133 C	0.9354	Adder	1.1
936992	AD2-133 E	4.2786	Adder	5.03
939171	AE1-147 C	1.2773	50/50	1.2773
939172	AE1-147 E	0.8515	50/50	0.8515
939591	AE1-188 C	-0.6130	Adder	-0.72
940201	AE2-001 C	1.2815	50/50	1.2815
940202	AE2-001 E	0.8543	50/50	0.8543
940681	AE2-055 C (Suspended)	1.3447	50/50	1.3447
940682	AE2-055 E (Suspended)	0.8965	50/50	0.8965
941231	AE2-117 C	0.9303	Adder	1.09
941232	AE2-117 E	0.6202	Adder	0.73
941241	AE2-118 C	0.8844	Adder	1.04
941242	AE2-118 E	0.5896	Adder	0.69
941261	AE2-120 C	1.2838	50/50	1.2838
941262	AE2-120 E	0.8558	50/50	0.8558
941271	AE2-121 C	0.6753	50/50	0.6753
941272	AE2-121 E	0.4509	50/50	0.4509
941321	AE2-126 C	0.6212	Adder	0.73
941322	AE2-126 E	0.4141	Adder	0.49
941331	AE2-129 C	0.6514	Adder	0.77
941332	AE2-129 E	0.4342	Adder	0.51
941351	AE2-131 C (Suspended)	0.6514	Adder	0.77
941352	AE2-131 E (Suspended)	0.4342	Adder	0.51
942121	AE2-224 C	2.6464	Adder	3.11
942122	AE2-224 E	1.7643	Adder	2.08
942351	AE2-248 C	1.0547	50/50	1.0547
942352	AE2-248 E	0.7031	50/50	0.7031
942491	AE2-262 C	3.7800	Adder	4.45
942492	AE2-262 E	2.5401	Adder	2.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942501	AE2-263 C	3.5532	Adder	4.18
942502	AE2-263 E	2.3723	Adder	2.79
942511	AE2-264 C	3.8801	Adder	4.56
942512	AE2-264 E	2.5867	Adder	3.04
943751	AF1-043	5.2265	Adder	6.15
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.4148	50/50	1.4148
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.7958	50/50	0.7958
944311	AF1-099 C	5.7380	Adder	6.75
944312	AF1-099 E	3.8253	Adder	4.5
944321	AF1-100 C	9.7346	Adder	11.45
944322	AF1-100 E	6.4898	Adder	7.64
944471	AF1-112 C	1.3115	50/50	1.3115
944472	AF1-112 E	0.8743	50/50	0.8743
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3308	50/50	1.3308
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.8872	50/50	0.8872
944691	AF1-134 C	0.5302	Adder	0.62
944692	AF1-134 E	0.3535	Adder	0.42
944771	AF1-142 C	9.1807	Adder	10.8
944772	AF1-142 E	6.1205	Adder	7.2
944881	AF1-153 C O1	0.5901	Adder	0.69
944882	AF1-153 E O1	0.3934	Adder	0.46
944901	AF1-155 C	0.5866	Adder	0.69
944902	AF1-155 E	0.3911	Adder	0.46
945011	AF1-166 C	-0.5009	Adder	-0.59
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.2836	50/50	1.2836
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.8558	50/50	0.8558
945591	AF1-224 C	-0.3844	Adder	-0.45
946421	AF1-306 C	2.5604	Adder	3.01
946422	AF1-306 E	10.2416	Adder	12.05
957451	AF2-039 C	0.4623	Adder	0.54
957452	AF2-039 E	0.3082	Adder	0.36
957561	AF2-050 C	1.3232	Adder	1.56
957562	AF2-050 E	0.8821	Adder	1.04
957931	AF2-087 C (Suspended)	0.1706	Adder	0.2
957932	AF2-087 E (Suspended)	0.2350	Adder	0.28
957941	AF2-088 C	0.2226	Adder	0.26
957942	AF2-088 E	0.1484	Adder	0.17
958071	AF2-101 C	-0.0823	Adder	-0.1
958271	AF2-121 C	0.6514	Adder	0.77
958272	AF2-121 E	0.4342	Adder	0.51
958601	AF2-151 C	-0.0812	Adder	-0.1
959241	AF2-215 C	-0.1404	Adder	-0.17
959802	AF2-271 E	0.2111	Adder	0.25
959843	AF2-275 BAT	0.0921	Merchant Transmission	0.0921
959853	AF2-276 BAT	0.0921	Merchant Transmission	0.0921

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960022	AF2-293 E	0.1239	50/50	0.1239
960041	AF2-295 C	0.5866	Adder	0.69
960042	AF2-295 E	0.3911	Adder	0.46
960051	AF2-296 C	0.5302	Adder	0.62
960052	AF2-296 E	0.3535	Adder	0.42
962411	AG1-090 C O2	6.0996	50/50	6.0996
962412	AG1-090 E O2	4.0664	50/50	4.0664
962951	AG1-144 C	0.3452	Adder	0.77
962952	AG1-144 E	0.2302	Adder	0.51
963571	AG1-206 C	0.1737	Adder	0.39
963572	AG1-206 E	0.0935	Adder	0.21
963891	AG1-242 C	0.1522	Adder	0.34
963892	AG1-242 E	0.0820	Adder	0.18
964031	AG1-257 C	0.9032	50/50	0.9032
964032	AG1-257 E	1.2623	50/50	1.2623
964041	AG1-258 C	0.9032	50/50	0.9032
964042	AG1-258 E	1.2623	50/50	1.2623
964191	AG1-280 C	0.2720	Adder	0.6
964192	AG1-280 E	0.1814	Adder	0.4
964201	AG1-281 C	0.2737	Adder	0.61
964202	AG1-281 E	0.1824	Adder	0.4
964391	AG1-301 C	0.5082	Adder	1.13
964392	AG1-301 E	0.3388	Adder	0.75
964451	AG1-308 C O2	0.2388	Adder	0.53
964452	AG1-308 E O2	0.3337	Adder	0.74
965121	AG1-377 C O1	0.3452	Adder	0.77
965122	AG1-377 E O1	0.2302	Adder	0.51
965131	AG1-378 C O1	0.3452	Adder	0.77
965132	AG1-378 E O1	0.2302	Adder	0.51
965201	AG1-385 C	0.4021	Adder	0.89
965202	AG1-385 E	0.1191	Adder	0.26
965301	AG1-395 C	0.4436	Adder	0.98
965302	AG1-395 E	0.1318	Adder	0.29
966041	AG1-473 C	4.4668	50/50	4.4668
966042	AG1-473 E	2.9779	50/50	2.9779
966152	AG1-484 BAT	0.6272	Merchant Transmission	0.6272
966463	AG1-515 BAT	0.3718	Merchant Transmission	0.3718
966891	AG1-560 BAT	12.4896	50/50	12.4896
966901	AG1-561 BAT	5.4371	50/50	5.4371
WEC	WEC	0.0394	Confirmed LTF	0.0394
LGEE	LGEE	0.0647	Confirmed LTF	0.0647
CALDERWOOD	CALDERWOOD	0.0055	Confirmed LTF	0.0055
CBM-W2	CBM-W2	0.5555	Confirmed LTF	0.5555
TVA	TVA	0.0322	Confirmed LTF	0.0322
O-066	O-066	1.7633	Confirmed LTF	1.7633
SIGE	SIGE	0.0381	Confirmed LTF	0.0381
CHEOAH	CHEOAH	0.0070	Confirmed LTF	0.0070
CBM-S1	CBM-S1	0.0144	Confirmed LTF	0.0144
G-007	G-007	0.3034	Confirmed LTF	0.3034
HAMLET	HAMLET	0.0878	Confirmed LTF	0.0878
MEC	MEC	0.1621	Confirmed LTF	0.1621
LAGN	LAGN	0.0543	Confirmed LTF	0.0543

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CATAWBA	CATAWBA	0.0374	Confirmed LTF	0.0374
CBM-W1	CBM-W1	2.1170	Confirmed LTF	2.1170

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
176732940	962410	AG1-090 TAP	PENELEC	235248	01SHINGL	AP	1	AP-P1-2-WP-230-005A-B	single	666.0	106.33	110.85	DC	30.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	4.0414	80/20	4.0414
200643	26SENECA#2	3.8169	80/20	3.8169
200644	26SENECA#3	0.4171	80/20	0.4171
200649	26PENNTech	1.1387	80/20	1.1387
200665	26SHAWVL 3	7.5805	80/20	7.5805
200666	26SHAWVL 4	7.5205	80/20	7.5205
200715	26SHAWVL 1	4.7288	80/20	4.7288
200722	26SHAWVL 2	4.8596	80/20	4.8596
200887	26ARMNA MT	0.1495	80/20	0.1495
200905	26Q36	0.1376	80/20	0.1376
200913	26SHAW-D	0.2014	80/20	0.2014
201201	26WRREN CT	0.8390	80/20	0.8390
203261	26BLOSSBCT	0.2188	80/20	0.2188
203349	26Z1-069 C	0.1562	80/20	0.1562
203351	26GROZ1-110	0.3040	80/20	0.3040
203352	26CANZ2-011	0.2983	80/20	0.2983
203922	X1-109 G1	3.7747	80/20	3.7747
203923	X1-109 G2	3.7747	80/20	3.7747
919201	AA1-144 OP	10.7841	80/20	10.7841
921642	AA2-000	82.8168	80/20	82.8168
930511	AB2-092	3.0408	80/20	3.0408
931091	AB1-160 C	0.0446	80/20	0.0446
936421	AD2-055	6.2605	80/20	6.2605
936991	AD2-133 C	1.8916	80/20	1.8916
939171	AE1-147 C	-3.8683	Adder	-4.55
940861	AE2-074 C	1.2552	80/20	1.2552
941191	AE2-113 C	8.0128	80/20	8.0128
941321	AE2-126 C	2.2922	80/20	2.2922
941331	AE2-129 C	1.8420	80/20	1.8420
941351	AE2-131 C (Suspended)	1.8420	80/20	1.8420
941421	AE2-139 C	4.3778	80/20	4.3778
942491	AE2-262 C	11.8150	80/20	11.8150
942501	AE2-263 C	11.1061	80/20	11.1061
942961	AE2-316 C	5.4299	80/20	5.4299
943751	AF1-043	18.7813	80/20	18.7813
944181	AF1-086 C O1	1.8141	80/20	1.8141
944311	AF1-099 C	17.9352	80/20	17.9352
944321	AF1-100 C	39.9285	80/20	39.9285
944381	AF1-103 O1	1.8660	80/20	1.8660
944691	AF1-134 C	1.7010	80/20	1.7010
944771	AF1-142 C	28.6963	80/20	28.6963

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944881	AF1-153 C O1	2.2002	80/20	2.2002
944901	AF1-155 C	2.1844	80/20	2.1844
945121	AF1-177	0.0736	80/20	0.0736
945161	AF1-181	0.0348	80/20	0.0348
945171	AF1-182	0.1759	80/20	0.1759
945181	AF1-183	0.0388	80/20	0.0388
945331	AF1-198	0.0288	80/20	0.0288
946111	AF1-276 C	5.9322	80/20	5.9322
946121	AF1-277 C	5.9322	80/20	5.9322
946131	AF1-278 C	4.7316	80/20	4.7316
946381	AF1-302 C	2.3711	80/20	2.3711
946421	AF1-306 C	9.6628	80/20	9.6628
957451	AF2-039 C	1.7233	80/20	1.7233
957941	AF2-088 C	0.8297	80/20	0.8297
958271	AF2-121 C	1.8420	80/20	1.8420
959061	AF2-197 C O1	2.3958	80/20	2.3958
959471	AF2-238 C	0.7955	80/20	0.7955
959741	AF2-265 C	0.5701	80/20	0.5701
960041	AF2-295 C	2.1844	80/20	2.1844
960051	AF2-296 C	1.7010	80/20	1.7010
961211	AF2-412	7.6830	80/20	7.6830
962411	AG1-090 C O2	30.0792	80/20	30.0792
962951	AG1-144 C	1.8420	80/20	1.8420
963571	AG1-206 C	1.2059	80/20	1.2059
963891	AG1-242 C	0.9214	80/20	0.9214
964341	AG1-296 C	0.7563	80/20	0.7563
964451	AG1-308 C O2	1.2741	80/20	1.2741
965121	AG1-377 C O1	1.8420	80/20	1.8420
965131	AG1-378 C O1	1.8420	80/20	1.8420
965201	AG1-385 C	2.8291	80/20	2.8291
965241	AG1-389 C O1	0.9179	80/20	0.9179
965251	AG1-390 C O2	0.9193	80/20	0.9193
965261	AG1-391 C O1	0.9179	80/20	0.9179
965271	AG1-392 C O1	1.8358	80/20	1.8358
965301	AG1-395 C	2.3670	80/20	2.3670
966121	AG1-481	1.4489	80/20	1.4489
WEC	WEC	0.1383	Confirmed LTF	0.1383
LGEE	LGEE	0.2551	Confirmed LTF	0.2551
CPL	CPL	0.0369	Confirmed LTF	0.0369
CBM-W2	CBM-W2	3.1898	Confirmed LTF	3.1898
TVA	TVA	0.4298	Confirmed LTF	0.4298
SIGE	SIGE	0.1760	Confirmed LTF	0.1760
CBM-S2	CBM-S2	1.3572	Confirmed LTF	1.3572
CBM-S1	CBM-S1	0.1235	Confirmed LTF	0.1235
MEC	MEC	0.6515	Confirmed LTF	0.6515
LAGN	LAGN	0.5547	Confirmed LTF	0.5547
CBM-W1	CBM-W1	6.7436	Confirmed LTF	6.7436

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
173976195	200701	26GROVER	PENELEC	941420	AE2-139 TAP	PENELEC	1	PN-P2-3-PN-230-14BT	breaker	621.0	101.81	105.34	DC	21.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.7770	50/50	5.7770
200666	26SHAWVL 4	5.6434	50/50	5.6434
200894	26K02	34.2838	50/50	34.2838
203351	26GROZ1-110	1.5966	50/50	1.5966
203352	26CANZ2-011	1.5668	50/50	1.5668
235003	AC1-025 E	0.3391	50/50	0.3391
236828	01GRAYMONT	0.9093	50/50	0.9093
290086	Q-036 E	3.3861	Adder	3.98
919201	AA1-144 OP	-23.7849	Adder	-27.98
921642	AA2-000	199.4280	50/50	199.4280
930511	AB2-092	7.3224	50/50	7.3224
936421	AD2-055	15.0755	50/50	15.0755
936991	AD2-133 C	1.5237	Adder	1.79
936992	AD2-133 E	6.9694	Adder	8.2
939171	AE1-147 C	2.7302	50/50	2.7302
939172	AE1-147 E	1.8202	50/50	1.8202
940201	AE2-001 C	2.7289	50/50	2.7289
940202	AE2-001 E	1.8193	50/50	1.8193
940681	AE2-055 C (Suspended)	2.7084	50/50	2.7084
940682	AE2-055 E (Suspended)	1.8056	50/50	1.8056
941191	AE2-113 C	4.6394	Adder	5.46
941192	AE2-113 E	4.9951	Adder	5.88
941261	AE2-120 C	2.7282	50/50	2.7282
941262	AE2-120 E	1.8188	50/50	1.8188
941271	AE2-121 C	1.4528	50/50	1.4528
941272	AE2-121 E	0.9700	50/50	0.9700
941321	AE2-126 C	1.5321	Adder	1.8
941322	AE2-126 E	1.0214	Adder	1.2
941331	AE2-129 C	1.3198	Adder	1.55
941332	AE2-129 E	0.8799	Adder	1.04
941351	AE2-131 C (Suspended)	1.3198	Adder	1.55
941352	AE2-131 E (Suspended)	0.8799	Adder	1.04
942351	AE2-248 C	2.1735	50/50	2.1735
942352	AE2-248 E	1.4490	50/50	1.4490
942491	AE2-262 C	11.6580	50/50	11.6580
942492	AE2-262 E	7.8342	50/50	7.8342
942501	AE2-263 C	10.9585	50/50	10.9585
942502	AE2-263 E	7.3166	50/50	7.3166
942961	AE2-316 C	3.8930	Adder	4.58
942962	AE2-316 E	5.5514	Adder	6.53
943751	AF1-043	45.2266	50/50	45.2266

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.8954	50/50	2.8954
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6286	50/50	1.6286
944181	AF1-086 C O1	1.2876	Adder	1.51
944182	AF1-086 E O1	5.6018	Adder	6.59
944311	AF1-099 C	17.6968	50/50	17.6968
944312	AF1-099 E	11.7979	50/50	11.7979
944321	AF1-100 C	32.5545	50/50	32.5545
944322	AF1-100 E	21.7030	50/50	21.7030
944412	AF1-106 BAT	2.0074	Merchant Transmission	2.0074
944471	AF1-112 C	2.7192	50/50	2.7192
944472	AF1-112 E	1.8128	50/50	1.8128
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.7130	50/50	2.7130
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8086	50/50	1.8086
944691	AF1-134 C	1.1556	Adder	1.36
944692	AF1-134 E	0.7704	Adder	0.91
944771	AF1-142 C	28.3150	50/50	28.3150
944772	AF1-142 E	18.8766	50/50	18.8766
944881	AF1-153 C O1	1.6016	Adder	1.88
944882	AF1-153 E O1	1.0677	Adder	1.26
944901	AF1-155 C	1.5895	Adder	1.87
944902	AF1-155 E	1.0596	Adder	1.25
945161	AF1-181	0.0265	50/50	0.0265
945171	AF1-182	0.1320	50/50	0.1320
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.7282	50/50	2.7282
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8188	50/50	1.8188
946381	AF1-302 C	1.7000	Adder	2.0
946382	AF1-302 E	2.2666	Adder	2.67
946421	AF1-306 C	6.9898	Adder	8.22
946422	AF1-306 E	27.9590	Adder	32.89
957451	AF2-039 C	1.1418	Adder	1.34
957452	AF2-039 E	0.7612	Adder	0.9
957941	AF2-088 C	0.5498	Adder	0.65
957942	AF2-088 E	0.3665	Adder	0.43
958271	AF2-121 C	1.3198	Adder	1.55
958272	AF2-121 E	0.8799	Adder	1.04
959063	AF2-197 BAT	13.5485	Merchant Transmission	13.5485
960022	AF2-293 E	0.2653	50/50	0.2653
960041	AF2-295 C	1.5895	Adder	1.87
960042	AF2-295 E	1.0596	Adder	1.25
960051	AF2-296 C	1.1556	Adder	1.36
960052	AF2-296 E	0.7704	Adder	0.91
961142	AF2-405 BAT	1.0037	Merchant Transmission	1.0037
961152	AF2-406 BAT	7.5277	Merchant Transmission	7.5277
961451	AF2-436	-0.1532	Adder	-0.18
962411	AG1-090 C O2	13.1610	50/50	13.1610

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962412	AG1-090 E O2	8.7740	50/50	8.7740
962951	AG1-144 C	0.6995	Adder	1.55
962952	AG1-144 E	0.4663	Adder	1.04
963571	AG1-206 C	0.4283	Adder	0.95
963572	AG1-206 E	0.2306	Adder	0.51
963891	AG1-242 C	0.3317	Adder	0.74
963892	AG1-242 E	0.1786	Adder	0.4
964031	AG1-257 C	1.8820	50/50	1.8820
964032	AG1-257 E	2.6303	50/50	2.6303
964041	AG1-258 C	1.8820	50/50	1.8820
964042	AG1-258 E	2.6303	50/50	2.6303
964341	AG1-296 C	0.2858	Adder	0.63
964342	AG1-296 E	0.1539	Adder	0.34
964451	AG1-308 C O2	0.4838	Adder	1.07
964452	AG1-308 E O2	0.6762	Adder	1.5
964703	AG1-333 BAT	0.2022	Merchant Transmission	0.2022
965121	AG1-377 C O1	0.6995	Adder	1.55
965122	AG1-377 E O1	0.4663	Adder	1.04
965131	AG1-378 C O1	0.6995	Adder	1.55
965132	AG1-378 E O1	0.4663	Adder	1.04
965201	AG1-385 C	1.0915	Adder	2.42
965202	AG1-385 E	0.3233	Adder	0.72
965301	AG1-395 C	0.8988	Adder	2.0
965302	AG1-395 E	0.2670	Adder	0.59
966041	AG1-473 C	7.2949	50/50	7.2949
966042	AG1-473 E	4.8633	50/50	4.8633
WEC	WEC	0.1877	Confirmed LTF	0.1877
LGEE	LGEE	0.3625	Confirmed LTF	0.3625
CPL	CPL	0.2396	Confirmed LTF	0.2396
CBM-W2	CBM-W2	4.8832	Confirmed LTF	4.8832
NY	NY	1.6994	Confirmed LTF	1.6994
TVA	TVA	0.7196	Confirmed LTF	0.7196
O-066	O-066	10.7209	Confirmed LTF	10.7209
SIGE	SIGE	0.2277	Confirmed LTF	0.2277
CBM-S2	CBM-S2	4.1864	Confirmed LTF	4.1864
CBM-S1	CBM-S1	0.1995	Confirmed LTF	0.1995
G-007	G-007	1.5666	Confirmed LTF	1.5666
MEC	MEC	0.9184	Confirmed LTF	0.9184
LAGN	LAGN	0.9100	Confirmed LTF	0.9100
CBM-W1	CBM-W1	8.6924	Confirmed LTF	8.6924

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
165880431	999326	26SHAWVL 2	PENELEC	200727	26SHAW. 2	PENELEC	2A	AP-P2-3-WP-230-443T *	breaker	166.0	98.55	101.08	DC	9.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	3.2639	50/50	3.2639
200666	26SHAWVL 4	3.3262	50/50	3.3262
200722	26SHAWVL 2	2.0010	50/50	2.0010
235003	AC1-025 E	0.1011	Adder	0.12
236828	01GRAYMONT	0.2779	Adder	0.33
921642	AA2-000	29.1109	Adder	34.25
930511	AB2-092	1.0689	Adder	1.26
936421	AD2-055	2.2006	Adder	2.59
939171	AE1-147 C	0.8378	Adder	0.99
939172	AE1-147 E	0.5586	Adder	0.66
940201	AE2-001 C	0.8356	Adder	0.98
940202	AE2-001 E	0.5571	Adder	0.66
940681	AE2-055 C (Suspended)	0.8011	Adder	0.94
940682	AE2-055 E (Suspended)	0.5341	Adder	0.63
941261	AE2-120 C	0.8343	Adder	0.98
941262	AE2-120 E	0.5562	Adder	0.65
941271	AE2-121 C	0.4475	Adder	0.53
941272	AE2-121 E	0.2988	Adder	0.35
941351	AE2-131 C (Suspended)	-1.4345	Adder	-1.69
942351	AE2-248 C	0.6524	Adder	0.77
942352	AE2-248 E	0.4349	Adder	0.51
942491	AE2-262 C	3.9670	Adder	4.67
942492	AE2-262 E	2.6658	Adder	3.14
942501	AE2-263 C	3.7289	Adder	4.39
942502	AE2-263 E	2.4897	Adder	2.93
943751	AF1-043	6.6018	Adder	7.77
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.8652	Adder	1.02
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.4867	Adder	0.57
944311	AF1-099 C	6.0218	Adder	7.08
944312	AF1-099 E	4.0146	Adder	4.72
944321	AF1-100 C	17.1840	50/50	17.1840
944322	AF1-100 E	11.4560	50/50	11.4560
944471	AF1-112 C	0.8193	Adder	0.96
944472	AF1-112 E	0.5462	Adder	0.64
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.8087	Adder	0.95

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5391	Adder	0.63
944771	AF1-142 C	9.6349	Adder	11.34
944772	AF1-142 E	6.4233	Adder	7.56
945161	AF1-181	0.0150	50/50	0.0150
945171	AF1-182	0.0778	50/50	0.0778
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8344	Adder	0.98
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5562	Adder	0.65
960022	AF2-293 E	0.0815	Adder	0.1
962411	AG1-090 C O2	2.5119	Adder	5.58
962412	AG1-090 E O2	1.6746	Adder	3.72
964031	AG1-257 C	0.3015	Adder	0.67
964032	AG1-257 E	0.4213	Adder	0.94
964041	AG1-258 C	0.3015	Adder	0.67
964042	AG1-258 E	0.4213	Adder	0.94
965303	AG1-395 BAT	1.2053	50/50	1.2053
966041	AG1-473 C	0.8054	Adder	1.79
966042	AG1-473 E	0.5369	Adder	1.19
G-007A	G-007A	1.0357	Confirmed LTF	1.0357
VFT	VFT	2.8509	Confirmed LTF	2.8509
CALDERWOOD	CALDERWOOD	0.0929	Confirmed LTF	0.0929
PRAIRIE	PRAIRIE	0.5631	Confirmed LTF	0.5631
CHEOAH	CHEOAH	0.0931	Confirmed LTF	0.0931
CBM-N	CBM-N	0.5568	Confirmed LTF	0.5568
COTTONWOOD	COTTONWOOD	0.4221	Confirmed LTF	0.4221
HAMLET	HAMLET	0.0820	Confirmed LTF	0.0820
GIBSON	GIBSON	0.1228	Confirmed LTF	0.1228
BLUEG	BLUEG	0.3906	Confirmed LTF	0.3906
TRIMBLE	TRIMBLE	0.1252	Confirmed LTF	0.1252
CATAWBA	CATAWBA	0.0549	Confirmed LTF	0.0549

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
165880163	200512	26LEWISTWN	PENELEC	200519	26REED TAP	PENELEC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	225.0	129.6	134.11	DC	10.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200812	26ALY HYDR	0.3605	50/50	0.3605
200852	26WARR RDG	0.1998	Adder	0.24
235003	AC1-025 E	0.1664	50/50	0.1664
236828	01GRAYMONT	0.4282	50/50	0.4282
290086	Q-036 E	2.0788	Adder	2.45
293301	N-039 E	3.2460	Adder	3.82
294515	O38_P22	2.8403	Adder	3.34
921642	AA2-000	23.0463	Adder	27.11
930511	AB2-092	0.8462	Adder	1.0
936421	AD2-055	1.7422	Adder	2.05
936991	AD2-133 C	0.9354	Adder	1.1
936992	AD2-133 E	4.2786	Adder	5.03
939171	AE1-147 C	1.2773	50/50	1.2773
939172	AE1-147 E	0.8515	50/50	0.8515
939591	AE1-188 C	-0.6130	Adder	-0.72
940201	AE2-001 C	1.2815	50/50	1.2815
940202	AE2-001 E	0.8543	50/50	0.8543
940681	AE2-055 C (Suspended)	1.3447	50/50	1.3447
940682	AE2-055 E (Suspended)	0.8965	50/50	0.8965
941231	AE2-117 C	0.9303	Adder	1.09
941232	AE2-117 E	0.6202	Adder	0.73
941241	AE2-118 C	0.8844	Adder	1.04
941242	AE2-118 E	0.5896	Adder	0.69
941261	AE2-120 C	1.2838	50/50	1.2838
941262	AE2-120 E	0.8558	50/50	0.8558
941271	AE2-121 C	0.6753	50/50	0.6753
941272	AE2-121 E	0.4509	50/50	0.4509
941321	AE2-126 C	0.6212	Adder	0.73
941322	AE2-126 E	0.4141	Adder	0.49
941331	AE2-129 C	0.6514	Adder	0.77
941332	AE2-129 E	0.4342	Adder	0.51
941351	AE2-131 C (Suspended)	0.6514	Adder	0.77
941352	AE2-131 E (Suspended)	0.4342	Adder	0.51
942121	AE2-224 C	2.6464	Adder	3.11
942122	AE2-224 E	1.7643	Adder	2.08
942351	AE2-248 C	1.0547	50/50	1.0547
942352	AE2-248 E	0.7031	50/50	0.7031
942491	AE2-262 C	3.7800	Adder	4.45
942492	AE2-262 E	2.5401	Adder	2.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942501	AE2-263 C	3.5532	Adder	4.18
942502	AE2-263 E	2.3723	Adder	2.79
942511	AE2-264 C	3.8801	Adder	4.56
942512	AE2-264 E	2.5867	Adder	3.04
943751	AF1-043	5.2265	Adder	6.15
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.4148	50/50	1.4148
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.7958	50/50	0.7958
944311	AF1-099 C	5.7380	Adder	6.75
944312	AF1-099 E	3.8253	Adder	4.5
944321	AF1-100 C	9.7346	Adder	11.45
944322	AF1-100 E	6.4898	Adder	7.64
944471	AF1-112 C	1.3115	50/50	1.3115
944472	AF1-112 E	0.8743	50/50	0.8743
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3308	50/50	1.3308
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.8872	50/50	0.8872
944691	AF1-134 C	0.5302	Adder	0.62
944692	AF1-134 E	0.3535	Adder	0.42
944771	AF1-142 C	9.1807	Adder	10.8
944772	AF1-142 E	6.1205	Adder	7.2
944881	AF1-153 C O1	0.5901	Adder	0.69
944882	AF1-153 E O1	0.3934	Adder	0.46
944901	AF1-155 C	0.5866	Adder	0.69
944902	AF1-155 E	0.3911	Adder	0.46
945011	AF1-166 C	-0.5009	Adder	-0.59
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.2836	50/50	1.2836
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.8558	50/50	0.8558
945591	AF1-224 C	-0.3844	Adder	-0.45
946421	AF1-306 C	2.5604	Adder	3.01
946422	AF1-306 E	10.2416	Adder	12.05
957451	AF2-039 C	0.4623	Adder	0.54
957452	AF2-039 E	0.3082	Adder	0.36
957561	AF2-050 C	1.3232	Adder	1.56
957562	AF2-050 E	0.8821	Adder	1.04
957931	AF2-087 C (Suspended)	0.1706	Adder	0.2
957932	AF2-087 E (Suspended)	0.2350	Adder	0.28
957941	AF2-088 C	0.2226	Adder	0.26
957942	AF2-088 E	0.1484	Adder	0.17
958071	AF2-101 C	-0.0823	Adder	-0.1
958271	AF2-121 C	0.6514	Adder	0.77
958272	AF2-121 E	0.4342	Adder	0.51
958601	AF2-151 C	-0.0812	Adder	-0.1
959241	AF2-215 C	-0.1404	Adder	-0.17
959802	AF2-271 E	0.2111	Adder	0.25
959843	AF2-275 BAT	0.0921	Merchant Transmission	0.0921
959853	AF2-276 BAT	0.0921	Merchant Transmission	0.0921

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960022	AF2-293 E	0.1239	50/50	0.1239
960041	AF2-295 C	0.5866	Adder	0.69
960042	AF2-295 E	0.3911	Adder	0.46
960051	AF2-296 C	0.5302	Adder	0.62
960052	AF2-296 E	0.3535	Adder	0.42
962411	AG1-090 C O2	6.0996	50/50	6.0996
962412	AG1-090 E O2	4.0664	50/50	4.0664
962951	AG1-144 C	0.3452	Adder	0.77
962952	AG1-144 E	0.2302	Adder	0.51
963571	AG1-206 C	0.1737	Adder	0.39
963572	AG1-206 E	0.0935	Adder	0.21
963891	AG1-242 C	0.1522	Adder	0.34
963892	AG1-242 E	0.0820	Adder	0.18
964031	AG1-257 C	0.9032	50/50	0.9032
964032	AG1-257 E	1.2623	50/50	1.2623
964041	AG1-258 C	0.9032	50/50	0.9032
964042	AG1-258 E	1.2623	50/50	1.2623
964191	AG1-280 C	0.2720	Adder	0.6
964192	AG1-280 E	0.1814	Adder	0.4
964201	AG1-281 C	0.2737	Adder	0.61
964202	AG1-281 E	0.1824	Adder	0.4
964391	AG1-301 C	0.5082	Adder	1.13
964392	AG1-301 E	0.3388	Adder	0.75
964451	AG1-308 C O2	0.2388	Adder	0.53
964452	AG1-308 E O2	0.3337	Adder	0.74
965121	AG1-377 C O1	0.3452	Adder	0.77
965122	AG1-377 E O1	0.2302	Adder	0.51
965131	AG1-378 C O1	0.3452	Adder	0.77
965132	AG1-378 E O1	0.2302	Adder	0.51
965201	AG1-385 C	0.4021	Adder	0.89
965202	AG1-385 E	0.1191	Adder	0.26
965301	AG1-395 C	0.4436	Adder	0.98
965302	AG1-395 E	0.1318	Adder	0.29
966041	AG1-473 C	4.4668	50/50	4.4668
966042	AG1-473 E	2.9779	50/50	2.9779
966152	AG1-484 BAT	0.6272	Merchant Transmission	0.6272
966463	AG1-515 BAT	0.3718	Merchant Transmission	0.3718
966891	AG1-560 BAT	12.4896	50/50	12.4896
966901	AG1-561 BAT	5.4371	50/50	5.4371
WEC	WEC	0.0394	Confirmed LTF	0.0394
LGEE	LGEE	0.0647	Confirmed LTF	0.0647
CALDERWOOD	CALDERWOOD	0.0055	Confirmed LTF	0.0055
CBM-W2	CBM-W2	0.5555	Confirmed LTF	0.5555
TVA	TVA	0.0322	Confirmed LTF	0.0322
O-066	O-066	1.7633	Confirmed LTF	1.7633
SIGE	SIGE	0.0381	Confirmed LTF	0.0381
CHEOAH	CHEOAH	0.0070	Confirmed LTF	0.0070
CBM-S1	CBM-S1	0.0144	Confirmed LTF	0.0144
G-007	G-007	0.3034	Confirmed LTF	0.3034
HAMLET	HAMLET	0.0878	Confirmed LTF	0.0878
MEC	MEC	0.1621	Confirmed LTF	0.1621
LAGN	LAGN	0.0543	Confirmed LTF	0.0543

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CATAWBA	CATAWBA	0.0374	Confirmed LTF	0.0374
CBM-W1	CBM-W1	2.1170	Confirmed LTF	2.1170

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
174170754	200513	26LEWISTWN	PENELEC	208005	JUNI BU2	PPL	1	PL:11:P42:000135	breaker	618.0	157.39	162.19	DC	29.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	6.1406	50/50	6.1406
200666	26SHAWVL 4	6.0429	50/50	6.0429
200715	26SHAWVL 1	4.0523	50/50	4.0523
200722	26SHAWVL 2	4.1465	50/50	4.1465
200812	26ALY HYDR	1.0595	50/50	1.0595
200852	26WARR RDG	0.6916	50/50	0.6916
200883	Q-053 E	5.7055	Adder	6.71
200886	26ARWF_N39	0.2982	50/50	0.2982
200894	26K02	5.3836	Adder	6.33
200905	26Q36	0.2360	50/50	0.2360
200913	26SHAW-D	0.1860	50/50	0.1860
203034	26NA_O38_P22	0.2619	50/50	0.2619
235003	AC1-025 E	0.4862	50/50	0.4862
236828	01GRAYMONT	1.2506	50/50	1.2506
290086	Q-036 E	7.2076	50/50	7.2076
293301	N-039 E	11.3037	50/50	11.3037
293393	V3-030E	2.7498	Adder	3.24
293603	O-018 E	4.5049	Adder	5.3
294515	O38_P22	9.8907	50/50	9.8907
296332	R-032 E	5.1979	Adder	6.12
901242	W1-045 E OP1	0.4569	Adder	0.54
921642	AA2-000	76.1635	50/50	76.1635
930511	AB2-092	2.3770	Adder	2.8
936421	AD2-055	4.8939	Adder	5.76
936991	AD2-133 C	3.2434	50/50	3.2434
936992	AD2-133 E	14.8350	50/50	14.8350
938384	AE1-071-C	11.9853	50/50	11.9853
938385	AE1-071-E	7.3340	50/50	7.3340
939171	AE1-147 C	3.7302	50/50	3.7302
939172	AE1-147 E	2.4868	50/50	2.4868
940201	AE2-001 C	3.7424	50/50	3.7424
940202	AE2-001 E	2.4950	50/50	2.4950
940681	AE2-055 C (Suspended)	3.9296	50/50	3.9296
940682	AE2-055 E (Suspended)	2.6198	50/50	2.6198
941191	AE2-113 C	6.9008	Adder	8.12
941192	AE2-113 E	7.4299	Adder	8.74
941231	AE2-117 C	3.2212	50/50	3.2212
941232	AE2-117 E	2.1474	50/50	2.1474
941241	AE2-118 C	3.0653	50/50	3.0653
941242	AE2-118 E	2.0435	50/50	2.0435
941261	AE2-120 C	3.7492	50/50	3.7492
941262	AE2-120 E	2.4994	50/50	2.4994

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941271	AE2-121 C	1.9719	50/50	1.9719
941272	AE2-121 E	1.3166	50/50	1.3166
941321	AE2-126 C	2.1377	50/50	2.1377
941322	AE2-126 E	1.4251	50/50	1.4251
941331	AE2-129 C	2.2508	50/50	2.2508
941332	AE2-129 E	1.5006	50/50	1.5006
941351	AE2-131 C (Suspended)	2.2508	50/50	2.2508
941352	AE2-131 E (Suspended)	1.5006	50/50	1.5006
942121	AE2-224 C	7.8520	Adder	9.24
942122	AE2-224 E	5.2346	Adder	6.16
942351	AE2-248 C	3.0812	50/50	3.0812
942352	AE2-248 E	2.0541	50/50	2.0541
942491	AE2-262 C	12.9555	50/50	12.9555
942492	AE2-262 E	8.7061	50/50	8.7061
942501	AE2-263 C	12.1782	50/50	12.1782
942502	AE2-263 E	8.1309	50/50	8.1309
942511	AE2-264 C	13.4338	50/50	13.4338
942512	AE2-264 E	8.9558	50/50	8.9558
942961	AE2-316 C	4.6466	Adder	5.47
942962	AE2-316 E	6.6261	Adder	7.8
943751	AF1-043	14.6816	Adder	17.27
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	4.1334	50/50	4.1334
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	2.3250	50/50	2.3250
944181	AF1-086 C O1	2.1145	Adder	2.49
944182	AF1-086 E O1	9.1990	Adder	10.82
944311	AF1-099 C	19.6664	50/50	19.6664
944312	AF1-099 E	13.1110	50/50	13.1110
944321	AF1-100 C	33.3555	50/50	33.3555
944322	AF1-100 E	22.2370	50/50	22.2370
944381	AF1-103 O1	1.7258	Adder	2.03
944471	AF1-112 C	3.8311	50/50	3.8311
944472	AF1-112 E	2.5541	50/50	2.5541
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	3.8882	50/50	3.8882
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	2.5922	50/50	2.5922
944691	AF1-134 C	1.5652	Adder	1.84
944692	AF1-134 E	1.0435	Adder	1.23
944751	AF1-140 C	0.9612	Adder	1.13
944752	AF1-140 E	0.6408	Adder	0.75
944771	AF1-142 C	31.4663	50/50	31.4663
944772	AF1-142 E	20.9775	50/50	20.9775
944881	AF1-153 C O1	2.0366	50/50	2.0366
944882	AF1-153 E O1	1.3578	50/50	1.3578
944901	AF1-155 C	2.0252	50/50	2.0252
944902	AF1-155 E	1.3502	50/50	1.3502
945161	AF1-181	0.0282	50/50	0.0282
945171	AF1-182	0.1414	50/50	0.1414
945181	AF1-183	0.0332	50/50	0.0332

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945491	AF1-214 C (Withdrawn : 12/03/2020)	3.7488	50/50	3.7488
945492	AF1-214 E (Withdrawn : 12/03/2020)	2.4992	50/50	2.4992
946111	AF1-276 C	5.7548	Adder	6.77
946112	AF1-276 E	2.8345	Adder	3.33
946121	AF1-277 C	5.7548	Adder	6.77
946122	AF1-277 E	2.8345	Adder	3.33
946131	AF1-278 C	4.5901	Adder	5.4
946132	AF1-278 E	2.2813	Adder	2.68
946381	AF1-302 C	2.0291	Adder	2.39
946382	AF1-302 E	2.7054	Adder	3.18
946421	AF1-306 C	8.8094	50/50	8.8094
946422	AF1-306 E	35.2377	50/50	35.2377
957451	AF2-039 C	1.5913	50/50	1.5913
957452	AF2-039 E	1.0609	50/50	1.0609
957512	AF2-045 E	1.6741	Adder	1.97
957561	AF2-050 C	3.9260	Adder	4.62
957562	AF2-050 E	2.6173	Adder	3.08
957931	AF2-087 C (Suspended)	0.5939	50/50	0.5939
957932	AF2-087 E (Suspended)	0.8178	50/50	0.8178
957941	AF2-088 C	0.7662	50/50	0.7662
957942	AF2-088 E	0.5108	50/50	0.5108
957981	AF2-092 C	0.6321	Adder	0.74
957982	AF2-092 E	0.4214	Adder	0.5
958271	AF2-121 C	2.2508	50/50	2.2508
958272	AF2-121 E	1.5006	50/50	1.5006
958551	AF2-146 C	3.8640	50/50	3.8640
958552	AF2-146 E	2.5760	50/50	2.5760
958571	AF2-148 C	2.1580	50/50	2.1580
958572	AF2-148 E	1.4387	50/50	1.4387
958871	AF2-178	0.3987	Adder	0.47
959381	AF2-229 C	1.1142	Adder	1.31
959382	AF2-229 E	0.9302	Adder	1.09
959802	AF2-271 E	0.7313	50/50	0.7313
959873	AF2-278 BAT	0.1604	Merchant Transmission	0.1604
959963	AF2-287 BAT	0.2437	Merchant Transmission	0.2437
959973	AF2-288 BAT	0.2437	Merchant Transmission	0.2437
960022	AF2-293 E	0.3619	50/50	0.3619
960041	AF2-295 C	2.0252	50/50	2.0252
960042	AF2-295 E	1.3502	50/50	1.3502
960051	AF2-296 C	1.5652	Adder	1.84
960052	AF2-296 E	1.0435	Adder	1.23
960451	AF2-336 C	1.0535	Adder	1.24
960452	AF2-336 E	0.7023	Adder	0.83
960461	AF2-337 C	1.0535	Adder	1.24
960462	AF2-337 E	0.7023	Adder	0.83
960471	AF2-338 C	1.0535	Adder	1.24
960472	AF2-338 E	0.7023	Adder	0.83
960481	AF2-339 C	1.0535	Adder	1.24
960482	AF2-339 E	0.7023	Adder	0.83
961481	AF2-439 C	2.5866	Adder	3.04
961482	AF2-439 E	2.3876	Adder	2.81

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961981	AG1-041 C	0.3433	Adder	0.76
961982	AG1-041 E	0.2289	Adder	0.51
962411	AG1-090 C O2	17.8164	50/50	17.8164
962412	AG1-090 E O2	11.8776	50/50	11.8776
962951	AG1-144 C	2.2508	50/50	2.2508
962952	AG1-144 E	1.5006	50/50	1.5006
963571	AG1-206 C	1.1279	50/50	1.1279
963572	AG1-206 E	0.6073	50/50	0.6073
963891	AG1-242 C	0.4493	Adder	1.0
963892	AG1-242 E	0.2420	Adder	0.54
964031	AG1-257 C	2.6383	50/50	2.6383
964032	AG1-257 E	3.6873	50/50	3.6873
964041	AG1-258 C	2.6383	50/50	2.6383
964042	AG1-258 E	3.6873	50/50	3.6873
964191	AG1-280 C	0.8111	Adder	1.8
964192	AG1-280 E	0.5407	Adder	1.2
964201	AG1-281 C	0.8157	Adder	1.81
964202	AG1-281 E	0.5438	Adder	1.21
964341	AG1-296 C	0.3560	Adder	0.79
964342	AG1-296 E	0.1917	Adder	0.43
964391	AG1-301 C	3.3197	50/50	3.3197
964392	AG1-301 E	2.2131	50/50	2.2131
964451	AG1-308 C O2	1.5568	50/50	1.5568
964452	AG1-308 E O2	2.1758	50/50	2.1758
964751	AG1-338 C	0.2252	Adder	0.5
964752	AG1-338 E	0.0307	Adder	0.07
964761	AG1-339 C	0.2354	Adder	0.52
964762	AG1-339 E	0.0205	Adder	0.05
964771	AG1-340 C	0.2252	Adder	0.5
964772	AG1-340 E	0.0307	Adder	0.07
965121	AG1-377 C O1	2.2508	50/50	2.2508
965122	AG1-377 E O1	1.5006	50/50	1.5006
965131	AG1-378 C O1	2.2508	50/50	2.2508
965132	AG1-378 E O1	1.5006	50/50	1.5006
965171	AG1-382 C	0.6260	Adder	1.39
965172	AG1-382 E	0.4173	Adder	0.93
965201	AG1-385 C	2.6188	50/50	2.6188
965202	AG1-385 E	0.7756	50/50	0.7756
965221	AG1-387 C	0.6260	Adder	1.39
965222	AG1-387 E	0.4173	Adder	0.93
965301	AG1-395 C	2.8923	50/50	2.8923
965302	AG1-395 E	0.8591	50/50	0.8591
966041	AG1-473 C	13.0744	50/50	13.0744
966042	AG1-473 E	8.7163	50/50	8.7163
966121	AG1-481	0.7103	Adder	1.58
WEC	WEC	0.5453	Confirmed LTF	0.5453
LGEE	LGEE	1.0562	Confirmed LTF	1.0562
CPL	CPL	0.6723	Confirmed LTF	0.6723
CBM-W2	CBM-W2	14.1478	Confirmed LTF	14.1478
NY	NY	0.5065	Confirmed LTF	0.5065
TVA	TVA	2.0818	Confirmed LTF	2.0818
O-066	O-066	30.2379	Confirmed LTF	30.2379

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
SIGE	SIGE	0.6476	Confirmed LTF	0.6476
CBM-S2	CBM-S2	11.8912	Confirmed LTF	11.8912
CBM-S1	CBM-S1	0.5784	Confirmed LTF	0.5784
G-007	G-007	4.7029	Confirmed LTF	4.7029
MEC	MEC	2.6648	Confirmed LTF	2.6648
LAGN	LAGN	2.6320	Confirmed LTF	2.6320
CBM-W1	CBM-W1	25.1238	Confirmed LTF	25.1238

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
165880071	200522	26SHADE GP	PENELEC	938380	AE1-071-POI	PENELEC	1	PL:10:P45:102437	breaker	160.0	195.09	202.22	DC	11.4

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200812	26ALY HYDR	0.4042	50/50	0.4042
200852	26WARR RDG	0.2636	50/50	0.2636
200883	Q-053 E	2.1510	Adder	2.53
235003	AC1-025 E	0.1866	50/50	0.1866
236828	01GRAYMONT	0.4801	50/50	0.4801
290086	Q-036 E	2.3338	Adder	2.75
293301	N-039 E	3.6448	Adder	4.29
294515	O38_P22	3.1892	Adder	3.75
921642	AA2-000	25.8759	Adder	30.44
930511	AB2-092	0.9501	Adder	1.12
936421	AD2-055	1.9561	Adder	2.3
936991	AD2-133 C	1.0502	Adder	1.24
936992	AD2-133 E	4.8035	Adder	5.65
939171	AE1-147 C	1.4321	50/50	1.4321
939172	AE1-147 E	0.9547	50/50	0.9547
939591	AE1-188 C	-0.6881	Adder	-0.81
940201	AE2-001 C	1.4368	50/50	1.4368
940202	AE2-001 E	0.9578	50/50	0.9578
940681	AE2-055 C (Suspended)	1.5077	50/50	1.5077
940682	AE2-055 E (Suspended)	1.0051	50/50	1.0051
941191	AE2-113 C	2.6637	Adder	3.13
941192	AE2-113 E	2.8679	Adder	3.37
941231	AE2-117 C	1.2276	50/50	1.2276
941232	AE2-117 E	0.8184	50/50	0.8184
941241	AE2-118 C	0.9922	Adder	1.17
941242	AE2-118 E	0.6614	Adder	0.78
941261	AE2-120 C	1.4393	50/50	1.4393
941262	AE2-120 E	0.9595	50/50	0.9595
941271	AE2-121 C	0.7571	50/50	0.7571
941272	AE2-121 E	0.5055	50/50	0.5055
941321	AE2-126 C	0.6973	Adder	0.82
941322	AE2-126 E	0.4648	Adder	0.55
941331	AE2-129 C	0.7311	Adder	0.86
941332	AE2-129 E	0.4874	Adder	0.57
941351	AE2-131 C (Suspended)	0.7311	Adder	0.86
941352	AE2-131 E (Suspended)	0.4874	Adder	0.57
942121	AE2-224 C	2.9733	Adder	3.5
942122	AE2-224 E	1.9822	Adder	2.33
942351	AE2-248 C	1.1824	50/50	1.1824
942352	AE2-248 E	0.7883	50/50	0.7883
942491	AE2-262 C	4.2394	Adder	4.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942492	AE2-262 E	2.8489	Adder	3.35
942501	AE2-263 C	3.9850	Adder	4.69
942502	AE2-263 E	2.6606	Adder	3.13
942511	AE2-264 C	5.1197	50/50	5.1197
942512	AE2-264 E	3.4131	50/50	3.4131
942961	AE2-316 C	1.7575	Adder	2.07
942962	AE2-316 E	2.5061	Adder	2.95
943751	AF1-043	5.8682	Adder	6.9
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.5860	50/50	1.5860
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8922	50/50	0.8922
944311	AF1-099 C	6.4354	Adder	7.57
944312	AF1-099 E	4.2902	Adder	5.05
944321	AF1-100 C	10.9204	Adder	12.85
944322	AF1-100 E	7.2802	Adder	8.56
944471	AF1-112 C	1.4704	50/50	1.4704
944472	AF1-112 E	0.9802	50/50	0.9802
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.4920	50/50	1.4920
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9946	50/50	0.9946
944691	AF1-134 C	0.5955	Adder	0.7
944692	AF1-134 E	0.3970	Adder	0.47
944771	AF1-142 C	10.2966	Adder	12.11
944772	AF1-142 E	6.8644	Adder	8.08
944881	AF1-153 C O1	0.6625	Adder	0.78
944882	AF1-153 E O1	0.4417	Adder	0.52
944901	AF1-155 C	0.6586	Adder	0.77
944902	AF1-155 E	0.4391	Adder	0.52
945011	AF1-166 C	-0.5622	Adder	-0.66
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4392	50/50	1.4392
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9594	50/50	0.9594
945591	AF1-224 C	-0.4314	Adder	-0.51
946381	AF1-302 C	0.7674	Adder	0.9
946382	AF1-302 E	1.0233	Adder	1.2
946421	AF1-306 C	2.8738	Adder	3.38
946422	AF1-306 E	11.4954	Adder	13.52
957451	AF2-039 C	0.5188	Adder	0.61
957452	AF2-039 E	0.3459	Adder	0.41
957561	AF2-050 C	1.4867	Adder	1.75
957562	AF2-050 E	0.9911	Adder	1.17
957931	AF2-087 C (Suspended)	0.1915	Adder	0.23
957932	AF2-087 E (Suspended)	0.2638	Adder	0.31
957941	AF2-088 C	0.2498	Adder	0.29
957942	AF2-088 E	0.1665	Adder	0.2
958071	AF2-101 C	-0.0937	Adder	-0.11
958271	AF2-121 C	0.7311	Adder	0.86
958272	AF2-121 E	0.4874	Adder	0.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958551	AF2-146 C	5.3006	50/50	5.3006
958552	AF2-146 E	3.5338	50/50	3.5338
958571	AF2-148 C	4.3049	50/50	4.3049
958572	AF2-148 E	2.8699	50/50	2.8699
958601	AF2-151 C	-0.0925	Adder	-0.11
959241	AF2-215 C	-0.1576	Adder	-0.19
959802	AF2-271 E	0.2368	Adder	0.28
959843	AF2-275 BAT	0.1034	Merchant Transmission	0.1034
959853	AF2-276 BAT	0.1034	Merchant Transmission	0.1034
960022	AF2-293 E	0.1389	50/50	0.1389
960041	AF2-295 C	0.6586	Adder	0.77
960042	AF2-295 E	0.4391	Adder	0.52
960051	AF2-296 C	0.5955	Adder	0.7
960052	AF2-296 E	0.3970	Adder	0.47
962411	AG1-090 C O2	6.8394	50/50	6.8394
962412	AG1-090 E O2	4.5596	50/50	4.5596
962951	AG1-144 C	0.3875	Adder	0.86
962952	AG1-144 E	0.2583	Adder	0.57
963571	AG1-206 C	0.1950	Adder	0.43
963572	AG1-206 E	0.1050	Adder	0.23
963891	AG1-242 C	0.1710	Adder	0.38
963892	AG1-242 E	0.0921	Adder	0.2
964031	AG1-257 C	1.0126	50/50	1.0126
964032	AG1-257 E	1.4152	50/50	1.4152
964041	AG1-258 C	1.0126	50/50	1.0126
964042	AG1-258 E	1.4152	50/50	1.4152
964191	AG1-280 C	0.3056	Adder	0.68
964192	AG1-280 E	0.2037	Adder	0.45
964201	AG1-281 C	0.3074	Adder	0.68
964202	AG1-281 E	0.2049	Adder	0.45
964391	AG1-301 C	1.2653	50/50	1.2653
964392	AG1-301 E	0.8435	50/50	0.8435
964451	AG1-308 C O2	0.2680	Adder	0.59
964452	AG1-308 E O2	0.3746	Adder	0.83
965121	AG1-377 C O1	0.3875	Adder	0.86
965122	AG1-377 E O1	0.2583	Adder	0.57
965131	AG1-378 C O1	0.3875	Adder	0.86
965132	AG1-378 E O1	0.2583	Adder	0.57
965201	AG1-385 C	0.4515	Adder	1.0
965202	AG1-385 E	0.1337	Adder	0.3
965301	AG1-395 C	0.4979	Adder	1.11
965302	AG1-395 E	0.1479	Adder	0.33
966041	AG1-473 C	5.0062	50/50	5.0062
966042	AG1-473 E	3.3375	50/50	3.3375
966152	AG1-484 BAT	0.7123	Merchant Transmission	0.7123
966463	AG1-515 BAT	0.4172	Merchant Transmission	0.4172
966891	AG1-560 BAT	13.9988	50/50	13.9988
966901	AG1-561 BAT	6.0982	50/50	6.0982
WEC	WEC	0.0460	Confirmed LTF	0.0460
LGEE	LGEE	0.0767	Confirmed LTF	0.0767
CALDERWOOD	CALDERWOOD	0.0045	Confirmed LTF	0.0045
CBM-W2	CBM-W2	0.6630	Confirmed LTF	0.6630

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
TVA	TVA	0.0420	Confirmed LTF	0.0420
O-066	O-066	1.9786	Confirmed LTF	1.9786
SIGE	SIGE	0.0434	Confirmed LTF	0.0434
CHEOAH	CHEOAH	0.0060	Confirmed LTF	0.0060
CBM-S1	CBM-S1	0.0179	Confirmed LTF	0.0179
G-007	G-007	0.3423	Confirmed LTF	0.3423
HAMLET	HAMLET	0.0982	Confirmed LTF	0.0982
MEC	MEC	0.1907	Confirmed LTF	0.1907
LAGN	LAGN	0.0683	Confirmed LTF	0.0683
CATAWBA	CATAWBA	0.0413	Confirmed LTF	0.0413
CBM-W1	CBM-W1	2.4535	Confirmed LTF	2.4535

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
164869500	200593	26GLADE	PENELEC	200811	26WARREN	PENELEC	1	PN-P2-2-PN-230-007T	bus	621.0	156.13	158.73	DC	16.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	13.7450	50/50	13.7450
200643	26SENECA#2	12.9813	50/50	12.9813
200644	26SENECA#3	1.4185	50/50	1.4185
200649	26PENNTech	1.3764	50/50	1.3764
200665	26SHAWVL 3	4.4633	50/50	4.4633
200666	26SHAWVL 4	4.3870	50/50	4.3870
200722	26SHAWVL 2	3.0093	50/50	3.0093
200894	26K02	4.7552	Adder	5.59
203999	P-047 E	4.9492	Adder	5.82
235003	AC1-025 E	0.2401	50/50	0.2401
236828	01GRAYMONT	0.6415	50/50	0.6415
290086	Q-036 E	3.0423	Adder	3.58
915952	Y3-092 NFTWR	97.0200	Merchant Transmission	97.0200
916202	Z1-069 E	6.0861	Adder	7.16
921642	AA2-000	51.2953	Adder	60.35
923821	AB2-019 FTWR	2.7166	Merchant Transmission	2.7166
930511	AB2-092	1.8834	Adder	2.22
931092	AB1-160 E	1.7389	Adder	2.05
936421	AD2-055	3.8776	Adder	4.56
936991	AD2-133 C	1.3690	Adder	1.61
936992	AD2-133 E	6.2619	Adder	7.37
939171	AE1-147 C	1.9252	50/50	1.9252
939172	AE1-147 E	1.2834	50/50	1.2834
940201	AE2-001 C	1.9248	50/50	1.9248
940202	AE2-001 E	1.2832	50/50	1.2832
940681	AE2-055 C (Suspended)	1.9200	50/50	1.9200
940682	AE2-055 E (Suspended)	1.2800	50/50	1.2800
940861	AE2-074 C	2.3538	50/50	2.3538
940862	AE2-074 E	3.0985	50/50	3.0985
941191	AE2-113 C	12.2108	50/50	12.2108
941192	AE2-113 E	13.1470	50/50	13.1470
941261	AE2-120 C	1.9247	50/50	1.9247
941262	AE2-120 E	1.2831	50/50	1.2831
941271	AE2-121 C	1.0238	50/50	1.0238
941272	AE2-121 E	0.6836	50/50	0.6836
941321	AE2-126 C	2.1053	50/50	2.1053
941322	AE2-126 E	1.4035	50/50	1.4035
941331	AE2-129 C	1.1558	Adder	1.36
941332	AE2-129 E	0.7705	Adder	0.91
941351	AE2-131 C (Suspended)	1.1558	Adder	1.36
941352	AE2-131 E (Suspended)	0.7705	Adder	0.91

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942351	AE2-248 C	1.5376	50/50	1.5376
942352	AE2-248 E	1.0251	50/50	1.0251
942491	AE2-262 C	8.0870	50/50	8.0870
942492	AE2-262 E	5.4345	50/50	5.4345
942501	AE2-263 C	7.6018	50/50	7.6018
942502	AE2-263 E	5.0754	50/50	5.0754
942813	AE2-299 BAT	23.7184	Merchant Transmission	23.7184
942961	AE2-316 C	4.0261	Adder	4.74
942962	AE2-316 E	5.7412	Adder	6.75
943751	AF1-043	11.6328	Adder	13.69
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.0495	50/50	2.0495
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.1529	50/50	1.1529
944311	AF1-099 C	12.2761	50/50	12.2761
944312	AF1-099 E	8.1840	50/50	8.1840
944321	AF1-100 C	24.3735	50/50	24.3735
944322	AF1-100 E	16.2490	50/50	16.2490
944382	AF1-103 BAT	10.1126	50/50	10.1126
944392	AF1-104 BAT	2.2092	Merchant Transmission	2.2092
944471	AF1-112 C	1.9225	50/50	1.9225
944472	AF1-112 E	1.2817	50/50	1.2817
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.9211	50/50	1.9211
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.2807	50/50	1.2807
944691	AF1-134 C	0.9952	Adder	1.17
944692	AF1-134 E	0.6635	Adder	0.78
944771	AF1-142 C	19.6417	50/50	19.6417
944772	AF1-142 E	13.0945	50/50	13.0945
944881	AF1-153 C O1	1.9645	50/50	1.9645
944882	AF1-153 E O1	1.3097	50/50	1.3097
944901	AF1-155 C	1.9510	50/50	1.9510
944902	AF1-155 E	1.3006	50/50	1.3006
945161	AF1-181	0.0205	50/50	0.0205
945171	AF1-182	0.1026	50/50	0.1026
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.9247	50/50	1.9247
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.2831	50/50	1.2831
946111	AF1-276 C	16.2060	50/50	16.2060
946112	AF1-276 E	7.9820	50/50	7.9820
946121	AF1-277 C	16.2060	50/50	16.2060
946122	AF1-277 E	7.9820	50/50	7.9820
946131	AF1-278 C	12.9261	50/50	12.9261
946132	AF1-278 E	6.4243	50/50	6.4243
946381	AF1-302 C	1.7581	Adder	2.07
946382	AF1-302 E	2.3442	Adder	2.76
946421	AF1-306 C	9.5839	50/50	9.5839
946422	AF1-306 E	38.3357	50/50	38.3357
957451	AF2-039 C	0.9816	Adder	1.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957452	AF2-039 E	0.6544	Adder	0.77
957941	AF2-088 C	0.4726	Adder	0.56
957942	AF2-088 E	0.3151	Adder	0.37
958271	AF2-121 C	1.1558	Adder	1.36
958272	AF2-121 E	0.7705	Adder	0.91
959471	AF2-238 C	0.7558	Adder	0.89
959472	AF2-238 E	0.5039	Adder	0.59
959741	AF2-265 C	0.5417	Adder	0.64
959742	AF2-265 E	0.4031	Adder	0.47
960022	AF2-293 E	0.1871	50/50	0.1871
960041	AF2-295 C	1.9510	50/50	1.9510
960042	AF2-295 E	1.3006	50/50	1.3006
960051	AF2-296 C	0.9952	Adder	1.17
960052	AF2-296 E	0.6635	Adder	0.78
961211	AF2-412	8.2687	Adder	9.73
962411	AG1-090 C O2	9.6462	50/50	9.6462
962412	AG1-090 E O2	6.4308	50/50	6.4308
962951	AG1-144 C	0.6126	Adder	1.36
962952	AG1-144 E	0.4084	Adder	0.91
963571	AG1-206 C	1.1942	50/50	1.1942
963572	AG1-206 E	0.6431	50/50	0.6431
963891	AG1-242 C	0.2857	Adder	0.63
963892	AG1-242 E	0.1538	Adder	0.34
964031	AG1-257 C	1.3301	50/50	1.3301
964032	AG1-257 E	1.8589	50/50	1.8589
964041	AG1-258 C	1.3301	50/50	1.3301
964042	AG1-258 E	1.8589	50/50	1.8589
964341	AG1-296 C	0.2887	Adder	0.64
964342	AG1-296 E	0.1555	Adder	0.35
964451	AG1-308 C O2	0.4237	Adder	0.94
964452	AG1-308 E O2	0.5921	Adder	1.31
965121	AG1-377 C O1	0.6126	Adder	1.36
965122	AG1-377 E O1	0.4084	Adder	0.91
965131	AG1-378 C O1	0.6126	Adder	1.36
965132	AG1-378 E O1	0.4084	Adder	0.91
965201	AG1-385 C	2.5260	50/50	2.5260
965202	AG1-385 E	0.7482	50/50	0.7482
965241	AG1-389 C O1	0.7205	Adder	1.6
965242	AG1-389 E O1	0.4803	Adder	1.07
965251	AG1-390 C O2	0.7227	Adder	1.6
965252	AG1-390 E O2	0.4818	Adder	1.07
965261	AG1-391 C O1	0.7205	Adder	1.6
965262	AG1-391 E O1	0.4803	Adder	1.07
965271	AG1-392 C O1	1.4409	Adder	3.2
965272	AG1-392 E O1	0.9606	Adder	2.13
965301	AG1-395 C	0.7871	Adder	1.75
965302	AG1-395 E	0.2338	Adder	0.52
965862	AG1-455 BAT	2.1360	Merchant Transmission	2.1360
966041	AG1-473 C	5.1117	50/50	5.1117
966042	AG1-473 E	3.4078	50/50	3.4078
966122	AG1-481 BAT	7.7361	50/50	7.7361
966773	AG1-548 BAT	1.7209	Merchant Transmission	1.7209

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
G-007A	G-007A	2.7739	Confirmed LTF	2.7739
VFT	VFT	7.6626	Confirmed LTF	7.6626
CALDERWOOD	CALDERWOOD	0.3931	Confirmed LTF	0.3931
PRAIRIE	PRAIRIE	2.4952	Confirmed LTF	2.4952
CHEOAH	CHEOAH	0.3934	Confirmed LTF	0.3934
CBM-N	CBM-N	1.5276	Confirmed LTF	1.5276
COTTONWOOD	COTTONWOOD	1.8291	Confirmed LTF	1.8291
HAMLET	HAMLET	0.3315	Confirmed LTF	0.3315
GIBSON	GIBSON	0.5476	Confirmed LTF	0.5476
BLUEG	BLUEG	1.7169	Confirmed LTF	1.7169
TRIMBLE	TRIMBLE	0.5509	Confirmed LTF	0.5509
CATAWBA	CATAWBA	0.2240	Confirmed LTF	0.2240

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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
164247835	200599	26ERIE W	PENELEC	238547	02AT	ATSI	1	PN-P2-3-PN-230-14BT	breaker	1900.0	111.92	112.42	DC	20.96

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200662	26SCRUB GR	4.6470	50/50	4.6470
200828	26HNSMLK 1	3.1097	50/50	3.1097
200829	26HNSMLK 2	3.1097	50/50	3.1097
200830	26HNSMLK 3	3.1097	50/50	3.1097
200831	26HNSMLK 4	3.1097	50/50	3.1097
200832	26HNSMLK 5	3.1097	50/50	3.1097
200849	26LAKVU GN	0.4122	50/50	0.4122
200894	26K02	8.3700	Adder	9.85
201201	26WRREN CT	3.3716	50/50	3.3716
203999	P-047 E	12.0202	Adder	14.14
235003	AC1-025 E	0.2648	Adder	0.31
236828	01GRAYMONT	0.7088	Adder	0.83
290086	Q-036 E	5.5896	Adder	6.58
915951	Y3-092 FTIR	592.0700	50/50	592.0700
916202	Z1-069 E	10.2699	Adder	12.08
920341	AA2-132 (Withdrawn : 12/07/2020)	2.8033	Adder	3.3
921642	AA2-000	76.6203	Adder	90.14
930511	AB2-092	2.8133	Adder	3.31
931092	AB1-160 E	2.9342	Adder	3.45
935191	AD1-154	3.3509	Adder	3.94
936421	AD2-055	5.7920	Adder	6.81
936991	AD2-133 C	2.5153	Adder	2.96
936992	AD2-133 E	11.5048	Adder	13.54
938951	AE1-123	3.6036	Adder	4.24
939171	AE1-147 C	2.1276	Adder	2.5
939172	AE1-147 E	1.4184	Adder	1.67
939291	AE1-160 C	4.7558	50/50	4.7558
939292	AE1-160 E	2.7336	50/50	2.7336
940201	AE2-001 C	2.1270	Adder	2.5
940202	AE2-001 E	1.4180	Adder	1.67
940681	AE2-055 C (Suspended)	2.1162	Adder	2.49
940682	AE2-055 E (Suspended)	1.4108	Adder	1.66
940861	AE2-074 C	2.9573	Adder	3.48
940862	AE2-074 E	3.8929	Adder	4.58
941191	AE2-113 C	13.0790	Adder	15.39
941192	AE2-113 E	14.0819	Adder	16.57
941261	AE2-120 C	2.1266	Adder	2.5
941262	AE2-120 E	1.4177	Adder	1.67
941271	AE2-121 C	1.1318	Adder	1.33
941272	AE2-121 E	0.7557	Adder	0.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941321	AE2-126 C	2.2829	Adder	2.69
941322	AE2-126 E	1.5219	Adder	1.79
941331	AE2-129 C	1.8517	Adder	2.18
941332	AE2-129 E	1.2345	Adder	1.45
941351	AE2-131 C (Suspended)	1.8517	Adder	2.18
941352	AE2-131 E (Suspended)	1.2345	Adder	1.45
942351	AE2-248 C	1.6965	Adder	2.0
942352	AE2-248 E	1.1310	Adder	1.33
942491	AE2-262 C	9.0134	Adder	10.6
942492	AE2-262 E	6.0570	Adder	7.13
942501	AE2-263 C	8.4726	Adder	9.97
942502	AE2-263 E	5.6568	Adder	6.66
942811	AE2-299 C	15.9571	50/50	15.9571
942812	AE2-299 E	63.8285	50/50	63.8285
942961	AE2-316 C	7.4990	Adder	8.82
942962	AE2-316 E	10.6936	Adder	12.58
943151	AE2-344 C	35.8014	50/50	35.8014
943152	AE2-344 E	23.8676	50/50	23.8676
943351	AF1-006 C	6.8550	50/50	6.8550
943352	AF1-006 E	3.8560	50/50	3.8560
943751	AF1-043	17.3761	Adder	20.44
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.2606	Adder	2.66
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.2716	Adder	1.5
944181	AF1-086 C O1	2.8177	Adder	3.31
944182	AF1-086 E O1	12.2585	Adder	14.42
944261	AF1-094 C	5.5565	50/50	5.5565
944262	AF1-094 E	3.7043	50/50	3.7043
944281	AF1-096 C	4.4936	50/50	4.4936
944282	AF1-096 E	2.9958	50/50	2.9958
944301	AF1-098 C	23.3381	50/50	23.3381
944302	AF1-098 E	15.5587	50/50	15.5587
944311	AF1-099 C	13.6823	Adder	16.1
944312	AF1-099 E	9.1216	Adder	10.73
944321	AF1-100 C	27.3513	Adder	32.18
944322	AF1-100 E	18.2342	Adder	21.45
944381	AF1-103 O1	7.4984	50/50	7.4984
944391	AF1-104 O1	11.3678	50/50	11.3678
944411	AF1-106 O1	2.9869	Adder	3.51
944471	AF1-112 C	2.1219	Adder	2.5
944472	AF1-112 E	1.4146	Adder	1.66
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.1186	Adder	2.49
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.4124	Adder	1.66
944691	AF1-134 C	1.8268	Adder	2.15
944692	AF1-134 E	1.2179	Adder	1.43
944771	AF1-142 C	21.8917	Adder	25.75
944772	AF1-142 E	14.5945	Adder	17.17
944881	AF1-153 C O1	2.3209	Adder	2.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944882	AF1-153 E O1	1.5473	Adder	1.82
944901	AF1-155 C	2.3189	Adder	2.73
944902	AF1-155 E	1.5459	Adder	1.82
945021	AF1-167 C	1.3325	Adder	1.57
945022	AF1-167 E	0.8899	Adder	1.05
945051	AF1-170 C	24.7138	50/50	24.7138
945052	AF1-170 E	16.4759	50/50	16.4759
945121	AF1-177	0.2958	50/50	0.2958
945451	AF1-210 C	1.4561	Adder	1.71
945452	AF1-210 E	0.9707	Adder	1.14
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.1266	Adder	2.5
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.4177	Adder	1.67
945751	AF1-240 C O1	2.0105	Adder	2.37
945752	AF1-240 E O1	1.3403	Adder	1.58
946111	AF1-276 C	15.5530	Adder	18.3
946112	AF1-276 E	7.6605	Adder	9.01
946121	AF1-277 C	15.5530	Adder	18.3
946122	AF1-277 E	7.6605	Adder	9.01
946131	AF1-278 C	12.4053	Adder	14.59
946132	AF1-278 E	6.1655	Adder	7.25
946211	AF1-286 C	1.2097	Adder	1.42
946212	AF1-286 E	0.8214	Adder	0.97
946221	AF1-287 C	6.1184	50/50	6.1184
946222	AF1-287 E	4.0790	50/50	4.0790
946381	AF1-302 C	3.2747	Adder	3.85
946382	AF1-302 E	4.3662	Adder	5.14
946401	AF1-304 C	20.4282	50/50	20.4282
946402	AF1-304 E	13.6188	50/50	13.6188
946421	AF1-306 C	9.9244	Adder	11.68
946422	AF1-306 E	39.6974	Adder	46.7
946771	AF1-217 C	6.1183	50/50	6.1183
946772	AF1-217 E	4.0789	50/50	4.0789
957161	AF2-010 C	21.1057	50/50	21.1057
957162	AF2-010 E	14.2234	50/50	14.2234
957451	AF2-039 C	1.3949	Adder	1.64
957452	AF2-039 E	0.9299	Adder	1.09
957571	AF2-051 C	15.1635	50/50	15.1635
957572	AF2-051 E	7.8115	50/50	7.8115
957941	AF2-088 C	0.6716	Adder	0.79
957942	AF2-088 E	0.4477	Adder	0.53
958271	AF2-121 C	1.8517	Adder	2.18
958272	AF2-121 E	1.2345	Adder	1.45
958361	AF2-130 C	2.8677	Adder	3.37
958362	AF2-130 E	1.9118	Adder	2.25
958731	AF2-164 C O1	17.6842	50/50	17.6842
958732	AF2-164 E O1	11.7894	50/50	11.7894
958741	AF2-165 C	4.0072	50/50	4.0072
958742	AF2-165 E	2.6714	50/50	2.6714
958751	AF2-166 C	2.8677	Adder	3.37
958752	AF2-166 E	1.9118	Adder	2.25
959441	AF2-235 C	2.2468	50/50	2.2468

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959442	AF2-235 E	1.4979	50/50	1.4979
959471	AF2-238 C	1.7638	Adder	2.08
959472	AF2-238 E	1.1759	Adder	1.38
959491	AF2-240 C	0.5645	Adder	0.66
959492	AF2-240 E	0.4809	Adder	0.57
959501	AF2-241 C	1.6876	Adder	1.99
959502	AF2-241 E	1.2993	Adder	1.53
959521	AF2-243 C	3.0054	50/50	3.0054
959522	AF2-243 E	2.0036	50/50	2.0036
959741	AF2-265 C	1.2640	Adder	1.49
959742	AF2-265 E	0.9407	Adder	1.11
959822	AF2-273 E	0.5842	Adder	0.69
960022	AF2-293 E	0.2068	Adder	0.24
960031	AF2-294 C	1.6904	Adder	1.99
960032	AF2-294 E	1.1270	Adder	1.33
960041	AF2-295 C	2.3189	Adder	2.73
960042	AF2-295 E	1.5459	Adder	1.82
960051	AF2-296 C	1.8268	Adder	2.15
960052	AF2-296 E	1.2179	Adder	1.43
961141	AF2-405	1.4934	Adder	1.76
961151	AF2-406	11.2009	Adder	13.18
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	46.9710	Adder	55.26
961211	AF2-412	20.2569	Adder	23.83
961971	AG1-040 C	5.8858	50/50	5.8858
961972	AG1-040 E	3.9238	50/50	3.9238
962411	AG1-090 C O2	5.6647	Adder	12.57
962412	AG1-090 E O2	3.7765	Adder	8.38
962511	AG1-100 C	6.1441	50/50	6.1441
962512	AG1-100 E	4.0961	50/50	4.0961
962891	AG1-138 C	0.6016	Adder	1.34
962892	AG1-138 E	0.0317	Adder	0.07
962901	AG1-139 C	1.5862	50/50	1.5862
962902	AG1-139 E	0.0835	50/50	0.0835
962911	AG1-140 C	0.8976	50/50	0.8976
962912	AG1-140 E	0.4089	50/50	0.4089
962951	AG1-144 C	0.9814	Adder	2.18
962952	AG1-144 E	0.6543	Adder	1.45
963281	AG1-177 C O2	6.1183	50/50	6.1183
963282	AG1-177 E O2	4.0789	50/50	4.0789
963441	AG1-193 C	4.6628	50/50	4.6628
963442	AG1-193 E	3.1086	50/50	3.1086
963481	AG1-197 C	4.3745	50/50	4.3745
963482	AG1-197 E	2.9164	50/50	2.9164
963491	AG1-198 C	3.3339	50/50	3.3339
963492	AG1-198 E	2.2226	50/50	2.2226
963531	AG1-202 C	3.5769	50/50	3.5769
963532	AG1-202 E	1.8426	50/50	1.8426
963571	AG1-206 C	0.6710	Adder	1.49
963572	AG1-206 E	0.3613	Adder	0.8
963891	AG1-242 C	0.5244	Adder	1.16
963892	AG1-242 E	0.2824	Adder	0.63

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963941	AG1-247 C	0.3878	Adder	0.86
963942	AG1-247 E	0.2058	Adder	0.46
963991	AG1-253 C	1.3464	50/50	1.3464
963992	AG1-253 E	0.6483	50/50	0.6483
964031	AG1-257 C	0.7782	Adder	1.73
964032	AG1-257 E	1.0876	Adder	2.41
964041	AG1-258 C	0.7782	Adder	1.73
964042	AG1-258 E	1.0876	Adder	2.41
964341	AG1-296 C	0.6136	Adder	1.36
964342	AG1-296 E	0.3304	Adder	0.73
964411	AG1-303 C O2	12.0740	50/50	12.0740
964412	AG1-303 E O2	8.0494	50/50	8.0494
964451	AG1-308 C O2	0.6788	Adder	1.51
964452	AG1-308 E O2	0.9487	Adder	2.11
964701	AG1-333 C	0.3285	Adder	0.73
964702	AG1-333 E	0.0448	Adder	0.1
965121	AG1-377 C O1	0.9814	Adder	2.18
965122	AG1-377 E O1	0.6543	Adder	1.45
965131	AG1-378 C O1	0.9814	Adder	2.18
965132	AG1-378 E O1	0.6543	Adder	1.45
965201	AG1-385 C	1.5817	Adder	3.51
965202	AG1-385 E	0.4685	Adder	1.04
965241	AG1-389 C O1	1.1740	Adder	2.61
965242	AG1-389 E O1	0.7826	Adder	1.74
965251	AG1-390 C O2	1.1753	Adder	2.61
965252	AG1-390 E O2	0.7835	Adder	1.74
965261	AG1-391 C O1	1.1740	Adder	2.61
965262	AG1-391 E O1	0.7826	Adder	1.74
965271	AG1-392 C O1	2.3479	Adder	5.21
965272	AG1-392 E O1	1.5653	Adder	3.47
965301	AG1-395 C	1.2611	Adder	2.8
965302	AG1-395 E	0.3746	Adder	0.83
965861	AG1-455	18.6018	50/50	18.6018
966041	AG1-473 C	2.9468	Adder	6.54
966042	AG1-473 E	1.9645	Adder	4.36
966121	AG1-481	5.8225	50/50	5.8225
966771	AG1-548 C	53.9430	50/50	53.9430
966772	AG1-548 E	16.4174	50/50	16.4174
G-007A	G-007A	9.7027	Confirmed LTF	9.7027
VFT	VFT	26.5804	Confirmed LTF	26.5804
CALDERWOOD	CALDERWOOD	1.2703	Confirmed LTF	1.2703
PRAIRIE	PRAIRIE	8.3922	Confirmed LTF	8.3922
CHEOAH	CHEOAH	1.2693	Confirmed LTF	1.2693
CBM-N	CBM-N	5.1816	Confirmed LTF	5.1816
COTTONWOOD	COTTONWOOD	6.0333	Confirmed LTF	6.0333
HAMLET	HAMLET	0.9893	Confirmed LTF	0.9893
GIBSON	GIBSON	1.8515	Confirmed LTF	1.8515
BLUEG	BLUEG	5.7791	Confirmed LTF	5.7791
TRIMBLE	TRIMBLE	1.8559	Confirmed LTF	1.8559
CATAWBA	CATAWBA	0.6891	Confirmed LTF	0.6891

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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
164869470	200675	26E.TWANDA	PENELEC	200924	26CANYON	PENELEC	1	PN-P2-2-PN-230-007T	bus	615.0	180.45	181.46	DC	13.61

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200894	26K02	17.6960	50/50	17.6960
203283	26MANOR_T86	0.0582	50/50	0.0582
203350	26MILZ1-092	0.8988	50/50	0.8988
203351	26GROZ1-110	1.0826	50/50	1.0826
203352	26CANZ2-011	1.0623	50/50	1.0623
203922	X1-109 G1	24.7826	50/50	24.7826
203923	X1-109 G2	24.7826	50/50	24.7826
203932	AA2-133 GEN	2.1231	Adder	2.5
203999	P-047 E	17.6345	Adder	20.75
235003	AC1-025 E	0.1744	Adder	0.21
236828	01GRAYMONT	0.4701	Adder	0.55
916202	Z1-069 E	8.7970	Adder	10.35
919201	AA1-144 OP	66.0052	50/50	66.0052
921642	AA2-000	92.7912	Adder	109.17
930511	AB2-092	3.4070	Adder	4.01
931092	AB1-160 E	2.5134	Adder	2.96
936421	AD2-055	7.0145	Adder	8.25
938332	AE1-051 BAT	0.9479	Merchant Transmission	0.9479
939171	AE1-147 C	1.4127	Adder	1.66
939172	AE1-147 E	0.9418	Adder	1.11
940201	AE2-001 C	1.4114	Adder	1.66
940202	AE2-001 E	0.9409	Adder	1.11
940681	AE2-055 C (Suspended)	1.3908	Adder	1.64
940682	AE2-055 E (Suspended)	0.9272	Adder	1.09
940861	AE2-074 C	1.9758	Adder	2.32
940862	AE2-074 E	2.6009	Adder	3.06
941191	AE2-113 C	6.5799	Adder	7.74
941192	AE2-113 E	7.0845	Adder	8.33
941261	AE2-120 C	1.4106	Adder	1.66
941262	AE2-120 E	0.9404	Adder	1.11
941271	AE2-121 C	0.7523	Adder	0.89
941272	AE2-121 E	0.5023	Adder	0.59
941321	AE2-126 C	1.2282	Adder	1.44
941322	AE2-126 E	0.8188	Adder	0.96
941331	AE2-129 C	1.0121	Adder	1.19
941332	AE2-129 E	0.6748	Adder	0.79
941351	AE2-131 C (Suspended)	1.0121	Adder	1.19
941352	AE2-131 E (Suspended)	0.6748	Adder	0.79
941421	AE2-139 C	23.8022	50/50	23.8022
941422	AE2-139 E	15.8681	50/50	15.8681
942351	AE2-248 C	1.1195	Adder	1.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942352	AE2-248 E	0.7463	Adder	0.88
942491	AE2-262 C	6.1710	Adder	7.26
942492	AE2-262 E	4.1469	Adder	4.88
942501	AE2-263 C	5.8007	Adder	6.82
942502	AE2-263 E	3.8729	Adder	4.56
942961	AE2-316 C	3.3408	Adder	3.93
942962	AE2-316 E	4.7640	Adder	5.6
943751	AF1-043	21.0434	Adder	24.76
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.4899	Adder	1.75
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8381	Adder	0.99
944311	AF1-099 C	9.3676	Adder	11.02
944312	AF1-099 E	6.2451	Adder	7.35
944321	AF1-100 C	17.9903	Adder	21.17
944322	AF1-100 E	11.9935	Adder	14.11
944381	AF1-103 O1	1.6097	Adder	1.89
944411	AF1-106 O1	5.4258	50/50	5.4258
944471	AF1-112 C	1.4016	Adder	1.65
944472	AF1-112 E	0.9344	Adder	1.1
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3953	Adder	1.64
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9302	Adder	1.09
944691	AF1-134 C	0.9284	Adder	1.09
944692	AF1-134 E	0.6189	Adder	0.73
944771	AF1-142 C	14.9881	Adder	17.63
944772	AF1-142 E	9.9921	Adder	11.76
944881	AF1-153 C O1	1.2104	Adder	1.42
944882	AF1-153 E O1	0.8070	Adder	0.95
944901	AF1-155 C	1.2043	Adder	1.42
944902	AF1-155 E	0.8029	Adder	0.94
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4107	Adder	1.66
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9404	Adder	1.11
946111	AF1-276 C	6.4479	Adder	7.59
946112	AF1-276 E	3.1758	Adder	3.74
946121	AF1-277 C	6.4479	Adder	7.59
946122	AF1-277 E	3.1758	Adder	3.74
946131	AF1-278 C	5.1429	Adder	6.05
946132	AF1-278 E	2.5561	Adder	3.01
946211	AF1-286 C	2.1974	50/50	2.1974
946212	AF1-286 E	1.4921	50/50	1.4921
946381	AF1-302 C	1.4589	Adder	1.72
946382	AF1-302 E	1.9451	Adder	2.29
946421	AF1-306 C	5.2880	Adder	6.22
946422	AF1-306 E	21.1520	Adder	24.88
957451	AF2-039 C	0.8155	Adder	0.96
957452	AF2-039 E	0.5436	Adder	0.64
957941	AF2-088 C	0.3926	Adder	0.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957942	AF2-088 E	0.2618	Adder	0.31
958271	AF2-121 C	1.0121	Adder	1.19
958272	AF2-121 E	0.6748	Adder	0.79
959061	AF2-197 C O1	12.9326	50/50	12.9326
959062	AF2-197 E O1	19.3990	50/50	19.3990
959471	AF2-238 C	3.3199	50/50	3.3199
959472	AF2-238 E	2.2133	50/50	2.2133
959481	AF2-239 C	3.1511	50/50	3.1511
959482	AF2-239 E	2.5265	50/50	2.5265
959491	AF2-240 C	1.0255	50/50	1.0255
959492	AF2-240 E	0.8736	50/50	0.8736
959501	AF2-241 C	3.0656	50/50	3.0656
959502	AF2-241 E	2.3602	50/50	2.3602
959741	AF2-265 C	2.3793	50/50	2.3793
959742	AF2-265 E	1.7706	50/50	1.7706
959913	AF2-282 BAT	0.1422	Merchant Transmission	0.1422
959923	AF2-283 BAT	0.1422	Merchant Transmission	0.1422
960022	AF2-293 E	0.1373	Adder	0.16
960041	AF2-295 C	1.2043	Adder	1.42
960042	AF2-295 E	0.8029	Adder	0.94
960051	AF2-296 C	0.9284	Adder	1.09
960052	AF2-296 E	0.6189	Adder	0.73
960271	AF2-318 C	3.4066	50/50	3.4066
960272	AF2-318 E	2.2710	50/50	2.2710
961141	AF2-405	2.7129	50/50	2.7129
961151	AF2-406	20.3468	50/50	20.3468
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	54.2028	Adder	63.77
961211	AF2-412	25.5929	Adder	30.11
961451	AF2-436	0.1601	Adder	0.19
962411	AG1-090 C O2	3.6774	Adder	8.16
962412	AG1-090 E O2	2.4516	Adder	5.44
962951	AG1-144 C	0.5364	Adder	1.19
962952	AG1-144 E	0.3576	Adder	0.79
963571	AG1-206 C	0.3540	Adder	0.79
963572	AG1-206 E	0.1906	Adder	0.42
963891	AG1-242 C	0.2665	Adder	0.59
963892	AG1-242 E	0.1435	Adder	0.32
963941	AG1-247 C	1.3293	50/50	1.3293
963942	AG1-247 E	0.7054	50/50	0.7054
964031	AG1-257 C	0.5145	Adder	1.14
964032	AG1-257 E	0.7190	Adder	1.6
964041	AG1-258 C	0.5145	Adder	1.14
964042	AG1-258 E	0.7190	Adder	1.6
964341	AG1-296 C	0.2583	Adder	0.57
964342	AG1-296 E	0.1391	Adder	0.31
964451	AG1-308 C O2	0.3710	Adder	0.82
964452	AG1-308 E O2	0.5186	Adder	1.15
965121	AG1-377 C O1	0.5364	Adder	1.19
965122	AG1-377 E O1	0.3576	Adder	0.79
965131	AG1-378 C O1	0.5364	Adder	1.19
965132	AG1-378 E O1	0.3576	Adder	0.79

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965201	AG1-385 C	0.8249	Adder	1.83
965202	AG1-385 E	0.2443	Adder	0.54
965241	AG1-389 C O1	0.9501	Adder	2.11
965242	AG1-389 E O1	0.6334	Adder	1.41
965251	AG1-390 C O2	0.9478	Adder	2.1
965252	AG1-390 E O2	0.6319	Adder	1.4
965261	AG1-391 C O1	0.9501	Adder	2.11
965262	AG1-391 E O1	0.6334	Adder	1.41
965271	AG1-392 C O1	1.9001	Adder	4.22
965272	AG1-392 E O1	1.2667	Adder	2.81
965301	AG1-395 C	0.6893	Adder	1.53
965302	AG1-395 E	0.2047	Adder	0.45
966041	AG1-473 C	1.8943	Adder	4.2
966042	AG1-473 E	1.2629	Adder	2.8
966121	AG1-481	0.6625	Adder	1.47
WEC	WEC	0.3758	Confirmed LTF	0.3758
LGEE	LGEE	0.7219	Confirmed LTF	0.7219
CPL	CPL	0.4368	Confirmed LTF	0.4368
CBM-W2	CBM-W2	9.6410	Confirmed LTF	9.6410
TVA	TVA	1.4084	Confirmed LTF	1.4084
O-066	O-066	27.0075	Confirmed LTF	27.0075
SIGE	SIGE	0.5418	Confirmed LTF	0.5418
CBM-S2	CBM-S2	7.8300	Confirmed LTF	7.8300
CBM-S1	CBM-S1	0.3922	Confirmed LTF	0.3922
G-007	G-007	3.9427	Confirmed LTF	3.9427
MEC	MEC	1.8289	Confirmed LTF	1.8289
LAGN	LAGN	1.7850	Confirmed LTF	1.7850
CBM-W1	CBM-W1	17.4970	Confirmed LTF	17.4970

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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
164869535	200706	26N.MESHPN	PENELEC	200708	26OXBOW	PENELEC	1	PN-P2-2-PN-230-007T	bus	984.0	145.58	146.34	DC	16.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200823	26MHP_X3-003	35.7405	50/50	35.7405
200851	26MEHOOP3	5.3659	50/50	5.3659
200894	26K02	17.4935	Adder	20.58
200917	26MTNTP_P28	1.9918	50/50	1.9918
203283	26MANOR_T86	0.0945	50/50	0.0945
203347	26NME_Y1-047	1.9463	50/50	1.9463
203922	X1-109 G1	28.4734	50/50	28.4734
203923	X1-109 G2	28.4734	50/50	28.4734
203932	AA2-133 GEN	9.0484	50/50	9.0484
203999	P-047 E	25.0367	Adder	29.45
235003	AC1-025 E	0.2081	Adder	0.24
236828	01GRAYMONT	0.5618	Adder	0.66
294573	P-028 E	69.1752	50/50	69.1752
916202	Z1-069 E	12.3394	Adder	14.52
919201	AA1-144 OP	75.8895	50/50	75.8895
920341	AA2-132 (Withdrawn : 12/07/2020)	8.7148	50/50	8.7148
921642	AA2-000	109.1865	Adder	128.45
930511	AB2-092	4.0090	Adder	4.72
931092	AB1-160 E	3.5255	Adder	4.15
936421	AD2-055	8.2538	Adder	9.71
938332	AE1-051 BAT	1.2964	Merchant Transmission	1.2964
939171	AE1-147 C	1.6887	Adder	1.99
939172	AE1-147 E	1.1258	Adder	1.32
940201	AE2-001 C	1.6869	Adder	1.98
940202	AE2-001 E	1.1246	Adder	1.32
940681	AE2-055 C (Suspended)	1.6591	Adder	1.95
940682	AE2-055 E (Suspended)	1.1061	Adder	1.3
940861	AE2-074 C	2.7480	Adder	3.23
940862	AE2-074 E	3.6173	Adder	4.26
941191	AE2-113 C	8.7344	Adder	10.28
941192	AE2-113 E	9.4042	Adder	11.06
941261	AE2-120 C	1.6859	Adder	1.98
941262	AE2-120 E	1.1239	Adder	1.32
941271	AE2-121 C	0.8995	Adder	1.06
941272	AE2-121 E	0.6006	Adder	0.71
941321	AE2-126 C	1.5384	Adder	1.81
941322	AE2-126 E	1.0256	Adder	1.21
941421	AE2-139 C	27.4027	50/50	27.4027
941422	AE2-139 E	18.2685	50/50	18.2685
942351	AE2-248 C	1.3365	Adder	1.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942352	AE2-248 E	0.8910	Adder	1.05
942491	AE2-262 C	7.4201	Adder	8.73
942492	AE2-262 E	4.9863	Adder	5.87
942501	AE2-263 C	6.9749	Adder	8.21
942502	AE2-263 E	4.6568	Adder	5.48
943751	AF1-043	24.7615	Adder	29.13
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.7783	Adder	2.09
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.0003	Adder	1.18
944311	AF1-099 C	11.2637	Adder	13.25
944312	AF1-099 E	7.5091	Adder	8.83
944321	AF1-100 C	21.8140	Adder	25.66
944322	AF1-100 E	14.5427	Adder	17.11
944381	AF1-103 O1	2.1480	Adder	2.53
944411	AF1-106 O1	6.6886	Adder	7.87
944471	AF1-112 C	1.6737	Adder	1.97
944472	AF1-112 E	1.1158	Adder	1.31
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.6653	Adder	1.96
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.1102	Adder	1.31
944771	AF1-142 C	18.0219	Adder	21.2
944772	AF1-142 E	12.0146	Adder	14.13
944881	AF1-153 C O1	1.5039	Adder	1.77
944882	AF1-153 E O1	1.0026	Adder	1.18
944901	AF1-155 C	1.4969	Adder	1.76
944902	AF1-155 E	0.9979	Adder	1.17
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.6860	Adder	1.98
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.1240	Adder	1.32
946111	AF1-276 C	8.8318	Adder	10.39
946112	AF1-276 E	4.3500	Adder	5.12
946121	AF1-277 C	8.8318	Adder	10.39
946122	AF1-277 E	4.3500	Adder	5.12
946131	AF1-278 C	7.0444	Adder	8.29
946132	AF1-278 E	3.5011	Adder	4.12
946211	AF1-286 C	2.7089	Adder	3.19
946212	AF1-286 E	1.8394	Adder	2.16
946421	AF1-306 C	6.5728	Adder	7.73
946422	AF1-306 E	26.2912	Adder	30.93
957451	AF2-039 C	1.0038	Adder	1.18
957452	AF2-039 E	0.6692	Adder	0.79
957941	AF2-088 C	0.4833	Adder	0.57
957942	AF2-088 E	0.3222	Adder	0.38
959061	AF2-197 C O1	18.6282	50/50	18.6282
959062	AF2-197 E O1	27.9424	50/50	27.9424
959471	AF2-238 C	3.8729	Adder	4.56
959472	AF2-238 E	2.5820	Adder	3.04
959481	AF2-239 C	5.1134	50/50	5.1134

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959482	AF2-239 E	4.1000	50/50	4.1000
959491	AF2-240 C	1.2642	Adder	1.49
959492	AF2-240 E	1.0769	Adder	1.27
959501	AF2-241 C	3.7791	Adder	4.45
959502	AF2-241 E	2.9096	Adder	3.42
959741	AF2-265 C	2.7756	Adder	3.27
959742	AF2-265 E	2.0656	Adder	2.43
959913	AF2-282 BAT	0.1945	Merchant Transmission	0.1945
959923	AF2-283 BAT	0.1945	Merchant Transmission	0.1945
960022	AF2-293 E	0.1642	Adder	0.19
960031	AF2-294 C	5.2552	50/50	5.2552
960032	AF2-294 E	3.5034	50/50	3.5034
960041	AF2-295 C	1.4969	Adder	1.76
960042	AF2-295 E	0.9979	Adder	1.17
960271	AF2-318 C	5.5280	50/50	5.5280
960272	AF2-318 E	3.6854	50/50	3.6854
961141	AF2-405	3.3443	Adder	3.93
961151	AF2-406	25.0824	Adder	29.51
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	77.4256	Adder	91.09
961211	AF2-412	36.3191	Adder	42.73
961451	AF2-436	0.6824	50/50	0.6824
962411	AG1-090 C O2	4.4124	Adder	9.79
962412	AG1-090 E O2	2.9416	Adder	6.53
963571	AG1-206 C	0.4453	Adder	0.99
963572	AG1-206 E	0.2398	Adder	0.53
963941	AG1-247 C	0.8685	Adder	1.93
963942	AG1-247 E	0.4608	Adder	1.02
964031	AG1-257 C	0.6145	Adder	1.36
964032	AG1-257 E	0.8588	Adder	1.91
964041	AG1-258 C	0.6145	Adder	1.36
964042	AG1-258 E	0.8588	Adder	1.91
964701	AG1-333 C	1.9269	50/50	1.9269
964702	AG1-333 E	0.2628	50/50	0.2628
965201	AG1-385 C	1.0249	Adder	2.28
965202	AG1-385 E	0.3035	Adder	0.67
965241	AG1-389 C O1	1.3303	Adder	2.95
965242	AG1-389 E O1	0.8868	Adder	1.97
965251	AG1-390 C O2	1.3270	Adder	2.95
965252	AG1-390 E O2	0.8846	Adder	1.96
965261	AG1-391 C O1	1.3303	Adder	2.95
965262	AG1-391 E O1	0.8868	Adder	1.97
965271	AG1-392 C O1	2.6605	Adder	5.91
965272	AG1-392 E O1	1.7737	Adder	3.94
966041	AG1-473 C	2.2335	Adder	4.96
966042	AG1-473 E	1.4890	Adder	3.31
966121	AG1-481	0.8840	Adder	1.96
WEC	WEC	0.5122	Confirmed LTF	0.5122
LGEE	LGEE	0.9845	Confirmed LTF	0.9845
CPL	CPL	0.5958	Confirmed LTF	0.5958
CBM-W2	CBM-W2	13.1443	Confirmed LTF	13.1443
TVA	TVA	1.9208	Confirmed LTF	1.9208

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	36.8400	Confirmed LTF	36.8400
SIGE	SIGE	0.7389	Confirmed LTF	0.7389
CBM-S2	CBM-S2	10.6906	Confirmed LTF	10.6906
CBM-S1	CBM-S1	0.5347	Confirmed LTF	0.5347
G-007	G-007	5.3771	Confirmed LTF	5.3771
MEC	MEC	2.4947	Confirmed LTF	2.4947
LAGN	LAGN	2.4343	Confirmed LTF	2.4343
CBM-W1	CBM-W1	23.8480	Confirmed LTF	23.8480

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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
164869540	200708	26OXBOW	PENELEC	208009	LACK	PPL	1	PN-P2-2-PN-230-007T	bus	984.0	144.31	145.07	DC	16.53

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200823	26MHP_X3-003	36.4479	50/50	36.4479
200851	26MEHOOP3	5.4721	50/50	5.4721
200894	26K02	17.7115	Adder	20.84
200917	26MTNTP_P28	2.0312	50/50	2.0312
203283	26MANOR_T86	0.0987	50/50	0.0987
203347	26NME_Y1-047	1.9848	50/50	1.9848
203907	26Y2-042	1.9697	50/50	1.9697
203922	X1-109 G1	28.8246	50/50	28.8246
203923	X1-109 G2	28.8246	50/50	28.8246
203932	AA2-133 GEN	10.5282	50/50	10.5282
203999	P-047 E	25.4445	Adder	29.93
235003	AC1-025 E	0.2108	Adder	0.25
236828	01GRAYMONT	0.5689	Adder	0.67
294573	P-028 E	70.5444	50/50	70.5444
916202	Z1-069 E	12.5264	Adder	14.74
919201	AA1-144 OP	76.8268	50/50	76.8268
920341	AA2-132 (Withdrawn : 12/07/2020)	7.5383	Adder	8.87
921642	AA2-000	110.5600	Adder	130.07
930511	AB2-092	4.0594	Adder	4.78
931092	AB1-160 E	3.5790	Adder	4.21
936421	AD2-055	8.3577	Adder	9.83
939171	AE1-147 C	1.7100	Adder	2.01
939172	AE1-147 E	1.1400	Adder	1.34
940201	AE2-001 C	1.7082	Adder	2.01
940202	AE2-001 E	1.1388	Adder	1.34
940681	AE2-055 C (Suspended)	1.6800	Adder	1.98
940682	AE2-055 E (Suspended)	1.1200	Adder	1.32
940861	AE2-074 C	2.7886	Adder	3.28
940862	AE2-074 E	3.6707	Adder	4.32
941191	AE2-113 C	8.8547	Adder	10.42
941192	AE2-113 E	9.5336	Adder	11.22
941261	AE2-120 C	1.7072	Adder	2.01
941262	AE2-120 E	1.1381	Adder	1.34
941271	AE2-121 C	0.9108	Adder	1.07
941272	AE2-121 E	0.6082	Adder	0.72
941321	AE2-126 C	1.5585	Adder	1.83
941322	AE2-126 E	1.0390	Adder	1.22
941421	AE2-139 C	12.4973	Adder	27.74
941422	AE2-139 E	8.3316	Adder	18.49
942351	AE2-248 C	1.3534	Adder	1.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942352	AE2-248 E	0.9023	Adder	1.06
942491	AE2-262 C	7.5144	Adder	8.84
942492	AE2-262 E	5.0497	Adder	5.94
942501	AE2-263 C	7.0636	Adder	8.31
942502	AE2-263 E	4.7161	Adder	5.55
943751	AF1-043	25.0730	Adder	29.5
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.8007	Adder	2.12
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.0129	Adder	1.19
944311	AF1-099 C	11.4069	Adder	13.42
944312	AF1-099 E	7.6046	Adder	8.95
944321	AF1-100 C	22.0932	Adder	25.99
944322	AF1-100 E	14.7288	Adder	17.33
944411	AF1-106 O1	6.7964	Adder	8.0
944471	AF1-112 C	1.6948	Adder	1.99
944472	AF1-112 E	1.1299	Adder	1.33
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.6863	Adder	1.98
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.1242	Adder	1.32
944771	AF1-142 C	18.2510	Adder	21.47
944772	AF1-142 E	12.1674	Adder	14.31
944881	AF1-153 C O1	1.5234	Adder	1.79
944882	AF1-153 E O1	1.0156	Adder	1.19
944901	AF1-155 C	1.5163	Adder	1.78
944902	AF1-155 E	1.0109	Adder	1.19
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.7073	Adder	2.01
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.1382	Adder	1.34
946111	AF1-276 C	8.9560	Adder	10.54
946112	AF1-276 E	4.4111	Adder	5.19
946121	AF1-277 C	8.9560	Adder	10.54
946122	AF1-277 E	4.4111	Adder	5.19
946131	AF1-278 C	7.1434	Adder	8.4
946132	AF1-278 E	3.5503	Adder	4.18
946211	AF1-286 C	2.7526	Adder	3.24
946212	AF1-286 E	1.8690	Adder	2.2
946421	AF1-306 C	6.6583	Adder	7.83
946422	AF1-306 E	26.6331	Adder	31.33
957451	AF2-039 C	1.0167	Adder	1.2
957452	AF2-039 E	0.6778	Adder	0.8
957941	AF2-088 C	0.4895	Adder	0.58
957942	AF2-088 E	0.3264	Adder	0.38
959061	AF2-197 C O1	16.1154	Adder	18.96
959062	AF2-197 E O1	28.4389	50/50	28.4389
959471	AF2-238 C	3.9342	Adder	4.63
959472	AF2-238 E	2.6228	Adder	3.09
959481	AF2-239 C	5.3434	50/50	5.3434
959482	AF2-239 E	4.2844	50/50	4.2844

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959491	AF2-240 C	1.2845	Adder	1.51
959492	AF2-240 E	1.0942	Adder	1.29
959501	AF2-241 C	3.8400	Adder	4.52
959502	AF2-241 E	2.9564	Adder	3.48
959741	AF2-265 C	2.8195	Adder	3.32
959742	AF2-265 E	2.0983	Adder	2.47
960022	AF2-293 E	0.1662	Adder	0.2
960031	AF2-294 C	4.5457	Adder	5.35
960032	AF2-294 E	3.0305	Adder	3.57
960041	AF2-295 C	1.5163	Adder	1.78
960042	AF2-295 E	1.0109	Adder	1.19
960271	AF2-318 C	5.7767	50/50	5.7767
960272	AF2-318 E	3.8511	50/50	3.8511
961141	AF2-405	3.3982	Adder	4.0
961151	AF2-406	25.4866	Adder	29.98
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	78.5706	Adder	92.44
961211	AF2-412	36.8849	Adder	43.39
961451	AF2-436	0.7940	50/50	0.7940
961461	AF2-437	0.1615	50/50	0.1615
962411	AG1-090 C O2	4.4681	Adder	9.92
962412	AG1-090 E O2	2.9787	Adder	6.61
963571	AG1-206 C	0.4512	Adder	1.0
963572	AG1-206 E	0.2429	Adder	0.54
963941	AG1-247 C	0.8825	Adder	1.96
963942	AG1-247 E	0.4683	Adder	1.04
964031	AG1-257 C	0.6222	Adder	1.38
964032	AG1-257 E	0.8696	Adder	1.93
964041	AG1-258 C	0.6222	Adder	1.38
964042	AG1-258 E	0.8696	Adder	1.93
964701	AG1-333 C	0.8834	Adder	1.96
964702	AG1-333 E	0.1205	Adder	0.27
965201	AG1-385 C	1.0382	Adder	2.3
965202	AG1-385 E	0.3075	Adder	0.68
965241	AG1-389 C O1	1.3503	Adder	3.0
965242	AG1-389 E O1	0.9002	Adder	2.0
965251	AG1-390 C O2	1.3470	Adder	2.99
965252	AG1-390 E O2	0.8980	Adder	1.99
965261	AG1-391 C O1	1.3503	Adder	3.0
965262	AG1-391 E O1	0.9002	Adder	2.0
965271	AG1-392 C O1	2.7005	Adder	5.99
965272	AG1-392 E O1	1.8003	Adder	4.0
966041	AG1-473 C	2.2613	Adder	5.02
966042	AG1-473 E	1.5075	Adder	3.35
WEC	WEC	0.5172	Confirmed LTF	0.5172
LGEE	LGEE	0.9940	Confirmed LTF	0.9940
CPL	CPL	0.5992	Confirmed LTF	0.5992
CBM-W2	CBM-W2	13.2608	Confirmed LTF	13.2608
TVA	TVA	1.9376	Confirmed LTF	1.9376
O-066	O-066	37.4255	Confirmed LTF	37.4255
SIGE	SIGE	0.7496	Confirmed LTF	0.7496
CBM-S2	CBM-S2	10.7636	Confirmed LTF	10.7636

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S1	CBM-S1	0.5396	Confirmed LTF	0.5396
G-007	G-007	5.4621	Confirmed LTF	5.4621
MEC	MEC	2.5186	Confirmed LTF	2.5186
LAGN	LAGN	2.4553	Confirmed LTF	2.4553
CBM-W1	CBM-W1	24.0864	Confirmed LTF	24.0864

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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
165880210	200713	26ROCKTON	PENELEC	200712	26DUBOIS	PENELEC	1	AP-P2-3-WP-230-443T *	breaker	190.0	121.97	124.05	DC	8.79

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	3.0960	50/50	3.0960
200666	26SHAWVL 4	3.0432	50/50	3.0432
200715	26SHAWVL 1	2.7655	50/50	2.7655
200722	26SHAWVL 2	2.8293	50/50	2.8293
200905	26Q36	0.1317	50/50	0.1317
200913	26SHAW-D	0.1681	50/50	0.1681
235003	AC1-025 E	0.0980	Adder	0.12
236828	01GRAYMONT	0.2686	Adder	0.32
290086	Q-036 E	4.0236	50/50	4.0236
921642	AA2-000	26.3797	Adder	31.03
930511	AB2-092	0.9686	Adder	1.14
936421	AD2-055	1.9941	Adder	2.35
936991	AD2-133 C	1.8106	50/50	1.8106
936992	AD2-133 E	8.2816	50/50	8.2816
939171	AE1-147 C	0.8091	Adder	0.95
939172	AE1-147 E	0.5394	Adder	0.63
940201	AE2-001 C	0.8071	Adder	0.95
940202	AE2-001 E	0.5381	Adder	0.63
940681	AE2-055 C (Suspended)	0.7776	Adder	0.91
940682	AE2-055 E (Suspended)	0.5184	Adder	0.61
941261	AE2-120 C	0.8061	Adder	0.95
941262	AE2-120 E	0.5374	Adder	0.63
941271	AE2-121 C	0.4319	Adder	0.51
941272	AE2-121 E	0.2884	Adder	0.34
941331	AE2-129 C	1.6170	50/50	1.6170
941332	AE2-129 E	1.0780	50/50	1.0780
941351	AE2-131 C (Suspended)	1.6170	50/50	1.6170
941352	AE2-131 E (Suspended)	1.0780	50/50	1.0780
942351	AE2-248 C	0.6320	Adder	0.74
942352	AE2-248 E	0.4213	Adder	0.5
942491	AE2-262 C	3.7795	Adder	4.45
942492	AE2-262 E	2.5398	Adder	2.99
942501	AE2-263 C	3.5528	Adder	4.18
942502	AE2-263 E	2.3720	Adder	2.79
943751	AF1-043	5.9824	Adder	7.04
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.8386	Adder	0.99
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.4717	Adder	0.55
944181	AF1-086 C O1	1.0997	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944182	AF1-086 E O1	4.7845	Adder	5.63
944311	AF1-099 C	5.7373	Adder	6.75
944312	AF1-099 E	3.8249	Adder	4.5
944321	AF1-100 C	16.2855	50/50	16.2855
944322	AF1-100 E	10.8570	50/50	10.8570
944382	AF1-103 BAT	1.3910	Merchant Transmission	1.3910
944471	AF1-112 C	0.7932	Adder	0.93
944472	AF1-112 E	0.5288	Adder	0.62
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.7842	Adder	0.92
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5228	Adder	0.62
944691	AF1-134 C	1.3462	50/50	1.3462
944692	AF1-134 E	0.8974	50/50	0.8974
944771	AF1-142 C	9.1797	Adder	10.8
944772	AF1-142 E	6.1198	Adder	7.2
944901	AF1-155 C	-1.0979	Adder	-1.29
945161	AF1-181	0.0142	50/50	0.0142
945171	AF1-182	0.0712	50/50	0.0712
945181	AF1-183	0.0227	50/50	0.0227
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8062	Adder	0.95
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5375	Adder	0.63
946423	AF1-306 BAT	32.6563	50/50	32.6563
957451	AF2-039 C	1.4369	50/50	1.4369
957452	AF2-039 E	0.9579	50/50	0.9579
957941	AF2-088 C	0.6918	50/50	0.6918
957942	AF2-088 E	0.4612	50/50	0.4612
958271	AF2-121 C	1.6170	50/50	1.6170
958272	AF2-121 E	1.0780	50/50	1.0780
959802	AF2-271 E	0.1375	Adder	0.16
960022	AF2-293 E	0.0787	Adder	0.09
960051	AF2-296 C	1.3462	50/50	1.3462
960052	AF2-296 E	0.8974	50/50	0.8974
962411	AG1-090 C O2	2.3770	Adder	5.28
962412	AG1-090 E O2	1.5847	Adder	3.52
962951	AG1-144 C	1.6170	50/50	1.6170
962952	AG1-144 E	1.0780	50/50	1.0780
963891	AG1-242 C	0.7292	50/50	0.7292
963892	AG1-242 E	0.3926	50/50	0.3926
964031	AG1-257 C	0.2917	Adder	0.65
964032	AG1-257 E	0.4077	Adder	0.9
964041	AG1-258 C	0.2917	Adder	0.65
964042	AG1-258 E	0.4077	Adder	0.9
964451	AG1-308 C O2	1.1184	50/50	1.1184
964452	AG1-308 E O2	1.5631	50/50	1.5631
965121	AG1-377 C O1	1.6170	50/50	1.6170
965122	AG1-377 E O1	1.0780	50/50	1.0780
965131	AG1-378 C O1	1.6170	50/50	1.6170
965132	AG1-378 E O1	1.0780	50/50	1.0780
965203	AG1-385 BAT	0.9227	50/50	0.9227

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965301	AG1-395 C	2.0778	50/50	2.0778
965302	AG1-395 E	0.6172	50/50	0.6172
966041	AG1-473 C	0.8280	Adder	1.84
966042	AG1-473 E	0.5520	Adder	1.23
966122	AG1-481 BAT	0.5640	Merchant Transmission	0.5640
G-007A	G-007A	1.2563	Confirmed LTF	1.2563
VFT	VFT	3.4120	Confirmed LTF	3.4120
CALDERWOOD	CALDERWOOD	0.1123	Confirmed LTF	0.1123
NY	NY	0.0265	Confirmed LTF	0.0265
PRAIRIE	PRAIRIE	0.7258	Confirmed LTF	0.7258
CHEOAH	CHEOAH	0.1121	Confirmed LTF	0.1121
CBM-N	CBM-N	0.6456	Confirmed LTF	0.6456
COTTONWOOD	COTTONWOOD	0.5271	Confirmed LTF	0.5271
HAMLET	HAMLET	0.0872	Confirmed LTF	0.0872
GIBSON	GIBSON	0.1605	Confirmed LTF	0.1605
BLUEG	BLUEG	0.5052	Confirmed LTF	0.5052
TRIMBLE	TRIMBLE	0.1625	Confirmed LTF	0.1625
CATAWBA	CATAWBA	0.0613	Confirmed LTF	0.0613

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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
165880201	200714	26SHAWVL 1	PENELEC	200713	26ROCKTON	PENELEC	1	AP-P2-3-WP-230-443T *	breaker	190.0	122.91	125.0	DC	8.79

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	3.0960	50/50	3.0960
200666	26SHAWVL 4	3.0432	50/50	3.0432
200715	26SHAWVL 1	2.7655	50/50	2.7655
200722	26SHAWVL 2	2.8293	50/50	2.8293
200905	26Q36	0.1317	50/50	0.1317
200913	26SHAW-D	0.1681	50/50	0.1681
235003	AC1-025 E	0.0980	Adder	0.12
236828	01GRAYMONT	0.2686	Adder	0.32
290086	Q-036 E	4.0236	50/50	4.0236
921642	AA2-000	26.3797	Adder	31.03
930511	AB2-092	0.9686	Adder	1.14
936421	AD2-055	1.9941	Adder	2.35
936991	AD2-133 C	1.8106	50/50	1.8106
936992	AD2-133 E	8.2816	50/50	8.2816
939171	AE1-147 C	0.8091	Adder	0.95
939172	AE1-147 E	0.5394	Adder	0.63
940201	AE2-001 C	0.8071	Adder	0.95
940202	AE2-001 E	0.5381	Adder	0.63
940681	AE2-055 C (Suspended)	0.7776	Adder	0.91
940682	AE2-055 E (Suspended)	0.5184	Adder	0.61
941261	AE2-120 C	0.8061	Adder	0.95
941262	AE2-120 E	0.5374	Adder	0.63
941271	AE2-121 C	0.4319	Adder	0.51
941272	AE2-121 E	0.2884	Adder	0.34
941331	AE2-129 C	1.6170	50/50	1.6170
941332	AE2-129 E	1.0780	50/50	1.0780
941351	AE2-131 C (Suspended)	1.6170	50/50	1.6170
941352	AE2-131 E (Suspended)	1.0780	50/50	1.0780
942351	AE2-248 C	0.6320	Adder	0.74
942352	AE2-248 E	0.4213	Adder	0.5
942491	AE2-262 C	3.7795	Adder	4.45
942492	AE2-262 E	2.5398	Adder	2.99
942501	AE2-263 C	3.5528	Adder	4.18
942502	AE2-263 E	2.3720	Adder	2.79
943751	AF1-043	5.9824	Adder	7.04
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.8386	Adder	0.99
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.4717	Adder	0.55
944181	AF1-086 C O1	1.0997	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944182	AF1-086 E O1	4.7845	Adder	5.63
944311	AF1-099 C	5.7373	Adder	6.75
944312	AF1-099 E	3.8249	Adder	4.5
944321	AF1-100 C	16.2855	50/50	16.2855
944322	AF1-100 E	10.8570	50/50	10.8570
944382	AF1-103 BAT	1.3910	Merchant Transmission	1.3910
944471	AF1-112 C	0.7932	Adder	0.93
944472	AF1-112 E	0.5288	Adder	0.62
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.7842	Adder	0.92
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5228	Adder	0.62
944691	AF1-134 C	1.3462	50/50	1.3462
944692	AF1-134 E	0.8974	50/50	0.8974
944771	AF1-142 C	9.1797	Adder	10.8
944772	AF1-142 E	6.1198	Adder	7.2
944901	AF1-155 C	-1.0979	Adder	-1.29
945161	AF1-181	0.0142	50/50	0.0142
945171	AF1-182	0.0712	50/50	0.0712
945181	AF1-183	0.0227	50/50	0.0227
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8062	Adder	0.95
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5375	Adder	0.63
946423	AF1-306 BAT	32.6563	50/50	32.6563
957451	AF2-039 C	1.4369	50/50	1.4369
957452	AF2-039 E	0.9579	50/50	0.9579
957941	AF2-088 C	0.6918	50/50	0.6918
957942	AF2-088 E	0.4612	50/50	0.4612
958271	AF2-121 C	1.6170	50/50	1.6170
958272	AF2-121 E	1.0780	50/50	1.0780
959802	AF2-271 E	0.1375	Adder	0.16
960022	AF2-293 E	0.0787	Adder	0.09
960051	AF2-296 C	1.3462	50/50	1.3462
960052	AF2-296 E	0.8974	50/50	0.8974
962411	AG1-090 C O2	2.3770	Adder	5.28
962412	AG1-090 E O2	1.5847	Adder	3.52
962951	AG1-144 C	1.6170	50/50	1.6170
962952	AG1-144 E	1.0780	50/50	1.0780
963891	AG1-242 C	0.7292	50/50	0.7292
963892	AG1-242 E	0.3926	50/50	0.3926
964031	AG1-257 C	0.2917	Adder	0.65
964032	AG1-257 E	0.4077	Adder	0.9
964041	AG1-258 C	0.2917	Adder	0.65
964042	AG1-258 E	0.4077	Adder	0.9
964451	AG1-308 C O2	1.1184	50/50	1.1184
964452	AG1-308 E O2	1.5631	50/50	1.5631
965121	AG1-377 C O1	1.6170	50/50	1.6170
965122	AG1-377 E O1	1.0780	50/50	1.0780
965131	AG1-378 C O1	1.6170	50/50	1.6170
965132	AG1-378 E O1	1.0780	50/50	1.0780
965203	AG1-385 BAT	0.9227	50/50	0.9227

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965301	AG1-395 C	2.0778	50/50	2.0778
965302	AG1-395 E	0.6172	50/50	0.6172
966041	AG1-473 C	0.8280	Adder	1.84
966042	AG1-473 E	0.5520	Adder	1.23
966122	AG1-481 BAT	0.5640	Merchant Transmission	0.5640
G-007A	G-007A	1.2563	Confirmed LTF	1.2563
VFT	VFT	3.4120	Confirmed LTF	3.4120
CALDERWOOD	CALDERWOOD	0.1123	Confirmed LTF	0.1123
NY	NY	0.0265	Confirmed LTF	0.0265
PRAIRIE	PRAIRIE	0.7258	Confirmed LTF	0.7258
CHEOAH	CHEOAH	0.1121	Confirmed LTF	0.1121
CBM-N	CBM-N	0.6456	Confirmed LTF	0.6456
COTTONWOOD	COTTONWOOD	0.5271	Confirmed LTF	0.5271
HAMLET	HAMLET	0.0872	Confirmed LTF	0.0872
GIBSON	GIBSON	0.1605	Confirmed LTF	0.1605
BLUEG	BLUEG	0.5052	Confirmed LTF	0.5052
TRIMBLE	TRIMBLE	0.1625	Confirmed LTF	0.1625
CATAWBA	CATAWBA	0.0613	Confirmed LTF	0.0613

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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
176067369	200727	26SHAW. 2	PENELEC	200716	26PHILIPSB	PENELEC	1	AP-P1-2-WP-230-323T-A	single	202.0	101.82	104.98	DC	6.4

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200649	26PENNTech	0.5643	80/20	0.5643
200665	26SHAWVL 3	3.0688	80/20	3.0688
200666	26SHAWVL 4	3.0132	80/20	3.0132
200715	26SHAWVL 1	2.7201	80/20	2.7201
200722	26SHAWVL 2	2.7890	80/20	2.7890
200913	26SHAW-D	0.1644	80/20	0.1644
921642	AA2-000	34.1231	80/20	34.1231
930511	AB2-092	1.2529	80/20	1.2529
936421	AD2-055	2.5795	80/20	2.5795
939171	AE1-147 C	1.2322	80/20	1.2322
940201	AE2-001 C	1.2328	80/20	1.2328
940681	AE2-055 C (Suspended)	1.2421	80/20	1.2421
941191	AE2-113 C	3.7047	80/20	3.7047
941261	AE2-120 C	1.2331	80/20	1.2331
941271	AE2-121 C	0.6545	80/20	0.6545
941321	AE2-126 C	1.5325	80/20	1.5325
941351	AE2-131 C (Suspended)	-6.3035	Adder	-7.42
942351	AE2-248 C	0.9906	80/20	0.9906
942491	AE2-262 C	5.0040	80/20	5.0040
942501	AE2-263 C	4.7038	80/20	4.7038
942961	AE2-316 C	2.1566	80/20	2.1566
943751	AF1-043	7.7385	80/20	7.7385
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.3221	80/20	1.3221
944181	AF1-086 C O1	1.0319	80/20	1.0319
944311	AF1-099 C	7.5961	80/20	7.5961
944321	AF1-100 C	16.2390	80/20	16.2390
944471	AF1-112 C	1.2372	80/20	1.2372
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.2401	80/20	1.2401
944691	AF1-134 C	1.2390	80/20	1.2390
944751	AF1-140 C	-0.5991	Adder	-0.7
944771	AF1-142 C	12.1537	80/20	12.1537
944881	AF1-153 C O1	0.9084	80/20	0.9084
944901	AF1-155 C	0.9013	80/20	0.9013
945161	AF1-181	0.0141	80/20	0.0141
945171	AF1-182	0.0705	80/20	0.0705
945181	AF1-183	0.0223	80/20	0.0223

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.2331	80/20	1.2331
946381	AF1-302 C	0.9418	80/20	0.9418
946421	AF1-306 C	4.0648	80/20	4.0648
957451	AF2-039 C	1.4097	80/20	1.4097
957931	AF2-087 C (Suspended)	-0.2796	Adder	-0.33
957941	AF2-088 C	0.6788	80/20	0.6788
960041	AF2-295 C	0.9013	80/20	0.9013
960051	AF2-296 C	1.2390	80/20	1.2390
962411	AG1-090 C O2	6.3978	80/20	6.3978
963571	AG1-206 C	0.7546	80/20	0.7546
963891	AG1-242 C	0.6711	80/20	0.6711
964031	AG1-257 C	0.8551	80/20	0.8551
964041	AG1-258 C	0.8551	80/20	0.8551
965201	AG1-385 C	1.1681	80/20	1.1681
WEC	WEC	0.0041	Confirmed LTF	0.0041
LGEE	LGEE	0.0025	Confirmed LTF	0.0025
CALDERWOOD	CALDERWOOD	0.0119	Confirmed LTF	0.0119
SIGE	SIGE	0.0118	Confirmed LTF	0.0118
CHEOAH	CHEOAH	0.0125	Confirmed LTF	0.0125
COTTONWOOD	COTTONWOOD	0.0273	Confirmed LTF	0.0273
HAMLET	HAMLET	0.0329	Confirmed LTF	0.0329
MEC	MEC	0.0111	Confirmed LTF	0.0111
CATAWBA	CATAWBA	0.0164	Confirmed LTF	0.0164
CBM-W1	CBM-W1	0.3645	Confirmed LTF	0.3645

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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
174170725	200767	26HOMER CT	PENELEC	200795	26SHELOCTA	PENELEC	1	PN-P2_3- PN-230-0347-A	breaker	923.0	182.47	183.14	DC	13.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200503	26C.SLOPE (Deactivation : 07/06/2019)	2.0465	50/50	2.0465
200809	26SITHE	2.5736	50/50	2.5736
200833	26SEWRDB34	24.2656	50/50	24.2656
200835	26ARN_Z1-066	1.4464	Adder	1.7
200837	26HOMER C1	44.3228	50/50	44.3228
200838	26HOMER C2	36.3370	50/50	36.3370
200839	26HOMER C3	38.4675	50/50	38.4675
200846	26FORWARD	0.1435	50/50	0.1435
200852	26WARR RDG	0.4074	Adder	0.48
200864	K-013 E	6.5955	50/50	6.5955
200883	Q-053 E	9.8760	Adder	11.62
200886	26ARWF_N39	0.4493	50/50	0.4493
200888	26HIGHLAND	0.3468	50/50	0.3468
200889	26STNY CRK	0.3486	50/50	0.3486
200894	26K02	6.8544	Adder	8.06
200925	26R32	0.5437	50/50	0.5437
203034	26NA_O38_P22	0.3947	50/50	0.3947
203915	26BF_Z2-108	3.2543	Adder	3.83
203932	AA2-133 GEN	2.1348	Adder	2.51
203999	P-047 E	12.8571	Adder	15.13
235003	AC1-025 E	0.1636	Adder	0.19
236828	01GRAYMONT	0.4439	Adder	0.52
290086	Q-036 E	6.8391	Adder	8.05
292350	K-023	5.9482	Adder	7.0
292542	L-013 1	5.7854	Adder	6.81
293301	N-039 E	17.0342	50/50	17.0342
293393	V3-030E	4.8503	Adder	5.71
293432	R-040 E	0.3254	Adder	0.38
293603	O-018 E	14.1097	50/50	14.1097
293902	O-048 E	5.2069	Adder	6.13
294515	O38_P22	14.9050	50/50	14.9050
294903	P-060 E	10.9166	50/50	10.9166
296332	R-032 E	16.2804	50/50	16.2804
913142	Y1-033 E OP1	4.6423	Adder	5.46
915951	Y3-092 FTIR	114.1900	Merchant Transmission	114.1900
916202	Z1-069 E	10.3961	Adder	12.23
919201	AA1-144 OP	19.3928	Adder	22.82
920341	AA2-132 (Withdrawn : 12/07/2020)	2.6902	Adder	3.16

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
921642	AA2-000	57.6511	Adder	67.82
930511	AB2-092	2.1168	Adder	2.49
931092	AB1-160 E	2.9703	Adder	3.49
935191	AD1-154	2.6226	Adder	3.09
936421	AD2-055	4.3581	Adder	5.13
936991	AD2-133 C	3.0776	Adder	3.62
936992	AD2-133 E	14.0766	Adder	16.56
938351	AE1-053	1.8079	Adder	2.13
938881	AE1-116	0.9740	Adder	1.15
938951	AE1-123	2.3430	Adder	2.76
938993	AE1-128 C	19.1606	50/50	19.1606
938994	AE1-128 E	12.7738	50/50	12.7738
939171	AE1-147 C	1.3354	Adder	1.57
939172	AE1-147 E	0.8903	Adder	1.05
939291	AE1-160 C	1.6100	Adder	1.89
939292	AE1-160 E	0.9254	Adder	1.09
940201	AE2-001 C	1.3332	Adder	1.57
940202	AE2-001 E	0.8888	Adder	1.05
940681	AE2-055 C (Suspended)	1.3016	Adder	1.53
940682	AE2-055 E (Suspended)	0.8677	Adder	1.02
940861	AE2-074 C	2.8507	Adder	3.35
940862	AE2-074 E	3.7526	Adder	4.41
941191	AE2-113 C	10.8676	Adder	12.79
941192	AE2-113 E	11.7009	Adder	13.77
941231	AE2-117 C	1.9706	Adder	2.32
941232	AE2-117 E	1.3138	Adder	1.55
941241	AE2-118 C	2.0733	Adder	2.44
941242	AE2-118 E	1.3822	Adder	1.63
941261	AE2-120 C	1.3321	Adder	1.57
941262	AE2-120 E	0.8881	Adder	1.04
941271	AE2-121 C	0.7119	Adder	0.84
941272	AE2-121 E	0.4753	Adder	0.56
941321	AE2-126 C	1.7328	Adder	2.04
941322	AE2-126 E	1.1552	Adder	1.36
941331	AE2-129 C	1.8789	Adder	2.21
941332	AE2-129 E	1.2526	Adder	1.47
941351	AE2-131 C (Suspended)	1.8789	Adder	2.21
941352	AE2-131 E (Suspended)	1.2526	Adder	1.47
941421	AE2-139 C	3.8172	Adder	8.47
941422	AE2-139 E	2.5448	Adder	5.65
942121	AE2-224 C	16.8156	50/50	16.8156
942122	AE2-224 E	11.2104	50/50	11.2104
942351	AE2-248 C	1.0519	Adder	1.24
942352	AE2-248 E	0.7013	Adder	0.83
942361	AE2-249 C	2.1556	50/50	2.1556
942362	AE2-249 E	1.4370	50/50	1.4370
942491	AE2-262 C	6.0010	Adder	7.06
942492	AE2-262 E	4.0327	Adder	4.74
942501	AE2-263 C	5.6409	Adder	6.64
942502	AE2-263 E	3.7662	Adder	4.43
942511	AE2-264 C	8.3077	Adder	9.77
942512	AE2-264 E	5.5385	Adder	6.52

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942811	AE2-299 C	3.7672	Adder	4.43
942812	AE2-299 E	15.0688	Adder	17.73
942961	AE2-316 C	5.8154	Adder	6.84
942962	AE2-316 E	8.2929	Adder	9.76
943151	AE2-344 C	8.0692	Adder	9.49
943152	AE2-344 E	5.3794	Adder	6.33
943351	AF1-006 C	1.3957	Adder	1.64
943352	AF1-006 E	0.7851	Adder	0.92
943711	AF1-039 C O1	1.2281	Adder	1.44
943712	AF1-039 E O1	0.8188	Adder	0.96
943751	AF1-043	13.0742	Adder	15.38
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.3983	Adder	1.65
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.7865	Adder	0.93
944181	AF1-086 C O1	2.8252	Adder	3.32
944182	AF1-086 E O1	12.2912	Adder	14.46
944261	AF1-094 C	1.4190	Adder	1.67
944262	AF1-094 E	0.9460	Adder	1.11
944281	AF1-096 C	1.5212	Adder	1.79
944282	AF1-096 E	1.0142	Adder	1.19
944301	AF1-098 C	5.7520	Adder	6.77
944302	AF1-098 E	3.8347	Adder	4.51
944311	AF1-099 C	9.1095	Adder	10.72
944312	AF1-099 E	6.0730	Adder	7.14
944321	AF1-100 C	19.1837	Adder	22.57
944322	AF1-100 E	12.7891	Adder	15.05
944381	AF1-103 O1	2.8942	Adder	3.4
944391	AF1-104 O1	2.0463	Adder	2.41
944411	AF1-106 O1	2.9461	Adder	3.47
944471	AF1-112 C	1.3184	Adder	1.55
944472	AF1-112 E	0.8789	Adder	1.03
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3087	Adder	1.54
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.8724	Adder	1.03
944691	AF1-134 C	1.6575	Adder	1.95
944692	AF1-134 E	1.1050	Adder	1.3
944751	AF1-140 C	2.1519	Adder	2.53
944752	AF1-140 E	1.4346	Adder	1.69
944771	AF1-142 C	14.5752	Adder	17.15
944772	AF1-142 E	9.7168	Adder	11.43
944781	AF1-143 C	10.8477	Adder	12.76
944782	AF1-143 E	5.7854	Adder	6.81
944881	AF1-153 C O1	1.6235	Adder	1.91
944882	AF1-153 E O1	1.0824	Adder	1.27
944901	AF1-155 C	1.6236	Adder	1.91
944902	AF1-155 E	1.0824	Adder	1.27
945021	AF1-167 C	1.0049	Adder	1.18
945022	AF1-167 E	0.6712	Adder	0.79
945051	AF1-170 C	5.1699	Adder	6.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945052	AF1-170 E	3.4466	Adder	4.05
945451	AF1-210 C	1.1053	Adder	1.3
945452	AF1-210 E	0.7368	Adder	0.87
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.3322	Adder	1.57
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.8881	Adder	1.04
945671	AF1-232 C (Withdrawn : 01/19/2021)	22.8134	Adder	26.84
945672	AF1-232 E (Withdrawn : 01/19/2021)	12.2841	Adder	14.45
945751	AF1-240 C O1	1.5736	Adder	1.85
945752	AF1-240 E O1	1.0490	Adder	1.23
946111	AF1-276 C	12.7545	Adder	15.01
946112	AF1-276 E	6.2821	Adder	7.39
946121	AF1-277 C	12.7545	Adder	15.01
946122	AF1-277 E	6.2821	Adder	7.39
946131	AF1-278 C	10.1732	Adder	11.97
946132	AF1-278 E	5.0561	Adder	5.95
946211	AF1-286 C	1.1932	Adder	1.4
946212	AF1-286 E	0.8102	Adder	0.95
946221	AF1-287 C	1.3925	Adder	1.64
946222	AF1-287 E	0.9283	Adder	1.09
946381	AF1-302 C	2.5395	Adder	2.99
946382	AF1-302 E	3.3860	Adder	3.98
946401	AF1-304 C	7.8025	Adder	9.18
946402	AF1-304 E	5.2017	Adder	6.12
946421	AF1-306 C	6.7840	Adder	7.98
946422	AF1-306 E	27.1360	Adder	31.92
946571	AF1-321 C O1	3.4556	50/50	3.4556
946572	AF1-321 E O1	2.3038	50/50	2.3038
946771	AF1-217 C	1.3925	Adder	1.64
946772	AF1-217 E	0.9283	Adder	1.09
957001	AF2-001 C O1	3.4556	50/50	3.4556
957002	AF2-001 E O1	2.3038	50/50	2.3038
957011	AF2-002 C O1	1.7278	50/50	1.7278
957012	AF2-002 E O1	1.1519	50/50	1.1519
957161	AF2-010 C	5.4584	Adder	6.42
957162	AF2-010 E	3.6785	Adder	4.33
957451	AF2-039 C	1.1251	Adder	1.32
957452	AF2-039 E	0.7501	Adder	0.88
957512	AF2-045 E	3.9693	Adder	4.67
957561	AF2-050 C	8.4078	50/50	8.4078
957562	AF2-050 E	5.6052	50/50	5.6052
957571	AF2-051 C	4.3062	Adder	5.07
957572	AF2-051 E	2.2184	Adder	2.61
957931	AF2-087 C (Suspended)	0.5886	Adder	0.69
957932	AF2-087 E (Suspended)	0.8105	Adder	0.95
957941	AF2-088 C	0.5417	Adder	0.64
957942	AF2-088 E	0.3611	Adder	0.42
957981	AF2-092 C	1.9044	50/50	1.9044
957982	AF2-092 E	1.2696	50/50	1.2696

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.5195	Adder	0.61
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.3463	Adder	0.41
958271	AF2-121 C	1.8789	Adder	2.21
958272	AF2-121 E	1.2526	Adder	1.47
958361	AF2-130 C	1.5671	Adder	1.84
958362	AF2-130 E	1.0448	Adder	1.23
958471	AF2-141	1.4464	Adder	1.7
958731	AF2-164 C O1	8.3154	Adder	9.78
958732	AF2-164 E O1	5.5436	Adder	6.52
958741	AF2-165 C	1.5822	Adder	1.86
958742	AF2-165 E	1.0548	Adder	1.24
958751	AF2-166 C	1.5671	Adder	1.84
958752	AF2-166 E	1.0448	Adder	1.23
959061	AF2-197 C O1	4.9636	Adder	5.84
959062	AF2-197 E O1	7.4454	Adder	8.76
959441	AF2-235 C	0.7606	Adder	0.89
959442	AF2-235 E	0.5071	Adder	0.6
959471	AF2-238 C	1.8100	Adder	2.13
959472	AF2-238 E	1.2067	Adder	1.42
959481	AF2-239 C	1.3334	Adder	1.57
959482	AF2-239 E	1.0691	Adder	1.26
959491	AF2-240 C	0.5568	Adder	0.66
959492	AF2-240 E	0.4743	Adder	0.56
959501	AF2-241 C	1.6645	Adder	1.96
959502	AF2-241 E	1.2816	Adder	1.51
959521	AF2-243 C	1.1867	Adder	1.4
959522	AF2-243 E	0.7911	Adder	0.93
959741	AF2-265 C	1.2972	Adder	1.53
959742	AF2-265 E	0.9653	Adder	1.14
959792	AF2-270 E	0.9902	50/50	0.9902
959802	AF2-271 E	0.5042	Adder	0.59
959822	AF2-273 E	0.4424	Adder	0.52
960022	AF2-293 E	0.1298	Adder	0.15
960031	AF2-294 C	1.6222	Adder	1.91
960032	AF2-294 E	1.0815	Adder	1.27
960041	AF2-295 C	1.6236	Adder	1.91
960042	AF2-295 E	1.0824	Adder	1.27
960051	AF2-296 C	1.6575	Adder	1.95
960052	AF2-296 E	1.1050	Adder	1.3
960271	AF2-318 C	1.4415	Adder	1.7
960272	AF2-318 E	0.9610	Adder	1.13
960451	AF2-336 C	3.1740	50/50	3.1740
960452	AF2-336 E	2.1160	50/50	2.1160
960461	AF2-337 C	3.1740	50/50	3.1740
960462	AF2-337 E	2.1160	50/50	2.1160
960471	AF2-338 C	3.1740	50/50	3.1740
960472	AF2-338 E	2.1160	50/50	2.1160
960481	AF2-339 C	3.1740	50/50	3.1740
960482	AF2-339 E	2.1160	50/50	2.1160
960901	AF2-381 C	22.8517	50/50	22.8517
960902	AF2-381 E	12.0258	50/50	12.0258

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961141	AF2-405	1.4730	Adder	1.73
961151	AF2-406	11.0479	Adder	13.0
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	57.1710	Adder	67.26
961211	AF2-412	22.6879	Adder	26.69
961451	AF2-436	0.1610	Adder	0.19
961911	AG1-033 C	0.9046	50/50	0.9046
961912	AG1-033 E	0.5088	50/50	0.5088
961971	AG1-040 C	0.7745	Adder	1.72
961972	AG1-040 E	0.5163	Adder	1.15
961981	AG1-041 C	1.8960	50/50	1.8960
961982	AG1-041 E	1.2640	50/50	1.2640
962292	AG1-077 E	0.4661	Adder	1.03
962411	AG1-090 C O2	3.6385	Adder	8.08
962412	AG1-090 E O2	2.4257	Adder	5.38
962511	AG1-100 C	0.7368	Adder	1.64
962512	AG1-100 E	0.4912	Adder	1.09
962641	AG1-113	0.4130	Adder	0.92
962651	AG1-114	0.9582	Adder	2.13
962891	AG1-138 C	0.3288	Adder	0.73
962892	AG1-138 E	0.0173	Adder	0.04
962901	AG1-139 C	0.3319	Adder	0.74
962902	AG1-139 E	0.0175	Adder	0.04
962911	AG1-140 C	0.1123	Adder	0.25
962912	AG1-140 E	0.0512	Adder	0.11
962951	AG1-144 C	0.9958	Adder	2.21
962952	AG1-144 E	0.6639	Adder	1.47
963281	AG1-177 C O2	0.7380	Adder	1.64
963282	AG1-177 E O2	0.4920	Adder	1.09
963441	AG1-193 C	0.8712	Adder	1.93
963442	AG1-193 E	0.5808	Adder	1.29
963481	AG1-197 C	0.5871	Adder	1.3
963482	AG1-197 E	0.3914	Adder	0.87
963491	AG1-198 C	0.4512	Adder	1.0
963492	AG1-198 E	0.3008	Adder	0.67
963531	AG1-202 C	0.3801	Adder	0.84
963532	AG1-202 E	0.1958	Adder	0.43
963541	AG1-203 C	0.7574	Adder	1.68
963542	AG1-203 E	0.4078	Adder	0.91
963561	AG1-205 C	0.6228	Adder	1.38
963562	AG1-205 E	0.3354	Adder	0.74
963571	AG1-206 C	0.5022	Adder	1.11
963572	AG1-206 E	0.2704	Adder	0.6
963881	AG1-241 C	1.8374	50/50	1.8374
963882	AG1-241 E	0.9894	50/50	0.9894
963891	AG1-242 C	0.4758	Adder	1.06
963892	AG1-242 E	0.2562	Adder	0.57
963941	AG1-247 C	0.3826	Adder	0.85
963942	AG1-247 E	0.2030	Adder	0.45
963991	AG1-253 C	0.1685	Adder	0.37
963992	AG1-253 E	0.0811	Adder	0.18
964031	AG1-257 C	0.4843	Adder	1.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964032	AG1-257 E	0.6768	Adder	1.5
964041	AG1-258 C	0.4843	Adder	1.08
964042	AG1-258 E	0.6768	Adder	1.5
964191	AG1-280 C	1.3311	Adder	2.95
964192	AG1-280 E	0.8874	Adder	1.97
964201	AG1-281 C	1.3294	Adder	2.95
964202	AG1-281 E	0.8863	Adder	1.97
964341	AG1-296 C	0.4902	Adder	1.09
964342	AG1-296 E	0.2640	Adder	0.59
964391	AG1-301 C	1.0363	Adder	2.3
964392	AG1-301 E	0.6909	Adder	1.53
964411	AG1-303 C O2	1.8342	Adder	4.07
964412	AG1-303 E O2	1.2228	Adder	2.71
964451	AG1-308 C O2	0.6888	Adder	1.53
964452	AG1-308 E O2	0.9626	Adder	2.14
964701	AG1-333 C	0.3152	Adder	0.7
964702	AG1-333 E	0.0430	Adder	0.1
964751	AG1-338 C	1.1430	50/50	1.1430
964752	AG1-338 E	0.1559	50/50	0.1559
964761	AG1-339 C	1.1950	50/50	1.1950
964762	AG1-339 E	0.1039	50/50	0.1039
964771	AG1-340 C	1.1430	50/50	1.1430
964772	AG1-340 E	0.1559	50/50	0.1559
964911	AG1-355 C	9.2910	50/50	9.2910
964912	AG1-355 E	6.1940	50/50	6.1940
964921	AG1-356 C	2.5044	Adder	5.56
964922	AG1-356 E	1.6696	Adder	3.71
965121	AG1-377 C O1	0.9958	Adder	2.21
965122	AG1-377 E O1	0.6639	Adder	1.47
965131	AG1-378 C O1	0.9958	Adder	2.21
965132	AG1-378 E O1	0.6639	Adder	1.47
965171	AG1-382 C	1.3203	Adder	2.93
965172	AG1-382 E	0.8802	Adder	1.95
965201	AG1-385 C	1.1064	Adder	2.46
965202	AG1-385 E	0.3277	Adder	0.73
965221	AG1-387 C	1.3203	Adder	2.93
965222	AG1-387 E	0.8802	Adder	1.95
965241	AG1-389 C O1	1.1741	Adder	2.61
965242	AG1-389 E O1	0.7828	Adder	1.74
965251	AG1-390 C O2	1.1746	Adder	2.61
965252	AG1-390 E O2	0.7831	Adder	1.74
965261	AG1-391 C O1	1.1741	Adder	2.61
965262	AG1-391 E O1	0.7828	Adder	1.74
965271	AG1-392 C O1	2.3483	Adder	5.21
965272	AG1-392 E O1	1.5655	Adder	3.48
965301	AG1-395 C	1.2797	Adder	2.84
965302	AG1-395 E	0.3801	Adder	0.84
965861	AG1-455	2.0624	Adder	4.58
965881	AG1-457 C	3.3154	Adder	7.36
965882	AG1-457 E	2.2103	Adder	4.91
966121	AG1-481	1.1911	Adder	2.64
966512	AG1-520 E	1.1519	50/50	1.1519

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966771	AG1-548 C	7.1722	Adder	15.92
966772	AG1-548 E	2.1829	Adder	4.85
966783	AG1-549 BAT	7.5960	50/50	7.5960
CALDERWOOD	CALDERWOOD	0.3593	Confirmed LTF	0.3593
PRAIRIE	PRAIRIE	1.4723	Confirmed LTF	1.4723
O-066	O-066	2.0190	Confirmed LTF	2.0190
CHEOAH	CHEOAH	0.3639	Confirmed LTF	0.3639
COTTONWOOD	COTTONWOOD	1.3671	Confirmed LTF	1.3671
G-007	G-007	0.4273	Confirmed LTF	0.4273
HAMLET	HAMLET	0.5088	Confirmed LTF	0.5088
GIBSON	GIBSON	0.2970	Confirmed LTF	0.2970
BLUEG	BLUEG	0.9791	Confirmed LTF	0.9791
TRIMBLE	TRIMBLE	0.3133	Confirmed LTF	0.3133
CATAWBA	CATAWBA	0.2926	Confirmed LTF	0.2926

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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
164869505	200810	26KEYSTONE	PENELEC	999332	KEYSTONE	PENELEC	4	APS-P2-2-WP-500-DRT19	bus	634.0	139.12	139.75	DC	8.77

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200636	26IUP CO-G	0.4562	50/50	0.4562
200794	26CONEMAGH	0.3075	50/50	0.3075
200809	26SITHE	1.4282	50/50	1.4282
200833	26SEWRDB34	14.8354	50/50	14.8354
200835	26ARN_Z1-066	0.9301	Adder	1.09
200837	26HOMER C1	24.5961	50/50	24.5961
200838	26HOMER C2	20.3806	50/50	20.3806
200839	26HOMER C3	21.5755	50/50	21.5755
200846	26FORWARD	0.0922	50/50	0.0922
200852	26WARR RDG	0.2604	Adder	0.31
200864	K-013 E	4.2361	50/50	4.2361
200883	Q-053 E	6.5672	Adder	7.73
200888	26HIGHLAND	0.2265	50/50	0.2265
200894	26K02	4.1917	Adder	4.93
200906	26KEYSTN#3	0.7604	50/50	0.7604
200925	26R32	0.3551	50/50	0.3551
202158	26CON.GEN1	0.0793	50/50	0.0793
202160	26CON.GEN2	0.0555	50/50	0.0555
203915	26BF_Z2-108	2.0927	Adder	2.46
203999	P-047 E	7.4720	Adder	8.79
235003	AC1-025 E	0.1061	Adder	0.12
236828	01GRAYMONT	0.2879	Adder	0.34
290086	Q-036 E	4.6070	Adder	5.42
292350	K-023	3.8251	Adder	4.5
292542	L-013 1	3.7204	Adder	4.38
293301	N-039 E	8.8150	Adder	10.37
293393	V3-030E	4.0181	Adder	4.73
293432	R-040 E	0.2093	Adder	0.25
293603	O-018 E	9.2165	50/50	9.2165
293902	O-048 E	3.3484	Adder	3.94
294515	O38_P22	7.7131	Adder	9.07
294903	P-060 E	5.9947	Adder	7.05
296332	R-032 E	10.6344	50/50	10.6344
913142	Y1-033 E OP1	2.9894	Adder	3.52
916202	Z1-069 E	6.0533	Adder	7.12
919201	AA1-144 OP	11.5038	Adder	13.53
920341	AA2-132 (Withdrawn : 12/07/2020)	1.5694	Adder	1.85
921642	AA2-000	36.2420	Adder	42.64
930511	AB2-092	1.3307	Adder	1.57
931092	AB1-160 E	1.7295	Adder	2.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
935191	AD1-154	2.3759	Adder	2.8
936421	AD2-055	2.7397	Adder	3.22
936991	AD2-133 C	2.0731	Adder	2.44
936992	AD2-133 E	9.4824	Adder	11.16
938351	AE1-053	1.1626	Adder	1.37
938881	AE1-116	0.6259	Adder	0.74
938951	AE1-123	1.7193	Adder	2.02
938993	AE1-128 C	10.5852	Adder	12.45
938994	AE1-128 E	7.0568	Adder	8.3
939171	AE1-147 C	0.8659	Adder	1.02
939172	AE1-147 E	0.5773	Adder	0.68
939291	AE1-160 C	1.0615	Adder	1.25
939292	AE1-160 E	0.6101	Adder	0.72
940201	AE2-001 C	0.8646	Adder	1.02
940202	AE2-001 E	0.5764	Adder	0.68
940681	AE2-055 C (Suspended)	0.8447	Adder	0.99
940682	AE2-055 E (Suspended)	0.5631	Adder	0.66
940861	AE2-074 C	1.6654	Adder	1.96
940862	AE2-074 E	2.1923	Adder	2.58
941191	AE2-113 C	6.5539	Adder	7.71
941192	AE2-113 E	7.0564	Adder	8.3
941231	AE2-117 C	1.2652	Adder	1.49
941232	AE2-117 E	0.8435	Adder	0.99
941241	AE2-118 C	1.3245	Adder	1.56
941242	AE2-118 E	0.8830	Adder	1.04
941261	AE2-120 C	0.8638	Adder	1.02
941262	AE2-120 E	0.5759	Adder	0.68
941271	AE2-121 C	0.4616	Adder	0.54
941272	AE2-121 E	0.3082	Adder	0.36
941321	AE2-126 C	1.1448	Adder	1.35
941322	AE2-126 E	0.7632	Adder	0.9
941331	AE2-129 C	1.2830	Adder	1.51
941332	AE2-129 E	0.8553	Adder	1.01
941351	AE2-131 C (Suspended)	1.2830	Adder	1.51
941352	AE2-131 E (Suspended)	0.8553	Adder	1.01
941421	AE2-139 C	2.2721	Adder	5.04
941422	AE2-139 E	1.5147	Adder	3.36
942121	AE2-224 C	8.6669	Adder	10.2
942122	AE2-224 E	5.7780	Adder	6.8
942351	AE2-248 C	0.6823	Adder	0.8
942352	AE2-248 E	0.4549	Adder	0.54
942361	AE2-249 C	1.1908	Adder	1.4
942362	AE2-249 E	0.7939	Adder	0.93
942491	AE2-262 C	3.8837	Adder	4.57
942492	AE2-262 E	2.6098	Adder	3.07
942501	AE2-263 C	3.6506	Adder	4.29
942502	AE2-263 E	2.4374	Adder	2.87
942511	AE2-264 C	5.1632	Adder	6.07
942512	AE2-264 E	3.4422	Adder	4.05
942811	AE2-299 C	2.2301	Adder	2.62
942812	AE2-299 E	8.9205	Adder	10.49
942961	AE2-316 C	3.6572	Adder	4.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.2151	Adder	6.14
943151	AE2-344 C	4.8233	Adder	5.67
943152	AE2-344 E	3.2155	Adder	3.78
943711	AF1-039 C O1	0.7909	Adder	0.93
943712	AF1-039 E O1	0.5272	Adder	0.62
943751	AF1-043	8.2190	Adder	9.67
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.9072	Adder	1.07
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.5103	Adder	0.6
944181	AF1-086 C O1	2.7629	Adder	3.25
944182	AF1-086 E O1	12.0200	Adder	14.14
944261	AF1-094 C	0.8818	Adder	1.04
944262	AF1-094 E	0.5879	Adder	0.69
944281	AF1-096 C	1.0030	Adder	1.18
944282	AF1-096 E	0.6686	Adder	0.79
944301	AF1-098 C	3.4305	Adder	4.04
944302	AF1-098 E	2.2870	Adder	2.69
944311	AF1-099 C	5.8954	Adder	6.94
944312	AF1-099 E	3.9303	Adder	4.62
944321	AF1-100 C	12.5371	Adder	14.75
944322	AF1-100 E	8.3580	Adder	9.83
944381	AF1-103 O1	1.7331	Adder	2.04
944411	AF1-106 O1	1.7177	Adder	2.02
944471	AF1-112 C	0.8552	Adder	1.01
944472	AF1-112 E	0.5701	Adder	0.67
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.8490	Adder	1.0
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5660	Adder	0.67
944691	AF1-134 C	1.4199	Adder	1.67
944692	AF1-134 E	0.9466	Adder	1.11
944751	AF1-140 C	1.4160	Adder	1.67
944752	AF1-140 E	0.9440	Adder	1.11
944771	AF1-142 C	9.4326	Adder	11.1
944772	AF1-142 E	6.2884	Adder	7.4
944781	AF1-143 C	6.9758	Adder	8.21
944782	AF1-143 E	3.7204	Adder	4.38
944881	AF1-153 C O1	1.0402	Adder	1.22
944882	AF1-153 E O1	0.6935	Adder	0.82
944901	AF1-155 C	1.0404	Adder	1.22
944902	AF1-155 E	0.6936	Adder	0.82
945021	AF1-167 C	0.6719	Adder	0.79
945022	AF1-167 E	0.4488	Adder	0.53
945051	AF1-170 C	3.0798	Adder	3.62
945052	AF1-170 E	2.0532	Adder	2.42
945451	AF1-210 C	0.7376	Adder	0.87
945452	AF1-210 E	0.4917	Adder	0.58
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8639	Adder	1.02

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5760	Adder	0.68
945671	AF1-232 C (Withdrawn : 01/19/2021)	14.7115	Adder	17.31
945672	AF1-232 E (Withdrawn : 01/19/2021)	7.9216	Adder	9.32
945751	AF1-240 C O1	1.4256	Adder	1.68
945752	AF1-240 E O1	0.9504	Adder	1.12
946071	AF1-272 C O1	15.6902	50/50	15.6902
946072	AF1-272 E O1	10.4601	50/50	10.4601
946111	AF1-276 C	7.4656	Adder	8.78
946112	AF1-276 E	3.6771	Adder	4.33
946121	AF1-277 C	7.4656	Adder	8.78
946122	AF1-277 E	3.6771	Adder	4.33
946131	AF1-278 C	5.9546	Adder	7.01
946132	AF1-278 E	2.9595	Adder	3.48
946211	AF1-286 C	0.6957	Adder	0.82
946212	AF1-286 E	0.4724	Adder	0.56
946221	AF1-287 C	0.8326	Adder	0.98
946222	AF1-287 E	0.5551	Adder	0.65
946381	AF1-302 C	1.5970	Adder	1.88
946382	AF1-302 E	2.1294	Adder	2.51
946401	AF1-304 C	5.2474	Adder	6.17
946402	AF1-304 E	3.4983	Adder	4.12
946421	AF1-306 C	4.3103	Adder	5.07
946422	AF1-306 E	17.2414	Adder	20.28
946571	AF1-321 C O1	2.2145	50/50	2.2145
946572	AF1-321 E O1	1.4763	50/50	1.4763
946771	AF1-217 C	0.8327	Adder	0.98
946772	AF1-217 E	0.5552	Adder	0.65
957001	AF2-001 C O1	2.2145	50/50	2.2145
957002	AF2-001 E O1	1.4763	50/50	1.4763
957011	AF2-002 C O1	1.1072	50/50	1.1072
957012	AF2-002 E O1	0.7382	50/50	0.7382
957161	AF2-010 C	3.4025	Adder	4.0
957162	AF2-010 E	2.2930	Adder	2.7
957451	AF2-039 C	0.7842	Adder	0.92
957452	AF2-039 E	0.5228	Adder	0.62
957512	AF2-045 E	2.6604	Adder	3.13
957561	AF2-050 C	4.3335	Adder	5.1
957562	AF2-050 E	2.8890	Adder	3.4
957571	AF2-051 C	2.5983	Adder	3.06
957572	AF2-051 E	1.3385	Adder	1.57
957931	AF2-087 C (Suspended)	0.3821	Adder	0.45
957932	AF2-087 E (Suspended)	0.5262	Adder	0.62
957941	AF2-088 C	0.3776	Adder	0.44
957942	AF2-088 E	0.2517	Adder	0.3
957981	AF2-092 C	1.0550	Adder	1.24
957982	AF2-092 E	0.7033	Adder	0.83
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.3338	Adder	0.39
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.2225	Adder	0.26

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958271	AF2-121 C	1.2830	Adder	1.51
958272	AF2-121 E	0.8553	Adder	1.01
958361	AF2-130 C	1.1065	Adder	1.3
958362	AF2-130 E	0.7377	Adder	0.87
958471	AF2-141	0.9301	Adder	1.09
958731	AF2-164 C O1	4.8576	Adder	5.71
958732	AF2-164 E O1	3.2384	Adder	3.81
958741	AF2-165 C	1.0641	Adder	1.25
958742	AF2-165 E	0.7094	Adder	0.83
958751	AF2-166 C	1.1065	Adder	1.3
958752	AF2-166 E	0.7377	Adder	0.87
959061	AF2-197 C O1	2.9265	Adder	3.44
959062	AF2-197 E O1	4.3897	Adder	5.16
959441	AF2-235 C	0.5015	Adder	0.59
959442	AF2-235 E	0.3343	Adder	0.39
959471	AF2-238 C	1.0580	Adder	1.24
959472	AF2-238 E	0.7054	Adder	0.83
959481	AF2-239 C	0.7866	Adder	0.93
959482	AF2-239 E	0.6307	Adder	0.74
959491	AF2-240 C	0.3246	Adder	0.38
959492	AF2-240 E	0.2765	Adder	0.33
959501	AF2-241 C	0.9705	Adder	1.14
959502	AF2-241 E	0.7472	Adder	0.88
959521	AF2-243 C	0.7980	Adder	0.94
959522	AF2-243 E	0.5320	Adder	0.63
959741	AF2-265 C	0.7583	Adder	0.89
959742	AF2-265 E	0.5643	Adder	0.66
959792	AF2-270 E	0.5470	Adder	0.64
959802	AF2-271 E	0.3276	Adder	0.39
959822	AF2-273 E	0.2954	Adder	0.35
960022	AF2-293 E	0.0842	Adder	0.1
960031	AF2-294 C	0.9464	Adder	1.11
960032	AF2-294 E	0.6309	Adder	0.74
960041	AF2-295 C	1.0404	Adder	1.22
960042	AF2-295 E	0.6936	Adder	0.82
960051	AF2-296 C	1.4199	Adder	1.67
960052	AF2-296 E	0.9466	Adder	1.11
960271	AF2-318 C	0.8504	Adder	1.0
960272	AF2-318 E	0.5669	Adder	0.67
960451	AF2-336 C	1.7583	Adder	2.07
960452	AF2-336 E	1.1722	Adder	1.38
960461	AF2-337 C	1.7583	Adder	2.07
960462	AF2-337 E	1.1722	Adder	1.38
960471	AF2-338 C	1.7583	Adder	2.07
960472	AF2-338 E	1.1722	Adder	1.38
960481	AF2-339 C	1.7583	Adder	2.07
960482	AF2-339 E	1.1722	Adder	1.38
960901	AF2-381 C	14.7256	50/50	14.7256
960902	AF2-381 E	7.7494	50/50	7.7494
961141	AF2-405	0.8588	Adder	1.01
961151	AF2-406	6.4413	Adder	7.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	32.8440	Adder	38.64
961211	AF2-412	13.1241	Adder	15.44
961911	AG1-033 C	0.5844	50/50	0.5844
961912	AG1-033 E	0.3287	50/50	0.3287
961971	AG1-040 C	0.4649	Adder	1.03
961972	AG1-040 E	0.3099	Adder	0.69
961981	AG1-041 C	0.5577	Adder	1.24
961982	AG1-041 E	0.3718	Adder	0.83
962292	AG1-077 E	0.3007	Adder	0.67
962411	AG1-090 C O2	2.3716	Adder	5.26
962412	AG1-090 E O2	1.5811	Adder	3.51
962511	AG1-100 C	0.4405	Adder	0.98
962512	AG1-100 E	0.2937	Adder	0.65
962641	AG1-113	0.2654	Adder	0.59
962651	AG1-114	0.6162	Adder	1.37
962891	AG1-138 C	0.2321	Adder	0.52
962892	AG1-138 E	0.0122	Adder	0.03
962901	AG1-139 C	0.2232	Adder	0.5
962902	AG1-139 E	0.0117	Adder	0.03
962911	AG1-140 C	0.0665	Adder	0.15
962912	AG1-140 E	0.0303	Adder	0.07
962951	AG1-144 C	0.6800	Adder	1.51
962952	AG1-144 E	0.4533	Adder	1.01
963281	AG1-177 C O2	0.4413	Adder	0.98
963282	AG1-177 E O2	0.2942	Adder	0.65
963441	AG1-193 C	0.5502	Adder	1.22
963442	AG1-193 E	0.3668	Adder	0.81
963481	AG1-197 C	0.3527	Adder	0.78
963482	AG1-197 E	0.2351	Adder	0.52
963491	AG1-198 C	0.2804	Adder	0.62
963492	AG1-198 E	0.1869	Adder	0.41
963541	AG1-203 C	0.4887	Adder	1.08
963542	AG1-203 E	0.2631	Adder	0.58
963561	AG1-205 C	0.4005	Adder	0.89
963562	AG1-205 E	0.2157	Adder	0.48
963571	AG1-206 C	0.3274	Adder	0.73
963572	AG1-206 E	0.1763	Adder	0.39
963881	AG1-241 C	1.1871	50/50	1.1871
963882	AG1-241 E	0.6392	50/50	0.6392
963891	AG1-242 C	0.4076	Adder	0.9
963892	AG1-242 E	0.2195	Adder	0.49
963941	AG1-247 C	0.2230	Adder	0.5
963942	AG1-247 E	0.1183	Adder	0.26
963991	AG1-253 C	0.0997	Adder	0.22
963992	AG1-253 E	0.0480	Adder	0.11
964031	AG1-257 C	0.3141	Adder	0.7
964032	AG1-257 E	0.4390	Adder	0.97
964041	AG1-258 C	0.3141	Adder	0.7
964042	AG1-258 E	0.4390	Adder	0.97
964191	AG1-280 C	0.8695	Adder	1.93
964192	AG1-280 E	0.5797	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964201	AG1-281 C	0.8682	Adder	1.93
964202	AG1-281 E	0.5788	Adder	1.28
964331	AG1-295 C	0.8622	50/50	0.8622
964332	AG1-295 E	0.4575	50/50	0.4575
964341	AG1-296 C	0.3072	Adder	0.68
964342	AG1-296 E	0.1654	Adder	0.37
964391	AG1-301 C	0.6626	Adder	1.47
964392	AG1-301 E	0.4417	Adder	0.98
964411	AG1-303 C O2	1.1070	Adder	2.46
964412	AG1-303 E O2	0.7380	Adder	1.64
964451	AG1-308 C O2	0.4703	Adder	1.04
964452	AG1-308 E O2	0.6573	Adder	1.46
964701	AG1-333 C	0.1839	Adder	0.41
964702	AG1-333 E	0.0251	Adder	0.06
964751	AG1-338 C	0.3383	Adder	0.75
964752	AG1-338 E	0.0461	Adder	0.1
964761	AG1-339 C	0.3537	Adder	0.79
964762	AG1-339 E	0.0308	Adder	0.07
964771	AG1-340 C	0.3383	Adder	0.75
964772	AG1-340 E	0.0461	Adder	0.1
964911	AG1-355 C	5.9652	50/50	5.9652
964912	AG1-355 E	3.9768	50/50	3.9768
964921	AG1-356 C	1.6139	Adder	3.58
964922	AG1-356 E	1.0759	Adder	2.39
965121	AG1-377 C O1	0.6800	Adder	1.51
965122	AG1-377 E O1	0.4533	Adder	1.01
965131	AG1-378 C O1	0.6800	Adder	1.51
965132	AG1-378 E O1	0.4533	Adder	1.01
965171	AG1-382 C	0.9204	Adder	2.04
965172	AG1-382 E	0.6136	Adder	1.36
965201	AG1-385 C	0.7089	Adder	1.57
965202	AG1-385 E	0.2100	Adder	0.47
965221	AG1-387 C	0.9204	Adder	2.04
965222	AG1-387 E	0.6136	Adder	1.36
965241	AG1-389 C O1	0.6842	Adder	1.52
965242	AG1-389 E O1	0.4562	Adder	1.01
965251	AG1-390 C O2	0.6846	Adder	1.52
965252	AG1-390 E O2	0.4564	Adder	1.01
965261	AG1-391 C O1	0.6842	Adder	1.52
965262	AG1-391 E O1	0.4562	Adder	1.01
965271	AG1-392 C O1	1.3685	Adder	3.04
965272	AG1-392 E O1	0.9123	Adder	2.03
965301	AG1-395 C	0.8738	Adder	1.94
965302	AG1-395 E	0.2595	Adder	0.58
965861	AG1-455	1.2286	Adder	2.73
965881	AG1-457 C	2.1315	Adder	4.73
965882	AG1-457 E	1.4210	Adder	3.15
966121	AG1-481	0.7133	Adder	1.58
966512	AG1-520 E	0.7382	50/50	0.7382
966771	AG1-548 C	4.4368	Adder	9.85
966772	AG1-548 E	1.3503	Adder	3.0
966781	AG1-549 C O2	50.3907	50/50	50.3907

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966782	AG1-549 E O2	15.3363	50/50	15.3363
VFT	VFT	0.1032	Confirmed LTF	0.1032
CALDERWOOD	CALDERWOOD	0.2704	Confirmed LTF	0.2704
PRAIRIE	PRAIRIE	1.2295	Confirmed LTF	1.2295
CHEOAH	CHEOAH	0.2733	Confirmed LTF	0.2733
CBM-N	CBM-N	0.1548	Confirmed LTF	0.1548
COTTONWOOD	COTTONWOOD	1.0752	Confirmed LTF	1.0752
G-007	G-007	0.0252	Confirmed LTF	0.0252
HAMLET	HAMLET	0.3465	Confirmed LTF	0.3465
GIBSON	GIBSON	0.2555	Confirmed LTF	0.2555
BLUEG	BLUEG	0.8333	Confirmed LTF	0.8333
TRIMBLE	TRIMBLE	0.2671	Confirmed LTF	0.2671
CATAWBA	CATAWBA	0.2051	Confirmed LTF	0.2051

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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
173976204	200857	26MARSHALL	PENELEC	200701	26GROVER	PENELEC	1	PN-P2-3-PN-230-14BT	breaker	666.0	100.06	103.48	DC	22.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.9787	50/50	5.9787
200666	26SHAWVL 4	5.8401	50/50	5.8401
200715	26SHAWVL 1	3.7614	50/50	3.7614
200722	26SHAWVL 2	3.8311	50/50	3.8311
200894	26K02	35.7084	50/50	35.7084
200913	26SHAW-D	0.1621	50/50	0.1621
235003	AC1-025 E	0.3513	50/50	0.3513
236828	01GRAYMONT	0.9421	50/50	0.9421
290086	Q-036 E	3.4833	Adder	4.1
919201	AA1-144 OP	-22.7374	Adder	-26.75
921642	AA2-000	207.4194	50/50	207.4194
930511	AB2-092	7.6158	50/50	7.6158
936421	AD2-055	15.6797	50/50	15.6797
936991	AD2-133 C	1.5675	Adder	1.84
936992	AD2-133 E	7.1695	Adder	8.43
939171	AE1-147 C	2.8286	50/50	2.8286
939172	AE1-147 E	1.8858	50/50	1.8858
940201	AE2-001 C	2.8272	50/50	2.8272
940202	AE2-001 E	1.8848	50/50	1.8848
940681	AE2-055 C (Suspended)	2.8061	50/50	2.8061
940682	AE2-055 E (Suspended)	1.8707	50/50	1.8707
941191	AE2-113 C	4.6096	Adder	5.42
941192	AE2-113 E	4.9630	Adder	5.84
941261	AE2-120 C	2.8265	50/50	2.8265
941262	AE2-120 E	1.8843	50/50	1.8843
941271	AE2-121 C	1.5052	50/50	1.5052
941272	AE2-121 E	1.0050	50/50	1.0050
941321	AE2-126 C	1.8539	50/50	1.8539
941322	AE2-126 E	1.2359	50/50	1.2359
941331	AE2-129 C	1.3607	Adder	1.6
941332	AE2-129 E	0.9071	Adder	1.07
941351	AE2-131 C (Suspended)	1.3607	Adder	1.6
941352	AE2-131 E (Suspended)	0.9071	Adder	1.07
942351	AE2-248 C	2.2520	50/50	2.2520
942352	AE2-248 E	1.5013	50/50	1.5013
942491	AE2-262 C	12.0780	50/50	12.0780
942492	AE2-262 E	8.1164	50/50	8.1164
942501	AE2-263 C	11.3533	50/50	11.3533
942502	AE2-263 E	7.5802	50/50	7.5802
942961	AE2-316 C	4.0033	Adder	4.71
942962	AE2-316 E	5.7088	Adder	6.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943751	AF1-043	47.0389	50/50	47.0389
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.9998	50/50	2.9998
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6874	50/50	1.6874
944181	AF1-086 C O1	1.3202	Adder	1.55
944182	AF1-086 E O1	5.7438	Adder	6.76
944311	AF1-099 C	18.3344	50/50	18.3344
944312	AF1-099 E	12.2229	50/50	12.2229
944321	AF1-100 C	33.7005	50/50	33.7005
944322	AF1-100 E	22.4670	50/50	22.4670
944412	AF1-106 BAT	2.0686	Merchant Transmission	2.0686
944471	AF1-112 C	2.8172	50/50	2.8172
944472	AF1-112 E	1.8782	50/50	1.8782
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.8108	50/50	2.8108
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8738	50/50	1.8738
944691	AF1-134 C	1.1902	Adder	1.4
944692	AF1-134 E	0.7935	Adder	0.93
944771	AF1-142 C	29.3350	50/50	29.3350
944772	AF1-142 E	19.5567	50/50	19.5567
944881	AF1-153 C O1	1.9435	50/50	1.9435
944882	AF1-153 E O1	1.2957	50/50	1.2957
944901	AF1-155 C	1.9286	50/50	1.9286
944902	AF1-155 E	1.2858	50/50	1.2858
945161	AF1-181	0.0275	50/50	0.0275
945171	AF1-182	0.1366	50/50	0.1366
945181	AF1-183	0.0308	50/50	0.0308
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.8265	50/50	2.8265
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8843	50/50	1.8843
946381	AF1-302 C	1.7482	Adder	2.06
946382	AF1-302 E	2.3309	Adder	2.74
946421	AF1-306 C	8.4801	50/50	8.4801
946422	AF1-306 E	33.9204	50/50	33.9204
957451	AF2-039 C	1.3872	50/50	1.3872
957452	AF2-039 E	0.9248	50/50	0.9248
957941	AF2-088 C	0.6679	50/50	0.6679
957942	AF2-088 E	0.4453	50/50	0.4453
958271	AF2-121 C	1.3607	Adder	1.6
958272	AF2-121 E	0.9071	Adder	1.07
959063	AF2-197 BAT	13.6765	Merchant Transmission	13.6765
960022	AF2-293 E	0.2749	50/50	0.2749
960041	AF2-295 C	1.9286	50/50	1.9286
960042	AF2-295 E	1.2858	50/50	1.2858
960051	AF2-296 C	1.1902	Adder	1.4
960052	AF2-296 E	0.7935	Adder	0.93
961142	AF2-405 BAT	1.0343	Merchant Transmission	1.0343
961152	AF2-406 BAT	7.7573	Merchant Transmission	7.7573

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961212	AF2-412 BAT	10.1049	Merchant Transmission	10.1049
961451	AF2-436	-0.1533	Adder	-0.18
962411	AG1-090 C O2	13.6308	50/50	13.6308
962412	AG1-090 E O2	9.0872	50/50	9.0872
962951	AG1-144 C	0.7212	Adder	1.6
962952	AG1-144 E	0.4808	Adder	1.07
963571	AG1-206 C	0.9766	50/50	0.9766
963572	AG1-206 E	0.5259	50/50	0.5259
963891	AG1-242 C	0.3417	Adder	0.76
963892	AG1-242 E	0.1840	Adder	0.41
964031	AG1-257 C	1.9499	50/50	1.9499
964032	AG1-257 E	2.7252	50/50	2.7252
964041	AG1-258 C	1.9499	50/50	1.9499
964042	AG1-258 E	2.7252	50/50	2.7252
964341	AG1-296 C	0.2935	Adder	0.65
964342	AG1-296 E	0.1580	Adder	0.35
964451	AG1-308 C O2	0.4988	Adder	1.11
964452	AG1-308 E O2	0.6971	Adder	1.55
964703	AG1-333 BAT	0.2076	Merchant Transmission	0.2076
965121	AG1-377 C O1	0.7212	Adder	1.6
965122	AG1-377 E O1	0.4808	Adder	1.07
965131	AG1-378 C O1	0.7212	Adder	1.6
965132	AG1-378 E O1	0.4808	Adder	1.07
965201	AG1-385 C	2.4990	50/50	2.4990
965202	AG1-385 E	0.7402	50/50	0.7402
965301	AG1-395 C	0.9267	Adder	2.06
965302	AG1-395 E	0.2752	Adder	0.61
966041	AG1-473 C	7.5608	50/50	7.5608
966042	AG1-473 E	5.0405	50/50	5.0405
WEC	WEC	0.1893	Confirmed LTF	0.1893
LGEE	LGEE	0.3657	Confirmed LTF	0.3657
CPL	CPL	0.2457	Confirmed LTF	0.2457
CBM-W2	CBM-W2	4.9280	Confirmed LTF	4.9280
NY	NY	1.7630	Confirmed LTF	1.7630
TVA	TVA	0.7280	Confirmed LTF	0.7280
O-066	O-066	10.4180	Confirmed LTF	10.4180
SIGE	SIGE	0.2235	Confirmed LTF	0.2235
CBM-S2	CBM-S2	4.2595	Confirmed LTF	4.2595
CBM-S1	CBM-S1	0.2018	Confirmed LTF	0.2018
G-007	G-007	1.5214	Confirmed LTF	1.5214
MEC	MEC	0.9264	Confirmed LTF	0.9264
LAGN	LAGN	0.9205	Confirmed LTF	0.9205
CBM-W1	CBM-W1	8.7625	Confirmed LTF	8.7625

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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
164869495	200924	26CANYON	PENELEC	200706	26N.MESHPN	PENELEC	1	PN-P2-2-PN-230-007T	bus	666.0	165.37	166.3	DC	13.61

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200894	26K02	17.6960	50/50	17.6960
203283	26MANOR_T86	0.0582	50/50	0.0582
203350	26MILZ1-092	0.8988	50/50	0.8988
203351	26GROZ1-110	1.0826	50/50	1.0826
203352	26CANZ2-011	1.0623	50/50	1.0623
203922	X1-109 G1	24.7826	50/50	24.7826
203923	X1-109 G2	24.7826	50/50	24.7826
203932	AA2-133 GEN	2.1231	Adder	2.5
203999	P-047 E	17.6345	Adder	20.75
235003	AC1-025 E	0.1744	Adder	0.21
236828	01GRAYMONT	0.4701	Adder	0.55
916202	Z1-069 E	8.7970	Adder	10.35
919201	AA1-144 OP	66.0052	50/50	66.0052
921642	AA2-000	92.7912	Adder	109.17
930511	AB2-092	3.4070	Adder	4.01
931092	AB1-160 E	2.5134	Adder	2.96
936421	AD2-055	7.0145	Adder	8.25
938332	AE1-051 BAT	0.9479	Merchant Transmission	0.9479
939171	AE1-147 C	1.4127	Adder	1.66
939172	AE1-147 E	0.9418	Adder	1.11
940201	AE2-001 C	1.4114	Adder	1.66
940202	AE2-001 E	0.9409	Adder	1.11
940681	AE2-055 C (Suspended)	1.3908	Adder	1.64
940682	AE2-055 E (Suspended)	0.9272	Adder	1.09
940861	AE2-074 C	1.9758	Adder	2.32
940862	AE2-074 E	2.6009	Adder	3.06
941191	AE2-113 C	6.5799	Adder	7.74
941192	AE2-113 E	7.0845	Adder	8.33
941261	AE2-120 C	1.4106	Adder	1.66
941262	AE2-120 E	0.9404	Adder	1.11
941271	AE2-121 C	0.7523	Adder	0.89
941272	AE2-121 E	0.5023	Adder	0.59
941321	AE2-126 C	1.2282	Adder	1.44
941322	AE2-126 E	0.8188	Adder	0.96
941331	AE2-129 C	1.0121	Adder	1.19
941332	AE2-129 E	0.6748	Adder	0.79
941351	AE2-131 C (Suspended)	1.0121	Adder	1.19
941352	AE2-131 E (Suspended)	0.6748	Adder	0.79
941421	AE2-139 C	23.8022	50/50	23.8022
941422	AE2-139 E	15.8681	50/50	15.8681
942351	AE2-248 C	1.1195	Adder	1.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942352	AE2-248 E	0.7463	Adder	0.88
942491	AE2-262 C	6.1710	Adder	7.26
942492	AE2-262 E	4.1469	Adder	4.88
942501	AE2-263 C	5.8007	Adder	6.82
942502	AE2-263 E	3.8729	Adder	4.56
942961	AE2-316 C	3.3408	Adder	3.93
942962	AE2-316 E	4.7640	Adder	5.6
943751	AF1-043	21.0434	Adder	24.76
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.4899	Adder	1.75
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8381	Adder	0.99
944311	AF1-099 C	9.3676	Adder	11.02
944312	AF1-099 E	6.2451	Adder	7.35
944321	AF1-100 C	17.9903	Adder	21.17
944322	AF1-100 E	11.9935	Adder	14.11
944381	AF1-103 O1	1.6097	Adder	1.89
944411	AF1-106 O1	5.4258	50/50	5.4258
944471	AF1-112 C	1.4016	Adder	1.65
944472	AF1-112 E	0.9344	Adder	1.1
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.3953	Adder	1.64
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9302	Adder	1.09
944691	AF1-134 C	0.9284	Adder	1.09
944692	AF1-134 E	0.6189	Adder	0.73
944771	AF1-142 C	14.9881	Adder	17.63
944772	AF1-142 E	9.9921	Adder	11.76
944881	AF1-153 C O1	1.2104	Adder	1.42
944882	AF1-153 E O1	0.8070	Adder	0.95
944901	AF1-155 C	1.2043	Adder	1.42
944902	AF1-155 E	0.8029	Adder	0.94
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4107	Adder	1.66
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9404	Adder	1.11
946111	AF1-276 C	6.4479	Adder	7.59
946112	AF1-276 E	3.1758	Adder	3.74
946121	AF1-277 C	6.4479	Adder	7.59
946122	AF1-277 E	3.1758	Adder	3.74
946131	AF1-278 C	5.1429	Adder	6.05
946132	AF1-278 E	2.5561	Adder	3.01
946211	AF1-286 C	2.1974	50/50	2.1974
946212	AF1-286 E	1.4921	50/50	1.4921
946381	AF1-302 C	1.4589	Adder	1.72
946382	AF1-302 E	1.9451	Adder	2.29
946421	AF1-306 C	5.2880	Adder	6.22
946422	AF1-306 E	21.1520	Adder	24.88
957451	AF2-039 C	0.8155	Adder	0.96
957452	AF2-039 E	0.5436	Adder	0.64
957941	AF2-088 C	0.3926	Adder	0.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957942	AF2-088 E	0.2618	Adder	0.31
958271	AF2-121 C	1.0121	Adder	1.19
958272	AF2-121 E	0.6748	Adder	0.79
959061	AF2-197 C O1	12.9326	50/50	12.9326
959062	AF2-197 E O1	19.3990	50/50	19.3990
959471	AF2-238 C	3.3199	50/50	3.3199
959472	AF2-238 E	2.2133	50/50	2.2133
959481	AF2-239 C	3.1511	50/50	3.1511
959482	AF2-239 E	2.5265	50/50	2.5265
959491	AF2-240 C	1.0255	50/50	1.0255
959492	AF2-240 E	0.8736	50/50	0.8736
959501	AF2-241 C	3.0656	50/50	3.0656
959502	AF2-241 E	2.3602	50/50	2.3602
959741	AF2-265 C	2.3793	50/50	2.3793
959742	AF2-265 E	1.7706	50/50	1.7706
959913	AF2-282 BAT	0.1422	Merchant Transmission	0.1422
959923	AF2-283 BAT	0.1422	Merchant Transmission	0.1422
960022	AF2-293 E	0.1373	Adder	0.16
960041	AF2-295 C	1.2043	Adder	1.42
960042	AF2-295 E	0.8029	Adder	0.94
960051	AF2-296 C	0.9284	Adder	1.09
960052	AF2-296 E	0.6189	Adder	0.73
960271	AF2-318 C	3.4066	50/50	3.4066
960272	AF2-318 E	2.2710	50/50	2.2710
961141	AF2-405	2.7129	50/50	2.7129
961151	AF2-406	20.3468	50/50	20.3468
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	54.2028	Adder	63.77
961211	AF2-412	25.5929	Adder	30.11
961451	AF2-436	0.1601	Adder	0.19
962411	AG1-090 C O2	3.6774	Adder	8.16
962412	AG1-090 E O2	2.4516	Adder	5.44
962951	AG1-144 C	0.5364	Adder	1.19
962952	AG1-144 E	0.3576	Adder	0.79
963571	AG1-206 C	0.3540	Adder	0.79
963572	AG1-206 E	0.1906	Adder	0.42
963891	AG1-242 C	0.2665	Adder	0.59
963892	AG1-242 E	0.1435	Adder	0.32
963941	AG1-247 C	1.3293	50/50	1.3293
963942	AG1-247 E	0.7054	50/50	0.7054
964031	AG1-257 C	0.5145	Adder	1.14
964032	AG1-257 E	0.7190	Adder	1.6
964041	AG1-258 C	0.5145	Adder	1.14
964042	AG1-258 E	0.7190	Adder	1.6
964341	AG1-296 C	0.2583	Adder	0.57
964342	AG1-296 E	0.1391	Adder	0.31
964451	AG1-308 C O2	0.3710	Adder	0.82
964452	AG1-308 E O2	0.5186	Adder	1.15
965121	AG1-377 C O1	0.5364	Adder	1.19
965122	AG1-377 E O1	0.3576	Adder	0.79
965131	AG1-378 C O1	0.5364	Adder	1.19
965132	AG1-378 E O1	0.3576	Adder	0.79

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965201	AG1-385 C	0.8249	Adder	1.83
965202	AG1-385 E	0.2443	Adder	0.54
965241	AG1-389 C O1	0.9501	Adder	2.11
965242	AG1-389 E O1	0.6334	Adder	1.41
965251	AG1-390 C O2	0.9478	Adder	2.1
965252	AG1-390 E O2	0.6319	Adder	1.4
965261	AG1-391 C O1	0.9501	Adder	2.11
965262	AG1-391 E O1	0.6334	Adder	1.41
965271	AG1-392 C O1	1.9001	Adder	4.22
965272	AG1-392 E O1	1.2667	Adder	2.81
965301	AG1-395 C	0.6893	Adder	1.53
965302	AG1-395 E	0.2047	Adder	0.45
966041	AG1-473 C	1.8943	Adder	4.2
966042	AG1-473 E	1.2629	Adder	2.8
966121	AG1-481	0.6625	Adder	1.47
WEC	WEC	0.3758	Confirmed LTF	0.3758
LGEE	LGEE	0.7219	Confirmed LTF	0.7219
CPL	CPL	0.4368	Confirmed LTF	0.4368
CBM-W2	CBM-W2	9.6410	Confirmed LTF	9.6410
TVA	TVA	1.4084	Confirmed LTF	1.4084
O-066	O-066	27.0075	Confirmed LTF	27.0075
SIGE	SIGE	0.5418	Confirmed LTF	0.5418
CBM-S2	CBM-S2	7.8300	Confirmed LTF	7.8300
CBM-S1	CBM-S1	0.3922	Confirmed LTF	0.3922
G-007	G-007	3.9427	Confirmed LTF	3.9427
MEC	MEC	1.8289	Confirmed LTF	1.8289
LAGN	LAGN	1.7850	Confirmed LTF	1.7850
CBM-W1	CBM-W1	17.4970	Confirmed LTF	17.4970

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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
164869515	200940	26SCOTCHHLLW	PENELEC	200675	26E.TWANDA	PENELEC	1	PN-P2-2-PN-230-007T	bus	570.0	149.26	153.11	DC	21.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.7762	50/50	5.7762
200666	26SHAWVL 4	5.6426	50/50	5.6426
200894	26K02	34.2826	50/50	34.2826
203351	26GROZ1-110	1.5966	50/50	1.5966
203352	26CANZ2-011	1.5667	50/50	1.5667
235003	AC1-025 E	0.3391	50/50	0.3391
236828	01GRAYMONT	0.9092	50/50	0.9092
290086	Q-036 E	3.3810	Adder	3.98
919201	AA1-144 OP	135.0162	50/50	135.0162
921642	AA2-000	199.4187	50/50	199.4187
930511	AB2-092	7.3221	50/50	7.3221
936421	AD2-055	15.0748	50/50	15.0748
936991	AD2-133 C	1.5214	Adder	1.79
936992	AD2-133 E	6.9589	Adder	8.19
939171	AE1-147 C	2.7299	50/50	2.7299
939172	AE1-147 E	1.8199	50/50	1.8199
940201	AE2-001 C	2.7286	50/50	2.7286
940202	AE2-001 E	1.8190	50/50	1.8190
940681	AE2-055 C (Suspended)	2.7082	50/50	2.7082
940682	AE2-055 E (Suspended)	1.8054	50/50	1.8054
941191	AE2-113 C	4.6383	Adder	5.46
941192	AE2-113 E	4.9940	Adder	5.88
941261	AE2-120 C	2.7278	50/50	2.7278
941262	AE2-120 E	1.8186	50/50	1.8186
941271	AE2-121 C	1.4526	50/50	1.4526
941272	AE2-121 E	0.9699	50/50	0.9699
941321	AE2-126 C	1.5317	Adder	1.8
941322	AE2-126 E	1.0212	Adder	1.2
941331	AE2-129 C	1.3188	Adder	1.55
941332	AE2-129 E	0.8792	Adder	1.03
941351	AE2-131 C (Suspended)	1.3188	Adder	1.55
941352	AE2-131 E (Suspended)	0.8792	Adder	1.03
941421	AE2-139 C	48.3926	50/50	48.3926
941422	AE2-139 E	32.2617	50/50	32.2617
942351	AE2-248 C	2.1733	50/50	2.1733
942352	AE2-248 E	1.4489	50/50	1.4489
942491	AE2-262 C	11.6570	50/50	11.6570
942492	AE2-262 E	7.8335	50/50	7.8335
942501	AE2-263 C	10.9576	50/50	10.9576
942502	AE2-263 E	7.3159	50/50	7.3159
942961	AE2-316 C	3.8926	Adder	4.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.5509	Adder	6.53
943751	AF1-043	45.2245	50/50	45.2245
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.8950	50/50	2.8950
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6284	50/50	1.6284
944311	AF1-099 C	17.6953	50/50	17.6953
944312	AF1-099 E	11.7969	50/50	11.7969
944321	AF1-100 C	32.5500	50/50	32.5500
944322	AF1-100 E	21.7000	50/50	21.7000
944412	AF1-106 BAT	2.0074	Merchant Transmission	2.0074
944471	AF1-112 C	2.7188	50/50	2.7188
944472	AF1-112 E	1.8126	50/50	1.8126
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.7126	50/50	2.7126
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8084	50/50	1.8084
944691	AF1-134 C	1.1553	Adder	1.36
944692	AF1-134 E	0.7702	Adder	0.91
944771	AF1-142 C	28.3125	50/50	28.3125
944772	AF1-142 E	18.8750	50/50	18.8750
944881	AF1-153 C O1	1.6013	Adder	1.88
944882	AF1-153 E O1	1.0675	Adder	1.26
944901	AF1-155 C	1.5893	Adder	1.87
944902	AF1-155 E	1.0595	Adder	1.25
945161	AF1-181	0.0265	50/50	0.0265
945171	AF1-182	0.1320	50/50	0.1320
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.7278	50/50	2.7278
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8186	50/50	1.8186
946381	AF1-302 C	1.6998	Adder	2.0
946382	AF1-302 E	2.2664	Adder	2.67
946421	AF1-306 C	6.9889	Adder	8.22
946422	AF1-306 E	27.9557	Adder	32.89
957451	AF2-039 C	1.1415	Adder	1.34
957452	AF2-039 E	0.7610	Adder	0.9
957941	AF2-088 C	0.5496	Adder	0.65
957942	AF2-088 E	0.3664	Adder	0.43
958271	AF2-121 C	1.3188	Adder	1.55
958272	AF2-121 E	0.8792	Adder	1.03
959063	AF2-197 BAT	13.5485	Merchant Transmission	13.5485
960022	AF2-293 E	0.2653	50/50	0.2653
960041	AF2-295 C	1.5893	Adder	1.87
960042	AF2-295 E	1.0595	Adder	1.25
960051	AF2-296 C	1.1553	Adder	1.36
960052	AF2-296 E	0.7702	Adder	0.91
961142	AF2-405 BAT	1.0037	Merchant Transmission	1.0037
961152	AF2-406 BAT	7.5277	Merchant Transmission	7.5277
961451	AF2-436	-0.1532	Adder	-0.18
962411	AG1-090 C O2	13.1592	50/50	13.1592

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962412	AG1-090 E O2	8.7728	50/50	8.7728
962951	AG1-144 C	0.6989	Adder	1.55
962952	AG1-144 E	0.4660	Adder	1.03
963571	AG1-206 C	0.4282	Adder	0.95
963572	AG1-206 E	0.2306	Adder	0.51
963891	AG1-242 C	0.3317	Adder	0.74
963892	AG1-242 E	0.1786	Adder	0.4
964031	AG1-257 C	1.8818	50/50	1.8818
964032	AG1-257 E	2.6300	50/50	2.6300
964041	AG1-258 C	1.8818	50/50	1.8818
964042	AG1-258 E	2.6300	50/50	2.6300
964341	AG1-296 C	0.2857	Adder	0.63
964342	AG1-296 E	0.1539	Adder	0.34
964451	AG1-308 C O2	0.4834	Adder	1.07
964452	AG1-308 E O2	0.6756	Adder	1.5
964703	AG1-333 BAT	0.2022	Merchant Transmission	0.2022
965121	AG1-377 C O1	0.6989	Adder	1.55
965122	AG1-377 E O1	0.4660	Adder	1.03
965131	AG1-378 C O1	0.6989	Adder	1.55
965132	AG1-378 E O1	0.4660	Adder	1.03
965201	AG1-385 C	1.0913	Adder	2.42
965202	AG1-385 E	0.3232	Adder	0.72
965301	AG1-395 C	0.8981	Adder	1.99
965302	AG1-395 E	0.2668	Adder	0.59
966041	AG1-473 C	7.2943	50/50	7.2943
966042	AG1-473 E	4.8629	50/50	4.8629
WEC	WEC	0.1877	Confirmed LTF	0.1877
LGEE	LGEE	0.3625	Confirmed LTF	0.3625
CPL	CPL	0.2396	Confirmed LTF	0.2396
CBM-W2	CBM-W2	4.8832	Confirmed LTF	4.8832
NY	NY	1.6994	Confirmed LTF	1.6994
TVA	TVA	0.7196	Confirmed LTF	0.7196
O-066	O-066	10.7209	Confirmed LTF	10.7209
SIGE	SIGE	0.2277	Confirmed LTF	0.2277
CBM-S2	CBM-S2	4.1864	Confirmed LTF	4.1864
CBM-S1	CBM-S1	0.1995	Confirmed LTF	0.1995
G-007	G-007	1.5666	Confirmed LTF	1.5666
MEC	MEC	0.9184	Confirmed LTF	0.9184
LAGN	LAGN	0.9100	Confirmed LTF	0.9100
CBM-W1	CBM-W1	8.6924	Confirmed LTF	8.6924

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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
164247863	235175	01ELKO	AP	235971	01SQUABHLLW	AP	1	PN-P2-3-PN-230-14BT	breaker	621.0	105.61	111.34	DC	35.62

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	9.6307	50/50	9.6307
200666	26SHAWVL 4	9.4768	50/50	9.4768
200715	26SHAWVL 1	5.4583	50/50	5.4583
200722	26SHAWVL 2	5.5813	50/50	5.5813
200894	26K02	9.2098	50/50	9.2098
200905	26Q36	0.1562	50/50	0.1562
200913	26SHAW-D	0.1993	50/50	0.1993
235003	AC1-025 E	0.5392	50/50	0.5392
236828	01GRAYMONT	1.4401	50/50	1.4401
290086	Q-036 E	4.7704	50/50	4.7704
921642	AA2-000	121.0699	50/50	121.0699
930511	AB2-092	4.4453	50/50	4.4453
936421	AD2-055	9.1521	50/50	9.1521
936991	AD2-133 C	2.1467	50/50	2.1467
936992	AD2-133 E	9.8187	50/50	9.8187
939171	AE1-147 C	4.3214	50/50	4.3214
939172	AE1-147 E	2.8810	50/50	2.8810
940201	AE2-001 C	4.3208	50/50	4.3208
940202	AE2-001 E	2.8806	50/50	2.8806
940681	AE2-055 C (Suspended)	4.3114	50/50	4.3114
940682	AE2-055 E (Suspended)	2.8742	50/50	2.8742
941261	AE2-120 C	4.3205	50/50	4.3205
941262	AE2-120 E	2.8803	50/50	2.8803
941271	AE2-121 C	2.2981	50/50	2.2981
941272	AE2-121 E	1.5345	50/50	1.5345
941331	AE2-129 C	1.9278	50/50	1.9278
941332	AE2-129 E	1.2852	50/50	1.2852
941351	AE2-131 C (Suspended)	1.9278	50/50	1.9278
941352	AE2-131 E (Suspended)	1.2852	50/50	1.2852
942351	AE2-248 C	3.4523	50/50	3.4523
942352	AE2-248 E	2.3015	50/50	2.3015
942491	AE2-262 C	18.1380	50/50	18.1380
942492	AE2-262 E	12.1887	50/50	12.1887
942501	AE2-263 C	17.0497	50/50	17.0497
942502	AE2-263 E	11.3834	50/50	11.3834
943751	AF1-043	27.4564	50/50	27.4564
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	4.6017	50/50	4.6017
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	2.5885	50/50	2.5885

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944311	AF1-099 C	27.5335	50/50	27.5335
944312	AF1-099 E	18.3557	50/50	18.3557
944321	AF1-100 C	53.1015	50/50	53.1015
944322	AF1-100 E	35.4010	50/50	35.4010
944382	AF1-103 BAT	3.1934	50/50	3.1934
944471	AF1-112 C	4.3163	50/50	4.3163
944472	AF1-112 E	2.8775	50/50	2.8775
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	4.3134	50/50	4.3134
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	2.8756	50/50	2.8756
944691	AF1-134 C	1.6358	50/50	1.6358
944692	AF1-134 E	1.0906	50/50	1.0906
944771	AF1-142 C	44.0536	50/50	44.0536
944772	AF1-142 E	29.3690	50/50	29.3690
944881	AF1-153 C O1	2.8615	50/50	2.8615
944882	AF1-153 E O1	1.9077	50/50	1.9077
944901	AF1-155 C	2.7005	50/50	2.7005
944902	AF1-155 E	1.8003	50/50	1.8003
945161	AF1-181	0.0442	50/50	0.0442
945171	AF1-182	0.2217	50/50	0.2217
945181	AF1-183	0.0447	50/50	0.0447
945491	AF1-214 C (Withdrawn : 12/03/2020)	4.3205	50/50	4.3205
945492	AF1-214 E (Withdrawn : 12/03/2020)	2.8803	50/50	2.8803
946423	AF1-306 BAT	109.4041	50/50	109.4041
957451	AF2-039 C	1.7066	50/50	1.7066
957452	AF2-039 E	1.1377	50/50	1.1377
957941	AF2-088 C	0.8217	50/50	0.8217
957942	AF2-088 E	0.5478	50/50	0.5478
958271	AF2-121 C	1.9278	50/50	1.9278
958272	AF2-121 E	1.2852	50/50	1.2852
960022	AF2-293 E	0.4199	50/50	0.4199
960041	AF2-295 C	2.7005	50/50	2.7005
960042	AF2-295 E	1.8003	50/50	1.8003
960051	AF2-296 C	1.6358	50/50	1.6358
960052	AF2-296 E	1.0906	50/50	1.0906
962411	AG1-090 C O2	21.3726	50/50	21.3726
962412	AG1-090 E O2	14.2484	50/50	14.2484
962951	AG1-144 C	1.9278	50/50	1.9278
962952	AG1-144 E	1.2852	50/50	1.2852
963891	AG1-242 C	0.8861	50/50	0.8861
963892	AG1-242 E	0.4771	50/50	0.4771
964031	AG1-257 C	2.9860	50/50	2.9860
964032	AG1-257 E	4.1732	50/50	4.1732
964041	AG1-258 C	2.9860	50/50	2.9860
964042	AG1-258 E	4.1732	50/50	4.1732
964451	AG1-308 C O2	1.3334	50/50	1.3334
964452	AG1-308 E O2	1.8635	50/50	1.8635
965121	AG1-377 C O1	1.9278	50/50	1.9278
965122	AG1-377 E O1	1.2852	50/50	1.2852

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965131	AG1-378 C O1	1.9278	50/50	1.9278
965132	AG1-378 E O1	1.2852	50/50	1.2852
965201	AG1-385 C	3.6794	50/50	3.6794
965202	AG1-385 E	1.0898	50/50	1.0898
965301	AG1-395 C	2.4772	50/50	2.4772
965302	AG1-395 E	0.7358	50/50	0.7358
966041	AG1-473 C	11.6198	50/50	11.6198
966042	AG1-473 E	7.7465	50/50	7.7465
966122	AG1-481 BAT	2.4430	50/50	2.4430
G-007A	G-007A	1.4984	Confirmed LTF	1.4984
VFT	VFT	4.1925	Confirmed LTF	4.1925
CALDERWOOD	CALDERWOOD	0.1730	Confirmed LTF	0.1730
PRAIRIE	PRAIRIE	1.0771	Confirmed LTF	1.0771
CHEOAH	CHEOAH	0.1732	Confirmed LTF	0.1732
CBM-N	CBM-N	0.8616	Confirmed LTF	0.8616
COTTONWOOD	COTTONWOOD	0.7959	Confirmed LTF	0.7959
HAMLET	HAMLET	0.1502	Confirmed LTF	0.1502
GIBSON	GIBSON	0.2359	Confirmed LTF	0.2359
BLUEG	BLUEG	0.7413	Confirmed LTF	0.7413
TRIMBLE	TRIMBLE	0.2376	Confirmed LTF	0.2376
CATAWBA	CATAWBA	0.1004	Confirmed LTF	0.1004

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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
167280539	235197	01KARNSC	AP	235152	01BUTLER	AP	1	ATSI-P2-3-CEI-345-004D	breaker	179.0	228.28	229.61	DC	5.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200608	26PINEY #1	0.7388	50/50	0.7388
200662	26SCRUB GR	1.6803	50/50	1.6803
235030	01MHNG-T155	0.1596	50/50	0.1596
236828	01GRAYMONT	0.1716	Adder	0.2
290086	Q-036 E	1.7010	Adder	2.0
293393	V3-030E	1.2402	Adder	1.46
915951	Y3-092 FTIR	95.0500	Merchant Transmission	95.0500
916202	Z1-069 E	2.6874	Adder	3.16
921642	AA2-000	21.5351	Adder	25.34
930511	AB2-092	0.7907	Adder	0.93
931092	AB1-160 E	0.7678	Adder	0.9
935191	AD1-154	2.3032	50/50	2.3032
936421	AD2-055	1.6279	Adder	1.92
936991	AD2-133 C	0.7655	Adder	0.9
936992	AD2-133 E	3.5011	Adder	4.12
938951	AE1-123	2.7911	50/50	2.7911
939171	AE1-147 C	0.5172	Adder	0.61
939172	AE1-147 E	0.3448	Adder	0.41
939291	AE1-160 C	1.4995	50/50	1.4995
939292	AE1-160 E	0.8619	50/50	0.8619
940201	AE2-001 C	0.5159	Adder	0.61
940202	AE2-001 E	0.3439	Adder	0.4
940861	AE2-074 C	0.7659	Adder	0.9
940862	AE2-074 E	1.0081	Adder	1.19
941191	AE2-113 C	3.5353	Adder	4.16
941192	AE2-113 E	3.8063	Adder	4.48
941261	AE2-120 C	0.5152	Adder	0.61
941262	AE2-120 E	0.3435	Adder	0.4
941271	AE2-121 C	0.2762	Adder	0.32
941272	AE2-121 E	0.1844	Adder	0.22
941321	AE2-126 C	0.6680	Adder	0.79
941322	AE2-126 E	0.4453	Adder	0.52
941331	AE2-129 C	0.5598	Adder	0.66
941332	AE2-129 E	0.3732	Adder	0.44
941351	AE2-131 C (Suspended)	0.5598	Adder	0.66
941352	AE2-131 E (Suspended)	0.3732	Adder	0.44
942491	AE2-262 C	2.4259	Adder	2.85
942492	AE2-262 E	1.6302	Adder	1.92
942501	AE2-263 C	2.2803	Adder	2.68
942502	AE2-263 E	1.5225	Adder	1.79
942811	AE2-299 C	2.0656	Adder	2.43

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942812	AE2-299 E	8.2623	Adder	9.72
942961	AE2-316 C	4.3499	50/50	4.3499
942962	AE2-316 E	6.2031	50/50	6.2031
943151	AE2-344 C	5.2796	Adder	6.21
943152	AE2-344 E	3.5197	Adder	4.14
943351	AF1-006 C	0.9302	Adder	1.09
943352	AF1-006 E	0.5233	Adder	0.62
943751	AF1-043	4.8838	Adder	5.75
944181	AF1-086 C O1	1.0729	Adder	1.26
944182	AF1-086 E O1	4.6675	Adder	5.49
944261	AF1-094 C	0.9660	Adder	1.14
944262	AF1-094 E	0.6440	Adder	0.76
944281	AF1-096 C	1.4168	50/50	1.4168
944282	AF1-096 E	0.9446	50/50	0.9446
944301	AF1-098 C	3.2077	Adder	3.77
944302	AF1-098 E	2.1385	Adder	2.52
944311	AF1-099 C	3.6825	Adder	4.33
944312	AF1-099 E	2.4550	Adder	2.89
944321	AF1-100 C	7.9114	Adder	9.31
944322	AF1-100 E	5.2742	Adder	6.2
944381	AF1-103 O1	1.2386	Adder	1.46
944391	AF1-104 O1	1.5677	Adder	1.84
944691	AF1-134 C	0.6241	Adder	0.73
944692	AF1-134 E	0.4161	Adder	0.49
944771	AF1-142 C	5.8920	Adder	6.93
944772	AF1-142 E	3.9280	Adder	4.62
944881	AF1-153 C O1	0.9010	Adder	1.06
944882	AF1-153 E O1	0.6006	Adder	0.71
944901	AF1-155 C	0.9096	Adder	1.07
944902	AF1-155 E	0.6064	Adder	0.71
945021	AF1-167 C	1.5046	50/50	1.5046
945022	AF1-167 E	1.0049	50/50	1.0049
945051	AF1-170 C	3.6027	Adder	4.24
945052	AF1-170 E	2.4018	Adder	2.83
945451	AF1-210 C	1.7061	50/50	1.7061
945452	AF1-210 E	1.1374	50/50	1.1374
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.5153	Adder	0.61
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.3435	Adder	0.4
945751	AF1-240 C O1	1.3819	50/50	1.3819
945752	AF1-240 E O1	0.9213	50/50	0.9213
946111	AF1-276 C	3.7393	Adder	4.4
946112	AF1-276 E	1.8418	Adder	2.17
946121	AF1-277 C	3.7393	Adder	4.4
946122	AF1-277 E	1.8418	Adder	2.17
946131	AF1-278 C	2.9825	Adder	3.51
946132	AF1-278 E	1.4823	Adder	1.74
946221	AF1-287 C	0.9076	Adder	1.07
946222	AF1-287 E	0.6051	Adder	0.71
946381	AF1-302 C	1.8995	50/50	1.8995
946382	AF1-302 E	2.5327	50/50	2.5327
946401	AF1-304 C	7.6224	50/50	7.6224

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946402	AF1-304 E	5.0816	50/50	5.0816
946421	AF1-306 C	3.1031	Adder	3.65
946422	AF1-306 E	12.4123	Adder	14.6
946771	AF1-217 C	0.9076	Adder	1.07
946772	AF1-217 E	0.6051	Adder	0.71
957161	AF2-010 C	3.7466	Adder	4.41
957162	AF2-010 E	2.5249	Adder	2.97
957451	AF2-039 C	0.4190	Adder	0.49
957452	AF2-039 E	0.2793	Adder	0.33
957571	AF2-051 C	2.7680	Adder	3.26
957572	AF2-051 E	1.4259	Adder	1.68
957941	AF2-088 C	0.2017	Adder	0.24
957942	AF2-088 E	0.1345	Adder	0.16
958271	AF2-121 C	0.5598	Adder	0.66
958272	AF2-121 E	0.3732	Adder	0.44
958361	AF2-130 C	1.7143	50/50	1.7143
958362	AF2-130 E	1.1429	50/50	1.1429
958731	AF2-164 C O1	3.9772	Adder	4.68
958732	AF2-164 E O1	2.6515	Adder	3.12
958741	AF2-165 C	1.5448	50/50	1.5448
958742	AF2-165 E	1.0298	50/50	1.0298
958751	AF2-166 C	1.7143	50/50	1.7143
958752	AF2-166 E	1.1429	50/50	1.1429
959441	AF2-235 C	0.7084	50/50	0.7084
959442	AF2-235 E	0.4723	50/50	0.4723
959521	AF2-243 C	1.1586	50/50	1.1586
959522	AF2-243 E	0.7724	50/50	0.7724
959822	AF2-273 E	0.6750	50/50	0.6750
960022	AF2-293 E	0.0503	Adder	0.06
960041	AF2-295 C	0.9096	Adder	1.07
960042	AF2-295 E	0.6064	Adder	0.71
960051	AF2-296 C	0.6241	Adder	0.73
960052	AF2-296 E	0.4161	Adder	0.49
960891	AF2-380 C	3.6836	50/50	3.6836
960892	AF2-380 E	2.4557	50/50	2.4557
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	12.7653	Adder	15.02
961971	AG1-040 C	0.5056	Adder	1.12
961972	AG1-040 E	0.3370	Adder	0.75
962411	AG1-090 C O2	1.4234	Adder	3.16
962412	AG1-090 E O2	0.9489	Adder	2.11
962511	AG1-100 C	0.4897	Adder	1.09
962512	AG1-100 E	0.3265	Adder	0.72
962891	AG1-138 C	0.6786	50/50	0.6786
962892	AG1-138 E	0.0357	50/50	0.0357
962901	AG1-139 C	0.6115	50/50	0.6115
962902	AG1-139 E	0.0322	50/50	0.0322
962911	AG1-140 C	0.0616	Adder	0.14
962912	AG1-140 E	0.0281	Adder	0.06
962951	AG1-144 C	0.2967	Adder	0.66
962952	AG1-144 E	0.1978	Adder	0.44
963281	AG1-177 C O2	0.4810	Adder	1.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963282	AG1-177 E O2	0.3207	Adder	0.71
963441	AG1-193 C	1.3675	50/50	1.3675
963442	AG1-193 E	0.9117	50/50	0.9117
963481	AG1-197 C	0.3834	Adder	0.85
963482	AG1-197 E	0.2556	Adder	0.57
963491	AG1-198 C	0.3072	Adder	0.68
963492	AG1-198 E	0.2048	Adder	0.45
963531	AG1-202 C	0.2719	Adder	0.6
963532	AG1-202 E	0.1401	Adder	0.31
963571	AG1-206 C	0.1952	Adder	0.43
963572	AG1-206 E	0.1051	Adder	0.23
963891	AG1-242 C	0.1792	Adder	0.4
963892	AG1-242 E	0.0965	Adder	0.21
963991	AG1-253 C	0.0924	Adder	0.21
963992	AG1-253 E	0.0445	Adder	0.1
964341	AG1-296 C	0.7284	50/50	0.7284
964342	AG1-296 E	0.3922	50/50	0.3922
964411	AG1-303 C O2	1.1777	Adder	2.61
964412	AG1-303 E O2	0.7851	Adder	1.74
964451	AG1-308 C O2	0.2052	Adder	0.46
964452	AG1-308 E O2	0.2868	Adder	0.64
965121	AG1-377 C O1	0.2967	Adder	0.66
965122	AG1-377 E O1	0.1978	Adder	0.44
965131	AG1-378 C O1	0.2967	Adder	0.66
965132	AG1-378 E O1	0.1978	Adder	0.44
965201	AG1-385 C	0.6140	Adder	1.36
965202	AG1-385 E	0.1819	Adder	0.4
965241	AG1-389 C O1	0.3064	Adder	0.68
965242	AG1-389 E O1	0.2043	Adder	0.45
965251	AG1-390 C O2	0.3067	Adder	0.68
965252	AG1-390 E O2	0.2045	Adder	0.45
965261	AG1-391 C O1	0.3064	Adder	0.68
965262	AG1-391 E O1	0.2043	Adder	0.45
965271	AG1-392 C O1	0.6128	Adder	1.36
965272	AG1-392 E O1	0.4085	Adder	0.91
965301	AG1-395 C	0.3812	Adder	0.85
965302	AG1-395 E	0.1132	Adder	0.25
965861	AG1-455	1.4372	Adder	3.19
966121	AG1-481	0.5097	Adder	1.13
966771	AG1-548 C	4.8243	Adder	10.71
966772	AG1-548 E	1.4683	Adder	3.26
G-007A	G-007A	1.8820	Confirmed LTF	1.8820
VFT	VFT	5.1923	Confirmed LTF	5.1923
CALDERWOOD	CALDERWOOD	0.2798	Confirmed LTF	0.2798
PRAIRIE	PRAIRIE	1.6660	Confirmed LTF	1.6660
CHEOAH	CHEOAH	0.2803	Confirmed LTF	0.2803
CBM-N	CBM-N	1.0296	Confirmed LTF	1.0296
COTTONWOOD	COTTONWOOD	1.2579	Confirmed LTF	1.2579
HAMLET	HAMLET	0.2535	Confirmed LTF	0.2535
GIBSON	GIBSON	0.3647	Confirmed LTF	0.3647
BLUEG	BLUEG	1.1562	Confirmed LTF	1.1562
TRIMBLE	TRIMBLE	0.3712	Confirmed LTF	0.3712

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CATAWBA	CATAWBA	0.1677	Confirmed LTF	0.1677

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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
167821107	235203	01KISSNG	AP	235197	01KARNSC	AP	1	PN-P1-2-PN-345-107T	single	268.0	137.23	137.8	DC	3.39

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200608	26PINEY #1	0.7758	80/20	0.7758
200642	26SENECA#1	2.8936	80/20	2.8936
200643	26SENECA#2	2.7329	80/20	2.7329
200644	26SENECA#3	0.2986	80/20	0.2986
200649	26PENNTech	0.5029	80/20	0.5029
200662	26SCRUB GR	1.7506	80/20	1.7506
200665	26SHAWVL 3	1.8285	80/20	1.8285
200666	26SHAWVL 4	1.7954	80/20	1.7954
200805	26COLVER13 (Deactivation : 01/09/2020)	1.1511	80/20	1.1511
200828	26HNSMLK 1	0.8374	80/20	0.8374
200829	26HNSMLK 2	0.8374	80/20	0.8374
200830	26HNSMLK 3	0.8374	80/20	0.8374
200831	26HNSMLK 4	0.8374	80/20	0.8374
200832	26HNSMLK 5	0.8374	80/20	0.8374
200849	26LAKVU GN	0.0712	80/20	0.0712
201201	26WRREN CT	0.7342	80/20	0.7342
235030	01MHNG-T155	0.0751	80/20	0.0751
235134	01AL&D6	0.0844	80/20	0.0844
915951	Y3-092 FTIR	92.3700	80/20	92.3700
921642	AA2-000	23.1250	Adder	27.21
930511	AB2-092	0.8491	Adder	1.0
935191	AD1-154	2.4200	80/20	2.4200
936421	AD2-055	1.7481	Adder	2.06
936991	AD2-133 C	0.8153	Adder	0.96
938951	AE1-123	2.9308	80/20	2.9308
939171	AE1-147 C	0.5544	Adder	0.65
939291	AE1-160 C	1.5949	80/20	1.5949
940201	AE2-001 C	0.5529	Adder	0.65
940681	AE2-055 C (Suspended)	0.5319	Adder	0.63
940861	AE2-074 C	0.8292	Adder	0.98
941191	AE2-113 C	4.4991	80/20	4.4991
941261	AE2-120 C	0.5522	Adder	0.65
941271	AE2-121 C	0.2960	Adder	0.35
941321	AE2-126 C	0.8448	80/20	0.8448
941331	AE2-129 C	0.5975	Adder	0.7
941351	AE2-131 C (Suspended)	0.5975	Adder	0.7
942351	AE2-248 C	0.4326	Adder	0.51
942491	AE2-262 C	2.6006	Adder	3.06
942501	AE2-263 C	2.4445	Adder	2.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942811	AE2-299 C	2.8198	80/20	2.8198
942961	AE2-316 C	4.5989	80/20	4.5989
943151	AE2-344 C	6.6468	80/20	6.6468
943351	AF1-006 C	1.1808	80/20	1.1808
943751	AF1-043	5.2443	Adder	6.17
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.5739	Adder	0.68
944181	AF1-086 C O1	1.1348	Adder	1.34
944261	AF1-094 C	1.2530	80/20	1.2530
944281	AF1-096 C	1.5070	80/20	1.5070
944301	AF1-098 C	4.2893	80/20	4.2893
944311	AF1-099 C	3.9477	Adder	4.64
944321	AF1-100 C	9.9765	80/20	9.9765
944381	AF1-103 O1	1.6328	80/20	1.6328
944391	AF1-104 O1	1.8556	80/20	1.8556
944471	AF1-112 C	0.5429	Adder	0.64
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.5365	Adder	0.63
944691	AF1-134 C	0.6635	Adder	0.78
944771	AF1-142 C	6.3163	Adder	7.43
944881	AF1-153 C O1	1.1297	80/20	1.1297
944901	AF1-155 C	1.1402	80/20	1.1402
945021	AF1-167 C	1.4331	80/20	1.4331
945051	AF1-170 C	4.4040	80/20	4.4040
945121	AF1-177	0.0644	80/20	0.0644
945161	AF1-181	0.0084	80/20	0.0084
945171	AF1-182	0.0420	80/20	0.0420
945451	AF1-210 C	1.2796	80/20	1.2796
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.5522	Adder	0.65
945751	AF1-240 C O1	1.4520	80/20	1.4520
946111	AF1-276 C	4.8046	80/20	4.8046
946121	AF1-277 C	4.8046	80/20	4.8046
946131	AF1-278 C	3.8322	80/20	3.8322
946221	AF1-287 C	1.1434	80/20	1.1434
946381	AF1-302 C	2.0083	80/20	2.0083
946401	AF1-304 C	8.0226	80/20	8.0226
946421	AF1-306 C	3.9208	80/20	3.9208
946771	AF1-217 C	1.1434	80/20	1.1434
957161	AF2-010 C	4.8493	80/20	4.8493
957451	AF2-039 C	0.4483	Adder	0.53
957571	AF2-051 C	3.3653	80/20	3.3653
957941	AF2-088 C	0.2158	Adder	0.25
958271	AF2-121 C	0.5975	Adder	0.7
958361	AF2-130 C	1.7996	80/20	1.7996
958731	AF2-164 C O1	4.7621	80/20	4.7621
958741	AF2-165 C	1.6175	80/20	1.6175
958751	AF2-166 C	1.7996	80/20	1.7996
959441	AF2-235 C	0.7535	80/20	0.7535
959521	AF2-243 C	1.2131	80/20	1.2131
960041	AF2-295 C	1.1402	80/20	1.1402

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960051	AF2-296 C	0.6635	Adder	0.78
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	13.7037	Adder	16.12
961211	AF2-412	5.8311	Adder	6.86
961971	AG1-040 C	1.1778	80/20	1.1778
962411	AG1-090 C O2	1.5253	Adder	3.39
962511	AG1-100 C	1.1488	80/20	1.1488
962891	AG1-138 C	0.7124	80/20	0.7124
962901	AG1-139 C	0.6403	80/20	0.6403
962911	AG1-140 C	0.1586	80/20	0.1586
962951	AG1-144 C	0.3167	Adder	0.7
963281	AG1-177 C O2	1.1434	80/20	1.1434
963441	AG1-193 C	1.4104	80/20	1.4104
963481	AG1-197 C	0.8893	80/20	0.8893
963491	AG1-198 C	0.7518	80/20	0.7518
963531	AG1-202 C	0.6215	80/20	0.6215
963571	AG1-206 C	0.4663	80/20	0.4663
963891	AG1-242 C	0.1905	Adder	0.42
963991	AG1-253 C	0.2379	80/20	0.2379
964031	AG1-257 C	0.1997	Adder	0.44
964041	AG1-258 C	0.1997	Adder	0.44
964341	AG1-296 C	0.7684	80/20	0.7684
964411	AG1-303 C O2	2.6989	80/20	2.6989
964451	AG1-308 C O2	0.2190	Adder	0.49
965121	AG1-377 C O1	0.3167	Adder	0.7
965131	AG1-378 C O1	0.3167	Adder	0.7
965201	AG1-385 C	1.4526	80/20	1.4526
965241	AG1-389 C O1	0.3312	Adder	0.74
965251	AG1-390 C O2	0.3315	Adder	0.74
965261	AG1-391 C O1	0.3312	Adder	0.74
965271	AG1-392 C O1	0.6623	Adder	1.47
965301	AG1-395 C	0.4069	Adder	0.9
965861	AG1-455	3.3148	80/20	3.3148
966121	AG1-481	1.2679	80/20	1.2679
966771	AG1-548 C	11.8415	80/20	11.8415
G-007A	G-007A	2.0547	Confirmed LTF	2.0547
VFT	VFT	5.6696	Confirmed LTF	5.6696
CALDERWOOD	CALDERWOOD	0.3012	Confirmed LTF	0.3012
PRAIRIE	PRAIRIE	1.8004	Confirmed LTF	1.8004
CHEOAH	CHEOAH	0.3018	Confirmed LTF	0.3018
CBM-N	CBM-N	1.1232	Confirmed LTF	1.1232
COTTONWOOD	COTTONWOOD	1.3566	Confirmed LTF	1.3566
HAMLET	HAMLET	0.2720	Confirmed LTF	0.2720
GIBSON	GIBSON	0.3937	Confirmed LTF	0.3937
BLUEG	BLUEG	1.2499	Confirmed LTF	1.2499
TRIMBLE	TRIMBLE	0.4012	Confirmed LTF	0.4012
CATAWBA	CATAWBA	0.1803	Confirmed LTF	0.1803

13.5.24 Index 24

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
164248049	235248	01SHINGL	AP	966040	AG1-473 TAP	AP	1	Base Case	single	520.0	134.92	140.17	DC	27.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	5.0275	80/20	5.0275
200643	26SENECA#2	4.7482	80/20	4.7482
200644	26SENECA#3	0.5188	80/20	0.5188
200649	26PENNTech	1.3993	80/20	1.3993
200665	26SHAWVL 3	8.7683	80/20	8.7683
200666	26SHAWVL 4	8.6326	80/20	8.6326
200715	26SHAWVL 1	5.4751	80/20	5.4751
200722	26SHAWVL 2	5.6011	80/20	5.6011
200887	26ARMNA MT	0.1941	80/20	0.1941
200905	26Q36	0.1579	80/20	0.1579
200913	26SHAW-D	0.2335	80/20	0.2335
201201	26WRREN CT	1.0438	80/20	1.0438
203261	26BLOSSBCT	0.2856	80/20	0.2856
203283	26MANOR_T86	0.0156	80/20	0.0156
203349	26Z1-069 C	0.1974	80/20	0.1974
203351	26GROZ1-110	0.4022	80/20	0.4022
203352	26CANZ2-011	0.3947	80/20	0.3947
203922	X1-109 G1	4.9828	80/20	4.9828
203923	X1-109 G2	4.9828	80/20	4.9828
919201	AA1-144 OP	14.2495	80/20	14.2495
921642	AA2-000	110.6570	80/20	110.6570
930511	AB2-092	4.0630	80/20	4.0630
931091	AB1-160 C	0.0564	80/20	0.0564
936421	AD2-055	8.3650	80/20	8.3650
936991	AD2-133 C	2.1703	80/20	2.1703
939171	AE1-147 C	5.7880	80/20	5.7880
940201	AE2-001 C	5.8100	80/20	5.8100
940681	AE2-055 C (Suspended)	6.1463	80/20	6.1463
940861	AE2-074 C	1.5726	80/20	1.5726
941191	AE2-113 C	9.8927	80/20	9.8927
941261	AE2-120 C	5.8220	80/20	5.8220
941271	AE2-121 C	3.0568	80/20	3.0568
941321	AE2-126 C	2.7310	80/20	2.7310
941331	AE2-129 C	2.1270	80/20	2.1270
941351	AE2-131 C (Suspended)	2.1270	80/20	2.1270
941421	AE2-139 C	5.7936	80/20	5.7936
942351	AE2-248 C	4.8048	80/20	4.8048
942491	AE2-262 C	19.4670	80/20	19.4670
942501	AE2-263 C	18.2990	80/20	18.2990
942961	AE2-316 C	6.7630	80/20	6.7630
943751	AF1-043	25.0950	80/20	25.0950

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	6.4515	80/20	6.4515
944181	AF1-086 C O1	2.1136	80/20	2.1136
944311	AF1-099 C	29.5509	80/20	29.5509
944321	AF1-100 C	47.8020	80/20	47.8020
944381	AF1-103 O1	2.3214	80/20	2.3214
944471	AF1-112 C	5.9693	80/20	5.9693
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	6.0721	80/20	6.0721
944691	AF1-134 C	1.9754	80/20	1.9754
944771	AF1-142 C	47.2815	80/20	47.2815
944881	AF1-153 C O1	2.7431	80/20	2.7431
944901	AF1-155 C	2.7232	80/20	2.7232
945121	AF1-177	0.0916	80/20	0.0916
945161	AF1-181	0.0403	80/20	0.0403
945171	AF1-182	0.2020	80/20	0.2020
945181	AF1-183	0.0449	80/20	0.0449
945331	AF1-198	0.0376	80/20	0.0376
945491	AF1-214 C (Withdrawn : 12/03/2020)	5.8213	80/20	5.8213
946111	AF1-276 C	7.3894	80/20	7.3894
946121	AF1-277 C	7.3894	80/20	7.3894
946131	AF1-278 C	5.8939	80/20	5.8939
946381	AF1-302 C	2.9533	80/20	2.9533
946421	AF1-306 C	12.0405	80/20	12.0405
957451	AF2-039 C	1.9978	80/20	1.9978
957941	AF2-088 C	0.9619	80/20	0.9619
958271	AF2-121 C	2.1270	80/20	2.1270
959061	AF2-197 C O1	3.1534	80/20	3.1534
959471	AF2-238 C	1.0396	80/20	1.0396
959481	AF2-239 C	0.8430	80/20	0.8430
959741	AF2-265 C	0.7450	80/20	0.7450
960041	AF2-295 C	2.7232	80/20	2.7232
960051	AF2-296 C	1.9754	80/20	1.9754
960271	AF2-318 C	0.9114	80/20	0.9114
961211	AF2-412	9.9125	80/20	9.9125
962411	AG1-090 C O2	27.3096	80/20	27.3096
962951	AG1-144 C	2.1270	80/20	2.1270
963571	AG1-206 C	1.4479	80/20	1.4479
963891	AG1-242 C	1.0700	80/20	1.0700
964031	AG1-257 C	4.1081	80/20	4.1081
964041	AG1-258 C	4.1081	80/20	4.1081
964341	AG1-296 C	0.9417	80/20	0.9417
964451	AG1-308 C O2	1.4712	80/20	1.4712
965121	AG1-377 C O1	2.1270	80/20	2.1270
965131	AG1-378 C O1	2.1270	80/20	2.1270
965201	AG1-385 C	3.5271	80/20	3.5271
965241	AG1-389 C O1	1.1574	80/20	1.1574
965251	AG1-390 C O2	1.1591	80/20	1.1591
965261	AG1-391 C O1	1.1574	80/20	1.1574
965271	AG1-392 C O1	2.3148	80/20	2.3148

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965301	AG1-395 C	2.7332	80/20	2.7332
966121	AG1-481	1.8026	80/20	1.8026
WEC	WEC	0.1701	Confirmed LTF	0.1701
LGEE	LGEE	0.3135	Confirmed LTF	0.3135
CPL	CPL	0.0437	Confirmed LTF	0.0437
CBM-W2	CBM-W2	3.9155	Confirmed LTF	3.9155
TVA	TVA	0.5264	Confirmed LTF	0.5264
SIGE	SIGE	0.2138	Confirmed LTF	0.2138
CBM-S2	CBM-S2	1.6495	Confirmed LTF	1.6495
CBM-S1	CBM-S1	0.1512	Confirmed LTF	0.1512
MEC	MEC	0.7993	Confirmed LTF	0.7993
LAGN	LAGN	0.6808	Confirmed LTF	0.6808
CBM-W1	CBM-W1	8.2858	Confirmed LTF	8.2858

13.5.25 Index 25

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
176732899	235970	01DALE	AP	235248	01SHINGL	AP	1	AP-P1-2-WP-230-322T-A1	single	554.0	106.81	109.21	DC	13.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	3.8203	80/20	3.8203
200643	26SENECA#2	3.6080	80/20	3.6080
200644	26SENECA#3	0.3943	80/20	0.3943
200649	26PENNTech	1.0506	80/20	1.0506
200665	26SHAWVL 3	6.1755	80/20	6.1755
200666	26SHAWVL 4	6.0276	80/20	6.0276
200715	26SHAWVL 1	3.8602	80/20	3.8602
200722	26SHAWVL 2	3.9293	80/20	3.9293
200887	26ARMNA MT	0.1535	80/20	0.1535
200905	26Q36	0.1102	80/20	0.1102
200913	26SHAW-D	0.1649	80/20	0.1649
201201	26WRREN CT	0.7932	80/20	0.7932
203261	26BLOSSBCT	0.2268	80/20	0.2268
203283	26MANOR_T86	0.0125	80/20	0.0125
203349	26Z1-069 C	0.1523	80/20	0.1523
203350	26MILZ1-092	0.1986	80/20	0.1986
203351	26GROZ1-110	0.3233	80/20	0.3233
203352	26CANZ2-011	0.3172	80/20	0.3172
203922	X1-109 G1	3.9974	80/20	3.9974
203923	X1-109 G2	3.9974	80/20	3.9974
919201	AA1-144 OP	11.4410	80/20	11.4410
921642	AA2-000	89.7062	80/20	89.7062
930511	AB2-092	3.2937	80/20	3.2937
931091	AB1-160 C	0.0435	80/20	0.0435
936421	AD2-055	6.7812	80/20	6.7812
936991	AD2-133 C	1.5147	80/20	1.5147
939171	AE1-147 C	4.2680	80/20	4.2680
940201	AE2-001 C	3.9690	80/20	3.9690
940861	AE2-074 C	1.2031	80/20	1.2031
941191	AE2-113 C	7.4625	80/20	7.4625
941261	AE2-120 C	3.8749	80/20	3.8749
941271	AE2-121 C	2.3613	80/20	2.3613
941321	AE2-126 C	1.9864	80/20	1.9864
941331	AE2-129 C	1.4952	80/20	1.4952
941351	AE2-131 C (Suspended)	1.4952	80/20	1.4952
941421	AE2-139 C	4.6576	80/20	4.6576
942351	AE2-248 C	1.3429	80/20	1.3429
942491	AE2-262 C	18.3030	80/20	18.3030
942501	AE2-263 C	17.2048	80/20	17.2048
942961	AE2-316 C	5.1451	80/20	5.1451
943751	AF1-043	20.3437	80/20	20.3437

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.8460	80/20	0.8460
944181	AF1-086 C O1	1.5007	80/20	1.5007
944311	AF1-099 C	27.7840	80/20	27.7840
944321	AF1-100 C	34.9485	80/20	34.9485
944381	AF1-103 O1	1.7640	80/20	1.7640
944471	AF1-112 C	1.9931	80/20	1.9931
944691	AF1-134 C	1.3976	80/20	1.3976
944771	AF1-142 C	44.4543	80/20	44.4543
944881	AF1-153 C O1	2.0888	80/20	2.0888
944901	AF1-155 C	2.0736	80/20	2.0736
945121	AF1-177	0.0696	80/20	0.0696
945161	AF1-181	0.0284	80/20	0.0284
945171	AF1-182	0.1410	80/20	0.1410
945181	AF1-183	0.0316	80/20	0.0316
945331	AF1-198	0.0298	80/20	0.0298
945491	AF1-214 C (Withdrawn : 12/03/2020)	3.8803	80/20	3.8803
946111	AF1-276 C	5.6226	80/20	5.6226
946121	AF1-277 C	5.6226	80/20	5.6226
946131	AF1-278 C	4.4847	80/20	4.4847
946381	AF1-302 C	2.2468	80/20	2.2468
946421	AF1-306 C	9.1639	80/20	9.1639
957451	AF2-039 C	1.4106	80/20	1.4106
957941	AF2-088 C	0.6792	80/20	0.6792
958271	AF2-121 C	1.4952	80/20	1.4952
959061	AF2-197 C O1	2.5236	80/20	2.5236
959471	AF2-238 C	0.8268	80/20	0.8268
959481	AF2-239 C	0.6749	80/20	0.6749
959741	AF2-265 C	0.5925	80/20	0.5925
960041	AF2-295 C	2.0736	80/20	2.0736
960051	AF2-296 C	1.3976	80/20	1.3976
960271	AF2-318 C	0.7296	80/20	0.7296
962411	AG1-090 C O2	13.3104	80/20	13.3104
962951	AG1-144 C	1.4952	80/20	1.4952
963571	AG1-206 C	1.0618	80/20	1.0618
963891	AG1-242 C	0.7571	80/20	0.7571
964031	AG1-257 C	1.6921	80/20	1.6921
964041	AG1-258 C	1.6921	80/20	1.6921
964341	AG1-296 C	0.7162	80/20	0.7162
964451	AG1-308 C O2	1.0342	80/20	1.0342
965121	AG1-377 C O1	1.4952	80/20	1.4952
965131	AG1-378 C O1	1.4952	80/20	1.4952
965201	AG1-385 C	2.6859	80/20	2.6859
965241	AG1-389 C O1	0.8910	80/20	0.8910
965251	AG1-390 C O2	0.8922	80/20	0.8922
965261	AG1-391 C O1	0.8910	80/20	0.8910
965271	AG1-392 C O1	1.7820	80/20	1.7820
965301	AG1-395 C	1.9213	80/20	1.9213
966121	AG1-481	1.3697	80/20	1.3697
WEC	WEC	0.1276	Confirmed LTF	0.1276
LGEE	LGEE	0.2350	Confirmed LTF	0.2350

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CPLE	CPLE	0.0314	Confirmed LTF	0.0314
CBM-W2	CBM-W2	2.9299	Confirmed LTF	2.9299
TVA	TVA	0.3934	Confirmed LTF	0.3934
SIGE	SIGE	0.1586	Confirmed LTF	0.1586
CBM-S2	CBM-S2	1.2215	Confirmed LTF	1.2215
CBM-S1	CBM-S1	0.1132	Confirmed LTF	0.1132
MEC	MEC	0.5991	Confirmed LTF	0.5991
LAGN	LAGN	0.5093	Confirmed LTF	0.5093
CBM-W1	CBM-W1	6.2249	Confirmed LTF	6.2249

13.5.26 Index 26

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
164869555	919200	AA1-144 TAP	PENELEC	200940	26SCOTCHHLLW	PENELEC	1	PN-P2-2-PN-230-007T	bus	621.0	139.24	142.78	DC	21.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.7762	50/50	5.7762
200666	26SHAWVL 4	5.6426	50/50	5.6426
200894	26K02	34.2826	50/50	34.2826
203351	26GROZ1-110	1.5966	50/50	1.5966
203352	26CANZ2-011	1.5667	50/50	1.5667
235003	AC1-025 E	0.3391	50/50	0.3391
236828	01GRAYMONT	0.9092	50/50	0.9092
290086	Q-036 E	3.3810	Adder	3.98
919201	AA1-144 OP	135.0162	50/50	135.0162
921642	AA2-000	199.4187	50/50	199.4187
930511	AB2-092	7.3221	50/50	7.3221
936421	AD2-055	15.0748	50/50	15.0748
936991	AD2-133 C	1.5214	Adder	1.79
936992	AD2-133 E	6.9589	Adder	8.19
939171	AE1-147 C	2.7299	50/50	2.7299
939172	AE1-147 E	1.8199	50/50	1.8199
940201	AE2-001 C	2.7286	50/50	2.7286
940202	AE2-001 E	1.8190	50/50	1.8190
940681	AE2-055 C (Suspended)	2.7082	50/50	2.7082
940682	AE2-055 E (Suspended)	1.8054	50/50	1.8054
941191	AE2-113 C	4.6383	Adder	5.46
941192	AE2-113 E	4.9940	Adder	5.88
941261	AE2-120 C	2.7278	50/50	2.7278
941262	AE2-120 E	1.8186	50/50	1.8186
941271	AE2-121 C	1.4526	50/50	1.4526
941272	AE2-121 E	0.9699	50/50	0.9699
941321	AE2-126 C	1.5317	Adder	1.8
941322	AE2-126 E	1.0212	Adder	1.2
941331	AE2-129 C	1.3188	Adder	1.55
941332	AE2-129 E	0.8792	Adder	1.03
941351	AE2-131 C (Suspended)	1.3188	Adder	1.55
941352	AE2-131 E (Suspended)	0.8792	Adder	1.03
941421	AE2-139 C	48.3926	50/50	48.3926
941422	AE2-139 E	32.2617	50/50	32.2617
942351	AE2-248 C	2.1733	50/50	2.1733
942352	AE2-248 E	1.4489	50/50	1.4489
942491	AE2-262 C	11.6570	50/50	11.6570
942492	AE2-262 E	7.8335	50/50	7.8335
942501	AE2-263 C	10.9576	50/50	10.9576
942502	AE2-263 E	7.3159	50/50	7.3159
942961	AE2-316 C	3.8926	Adder	4.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.5509	Adder	6.53
943751	AF1-043	45.2245	50/50	45.2245
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.8950	50/50	2.8950
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6284	50/50	1.6284
944311	AF1-099 C	17.6953	50/50	17.6953
944312	AF1-099 E	11.7969	50/50	11.7969
944321	AF1-100 C	32.5500	50/50	32.5500
944322	AF1-100 E	21.7000	50/50	21.7000
944412	AF1-106 BAT	2.0074	Merchant Transmission	2.0074
944471	AF1-112 C	2.7188	50/50	2.7188
944472	AF1-112 E	1.8126	50/50	1.8126
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.7126	50/50	2.7126
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8084	50/50	1.8084
944691	AF1-134 C	1.1553	Adder	1.36
944692	AF1-134 E	0.7702	Adder	0.91
944771	AF1-142 C	28.3125	50/50	28.3125
944772	AF1-142 E	18.8750	50/50	18.8750
944881	AF1-153 C O1	1.6013	Adder	1.88
944882	AF1-153 E O1	1.0675	Adder	1.26
944901	AF1-155 C	1.5893	Adder	1.87
944902	AF1-155 E	1.0595	Adder	1.25
945161	AF1-181	0.0265	50/50	0.0265
945171	AF1-182	0.1320	50/50	0.1320
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.7278	50/50	2.7278
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8186	50/50	1.8186
946381	AF1-302 C	1.6998	Adder	2.0
946382	AF1-302 E	2.2664	Adder	2.67
946421	AF1-306 C	6.9889	Adder	8.22
946422	AF1-306 E	27.9557	Adder	32.89
957451	AF2-039 C	1.1415	Adder	1.34
957452	AF2-039 E	0.7610	Adder	0.9
957941	AF2-088 C	0.5496	Adder	0.65
957942	AF2-088 E	0.3664	Adder	0.43
958271	AF2-121 C	1.3188	Adder	1.55
958272	AF2-121 E	0.8792	Adder	1.03
959063	AF2-197 BAT	13.5485	Merchant Transmission	13.5485
960022	AF2-293 E	0.2653	50/50	0.2653
960041	AF2-295 C	1.5893	Adder	1.87
960042	AF2-295 E	1.0595	Adder	1.25
960051	AF2-296 C	1.1553	Adder	1.36
960052	AF2-296 E	0.7702	Adder	0.91
961142	AF2-405 BAT	1.0037	Merchant Transmission	1.0037
961152	AF2-406 BAT	7.5277	Merchant Transmission	7.5277
961451	AF2-436	-0.1532	Adder	-0.18
962411	AG1-090 C O2	13.1592	50/50	13.1592

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962412	AG1-090 E O2	8.7728	50/50	8.7728
962951	AG1-144 C	0.6989	Adder	1.55
962952	AG1-144 E	0.4660	Adder	1.03
963571	AG1-206 C	0.4282	Adder	0.95
963572	AG1-206 E	0.2306	Adder	0.51
963891	AG1-242 C	0.3317	Adder	0.74
963892	AG1-242 E	0.1786	Adder	0.4
964031	AG1-257 C	1.8818	50/50	1.8818
964032	AG1-257 E	2.6300	50/50	2.6300
964041	AG1-258 C	1.8818	50/50	1.8818
964042	AG1-258 E	2.6300	50/50	2.6300
964341	AG1-296 C	0.2857	Adder	0.63
964342	AG1-296 E	0.1539	Adder	0.34
964451	AG1-308 C O2	0.4834	Adder	1.07
964452	AG1-308 E O2	0.6756	Adder	1.5
964703	AG1-333 BAT	0.2022	Merchant Transmission	0.2022
965121	AG1-377 C O1	0.6989	Adder	1.55
965122	AG1-377 E O1	0.4660	Adder	1.03
965131	AG1-378 C O1	0.6989	Adder	1.55
965132	AG1-378 E O1	0.4660	Adder	1.03
965201	AG1-385 C	1.0913	Adder	2.42
965202	AG1-385 E	0.3232	Adder	0.72
965301	AG1-395 C	0.8981	Adder	1.99
965302	AG1-395 E	0.2668	Adder	0.59
966041	AG1-473 C	7.2943	50/50	7.2943
966042	AG1-473 E	4.8629	50/50	4.8629
WEC	WEC	0.1877	Confirmed LTF	0.1877
LGEE	LGEE	0.3625	Confirmed LTF	0.3625
CPL	CPL	0.2396	Confirmed LTF	0.2396
CBM-W2	CBM-W2	4.8832	Confirmed LTF	4.8832
NY	NY	1.6994	Confirmed LTF	1.6994
TVA	TVA	0.7196	Confirmed LTF	0.7196
O-066	O-066	10.7209	Confirmed LTF	10.7209
SIGE	SIGE	0.2277	Confirmed LTF	0.2277
CBM-S2	CBM-S2	4.1864	Confirmed LTF	4.1864
CBM-S1	CBM-S1	0.1995	Confirmed LTF	0.1995
G-007	G-007	1.5666	Confirmed LTF	1.5666
MEC	MEC	0.9184	Confirmed LTF	0.9184
LAGN	LAGN	0.9100	Confirmed LTF	0.9100
CBM-W1	CBM-W1	8.6924	Confirmed LTF	8.6924

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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
165503114	936470	AD2-062 TAP	AP	235188	01GREENE	AP	1	PN-P2-2-PN-230-006AT	bus	206.0	102.74	104.37	DC	7.44

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200852	26WARR RDG	0.1456	Adder	0.17
200870	26C_T85_W218	0.3374	50/50	0.3374
203905	26W1-045 C	0.3793	50/50	0.3793
204648	27MOUNT CT	0.7759	50/50	0.7759
235003	AC1-025 E	0.1035	Adder	0.12
236828	01GRAYMONT	0.2664	Adder	0.31
901242	W1-045 E OP1	2.0950	50/50	2.0950
936471	AD2-062 C O1	32.3317	50/50	32.3317
936472	AD2-062 E O1	16.1960	50/50	16.1960
938384	AE1-071-C	26.1795	50/50	26.1795
938385	AE1-071-E	16.0197	50/50	16.0197
939021	AE1-131 C O1	2.9092	Adder	3.42
939022	AE1-131 E O1	1.9395	Adder	2.28
939171	AE1-147 C	0.7946	Adder	0.93
939172	AE1-147 E	0.5297	Adder	0.62
939591	AE1-188 C	-1.3703	Adder	-1.61
940201	AE2-001 C	0.7971	Adder	0.94
940202	AE2-001 E	0.5314	Adder	0.63
940681	AE2-055 C (Suspended)	0.8360	Adder	0.98
940682	AE2-055 E (Suspended)	0.5573	Adder	0.66
941231	AE2-117 C	0.6780	Adder	0.8
941232	AE2-117 E	0.4520	Adder	0.53
941241	AE2-118 C	0.6443	Adder	0.76
941242	AE2-118 E	0.4296	Adder	0.51
941261	AE2-120 C	0.7986	Adder	0.94
941262	AE2-120 E	0.5324	Adder	0.63
941271	AE2-121 C	0.4201	Adder	0.49
941272	AE2-121 E	0.2805	Adder	0.33
942351	AE2-248 C	0.6558	Adder	0.77
942352	AE2-248 E	0.4372	Adder	0.51
942491	AE2-262 C	2.7736	Adder	3.26
942492	AE2-262 E	1.8638	Adder	2.19
942501	AE2-263 C	2.6071	Adder	3.07
942502	AE2-263 E	1.7407	Adder	2.05
942511	AE2-264 C	2.8283	Adder	3.33
942512	AE2-264 E	1.8855	Adder	2.22
943161	AE2-345 C	3.7358	Adder	4.4
943162	AE2-345 E	2.4906	Adder	2.93
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.8796	Adder	1.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.4948	Adder	0.58
944311	AF1-099 C	4.2102	Adder	4.95
944312	AF1-099 E	2.8068	Adder	3.3
944471	AF1-112 C	0.8155	Adder	0.96
944472	AF1-112 E	0.5437	Adder	0.64
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.8274	Adder	0.97
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5516	Adder	0.65
944771	AF1-142 C	6.7364	Adder	7.93
944772	AF1-142 E	4.4909	Adder	5.28
945011	AF1-166 C	-1.1277	Adder	-1.33
945271	AF1-192	0.0196	50/50	0.0196
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.7985	Adder	0.94
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5323	Adder	0.63
945591	AF1-224 C	-0.8592	Adder	-1.01
958071	AF2-101 C	0.2028	50/50	0.2028
958072	AF2-101 E	0.1352	50/50	0.1352
958551	AF2-146 C	3.4620	50/50	3.4620
958552	AF2-146 E	2.3080	50/50	2.3080
958571	AF2-148 C	2.7942	50/50	2.7942
958572	AF2-148 E	1.8628	50/50	1.8628
958601	AF2-151 C	0.1999	50/50	0.1999
958602	AF2-151 E	0.1333	50/50	0.1333
958871	AF2-178	1.8278	50/50	1.8278
959241	AF2-215 C	-0.3157	Adder	-0.37
959381	AF2-229 C	5.1085	50/50	5.1085
959382	AF2-229 E	4.2649	50/50	4.2649
959843	AF2-275 BAT	0.2073	50/50	0.2073
959853	AF2-276 BAT	0.2073	50/50	0.2073
960022	AF2-293 E	0.0771	Adder	0.09
961481	AF2-439 C	11.9571	50/50	11.9571
961482	AF2-439 E	11.0374	50/50	11.0374
961773	AG1-018 BAT	0.2561	Merchant Transmission	0.2561
962411	AG1-090 C O2	2.0110	Adder	4.46
962412	AG1-090 E O2	1.3407	Adder	2.98
964031	AG1-257 C	0.2977	Adder	0.66
964032	AG1-257 E	0.4161	Adder	0.92
964041	AG1-258 C	0.2977	Adder	0.66
964042	AG1-258 E	0.4161	Adder	0.92
964391	AG1-301 C	0.3704	Adder	0.82
964392	AG1-301 E	0.2469	Adder	0.55
966041	AG1-473 C	3.2605	50/50	3.2605
966042	AG1-473 E	2.1737	50/50	2.1737
966151	AG1-484	2.4900	50/50	2.4900
966463	AG1-515 BAT	1.5934	50/50	1.5934
G-007A	G-007A	1.5128	Confirmed LTF	1.5128
VFT	VFT	4.1925	Confirmed LTF	4.1925
CALDERWOOD	CALDERWOOD	0.1968	Confirmed LTF	0.1968

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
PRAIRIE	PRAIRIE	0.7930	Confirmed LTF	0.7930
CHEOAH	CHEOAH	0.1997	Confirmed LTF	0.1997
CBM-N	CBM-N	0.8208	Confirmed LTF	0.8208
COTTONWOOD	COTTONWOOD	0.7497	Confirmed LTF	0.7497
HAMLET	HAMLET	0.3043	Confirmed LTF	0.3043
GIBSON	GIBSON	0.1551	Confirmed LTF	0.1551
BLUEG	BLUEG	0.4965	Confirmed LTF	0.4965
TRIMBLE	TRIMBLE	0.1586	Confirmed LTF	0.1586
CATAWBA	CATAWBA	0.1698	Confirmed LTF	0.1698

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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
165880061	938380	AE1-071-POI	PENELEC	200520	26ROXBURY	PENELEC	1	PN-P2_3-PN-230-0347-16-DRT-029	breaker	160.0	230.27	237.39	DC	11.38

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200812	26ALY HYDR	0.4036	50/50	0.4036
200852	26WARR RDG	0.2631	50/50	0.2631
200883	Q-053 E	2.1432	Adder	2.52
235003	AC1-025 E	0.1863	50/50	0.1863
236828	01GRAYMONT	0.4794	50/50	0.4794
290086	Q-036 E	2.3276	Adder	2.74
293301	N-039 E	3.6339	Adder	4.28
294515	O38_P22	3.1797	Adder	3.74
921642	AA2-000	25.8051	Adder	30.36
930511	AB2-092	0.9475	Adder	1.11
936421	AD2-055	1.9507	Adder	2.29
936991	AD2-133 C	1.0474	Adder	1.23
936992	AD2-133 E	4.7909	Adder	5.64
938384	AE1-071-C	40.3905	50/50	40.3905
938385	AE1-071-E	24.7156	50/50	24.7156
939171	AE1-147 C	1.4302	50/50	1.4302
939172	AE1-147 E	0.9534	50/50	0.9534
939591	AE1-188 C	-0.6863	Adder	-0.81
940201	AE2-001 C	1.4348	50/50	1.4348
940202	AE2-001 E	0.9566	50/50	0.9566
940681	AE2-055 C (Suspended)	1.5056	50/50	1.5056
940682	AE2-055 E (Suspended)	1.0038	50/50	1.0038
941231	AE2-117 C	1.2254	50/50	1.2254
941232	AE2-117 E	0.8170	50/50	0.8170
941241	AE2-118 C	0.9903	Adder	1.17
941242	AE2-118 E	0.6602	Adder	0.78
941261	AE2-120 C	1.4374	50/50	1.4374
941262	AE2-120 E	0.9582	50/50	0.9582
941271	AE2-121 C	0.7560	50/50	0.7560
941272	AE2-121 E	0.5048	50/50	0.5048
941321	AE2-126 C	0.6954	Adder	0.82
941322	AE2-126 E	0.4636	Adder	0.55
941331	AE2-129 C	0.7293	Adder	0.86
941332	AE2-129 E	0.4862	Adder	0.57
941351	AE2-131 C (Suspended)	0.7293	Adder	0.86
941352	AE2-131 E (Suspended)	0.4862	Adder	0.57
942121	AE2-224 C	2.9631	Adder	3.49
942122	AE2-224 E	1.9754	Adder	2.32
942351	AE2-248 C	1.1809	50/50	1.1809

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942352	AE2-248 E	0.7873	50/50	0.7873
942491	AE2-262 C	4.2321	Adder	4.98
942492	AE2-262 E	2.8440	Adder	3.35
942501	AE2-263 C	3.9782	Adder	4.68
942502	AE2-263 E	2.6561	Adder	3.12
942511	AE2-264 C	5.1106	50/50	5.1106
942512	AE2-264 E	3.4070	50/50	3.4070
943751	AF1-043	5.8521	Adder	6.88
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	1.5840	50/50	1.5840
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.8910	50/50	0.8910
944311	AF1-099 C	6.4244	Adder	7.56
944312	AF1-099 E	4.2829	Adder	5.04
944321	AF1-100 C	10.8987	Adder	12.82
944322	AF1-100 E	7.2658	Adder	8.55
944471	AF1-112 C	1.4683	50/50	1.4683
944472	AF1-112 E	0.9789	50/50	0.9789
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	1.4900	50/50	1.4900
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.9934	50/50	0.9934
944691	AF1-134 C	0.5935	Adder	0.7
944692	AF1-134 E	0.3957	Adder	0.47
944771	AF1-142 C	10.2790	Adder	12.09
944772	AF1-142 E	6.8527	Adder	8.06
944881	AF1-153 C O1	0.6607	Adder	0.78
944882	AF1-153 E O1	0.4404	Adder	0.52
944901	AF1-155 C	0.6569	Adder	0.77
944902	AF1-155 E	0.4379	Adder	0.52
945011	AF1-166 C	-0.5608	Adder	-0.66
945491	AF1-214 C (Withdrawn : 12/03/2020)	1.4371	50/50	1.4371
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.9581	50/50	0.9581
945591	AF1-224 C	-0.4303	Adder	-0.51
946421	AF1-306 C	2.8667	Adder	3.37
946422	AF1-306 E	11.4669	Adder	13.49
957451	AF2-039 C	0.5175	Adder	0.61
957452	AF2-039 E	0.3450	Adder	0.41
957561	AF2-050 C	1.4816	Adder	1.74
957562	AF2-050 E	0.9877	Adder	1.16
957931	AF2-087 C (Suspended)	0.1910	Adder	0.22
957932	AF2-087 E (Suspended)	0.2631	Adder	0.31
957941	AF2-088 C	0.2492	Adder	0.29
957942	AF2-088 E	0.1661	Adder	0.2
958071	AF2-101 C	-0.0921	Adder	-0.11
958271	AF2-121 C	0.7293	Adder	0.86
958272	AF2-121 E	0.4862	Adder	0.57
958551	AF2-146 C	5.3162	50/50	5.3162
958552	AF2-146 E	3.5442	50/50	3.5442

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958571	AF2-148 C	4.3078	50/50	4.3078
958572	AF2-148 E	2.8719	50/50	2.8719
958601	AF2-151 C	-0.0909	Adder	-0.11
959241	AF2-215 C	-0.1572	Adder	-0.18
959802	AF2-271 E	0.2363	Adder	0.28
959843	AF2-275 BAT	0.1031	Merchant Transmission	0.1031
959853	AF2-276 BAT	0.1031	Merchant Transmission	0.1031
960022	AF2-293 E	0.1387	50/50	0.1387
960041	AF2-295 C	0.6569	Adder	0.77
960042	AF2-295 E	0.4379	Adder	0.52
960051	AF2-296 C	0.5935	Adder	0.7
960052	AF2-296 E	0.3957	Adder	0.47
962411	AG1-090 C O2	6.8292	50/50	6.8292
962412	AG1-090 E O2	4.5528	50/50	4.5528
962951	AG1-144 C	0.3865	Adder	0.86
962952	AG1-144 E	0.2577	Adder	0.57
963571	AG1-206 C	0.1945	Adder	0.43
963572	AG1-206 E	0.1047	Adder	0.23
963891	AG1-242 C	0.1704	Adder	0.38
963892	AG1-242 E	0.0918	Adder	0.2
964031	AG1-257 C	1.0113	50/50	1.0113
964032	AG1-257 E	1.4133	50/50	1.4133
964041	AG1-258 C	1.0113	50/50	1.0113
964042	AG1-258 E	1.4133	50/50	1.4133
964191	AG1-280 C	0.3046	Adder	0.68
964192	AG1-280 E	0.2030	Adder	0.45
964201	AG1-281 C	0.3064	Adder	0.68
964202	AG1-281 E	0.2042	Adder	0.45
964391	AG1-301 C	1.2631	50/50	1.2631
964392	AG1-301 E	0.8421	50/50	0.8421
964451	AG1-308 C O2	0.2673	Adder	0.59
964452	AG1-308 E O2	0.3736	Adder	0.83
965121	AG1-377 C O1	0.3865	Adder	0.86
965122	AG1-377 E O1	0.2577	Adder	0.57
965131	AG1-378 C O1	0.3865	Adder	0.86
965132	AG1-378 E O1	0.2577	Adder	0.57
965201	AG1-385 C	0.4502	Adder	1.0
965202	AG1-385 E	0.1333	Adder	0.3
965301	AG1-395 C	0.4967	Adder	1.1
965302	AG1-395 E	0.1475	Adder	0.33
966041	AG1-473 C	5.0011	50/50	5.0011
966042	AG1-473 E	3.3340	50/50	3.3340
966152	AG1-484 BAT	0.7022	Merchant Transmission	0.7022
966463	AG1-515 BAT	0.4163	Merchant Transmission	0.4163
966901	AG1-561 BAT	6.0877	50/50	6.0877
WEC	WEC	0.0441	Confirmed LTF	0.0441
LGEE	LGEE	0.0729	Confirmed LTF	0.0729
CALDERWOOD	CALDERWOOD	0.0060	Confirmed LTF	0.0060
CBM-W2	CBM-W2	0.6182	Confirmed LTF	0.6182
TVA	TVA	0.0364	Confirmed LTF	0.0364
O-066	O-066	1.9719	Confirmed LTF	1.9719
SIGE	SIGE	0.0427	Confirmed LTF	0.0427

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CHEOAH	CHEOAH	0.0080	Confirmed LTF	0.0080
CBM-S1	CBM-S1	0.0163	Confirmed LTF	0.0163
G-007	G-007	0.3402	Confirmed LTF	0.3402
HAMLET	HAMLET	0.0982	Confirmed LTF	0.0982
MEC	MEC	0.1827	Confirmed LTF	0.1827
LAGN	LAGN	0.0595	Confirmed LTF	0.0595
CATAWBA	CATAWBA	0.0416	Confirmed LTF	0.0416
CBM-W1	CBM-W1	2.3694	Confirmed LTF	2.3694

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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
165880253	941190	AE2-113 TAP	PENELEC	200668	26FARM VLY	PENELEC	1	PN-P2-3-PN-230-8M_SUM_WIN	breaker	160.0	120.16	122.09	DC	6.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200649	26PENNTech	1.5387	50/50	1.5387
235003	AC1-025 E	0.0786	Adder	0.09
236828	01GRAYMONT	0.2175	Adder	0.26
290086	Q-036 E	1.7241	Adder	2.03
921642	AA2-000	20.9211	Adder	24.61
930511	AB2-092	0.7682	Adder	0.9
936421	AD2-055	1.5815	Adder	1.86
936991	AD2-133 C	0.7759	Adder	0.91
936992	AD2-133 E	3.5487	Adder	4.17
939171	AE1-147 C	0.6562	Adder	0.77
939172	AE1-147 E	0.4374	Adder	0.51
940201	AE2-001 C	0.6541	Adder	0.77
940202	AE2-001 E	0.4361	Adder	0.51
940681	AE2-055 C (Suspended)	0.6221	Adder	0.73
940682	AE2-055 E (Suspended)	0.4147	Adder	0.49
941191	AE2-113 C	33.8240	50/50	33.8240
941192	AE2-113 E	36.4176	50/50	36.4176
941261	AE2-120 C	0.6530	Adder	0.77
941262	AE2-120 E	0.4353	Adder	0.51
941271	AE2-121 C	0.3508	Adder	0.41
941272	AE2-121 E	0.2342	Adder	0.28
941321	AE2-126 C	1.9456	50/50	1.9456
941322	AE2-126 E	1.2970	50/50	1.2970
941331	AE2-129 C	0.6925	Adder	0.81
941332	AE2-129 E	0.4617	Adder	0.54
941351	AE2-131 C (Suspended)	0.6925	Adder	0.81
941352	AE2-131 E (Suspended)	0.4617	Adder	0.54
942351	AE2-248 C	0.5084	Adder	0.6
942352	AE2-248 E	0.3389	Adder	0.4
942491	AE2-262 C	3.1765	Adder	3.74
942492	AE2-262 E	2.1346	Adder	2.51
942501	AE2-263 C	2.9859	Adder	3.51
942502	AE2-263 E	1.9935	Adder	2.35
942961	AE2-316 C	2.2774	Adder	2.68
942962	AE2-316 E	3.2476	Adder	3.82
943751	AF1-043	4.7445	Adder	5.58
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.6736	Adder	0.79
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.3789	Adder	0.45
944311	AF1-099 C	4.8219	Adder	5.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944312	AF1-099 E	3.2146	Adder	3.78
944321	AF1-100 C	10.8235	Adder	12.73
944322	AF1-100 E	7.2157	Adder	8.49
944382	AF1-103 BAT	1.1770	Merchant Transmission	1.1770
944471	AF1-112 C	0.6389	Adder	0.75
944472	AF1-112 E	0.4260	Adder	0.5
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.6292	Adder	0.74
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.4195	Adder	0.49
944691	AF1-134 C	0.5831	Adder	0.69
944692	AF1-134 E	0.3888	Adder	0.46
944771	AF1-142 C	7.7150	Adder	9.08
944772	AF1-142 E	5.1433	Adder	6.05
944881	AF1-153 C O1	0.9734	Adder	1.15
944882	AF1-153 E O1	0.6489	Adder	0.76
944901	AF1-155 C	0.9669	Adder	1.14
944902	AF1-155 E	0.6446	Adder	0.76
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.6530	Adder	0.77
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.4353	Adder	0.51
946381	AF1-302 C	0.9945	Adder	1.17
946382	AF1-302 E	1.3260	Adder	1.56
946421	AF1-306 C	5.7301	50/50	5.7301
946422	AF1-306 E	22.9206	50/50	22.9206
957451	AF2-039 C	0.6136	Adder	0.72
957452	AF2-039 E	0.4091	Adder	0.48
957941	AF2-088 C	0.2954	Adder	0.35
957942	AF2-088 E	0.1970	Adder	0.23
958271	AF2-121 C	0.6925	Adder	0.81
958272	AF2-121 E	0.4617	Adder	0.54
960022	AF2-293 E	0.0639	Adder	0.08
960041	AF2-295 C	0.9669	Adder	1.14
960042	AF2-295 E	0.6446	Adder	0.76
960051	AF2-296 C	0.5831	Adder	0.69
960052	AF2-296 E	0.3888	Adder	0.46
962411	AG1-090 C O2	1.8513	Adder	4.11
962412	AG1-090 E O2	1.2342	Adder	2.74
962951	AG1-144 C	0.3670	Adder	0.81
962952	AG1-144 E	0.2447	Adder	0.54
963571	AG1-206 C	1.1736	50/50	1.1736
963572	AG1-206 E	0.6320	50/50	0.6320
963891	AG1-242 C	0.1674	Adder	0.37
963892	AG1-242 E	0.0901	Adder	0.2
964031	AG1-257 C	0.2353	Adder	0.52
964032	AG1-257 E	0.3288	Adder	0.73
964041	AG1-258 C	0.2353	Adder	0.52
964042	AG1-258 E	0.3288	Adder	0.73
964341	AG1-296 C	0.1602	Adder	0.36
964342	AG1-296 E	0.0863	Adder	0.19
964451	AG1-308 C O2	0.2539	Adder	0.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964452	AG1-308 E O2	0.3548	Adder	0.79
965121	AG1-377 C O1	0.3670	Adder	0.81
965122	AG1-377 E O1	0.2447	Adder	0.54
965131	AG1-378 C O1	0.3670	Adder	0.81
965132	AG1-378 E O1	0.2447	Adder	0.54
965201	AG1-385 C	0.6634	Adder	1.47
965202	AG1-385 E	0.1965	Adder	0.44
965301	AG1-395 C	0.4716	Adder	1.05
965302	AG1-395 E	0.1401	Adder	0.31
966122	AG1-481 BAT	0.4772	Merchant Transmission	0.4772
G-007A	G-007A	0.5922	Confirmed LTF	0.5922
VFT	VFT	1.5803	Confirmed LTF	1.5803
CALDERWOOD	CALDERWOOD	0.0601	Confirmed LTF	0.0601
NY	NY	0.4761	Confirmed LTF	0.4761
PRAIRIE	PRAIRIE	0.4004	Confirmed LTF	0.4004
CHEOAH	CHEOAH	0.0601	Confirmed LTF	0.0601
CBM-N	CBM-N	0.2820	Confirmed LTF	0.2820
COTTONWOOD	COTTONWOOD	0.2856	Confirmed LTF	0.2856
HAMLET	HAMLET	0.0445	Confirmed LTF	0.0445
GIBSON	GIBSON	0.0890	Confirmed LTF	0.0890
BLUEG	BLUEG	0.2778	Confirmed LTF	0.2778
TRIMBLE	TRIMBLE	0.0896	Confirmed LTF	0.0896
CATAWBA	CATAWBA	0.0319	Confirmed LTF	0.0319

13.5.30 Index 30

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
164869608	941420	AE2-139 TAP	PENELEC	919200	AA1-144 TAP	PENELEC	1	PN-P2-2-PN-230-007T	bus	621.0	113.68	117.22	DC	21.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	5.7762	50/50	5.7762
200666	26SHAWVL 4	5.6426	50/50	5.6426
200894	26K02	34.2826	50/50	34.2826
203351	26GROZ1-110	1.5966	50/50	1.5966
203352	26CANZ2-011	1.5667	50/50	1.5667
235003	AC1-025 E	0.3391	50/50	0.3391
236828	01GRAYMONT	0.9092	50/50	0.9092
290086	Q-036 E	3.3810	Adder	3.98
919201	AA1-144 OP	-23.7863	Adder	-27.98
921642	AA2-000	199.4187	50/50	199.4187
930511	AB2-092	7.3221	50/50	7.3221
936421	AD2-055	15.0748	50/50	15.0748
936991	AD2-133 C	1.5214	Adder	1.79
936992	AD2-133 E	6.9589	Adder	8.19
939171	AE1-147 C	2.7299	50/50	2.7299
939172	AE1-147 E	1.8199	50/50	1.8199
940201	AE2-001 C	2.7286	50/50	2.7286
940202	AE2-001 E	1.8190	50/50	1.8190
940681	AE2-055 C (Suspended)	2.7082	50/50	2.7082
940682	AE2-055 E (Suspended)	1.8054	50/50	1.8054
941191	AE2-113 C	4.6383	Adder	5.46
941192	AE2-113 E	4.9940	Adder	5.88
941261	AE2-120 C	2.7278	50/50	2.7278
941262	AE2-120 E	1.8186	50/50	1.8186
941271	AE2-121 C	1.4526	50/50	1.4526
941272	AE2-121 E	0.9699	50/50	0.9699
941321	AE2-126 C	1.5317	Adder	1.8
941322	AE2-126 E	1.0212	Adder	1.2
941331	AE2-129 C	1.3188	Adder	1.55
941332	AE2-129 E	0.8792	Adder	1.03
941351	AE2-131 C (Suspended)	1.3188	Adder	1.55
941352	AE2-131 E (Suspended)	0.8792	Adder	1.03
941421	AE2-139 C	48.3926	50/50	48.3926
941422	AE2-139 E	32.2617	50/50	32.2617
942351	AE2-248 C	2.1733	50/50	2.1733
942352	AE2-248 E	1.4489	50/50	1.4489
942491	AE2-262 C	11.6570	50/50	11.6570
942492	AE2-262 E	7.8335	50/50	7.8335
942501	AE2-263 C	10.9576	50/50	10.9576
942502	AE2-263 E	7.3159	50/50	7.3159
942961	AE2-316 C	3.8926	Adder	4.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.5509	Adder	6.53
943751	AF1-043	45.2245	50/50	45.2245
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	2.8950	50/50	2.8950
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	1.6284	50/50	1.6284
944311	AF1-099 C	17.6953	50/50	17.6953
944312	AF1-099 E	11.7969	50/50	11.7969
944321	AF1-100 C	32.5500	50/50	32.5500
944322	AF1-100 E	21.7000	50/50	21.7000
944412	AF1-106 BAT	2.0074	Merchant Transmission	2.0074
944471	AF1-112 C	2.7188	50/50	2.7188
944472	AF1-112 E	1.8126	50/50	1.8126
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	2.7126	50/50	2.7126
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	1.8084	50/50	1.8084
944691	AF1-134 C	1.1553	Adder	1.36
944692	AF1-134 E	0.7702	Adder	0.91
944771	AF1-142 C	28.3125	50/50	28.3125
944772	AF1-142 E	18.8750	50/50	18.8750
944881	AF1-153 C O1	1.6013	Adder	1.88
944882	AF1-153 E O1	1.0675	Adder	1.26
944901	AF1-155 C	1.5893	Adder	1.87
944902	AF1-155 E	1.0595	Adder	1.25
945161	AF1-181	0.0265	50/50	0.0265
945171	AF1-182	0.1320	50/50	0.1320
945491	AF1-214 C (Withdrawn : 12/03/2020)	2.7278	50/50	2.7278
945492	AF1-214 E (Withdrawn : 12/03/2020)	1.8186	50/50	1.8186
946381	AF1-302 C	1.6998	Adder	2.0
946382	AF1-302 E	2.2664	Adder	2.67
946421	AF1-306 C	6.9889	Adder	8.22
946422	AF1-306 E	27.9557	Adder	32.89
957451	AF2-039 C	1.1415	Adder	1.34
957452	AF2-039 E	0.7610	Adder	0.9
957941	AF2-088 C	0.5496	Adder	0.65
957942	AF2-088 E	0.3664	Adder	0.43
958271	AF2-121 C	1.3188	Adder	1.55
958272	AF2-121 E	0.8792	Adder	1.03
959063	AF2-197 BAT	13.5485	Merchant Transmission	13.5485
960022	AF2-293 E	0.2653	50/50	0.2653
960041	AF2-295 C	1.5893	Adder	1.87
960042	AF2-295 E	1.0595	Adder	1.25
960051	AF2-296 C	1.1553	Adder	1.36
960052	AF2-296 E	0.7702	Adder	0.91
961142	AF2-405 BAT	1.0037	Merchant Transmission	1.0037
961152	AF2-406 BAT	7.5277	Merchant Transmission	7.5277
961451	AF2-436	-0.1532	Adder	-0.18
962411	AG1-090 C O2	13.1592	50/50	13.1592

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962412	AG1-090 E O2	8.7728	50/50	8.7728
962951	AG1-144 C	0.6989	Adder	1.55
962952	AG1-144 E	0.4660	Adder	1.03
963571	AG1-206 C	0.4282	Adder	0.95
963572	AG1-206 E	0.2306	Adder	0.51
963891	AG1-242 C	0.3317	Adder	0.74
963892	AG1-242 E	0.1786	Adder	0.4
964031	AG1-257 C	1.8818	50/50	1.8818
964032	AG1-257 E	2.6300	50/50	2.6300
964041	AG1-258 C	1.8818	50/50	1.8818
964042	AG1-258 E	2.6300	50/50	2.6300
964341	AG1-296 C	0.2857	Adder	0.63
964342	AG1-296 E	0.1539	Adder	0.34
964451	AG1-308 C O2	0.4834	Adder	1.07
964452	AG1-308 E O2	0.6756	Adder	1.5
964703	AG1-333 BAT	0.2022	Merchant Transmission	0.2022
965121	AG1-377 C O1	0.6989	Adder	1.55
965122	AG1-377 E O1	0.4660	Adder	1.03
965131	AG1-378 C O1	0.6989	Adder	1.55
965132	AG1-378 E O1	0.4660	Adder	1.03
965201	AG1-385 C	1.0913	Adder	2.42
965202	AG1-385 E	0.3232	Adder	0.72
965301	AG1-395 C	0.8981	Adder	1.99
965302	AG1-395 E	0.2668	Adder	0.59
966041	AG1-473 C	7.2943	50/50	7.2943
966042	AG1-473 E	4.8629	50/50	4.8629
WEC	WEC	0.1877	Confirmed LTF	0.1877
LGEE	LGEE	0.3625	Confirmed LTF	0.3625
CPL	CPL	0.2396	Confirmed LTF	0.2396
CBM-W2	CBM-W2	4.8832	Confirmed LTF	4.8832
NY	NY	1.6994	Confirmed LTF	1.6994
TVA	TVA	0.7196	Confirmed LTF	0.7196
O-066	O-066	10.7209	Confirmed LTF	10.7209
SIGE	SIGE	0.2277	Confirmed LTF	0.2277
CBM-S2	CBM-S2	4.1864	Confirmed LTF	4.1864
CBM-S1	CBM-S1	0.1995	Confirmed LTF	0.1995
G-007	G-007	1.5666	Confirmed LTF	1.5666
MEC	MEC	0.9184	Confirmed LTF	0.9184
LAGN	LAGN	0.9100	Confirmed LTF	0.9100
CBM-W1	CBM-W1	8.6924	Confirmed LTF	8.6924

13.5.31 Index 31

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
176732924	942490	AE2-262 TAP	AP	235219	01MILESB	AP	1	AP-P1-3-WP-230-325T-A	single	688.0	112.66	114.73	DC	14.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	4.0879	80/20	4.0879
200643	26SENECA#2	3.8608	80/20	3.8608
200644	26SENECA#3	0.4219	80/20	0.4219
200649	26PENNTech	1.1241	80/20	1.1241
200665	26SHAWVL 3	6.6076	80/20	6.6076
200666	26SHAWVL 4	6.4492	80/20	6.4492
200715	26SHAWVL 1	4.1304	80/20	4.1304
200722	26SHAWVL 2	4.2043	80/20	4.2043
200887	26ARMNA MT	0.1642	80/20	0.1642
200905	26Q36	0.1179	80/20	0.1179
200913	26SHAW-D	0.1764	80/20	0.1764
201201	26WRREN CT	0.8487	80/20	0.8487
203261	26BLOSSBCT	0.2427	80/20	0.2427
203283	26MANOR_T86	0.0133	80/20	0.0133
203349	26Z1-069 C	0.1630	80/20	0.1630
203351	26GROZ1-110	0.3459	80/20	0.3459
203352	26CANZ2-011	0.3394	80/20	0.3394
203922	X1-109 G1	4.2768	80/20	4.2768
203923	X1-109 G2	4.2768	80/20	4.2768
919201	AA1-144 OP	12.2413	80/20	12.2413
921642	AA2-000	95.9845	80/20	95.9845
930511	AB2-092	3.5243	80/20	3.5243
931091	AB1-160 C	0.0466	80/20	0.0466
936421	AD2-055	7.2559	80/20	7.2559
936991	AD2-133 C	1.6207	80/20	1.6207
939171	AE1-147 C	-4.6997	Adder	-5.53
940861	AE2-074 C	1.2874	80/20	1.2874
941191	AE2-113 C	7.9846	80/20	7.9846
941321	AE2-126 C	2.1254	80/20	2.1254
941331	AE2-129 C	1.5998	80/20	1.5998
941351	AE2-131 C (Suspended)	1.5998	80/20	1.5998
941421	AE2-139 C	4.9838	80/20	4.9838
942491	AE2-262 C	19.5840	80/20	19.5840
942501	AE2-263 C	18.4090	80/20	18.4090
942961	AE2-316 C	5.5049	80/20	5.5049
943751	AF1-043	21.7675	80/20	21.7675
944181	AF1-086 C O1	1.6058	80/20	1.6058
944311	AF1-099 C	29.7285	80/20	29.7285
944321	AF1-100 C	37.3935	80/20	37.3935
944381	AF1-103 O1	1.8876	80/20	1.8876
944691	AF1-134 C	1.4954	80/20	1.4954

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944771	AF1-142 C	47.5656	80/20	47.5656
944881	AF1-153 C O1	2.2350	80/20	2.2350
944901	AF1-155 C	2.2187	80/20	2.2187
945121	AF1-177	0.0745	80/20	0.0745
945161	AF1-181	0.0303	80/20	0.0303
945171	AF1-182	0.1509	80/20	0.1509
945181	AF1-183	0.0339	80/20	0.0339
945331	AF1-198	0.0319	80/20	0.0319
946111	AF1-276 C	6.0159	80/20	6.0159
946121	AF1-277 C	6.0159	80/20	6.0159
946131	AF1-278 C	4.7984	80/20	4.7984
946381	AF1-302 C	2.4039	80/20	2.4039
946421	AF1-306 C	9.8053	80/20	9.8053
957451	AF2-039 C	1.5094	80/20	1.5094
957941	AF2-088 C	0.7267	80/20	0.7267
958271	AF2-121 C	1.5998	80/20	1.5998
959061	AF2-197 C O1	2.7002	80/20	2.7002
959471	AF2-238 C	0.8846	80/20	0.8846
959481	AF2-239 C	0.7222	80/20	0.7222
959741	AF2-265 C	0.6340	80/20	0.6340
960041	AF2-295 C	2.2187	80/20	2.2187
960051	AF2-296 C	1.4954	80/20	1.4954
960271	AF2-318 C	0.7807	80/20	0.7807
961211	AF2-412	8.3395	80/20	8.3395
962411	AG1-090 C O2	14.2416	80/20	14.2416
962951	AG1-144 C	1.5998	80/20	1.5998
963571	AG1-206 C	1.1361	80/20	1.1361
963891	AG1-242 C	0.8100	80/20	0.8100
964341	AG1-296 C	0.7663	80/20	0.7663
964451	AG1-308 C O2	1.1066	80/20	1.1066
965121	AG1-377 C O1	1.5998	80/20	1.5998
965131	AG1-378 C O1	1.5998	80/20	1.5998
965201	AG1-385 C	2.8738	80/20	2.8738
965241	AG1-389 C O1	0.9533	80/20	0.9533
965251	AG1-390 C O2	0.9546	80/20	0.9546
965261	AG1-391 C O1	0.9533	80/20	0.9533
965271	AG1-392 C O1	1.9066	80/20	1.9066
965301	AG1-395 C	2.0558	80/20	2.0558
966121	AG1-481	1.4657	80/20	1.4657
WEC	WEC	0.1364	Confirmed LTF	0.1364
LGEE	LGEE	0.2513	Confirmed LTF	0.2513
CPL	CPL	0.0334	Confirmed LTF	0.0334
CBM-W2	CBM-W2	3.1360	Confirmed LTF	3.1360
TVA	TVA	0.4214	Confirmed LTF	0.4214
SIGE	SIGE	0.1697	Confirmed LTF	0.1697
CBM-S2	CBM-S2	1.3050	Confirmed LTF	1.3050
CBM-S1	CBM-S1	0.1212	Confirmed LTF	0.1212
MEC	MEC	0.6420	Confirmed LTF	0.6420
LAGN	LAGN	0.5442	Confirmed LTF	0.5442
CBM-W1	CBM-W1	6.6595	Confirmed LTF	6.6595

13.5.32 Index 32

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
164248039	966040	AG1-473 TAP	AP	200513	26LEWISTWN	PENELEC	1	Base Case	single	520.0	134.84	140.09	DC	27.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200642	26SENECA#1	5.0275	80/20	5.0275
200643	26SENECA#2	4.7482	80/20	4.7482
200644	26SENECA#3	0.5188	80/20	0.5188
200649	26PENNTech	1.3993	80/20	1.3993
200665	26SHAWVL 3	8.7683	80/20	8.7683
200666	26SHAWVL 4	8.6326	80/20	8.6326
200715	26SHAWVL 1	5.4751	80/20	5.4751
200722	26SHAWVL 2	5.6011	80/20	5.6011
200887	26ARMNA MT	0.1941	80/20	0.1941
200905	26Q36	0.1579	80/20	0.1579
200913	26SHAW-D	0.2335	80/20	0.2335
201201	26WRREN CT	1.0438	80/20	1.0438
203261	26BLOSSBCT	0.2856	80/20	0.2856
203283	26MANOR_T86	0.0156	80/20	0.0156
203349	26Z1-069 C	0.1974	80/20	0.1974
203351	26GROZ1-110	0.4022	80/20	0.4022
203352	26CANZ2-011	0.3947	80/20	0.3947
203922	X1-109 G1	4.9828	80/20	4.9828
203923	X1-109 G2	4.9828	80/20	4.9828
919201	AA1-144 OP	14.2495	80/20	14.2495
921642	AA2-000	110.6570	80/20	110.6570
930511	AB2-092	4.0630	80/20	4.0630
931091	AB1-160 C	0.0564	80/20	0.0564
936421	AD2-055	8.3650	80/20	8.3650
936991	AD2-133 C	2.1703	80/20	2.1703
939171	AE1-147 C	5.7880	80/20	5.7880
940201	AE2-001 C	5.8100	80/20	5.8100
940681	AE2-055 C (Suspended)	6.1463	80/20	6.1463
940861	AE2-074 C	1.5726	80/20	1.5726
941191	AE2-113 C	9.8927	80/20	9.8927
941261	AE2-120 C	5.8220	80/20	5.8220
941271	AE2-121 C	3.0568	80/20	3.0568
941321	AE2-126 C	2.7310	80/20	2.7310
941331	AE2-129 C	2.1270	80/20	2.1270
941351	AE2-131 C (Suspended)	2.1270	80/20	2.1270
941421	AE2-139 C	5.7936	80/20	5.7936
942351	AE2-248 C	4.8048	80/20	4.8048
942491	AE2-262 C	19.4670	80/20	19.4670
942501	AE2-263 C	18.2990	80/20	18.2990
942961	AE2-316 C	6.7630	80/20	6.7630
943751	AF1-043	25.0950	80/20	25.0950

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	6.4515	80/20	6.4515
944181	AF1-086 C O1	2.1136	80/20	2.1136
944311	AF1-099 C	29.5509	80/20	29.5509
944321	AF1-100 C	47.8020	80/20	47.8020
944381	AF1-103 O1	2.3214	80/20	2.3214
944471	AF1-112 C	5.9693	80/20	5.9693
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	6.0721	80/20	6.0721
944691	AF1-134 C	1.9754	80/20	1.9754
944771	AF1-142 C	47.2815	80/20	47.2815
944881	AF1-153 C O1	2.7431	80/20	2.7431
944901	AF1-155 C	2.7232	80/20	2.7232
945121	AF1-177	0.0916	80/20	0.0916
945161	AF1-181	0.0403	80/20	0.0403
945171	AF1-182	0.2020	80/20	0.2020
945181	AF1-183	0.0449	80/20	0.0449
945331	AF1-198	0.0376	80/20	0.0376
945491	AF1-214 C (Withdrawn : 12/03/2020)	5.8213	80/20	5.8213
946111	AF1-276 C	7.3894	80/20	7.3894
946121	AF1-277 C	7.3894	80/20	7.3894
946131	AF1-278 C	5.8939	80/20	5.8939
946381	AF1-302 C	2.9533	80/20	2.9533
946421	AF1-306 C	12.0405	80/20	12.0405
957451	AF2-039 C	1.9978	80/20	1.9978
957941	AF2-088 C	0.9619	80/20	0.9619
958271	AF2-121 C	2.1270	80/20	2.1270
959061	AF2-197 C O1	3.1534	80/20	3.1534
959471	AF2-238 C	1.0396	80/20	1.0396
959481	AF2-239 C	0.8430	80/20	0.8430
959741	AF2-265 C	0.7450	80/20	0.7450
960041	AF2-295 C	2.7232	80/20	2.7232
960051	AF2-296 C	1.9754	80/20	1.9754
960271	AF2-318 C	0.9114	80/20	0.9114
961211	AF2-412	9.9125	80/20	9.9125
962411	AG1-090 C O2	27.3096	80/20	27.3096
962951	AG1-144 C	2.1270	80/20	2.1270
963571	AG1-206 C	1.4479	80/20	1.4479
963891	AG1-242 C	1.0700	80/20	1.0700
964031	AG1-257 C	4.1081	80/20	4.1081
964041	AG1-258 C	4.1081	80/20	4.1081
964341	AG1-296 C	0.9417	80/20	0.9417
964451	AG1-308 C O2	1.4712	80/20	1.4712
965121	AG1-377 C O1	2.1270	80/20	2.1270
965131	AG1-378 C O1	2.1270	80/20	2.1270
965201	AG1-385 C	3.5271	80/20	3.5271
965241	AG1-389 C O1	1.1574	80/20	1.1574
965251	AG1-390 C O2	1.1591	80/20	1.1591
965261	AG1-391 C O1	1.1574	80/20	1.1574
965271	AG1-392 C O1	2.3148	80/20	2.3148

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965301	AG1-395 C	2.7332	80/20	2.7332
966041	AG1-473 C	21.0892	80/20	21.0892
966121	AG1-481	1.8026	80/20	1.8026
WEC	WEC	0.1701	Confirmed LTF	0.1701
LGEE	LGEE	0.3135	Confirmed LTF	0.3135
CPL	CPL	0.0437	Confirmed LTF	0.0437
CBM-W2	CBM-W2	3.9155	Confirmed LTF	3.9155
TVA	TVA	0.5264	Confirmed LTF	0.5264
SIG	SIG	0.2138	Confirmed LTF	0.2138
CBM-S2	CBM-S2	1.6495	Confirmed LTF	1.6495
CBM-S1	CBM-S1	0.1512	Confirmed LTF	0.1512
MEC	MEC	0.7993	Confirmed LTF	0.7993
LAGN	LAGN	0.6808	Confirmed LTF	0.6808
CBM-W1	CBM-W1	8.2858	Confirmed LTF	8.2858

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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
165880174	999327	26SHAWVL 1	PENELEC	200714	26SHAWVL 1	PENELEC	1A	PN-P2-3-PN-230-21HT	breaker	126.0	139.93	141.8	DC	5.21

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200665	26SHAWVL 3	4.4416	50/50	4.4416
200894	26K02	2.4357	Adder	2.87
235003	AC1-025 E	0.0731	Adder	0.09
236828	01GRAYMONT	0.2127	Adder	0.25
921642	AA2-000	30.4214	Adder	35.79
930511	AB2-092	1.1170	Adder	1.31
936421	AD2-055	2.2997	Adder	2.71
939171	AE1-147 C	0.6465	Adder	0.76
939172	AE1-147 E	0.4310	Adder	0.51
940201	AE2-001 C	0.6417	Adder	0.75
940202	AE2-001 E	0.4278	Adder	0.5
940681	AE2-055 C (Suspended)	0.5693	Adder	0.67
940682	AE2-055 E (Suspended)	0.3795	Adder	0.45
941261	AE2-120 C	0.6391	Adder	0.75
941262	AE2-120 E	0.4261	Adder	0.5
941271	AE2-121 C	0.3481	Adder	0.41
941272	AE2-121 E	0.2324	Adder	0.27
941351	AE2-131 C (Suspended)	-2.4133	Adder	-2.84
942351	AE2-248 C	0.4796	Adder	0.56
942352	AE2-248 E	0.3197	Adder	0.38
942491	AE2-262 C	3.6949	Adder	4.35
942492	AE2-262 E	2.4830	Adder	2.92
942501	AE2-263 C	3.4733	Adder	4.09
942502	AE2-263 E	2.3190	Adder	2.73
943751	AF1-043	6.8990	Adder	8.12
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.6297	Adder	0.74
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.3542	Adder	0.42
944311	AF1-099 C	5.6089	Adder	6.6
944312	AF1-099 E	3.7393	Adder	4.4
944321	AF1-100 C	22.1220	50/50	22.1220
944322	AF1-100 E	14.7480	50/50	14.7480
944471	AF1-112 C	0.6074	Adder	0.71
944472	AF1-112 E	0.4049	Adder	0.48
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.5853	Adder	0.69
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.3902	Adder	0.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944771	AF1-142 C	8.9743	Adder	10.56
944772	AF1-142 E	5.9829	Adder	7.04
945161	AF1-181	0.0204	50/50	0.0204
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.6392	Adder	0.75
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.4262	Adder	0.5
959803	AF2-271 BAT	0.1064	Merchant Transmission	0.1064
960022	AF2-293 E	0.0630	Adder	0.07
962411	AG1-090 C O2	1.4075	Adder	3.12
962412	AG1-090 E O2	0.9383	Adder	2.08
964031	AG1-257 C	0.2250	Adder	0.5
964032	AG1-257 E	0.3145	Adder	0.7
964041	AG1-258 C	0.2250	Adder	0.5
964042	AG1-258 E	0.3145	Adder	0.7
965303	AG1-395 BAT	2.0277	50/50	2.0277
G-007A	G-007A	0.6689	Confirmed LTF	0.6689
VFT	VFT	1.8640	Confirmed LTF	1.8640
CALDERWOOD	CALDERWOOD	0.0616	Confirmed LTF	0.0616
PRAIRIE	PRAIRIE	0.3461	Confirmed LTF	0.3461
CHEOAH	CHEOAH	0.0621	Confirmed LTF	0.0621
CBM-N	CBM-N	0.3804	Confirmed LTF	0.3804
COTTONWOOD	COTTONWOOD	0.2688	Confirmed LTF	0.2688
HAMLET	HAMLET	0.0612	Confirmed LTF	0.0612
GIBSON	GIBSON	0.0748	Confirmed LTF	0.0748
BLUEG	BLUEG	0.2396	Confirmed LTF	0.2396
TRIMBLE	TRIMBLE	0.0768	Confirmed LTF	0.0768
CATAWBA	CATAWBA	0.0392	Confirmed LTF	0.0392

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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
164869510	999332	KEYSTONE	PENELEC	200011	KEYSTONE	PENELEC	4	APS-P2-2-WP-500-DRT19	bus	634.0	138.65	139.28	DC	8.77

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200636	26IUP CO-G	0.4562	50/50	0.4562
200794	26CONEMAGH	0.3075	50/50	0.3075
200809	26SITHE	1.4282	50/50	1.4282
200833	26SEWRDB34	14.8354	50/50	14.8354
200835	26ARN_Z1-066	0.9301	Adder	1.09
200837	26HOMER C1	24.5961	50/50	24.5961
200838	26HOMER C2	20.3806	50/50	20.3806
200839	26HOMER C3	21.5755	50/50	21.5755
200846	26FORWARD	0.0922	50/50	0.0922
200852	26WARR RDG	0.2604	Adder	0.31
200864	K-013 E	4.2361	50/50	4.2361
200883	Q-053 E	6.5672	Adder	7.73
200888	26HIGHLAND	0.2265	50/50	0.2265
200894	26K02	4.1917	Adder	4.93
200906	26KEYSTN#3	0.7604	50/50	0.7604
200925	26R32	0.3551	50/50	0.3551
202158	26CON.GEN1	0.0793	50/50	0.0793
202160	26CON.GEN2	0.0555	50/50	0.0555
203915	26BF_Z2-108	2.0927	Adder	2.46
203999	P-047 E	7.4720	Adder	8.79
235003	AC1-025 E	0.1061	Adder	0.12
236828	01GRAYMONT	0.2879	Adder	0.34
290086	Q-036 E	4.6070	Adder	5.42
292350	K-023	3.8251	Adder	4.5
292542	L-013 1	3.7204	Adder	4.38
293301	N-039 E	8.8150	Adder	10.37
293393	V3-030E	4.0181	Adder	4.73
293432	R-040 E	0.2093	Adder	0.25
293603	O-018 E	9.2165	50/50	9.2165
293902	O-048 E	3.3484	Adder	3.94
294515	O38_P22	7.7131	Adder	9.07
294903	P-060 E	5.9947	Adder	7.05
296332	R-032 E	10.6344	50/50	10.6344
913142	Y1-033 E OP1	2.9894	Adder	3.52
916202	Z1-069 E	6.0533	Adder	7.12
919201	AA1-144 OP	11.5038	Adder	13.53
920341	AA2-132 (Withdrawn : 12/07/2020)	1.5694	Adder	1.85
921642	AA2-000	36.2420	Adder	42.64
930511	AB2-092	1.3307	Adder	1.57
931092	AB1-160 E	1.7295	Adder	2.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
935191	AD1-154	2.3759	Adder	2.8
936421	AD2-055	2.7397	Adder	3.22
936991	AD2-133 C	2.0731	Adder	2.44
936992	AD2-133 E	9.4824	Adder	11.16
938351	AE1-053	1.1626	Adder	1.37
938881	AE1-116	0.6259	Adder	0.74
938951	AE1-123	1.7193	Adder	2.02
938993	AE1-128 C	10.5852	Adder	12.45
938994	AE1-128 E	7.0568	Adder	8.3
939171	AE1-147 C	0.8659	Adder	1.02
939172	AE1-147 E	0.5773	Adder	0.68
939291	AE1-160 C	1.0615	Adder	1.25
939292	AE1-160 E	0.6101	Adder	0.72
940201	AE2-001 C	0.8646	Adder	1.02
940202	AE2-001 E	0.5764	Adder	0.68
940681	AE2-055 C (Suspended)	0.8447	Adder	0.99
940682	AE2-055 E (Suspended)	0.5631	Adder	0.66
940861	AE2-074 C	1.6654	Adder	1.96
940862	AE2-074 E	2.1923	Adder	2.58
941191	AE2-113 C	6.5539	Adder	7.71
941192	AE2-113 E	7.0564	Adder	8.3
941231	AE2-117 C	1.2652	Adder	1.49
941232	AE2-117 E	0.8435	Adder	0.99
941241	AE2-118 C	1.3245	Adder	1.56
941242	AE2-118 E	0.8830	Adder	1.04
941261	AE2-120 C	0.8638	Adder	1.02
941262	AE2-120 E	0.5759	Adder	0.68
941271	AE2-121 C	0.4616	Adder	0.54
941272	AE2-121 E	0.3082	Adder	0.36
941321	AE2-126 C	1.1448	Adder	1.35
941322	AE2-126 E	0.7632	Adder	0.9
941331	AE2-129 C	1.2830	Adder	1.51
941332	AE2-129 E	0.8553	Adder	1.01
941351	AE2-131 C (Suspended)	1.2830	Adder	1.51
941352	AE2-131 E (Suspended)	0.8553	Adder	1.01
941421	AE2-139 C	2.2721	Adder	5.04
941422	AE2-139 E	1.5147	Adder	3.36
942121	AE2-224 C	8.6669	Adder	10.2
942122	AE2-224 E	5.7780	Adder	6.8
942351	AE2-248 C	0.6823	Adder	0.8
942352	AE2-248 E	0.4549	Adder	0.54
942361	AE2-249 C	1.1908	Adder	1.4
942362	AE2-249 E	0.7939	Adder	0.93
942491	AE2-262 C	3.8837	Adder	4.57
942492	AE2-262 E	2.6098	Adder	3.07
942501	AE2-263 C	3.6506	Adder	4.29
942502	AE2-263 E	2.4374	Adder	2.87
942511	AE2-264 C	5.1632	Adder	6.07
942512	AE2-264 E	3.4422	Adder	4.05
942811	AE2-299 C	2.2301	Adder	2.62
942812	AE2-299 E	8.9205	Adder	10.49
942961	AE2-316 C	3.6572	Adder	4.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942962	AE2-316 E	5.2151	Adder	6.14
943151	AE2-344 C	4.8233	Adder	5.67
943152	AE2-344 E	3.2155	Adder	3.78
943711	AF1-039 C O1	0.7909	Adder	0.93
943712	AF1-039 E O1	0.5272	Adder	0.62
943751	AF1-043	8.2190	Adder	9.67
944001	AF1-068 C O1 (Withdrawn : 12/15/2020)	0.9072	Adder	1.07
944002	AF1-068 E O1 (Withdrawn : 12/15/2020)	0.5103	Adder	0.6
944181	AF1-086 C O1	2.7629	Adder	3.25
944182	AF1-086 E O1	12.0200	Adder	14.14
944261	AF1-094 C	0.8818	Adder	1.04
944262	AF1-094 E	0.5879	Adder	0.69
944281	AF1-096 C	1.0030	Adder	1.18
944282	AF1-096 E	0.6686	Adder	0.79
944301	AF1-098 C	3.4305	Adder	4.04
944302	AF1-098 E	2.2870	Adder	2.69
944311	AF1-099 C	5.8954	Adder	6.94
944312	AF1-099 E	3.9303	Adder	4.62
944321	AF1-100 C	12.5371	Adder	14.75
944322	AF1-100 E	8.3580	Adder	9.83
944381	AF1-103 O1	1.7331	Adder	2.04
944411	AF1-106 O1	1.7177	Adder	2.02
944471	AF1-112 C	0.8552	Adder	1.01
944472	AF1-112 E	0.5701	Adder	0.67
944671	AF1-132 C O1 (Withdrawn : 12/15/2020)	0.8490	Adder	1.0
944672	AF1-132 E O1 (Withdrawn : 12/15/2020)	0.5660	Adder	0.67
944691	AF1-134 C	1.4199	Adder	1.67
944692	AF1-134 E	0.9466	Adder	1.11
944751	AF1-140 C	1.4160	Adder	1.67
944752	AF1-140 E	0.9440	Adder	1.11
944771	AF1-142 C	9.4326	Adder	11.1
944772	AF1-142 E	6.2884	Adder	7.4
944781	AF1-143 C	6.9758	Adder	8.21
944782	AF1-143 E	3.7204	Adder	4.38
944881	AF1-153 C O1	1.0402	Adder	1.22
944882	AF1-153 E O1	0.6935	Adder	0.82
944901	AF1-155 C	1.0404	Adder	1.22
944902	AF1-155 E	0.6936	Adder	0.82
945021	AF1-167 C	0.6719	Adder	0.79
945022	AF1-167 E	0.4488	Adder	0.53
945051	AF1-170 C	3.0798	Adder	3.62
945052	AF1-170 E	2.0532	Adder	2.42
945451	AF1-210 C	0.7376	Adder	0.87
945452	AF1-210 E	0.4917	Adder	0.58
945491	AF1-214 C (Withdrawn : 12/03/2020)	0.8639	Adder	1.02

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945492	AF1-214 E (Withdrawn : 12/03/2020)	0.5760	Adder	0.68
945671	AF1-232 C (Withdrawn : 01/19/2021)	14.7115	Adder	17.31
945672	AF1-232 E (Withdrawn : 01/19/2021)	7.9216	Adder	9.32
945751	AF1-240 C O1	1.4256	Adder	1.68
945752	AF1-240 E O1	0.9504	Adder	1.12
946071	AF1-272 C O1	15.6902	50/50	15.6902
946072	AF1-272 E O1	10.4601	50/50	10.4601
946111	AF1-276 C	7.4656	Adder	8.78
946112	AF1-276 E	3.6771	Adder	4.33
946121	AF1-277 C	7.4656	Adder	8.78
946122	AF1-277 E	3.6771	Adder	4.33
946131	AF1-278 C	5.9546	Adder	7.01
946132	AF1-278 E	2.9595	Adder	3.48
946211	AF1-286 C	0.6957	Adder	0.82
946212	AF1-286 E	0.4724	Adder	0.56
946221	AF1-287 C	0.8326	Adder	0.98
946222	AF1-287 E	0.5551	Adder	0.65
946381	AF1-302 C	1.5970	Adder	1.88
946382	AF1-302 E	2.1294	Adder	2.51
946401	AF1-304 C	5.2474	Adder	6.17
946402	AF1-304 E	3.4983	Adder	4.12
946421	AF1-306 C	4.3103	Adder	5.07
946422	AF1-306 E	17.2414	Adder	20.28
946571	AF1-321 C O1	2.2145	50/50	2.2145
946572	AF1-321 E O1	1.4763	50/50	1.4763
946771	AF1-217 C	0.8327	Adder	0.98
946772	AF1-217 E	0.5552	Adder	0.65
957001	AF2-001 C O1	2.2145	50/50	2.2145
957002	AF2-001 E O1	1.4763	50/50	1.4763
957011	AF2-002 C O1	1.1072	50/50	1.1072
957012	AF2-002 E O1	0.7382	50/50	0.7382
957161	AF2-010 C	3.4025	Adder	4.0
957162	AF2-010 E	2.2930	Adder	2.7
957451	AF2-039 C	0.7842	Adder	0.92
957452	AF2-039 E	0.5228	Adder	0.62
957512	AF2-045 E	2.6604	Adder	3.13
957561	AF2-050 C	4.3335	Adder	5.1
957562	AF2-050 E	2.8890	Adder	3.4
957571	AF2-051 C	2.5983	Adder	3.06
957572	AF2-051 E	1.3385	Adder	1.57
957931	AF2-087 C (Suspended)	0.3821	Adder	0.45
957932	AF2-087 E (Suspended)	0.5262	Adder	0.62
957941	AF2-088 C	0.3776	Adder	0.44
957942	AF2-088 E	0.2517	Adder	0.3
957981	AF2-092 C	1.0550	Adder	1.24
957982	AF2-092 E	0.7033	Adder	0.83
958101	AF2-104 C (Withdrawn : 12/08/2020)	0.3338	Adder	0.39
958102	AF2-104 E (Withdrawn : 12/08/2020)	0.2225	Adder	0.26

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958271	AF2-121 C	1.2830	Adder	1.51
958272	AF2-121 E	0.8553	Adder	1.01
958361	AF2-130 C	1.1065	Adder	1.3
958362	AF2-130 E	0.7377	Adder	0.87
958471	AF2-141	0.9301	Adder	1.09
958731	AF2-164 C O1	4.8576	Adder	5.71
958732	AF2-164 E O1	3.2384	Adder	3.81
958741	AF2-165 C	1.0641	Adder	1.25
958742	AF2-165 E	0.7094	Adder	0.83
958751	AF2-166 C	1.1065	Adder	1.3
958752	AF2-166 E	0.7377	Adder	0.87
959061	AF2-197 C O1	2.9265	Adder	3.44
959062	AF2-197 E O1	4.3897	Adder	5.16
959441	AF2-235 C	0.5015	Adder	0.59
959442	AF2-235 E	0.3343	Adder	0.39
959471	AF2-238 C	1.0580	Adder	1.24
959472	AF2-238 E	0.7054	Adder	0.83
959481	AF2-239 C	0.7866	Adder	0.93
959482	AF2-239 E	0.6307	Adder	0.74
959491	AF2-240 C	0.3246	Adder	0.38
959492	AF2-240 E	0.2765	Adder	0.33
959501	AF2-241 C	0.9705	Adder	1.14
959502	AF2-241 E	0.7472	Adder	0.88
959521	AF2-243 C	0.7980	Adder	0.94
959522	AF2-243 E	0.5320	Adder	0.63
959741	AF2-265 C	0.7583	Adder	0.89
959742	AF2-265 E	0.5643	Adder	0.66
959792	AF2-270 E	0.5470	Adder	0.64
959802	AF2-271 E	0.3276	Adder	0.39
959822	AF2-273 E	0.2954	Adder	0.35
960022	AF2-293 E	0.0842	Adder	0.1
960031	AF2-294 C	0.9464	Adder	1.11
960032	AF2-294 E	0.6309	Adder	0.74
960041	AF2-295 C	1.0404	Adder	1.22
960042	AF2-295 E	0.6936	Adder	0.82
960051	AF2-296 C	1.4199	Adder	1.67
960052	AF2-296 E	0.9466	Adder	1.11
960271	AF2-318 C	0.8504	Adder	1.0
960272	AF2-318 E	0.5669	Adder	0.67
960451	AF2-336 C	1.7583	Adder	2.07
960452	AF2-336 E	1.1722	Adder	1.38
960461	AF2-337 C	1.7583	Adder	2.07
960462	AF2-337 E	1.1722	Adder	1.38
960471	AF2-338 C	1.7583	Adder	2.07
960472	AF2-338 E	1.1722	Adder	1.38
960481	AF2-339 C	1.7583	Adder	2.07
960482	AF2-339 E	1.1722	Adder	1.38
960901	AF2-381 C	14.7256	50/50	14.7256
960902	AF2-381 E	7.7494	50/50	7.7494
961141	AF2-405	0.8588	Adder	1.01
961151	AF2-406	6.4413	Adder	7.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961201	AF2-411 O1 (Withdrawn : 12/08/2020)	32.8440	Adder	38.64
961211	AF2-412	13.1241	Adder	15.44
961911	AG1-033 C	0.5844	50/50	0.5844
961912	AG1-033 E	0.3287	50/50	0.3287
961971	AG1-040 C	0.4649	Adder	1.03
961972	AG1-040 E	0.3099	Adder	0.69
961981	AG1-041 C	0.5577	Adder	1.24
961982	AG1-041 E	0.3718	Adder	0.83
962292	AG1-077 E	0.3007	Adder	0.67
962411	AG1-090 C O2	2.3716	Adder	5.26
962412	AG1-090 E O2	1.5811	Adder	3.51
962511	AG1-100 C	0.4405	Adder	0.98
962512	AG1-100 E	0.2937	Adder	0.65
962641	AG1-113	0.2654	Adder	0.59
962651	AG1-114	0.6162	Adder	1.37
962891	AG1-138 C	0.2321	Adder	0.52
962892	AG1-138 E	0.0122	Adder	0.03
962901	AG1-139 C	0.2232	Adder	0.5
962902	AG1-139 E	0.0117	Adder	0.03
962911	AG1-140 C	0.0665	Adder	0.15
962912	AG1-140 E	0.0303	Adder	0.07
962951	AG1-144 C	0.6800	Adder	1.51
962952	AG1-144 E	0.4533	Adder	1.01
963281	AG1-177 C O2	0.4413	Adder	0.98
963282	AG1-177 E O2	0.2942	Adder	0.65
963441	AG1-193 C	0.5502	Adder	1.22
963442	AG1-193 E	0.3668	Adder	0.81
963481	AG1-197 C	0.3527	Adder	0.78
963482	AG1-197 E	0.2351	Adder	0.52
963491	AG1-198 C	0.2804	Adder	0.62
963492	AG1-198 E	0.1869	Adder	0.41
963541	AG1-203 C	0.4887	Adder	1.08
963542	AG1-203 E	0.2631	Adder	0.58
963561	AG1-205 C	0.4005	Adder	0.89
963562	AG1-205 E	0.2157	Adder	0.48
963571	AG1-206 C	0.3274	Adder	0.73
963572	AG1-206 E	0.1763	Adder	0.39
963881	AG1-241 C	1.1871	50/50	1.1871
963882	AG1-241 E	0.6392	50/50	0.6392
963891	AG1-242 C	0.4076	Adder	0.9
963892	AG1-242 E	0.2195	Adder	0.49
963941	AG1-247 C	0.2230	Adder	0.5
963942	AG1-247 E	0.1183	Adder	0.26
963991	AG1-253 C	0.0997	Adder	0.22
963992	AG1-253 E	0.0480	Adder	0.11
964031	AG1-257 C	0.3141	Adder	0.7
964032	AG1-257 E	0.4390	Adder	0.97
964041	AG1-258 C	0.3141	Adder	0.7
964042	AG1-258 E	0.4390	Adder	0.97
964191	AG1-280 C	0.8695	Adder	1.93
964192	AG1-280 E	0.5797	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964201	AG1-281 C	0.8682	Adder	1.93
964202	AG1-281 E	0.5788	Adder	1.28
964331	AG1-295 C	0.8622	50/50	0.8622
964332	AG1-295 E	0.4575	50/50	0.4575
964341	AG1-296 C	0.3072	Adder	0.68
964342	AG1-296 E	0.1654	Adder	0.37
964391	AG1-301 C	0.6626	Adder	1.47
964392	AG1-301 E	0.4417	Adder	0.98
964411	AG1-303 C O2	1.1070	Adder	2.46
964412	AG1-303 E O2	0.7380	Adder	1.64
964451	AG1-308 C O2	0.4703	Adder	1.04
964452	AG1-308 E O2	0.6573	Adder	1.46
964701	AG1-333 C	0.1839	Adder	0.41
964702	AG1-333 E	0.0251	Adder	0.06
964751	AG1-338 C	0.3383	Adder	0.75
964752	AG1-338 E	0.0461	Adder	0.1
964761	AG1-339 C	0.3537	Adder	0.79
964762	AG1-339 E	0.0308	Adder	0.07
964771	AG1-340 C	0.3383	Adder	0.75
964772	AG1-340 E	0.0461	Adder	0.1
964911	AG1-355 C	5.9652	50/50	5.9652
964912	AG1-355 E	3.9768	50/50	3.9768
964921	AG1-356 C	1.6139	Adder	3.58
964922	AG1-356 E	1.0759	Adder	2.39
965121	AG1-377 C O1	0.6800	Adder	1.51
965122	AG1-377 E O1	0.4533	Adder	1.01
965131	AG1-378 C O1	0.6800	Adder	1.51
965132	AG1-378 E O1	0.4533	Adder	1.01
965171	AG1-382 C	0.9204	Adder	2.04
965172	AG1-382 E	0.6136	Adder	1.36
965201	AG1-385 C	0.7089	Adder	1.57
965202	AG1-385 E	0.2100	Adder	0.47
965221	AG1-387 C	0.9204	Adder	2.04
965222	AG1-387 E	0.6136	Adder	1.36
965241	AG1-389 C O1	0.6842	Adder	1.52
965242	AG1-389 E O1	0.4562	Adder	1.01
965251	AG1-390 C O2	0.6846	Adder	1.52
965252	AG1-390 E O2	0.4564	Adder	1.01
965261	AG1-391 C O1	0.6842	Adder	1.52
965262	AG1-391 E O1	0.4562	Adder	1.01
965271	AG1-392 C O1	1.3685	Adder	3.04
965272	AG1-392 E O1	0.9123	Adder	2.03
965301	AG1-395 C	0.8738	Adder	1.94
965302	AG1-395 E	0.2595	Adder	0.58
965861	AG1-455	1.2286	Adder	2.73
965881	AG1-457 C	2.1315	Adder	4.73
965882	AG1-457 E	1.4210	Adder	3.15
966121	AG1-481	0.7133	Adder	1.58
966512	AG1-520 E	0.7382	50/50	0.7382
966771	AG1-548 C	4.4368	Adder	9.85
966772	AG1-548 E	1.3503	Adder	3.0
966781	AG1-549 C O2	50.3907	50/50	50.3907

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966782	AG1-549 E O2	15.3363	50/50	15.3363
VFT	VFT	0.1032	Confirmed LTF	0.1032
CALDERWOOD	CALDERWOOD	0.2704	Confirmed LTF	0.2704
PRAIRIE	PRAIRIE	1.2295	Confirmed LTF	1.2295
CHEOAH	CHEOAH	0.2733	Confirmed LTF	0.2733
CBM-N	CBM-N	0.1548	Confirmed LTF	0.1548
COTTONWOOD	COTTONWOOD	1.0752	Confirmed LTF	1.0752
G-007	G-007	0.0252	Confirmed LTF	0.0252
HAMLET	HAMLET	0.3465	Confirmed LTF	0.3465
GIBSON	GIBSON	0.2555	Confirmed LTF	0.2555
BLUEG	BLUEG	0.8333	Confirmed LTF	0.8333
TRIMBLE	TRIMBLE	0.2671	Confirmed LTF	0.2671
CATAWBA	CATAWBA	0.2051	Confirmed LTF	0.2051

13.6 Contingency Descriptions - Secondary POI

Contingency Name	Contingency Definition
PN-P2-3-PN-230-8M_SUM_WIN	CONTINGENCY 'PN-P2-3-PN-230-8M_SUM_WIN' /* GLADE STUCK BREAKER B42 (FOREST/SENECA) DISCONNECT BRANCH FROM BUS 200581 TO BUS 200593 CKT 1 /* 26FOREST 230 26GLADE 230 DISCONNECT BRANCH FROM BUS 200593 TO BUS 200594 CKT 1 /* 26GLADE 230 26SENECA 230 DISCONNECT BRANCH FROM BUS 200594 TO BUS 200642 CKT 1 /* 26SENECA 230 26SENECA#1 14 DISCONNECT BRANCH FROM BUS 200594 TO BUS 200643 CKT 1 /* 26SENECA 230 26SENECA#2 14 DISCONNECT BRANCH FROM BUS 200594 TO BUS 200644 CKT 1 /* 26SENECA 230 26SENECA#3 14 REMOVE MACHINE 1G FROM BUS 200642 /* 26SENECA#1 14 REMOVE MACHINE 2G FROM BUS 200643 /* 26SENECA#2 14 REMOVE MACHINE 3 FROM BUS 200644 /* 26SENECA#3 14 END
PL:48:P71:102649	CONTINGENCY 'PL:48:P71:102649' /* SUSQ-GEN1 230KV & BETA-SUSQ 230KV DISCONNECT BRANCH FROM BUS 207915 TO BUS 208113 CKT 1 /* BETA-SUSQ DISCONNECT BUS 208114 /* SUSQ G1 END
AP-P2-3-WP-230-443T *	CONTINGENCY 'AP-P2-3-WP-230-443T *' / UPDATED CON AJK 3-31-16 DISCONNECT BRANCH FROM BUS 200726 TO BUS 235175 CKT 1 DISCONNECT BRANCH FROM BUS 235175 TO BUS 235236 CKT 1 DISCONNECT BUS 235158 END
PL:10:P45:102437	CONTINGENCY 'PL:10:P45:102437' /* JUNI BU2 230KV BUS; BUS_SEC_1-2 CB @ JUNI 230KV DISCONNECT BUS 208004 /* JUNI BU1 230 DISCONNECT BUS 208005 /* JUNI BU2 230 END
AP-P1-3-WP-230-326T-B	CONTINGENCY 'AP-P1-3-WP-230-326T-B' / 1434 OPEN BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 / 200513 26LEWISTWN 230 966040 AG1-473 TAP 230 1 END

Contingency Name	Contingency Definition
PN-P2-3-PN-230-21HT	CONTINGENCY 'PN-P2-3-PN-230-21HT' / * SHAWVILLE 230 KV STUCK CB - CB23 (SHAWVILLE UNIT #2) DISCONNECT BRANCH FROM BUS 200726 TO BUS 962410 CKT 1 / * 26SHAWVL 2 230 AG1-090 TAP 230 DISCONNECT BRANCH FROM BUS 200726 TO BUS 235175 CKT 1 / * 26SHAWVL 2 230 01ELKO 230 DISCONNECT BRANCH FROM BUS 200710 TO BUS 200726 CKT ZB / * 26SHAWVL 1 230 26SHAWVL 2 230 DISCONNECT BRANCH FROM BUS 200666 TO BUS 200726 CKT 1 / * 26SHAWVL 4 22 26SHAWVL 2 230 DISCONNECT BRANCH FROM BUS 200726 TO BUS 200727 TO BUS 200722 CKT 2A/* 26SHAWVL 2 230 26SHAW. 2 115 26SHAWVL 2 18.00 DISCONNECT BRANCH FROM BUS 200714 TO BUS 200722 CKT 2B / * 26SHAWVL 1 115 26SHAWVL 2 18 END
PN-P2-2-PN-230-007T	CONTINGENCY 'PN-P2-2-PN-230-007T' / * LEWISTOWN #2 230KV BUS DISCONNECT BRANCH FROM BUS 200513 TO BUS 200531 CKT 2 / * 26LEWISTWN 230 26YEAGRTWN 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 / * 26LEWISTWN 230 AG1-473 TAP 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200517 CKT 1 / * 26LEWISTWN 230 26RAYSTOWN 230 END
PN-P2-3-PN-230-14BT	CONTINGENCY 'PN-P2-3-PN-230-14BT' / 1571 OPEN BRANCH FROM BUS 200513 TO BUS 200517 CKT 1 / 200513 26LEWISTWN 230 200517 26RAYSTOWN 230 1 OPEN BRANCH FROM BUS 200517 TO BUS 200539 CKT 1 / 200517 26RAYSTOWN 230 200539 26RAYSTOWN 46.0 1 OPEN BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 / 200513 26LEWISTWN 230 966040 AG1-473 TAP 230 1 OPEN BRANCH FROM BUS 200513 TO BUS 200531 CKT 2 / 200513 26LEWISTWN 230 200531 26YEAGRTWN 230 2 OPEN BRANCH FROM BUS 200513 TO BUS 200548 CKT 1 / 200513 26LEWISTWN 230 200548 26LEWISTWN 46.0 1 END
PL:11:P42:000135	CONTINGENCY 'PL:11:P42:000135' / 1049 OPEN BRANCH FROM BUS 200009 TO BUS 200011 CKT 1 / 200009 JUNIATA 500 200011 KEYSTONE 500 1 OPEN BRANCH FROM BUS 200009 TO BUS 208005 CKT 2 / 200009 JUNIATA 500 208005 JUNI BU2 230 2 END
PN-P1-2-PN-115-100-A	CONTINGENCY 'PN-P1-2-PN-115-100-A' / 1396 OPEN BRANCH FROM BUS 200927 TO BUS 944300 CKT 1 / 200927 26FOURMILE 115 944300 AF1-098 TAP 115 1 END

Contingency Name	Contingency Definition
ATSI-P2-3-CEI-345-004D	CONTINGENCY 'ATSI-P2-3-CEI-345-004D' / 911 OPEN BRANCH FROM BUS 200599 TO BUS 200600 CKT 1 / 200599 26ERIE W 345 200600 26ERIE SO 345 1 OPEN BRANCH FROM BUS 200599 TO BUS 238547 CKT 1 / 200599 26ERIE W 345 238547 02AT 345 1 OPEN BRANCH FROM BUS 238547 TO BUS 239036 CKT 1 / 238547 02AT 345 239036 02PERRY 345 1 OPEN BRANCH FROM BUS 238547 TO BUS 239082 CKT 1 / 238547 02AT 345 239082 02S8-ATT 345 1 OPEN BRANCH FROM BUS 200568 TO BUS 200600 CKT 5 / 200568 26ERIE SO. 230 200600 26ERIE SO 345 5 OPEN BRANCH FROM BUS 200819 TO BUS 200600 CKT 8 / 200819 26ERIE SE 230 200600 26ERIE SO 345 8 END
PN-P1-2-PN-230-002	CONTINGENCY 'PN-P1-2-PN-230-002' / 1643 OPEN BRANCH FROM BUS 200767 TO BUS 200795 CKT 1 / 200767 26HOMER CT 230 200795 26SHELOCTA 230 1 OPEN BRANCH FROM BUS 200795 TO BUS 200810 CKT 1 / 200795 26SHELOCTA 230 200810 26KEYSTONE 230 1 OPEN BRANCH FROM BUS 200739 TO BUS 200795 CKT 2 / 200739 26SHELOCTA 115 200795 26SHELOCTA 230 2 END
PN-P2_3-PN-230-0347-16-DRT-029	CONTINGENCY 'PN-P2_3-PN-230-0347-16-DRT-029' /* 26LEWISTOWN- 26RAYSTOWN 230 AND B5 FAULT DISCONNECT BRANCH FROM BUS 200513 TO BUS 208005 CKT 1 /* 26LEWISTOWN- 08JUNITA 230 AND B89 FAULT OPEN BUS 200531 /* 26LEWISTOWN 230 BUS 2 END
PN-P1-2-PN-230-006	CONTINGENCY 'PN-P1-2-PN-230-006' /* GLADE - FOREST 230KV DISCONNECT BRANCH FROM BUS 200593 TO BUS 200581 CKT 1 /* 26GLADE 230 26FOREST 230 END
AP-P2-2-WP-230-005T	CONTINGENCY 'AP-P2-2-WP-230-005T' /* SHINGLETOWN #2 230KV BUS DISCONNECT BRANCH FROM BUS 235248 TO BUS 235970 CKT 1 /* 01SHINGL 230 01DALE 230 DISCONNECT BRANCH FROM BUS 235248 TO BUS 966040 CKT 1 /* 01SHINGL 230 AG1- 473 TAP 230 DISCONNECT BRANCH FROM BUS 235248 TO BUS 236711 CKT 82 /* 01SHINGL 230 01SHINGLTN 46 END
PN-P2-2-PN-115-030	CONTINGENCY 'PN-P2-2-PN-115-030' /* SHADE GAP 115KV BUS FAULT DISCONNECT BUS 200522 /* 26SHADE GP 115 END

Contingency Name	Contingency Definition
AP-P2-2-WP-230-001T	CONTINGENCY 'AP-P2-2-WP-230-001T' /* ELKO #2 230KV BUS DISCONNECT BRANCH FROM BUS 235175 TO BUS 235158 CKT 1 /* 01ELKO 230 01CARB 230 DISCONNECT BRANCH FROM BUS 235175 TO BUS 235236 CKT 1 /* 01ELKO 230 01QUEHAN 230 DISCONNECT BRANCH FROM BUS 235175 TO BUS 200726 CKT 1 /* 01ELKO 230 26SHAWVL 2 230 END
PECO_P7-1_220-9091/* \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT PECO_P7-1_220-9091 \$ DCT	CONTINGENCY 'PECO_P7-1_220-9091/* \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT' DISCONNECT BUS 213616 /* FORDACT1 18.00 \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT DISCONNECT BUS 213617 /* FORDACT2 18.00 \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT DISCONNECT BUS 213618 /* FORDAST1 18.00 \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT DISCONNECT BUS 213619 /* FORDBCT1 18.00 \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT DISCONNECT BUS 213620 /* FORDBCT2 18.00 \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT DISCONNECT BUS 213621 /* FORDBST1 18.00 \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT DISCONNECT BUS 213622 /* FORDML90 230.00 \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT DISCONNECT BUS 213623 /* FORDML91 230.00 \$ BUCKS \$ PECO_P7-1_220-9091 \$ DCT END
PL:10:P13:001633	CONTINGENCY 'PL:10:P13:001633' / 1249 OPEN BRANCH FROM BUS 207953 TO BUS 207955 CKT 1 / 207953 DAUP TR1 230 207955 DAUP TR2 230 1 OPEN BRANCH FROM BUS 207955 TO BUS 208005 CKT 1 / 207955 DAUP TR2 230 208005 JUNI BU2 230 1 OPEN BRANCH FROM BUS 209866 TO BUS 207955 CKT 2 / 209866 DAUP 69.0 207955 DAUP TR2 230 2 END
AP-P1-3-WP-230-005-B	CONTINGENCY 'AP-P1-3-WP-230-005-B' / 847 OPEN BRANCH FROM BUS 236745 TO BUS 235219 CKT 82 / 236745 01MILESBBG 46.0 235219 01MILESB 230 82 OPEN BRANCH FROM BUS 235219 TO BUS 942490 CKT 1 / 235219 01MILESB 230 942490 AE2-262 TAP 230 1 END
AP-P1-3-WP-230-325T-A	CONTINGENCY 'AP-P1-3-WP-230-325T-A' /* SHINGLETOWN #81 230/46KV XFMR DISCONNECT BRANCH FROM BUS 235248 TO BUS 236711 CKT 81 /* 01SHINGL 230 01SHINGLTN 46 DISCONNECT BRANCH FROM BUS 235248 TO BUS 962410 CKT 1 /* 01SHINGL 230 AG1-090 TAP 230 END

Contingency Name	Contingency Definition
AP-P1-2-WP-230-005A-A	CONTINGENCY 'AP-P1-2-WP-230-005A-A' /* MILESBERG - MOSHANNON 230KV DISCONNECT BRANCH FROM BUS 235220 TO BUS 942490 CKT 1 /* 01MOSHAN 230 AE2-262 TAP 230 END
PN-P1-2-PN-345-107T	CONTINGENCY 'PN-P1-2-PN-345-107T' / 866 OPEN BRANCH FROM BUS 200599 TO BUS 238547 CKT 1 / 200599 26ERIE W 345 238547 02AT 345 1 OPEN BRANCH FROM BUS 238547 TO BUS 239082 CKT 1 / 238547 02AT 345 239082 02S8-ATT 345 1 OPEN BRANCH FROM BUS 238547 TO BUS 239036 CKT 1 / 238547 02AT 345 239036 02PERRY 345 1 END
AP-P1-2-WP-230-005A-B	CONTINGENCY 'AP-P1-2-WP-230-005A-B' /* MILESBERG - MOSHANNON 230KV DISCONNECT BRANCH FROM BUS 942490 TO BUS 235219 CKT 1 /* AE2-262 TAP 230 01MILES B 230 END
PL:10:P22:100582	CONTINGENCY 'PL:10:P22:100582' /* JUNIATA 230KV BUS 2 DISCONNECT BUS 208005 /* END
AP-P1-2-WP-345-311T	CONTINGENCY 'AP-P1-2-WP-345-311T' / 952 OPEN BRANCH FROM BUS 200769 TO BUS 235129 CKT 1 / 200769 26HOMER CY 345 235129 01ARMSTRONG 345 1 END
PN-P2-2-PN-500-001T	CONTINGENCY 'PN-P2-2-PN-500-001T' /* CONEMAUGH #1 500KV BUS DISCONNECT BRANCH FROM BUS 200005 TO BUS 200912 CKT 3 /* CONEM-GH 500 26CONEMAGH 230 END
PN-P2_3-PN-230-0347-A	CONTINGENCY 'PN-P2_3-PN-230-0347-A' / 1646 OPEN BRANCH FROM BUS 200767 TO BUS 200793 CKT 1 / 200767 26HOMER CT 230 200793 26SEWARD 2 230 1 OPEN BRANCH FROM BUS 200793 TO BUS 200912 CKT 1 / 200793 26SEWARD 2 230 200912 26CONEMAGH 230 1 END

Contingency Name	Contingency Definition
AP-P2-3-WP-230-460T	CONTINGENCY 'AP-P2-3-WP-230-460T' /* 467 DISCONNECT BRANCH FROM BUS 966040 TO BUS 235248 CKT 1 /* AG1-473 TAP 230 01SHINGL 230 DISCONNECT BRANCH FROM BUS 962410 TO BUS 235248 CKT 1 /* AG1-090 TAP 230 01SHINGL 230 DISCONNECT BRANCH FROM BUS 235248 TO BUS 235970 CKT 1 /* 01SHINGL 230 01DALE 230 DISCONNECT BRANCH FROM BUS 236711 TO BUS 235248 CKT 81 /* 01SHINGLTN 46 01SHINGL 230 DISCONNECT BRANCH FROM BUS 236711 TO BUS 235248 CKT 82 /* 01SHINGLTN 46 01SHINGL 230 END
ATSI-P7-1-OEE-345-003A_NON	CONTINGENCY 'ATSI-P7-1-OEE-345-003A_NON' /* GLENWILLOW-MN & HIGHLAND-HANNA 345KV DISCONNECT BRANCH FROM BUS 238941 TO BUS 239358 CKT 1 /* 02MANSFD 345 02GLENWILLOW 345 DISCONNECT BRANCH FROM BUS 238796 TO BUS 923061 CKT 1 /* 02HGHLND 345 AB1- 105 TAP 345 DISCONNECT BRANCH FROM BUS 923061 TO BUS 238781 CKT 1 /* AB1-105 TAP 345 02HANNA 345 END
PN-P2-3-PN-230-14CT	CONTINGENCY 'PN-P2-3-PN-230-14CT' / 1533 OPEN BRANCH FROM BUS 200513 TO BUS 200517 CKT 1 / 200513 26LEWISTWN 230 200517 26RAYSTOWN 230 1 OPEN BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 / 200513 26LEWISTWN 230 966040 AG1-473 TAP 230 1 OPEN BRANCH FROM BUS 200513 TO BUS 200531 CKT 2 / 200513 26LEWISTWN 230 200531 26YEAGRTWN 230 2 OPEN BRANCH FROM BUS 200513 TO BUS 200548 CKT 2 / 200513 26LEWISTWN 230 200548 26LEWISTWN 46.0 2 OPEN BRANCH FROM BUS 200513 TO BUS 200512 CKT 3 / 200513 26LEWISTWN 230 200512 26LEWISTWN 115 3 END
PN-P2-2-PN-230-006AT	CONTINGENCY 'PN-P2-2-PN-230-006AT' /* LEWISTOWN #1 230KV BUS / PJM FIXED DISCONNECT BRANCH FROM BUS 200513 TO BUS 208005 CKT 1 /* 26LEWISTWN 230 JUNI BU2 230 /UPDATED JUNI BUS # DISCONNECT BRANCH FROM BUS 200513 TO BUS 200531 CKT 1 /* 26LEWISTWN 230 26YEAGRTWN 230 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200548 CKT 1 /* 26LEWISTWN 230 26LEWISTWN 46.00 REDUCE BUS 200513 SHUNT BY 100 PERCENT /* 26LEWISTWN 230 END
Base Case	

Contingency Name	Contingency Definition
AP-P1-2-WP-230-323T-A	CONTINGENCY 'AP-P1-2-WP-230-323T-A' /* SHINGLETOWN-LEWISTOWN 230KV APS-PN TIE DISCONNECT BRANCH FROM BUS 235248 TO BUS 966040 CKT 1 /* 01SHINGL 230 AG1-473 TAP 230 END
PN-P1-2-PN-230-103AT	CONTINGENCY 'PN-P1-2-PN-230-103AT' /* LEWISTOWN - JUNIATA (PPL) 230KV DISCONNECT BRANCH FROM BUS 200513 TO BUS 208005 CKT 1 /* 26LEWISTWN 230 JUNI BU1 230 END
AP-P1-2-WP-230-322T-A1	CONTINGENCY 'AP-P1-2-WP-230-322T-A1' /* SHINGLETOWN-SHAWVILLE 230KV APS-PN TIE DISCONNECT BRANCH FROM BUS 235248 TO BUS 962410 CKT 1 /* 01SHINGL 230 AG1-090 TAP 230 END
PN-P2-2-PN-115-031	CONTINGENCY 'PN-P2-2-PN-115-031' /* LEWISTOWN 115KV BUS FAULT DISCONNECT BRANCH FROM BUS 200512 TO BUS 200519 CKT 1 /* 26LEWISTWN 115 26REED TAP 115 DISCONNECT BRANCH FROM BUS 200513 TO BUS 200512 CKT 3 /* 26LEWISTWN 230 26LEWISTWN 115 END
AP-P1-3-WP-230-001	CONTINGENCY 'AP-P1-3-WP-230-001' / 730 OPEN BRANCH FROM BUS 235174 TO BUS 235175 CKT 1 / 235174 01ELKO 138 235175 01ELKO 230 1 OPEN BRANCH FROM BUS 235175 TO BUS 235971 CKT 1 / 235175 01ELKO 230 235971 01SQUABHLLW 230 1 END
AP-P7-1-WPP-138-20T	CONTINGENCY 'AP-P7-1-WPP-138-20T' /* NEW BETHLEHEM LOOP DISCONNECT BRANCH FROM BUS 200827 TO BUS 235224 CKT 1 /* 26BROOKVLE 138 01N BETH 138 DISCONNECT BRANCH FROM BUS 235121 TO BUS 235224 CKT 1 /* 01ARMSTR 138 01N BETH 138 END
PL:10:P13:100618	CONTINGENCY 'PL:10:P13:100618' /* JUNIATA 230/69KV TR4 OUT" DISCONNECT BRANCH FROM BUS 208005 TO BUS 209997 CKT 4 /* DISCONNECT BRANCH FROM BUS 208005 TO BUS 207955 CKT 1 /* DISCONNECT BRANCH FROM BUS 208005 TO BUS 200009 CKT 2 /* REMOVE SHUNT 1 FROM BUS 208004 /* DISCONNECT BRANCH FROM BUS 208005 TO BUS 208004 CKT 1 /* DISCONNECT BRANCH FROM BUS 208005 TO BUS 200513 CKT 1 /* END

Contingency Name	Contingency Definition
AP-P2-3-WP-230-446T	CONTINGENCY 'AP-P2-3-WP-230-446T' / 781 OPEN BRANCH FROM BUS 200726 TO BUS 235175 CKT 1 / 200726 26SHAWVL 2 230 235175 01ELKO 230 1 OPEN BRANCH FROM BUS 235158 TO BUS 235175 CKT 1 / 235158 01CARB 230 235175 01ELKO 230 1 OPEN BRANCH FROM BUS 235175 TO BUS 235236 CKT 1 / 235175 01ELKO 230 235236 01QUEHAN 230 1 OPEN BRANCH FROM BUS 235220 TO BUS 235236 CKT 1 / 235220 01MOSHAN 230 235236 01QUEHAN 230 1 OPEN BRANCH FROM BUS 235236 TO BUS 236732 CKT 81 / 235236 01QUEHAN 230 236732 01QUEHANNA 46.0 81 OPEN BRANCH FROM BUS 235157 TO BUS 235158 CKT 1 / 235157 01CARB 138 235158 01CARB 230 1 OPEN BRANCH FROM BUS 236776 TO BUS 235158 CKT 82 / 236776 01CARB CENTE 46.0 235158 01CARB 230 82 END
PL:10:P24:100548	CONTINGENCY 'PL:10:P24:100548' /* JUNI 230KV BUS_SEC_1-2 CB DISCONNECT BUS 208005 /* JUNI BU2 230 DISCONNECT BUS 208004 /* JUNI BU1 230 /* JUNI BU1 230 END
PL:02:P42:001063	CONTINGENCY 'PL:02:P42:001063' / 458 OPEN BRANCH FROM BUS 208010 TO BUS 208014 CKT 1 / 208010 LACK_EBUS_B4 230 208014 LAEN_B4 230 1 OPEN BRANCH FROM BUS 208011 TO BUS 208013 CKT 1 / 208011 LACK_WBUS_B4 230 208013 SUMT2_B4 230 1 OPEN BRANCH FROM BUS 208013 TO BUS 208090 CKT 2 / 208013 SUMT2_B4 230 208090 SUMT 230 2 OPEN BRANCH FROM BUS 208014 TO BUS 208054 CKT 1 / 208014 LAEN_B4 230 208054 LAEN 230 1 OPEN BRANCH FROM BUS 208013 TO BUS 208014 CKT 1 / 208013 SUMT2_B4 230 208014 LAEN_B4 230 1 END
PL:03:P12:000193	CONTINGENCY 'PL:03:P12:000193' / 1154 OPEN BRANCH FROM BUS 200677 TO BUS 200706 CKT 4 / 200677 26NO MESHO 115 200706 26N.MESHPN 230 4 OPEN BRANCH FROM BUS 200706 TO BUS 200708 CKT 1 / 200706 26N.MESHPN 230 200708 26OXBOW 230 1 OPEN BRANCH FROM BUS 200708 TO BUS 208009 CKT 1 / 200708 26OXBOW 230 208009 LACK 230 1 OPEN BRANCH FROM BUS 200708 TO BUS 200709 CKT 1 / 200708 26OXBOW 230 200709 26OXBOW 34.5 1 END
APS-P2-2-WP-500-DRT19	CONTINGENCY 'APS-P2-2-WP-500-DRT19' /* KEYSTONE 500 KV BUS 1 FAULT OPEN BRANCH FROM BUS 200011 TO BUS 200810 CKT 3 /* KEYSTONE 500.00 26KEYSTONE 230.00 END

Contingency Name	Contingency Definition
PN-P2_3-PN-230-0347-12-DRT-025	CONTINGENCY 'PN-P2_3-PN-230-0347-12-DRT-025' /* 26LEWISTOWN-26RAYSTOWN 230 AND B5 FAULT DISCONNECT BRANCH FROM BUS 200513 TO BUS 966040 CKT 1 /* 26LEWISTOWN-AG1-473 TAP 230 AND B57 FAULT OPEN BUS 200531 /* 26LEWISTOWN 230 BUS 2 END
PN-P2-3-PN-345-004J	CONTINGENCY 'PN-P2-3-PN-345-004J' / 2995 OPEN BRANCH FROM BUS 200595 TO BUS 200599 CKT 1 / 200595 26WAYNE 345 200599 26ERIE W 345 1 END
PN-P7-1-PN-230-002A	CONTINGENCY 'PN-P7-1-PN-230-002A' /* GLADE - FOREST 230KV & GLADE - LEWIS RUN 230KV DISCONNECT BRANCH FROM BUS 200593 TO BUS 200581 CKT 1 /* 26GLADE 230 26FOREST 230 DISCONNECT BRANCH FROM BUS 200593 TO BUS 200704 CKT 1 /* 26GLADE 230 26LEWIS RN 230 END
PL:10:P12:000195	CONTINGENCY 'PL:10:P12:000195' / 401 OPEN BRANCH FROM BUS 207950 TO BUS 208004 CKT 1 / 207950 CUMB TR2 230 208004 JUNI BU1 230 1 OPEN BRANCH FROM BUS 209852 TO BUS 207950 CKT 2 / 209852 CUMB 69.0 207950 CUMB TR2 230 2 OPEN BRANCH FROM BUS 207948 TO BUS 207950 CKT 1 / 207948 CUMB 230 207950 CUMB TR2 230 1 END

14 Affected Systems

14.1 NYISO

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

15 Attachment 1: One Line Diagram