



**Generation Interconnection
Feasibility Study Report
for
Queue Project AF2-016
LEWIS 138 KV
120 MW Capacity / 300 MW Energy**

July 2020

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1 Introduction

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

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.

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 Storage generating facility located in Atlantic County, New Jersey. The installed facilities will have a total capability of 300 MW with 120 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is May 31, 2023. This study does not imply a TO commitment to this in-service date.

Queue Number	AF2-016
Project Name	LEWIS 138 KV
State	New Jersey
County	Atlantic
Transmission Owner	AEC
MFO	300
MWE	300
MWC	120
Fuel	Storage
Basecase Study Year	2023

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

4 Point of Interconnection

AF2-016 will interconnect with the AEC transmission system at the Lewis 138 kV substation.

5 Cost Summary

The AF2-016 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$750,000
Total System Network Upgrade Costs	\$1,526,213,963
Total Costs	\$1,526,963,963

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

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

6 Transmission Owner Scope of Work

Substation Interconnection Estimate

Scope: Install a 138 kV terminal on Lewis #3 138 kV bus.

Developer responsible for land purchase and site development for substation expansion if required, price is not included.

Required Relaying and Communications

Lewis substation:

New protection relays are required for the new terminal.

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

Description	Total Cost
Total Physical Interconnection Costs	\$750,000

7 Schedule

Work estimated to take approximately 12-24 months.

8 Transmission Owner Analysis

None

9 Interconnection Customer Requirements

Interconnection Customer Scope of Direct Connection Work

The IC is responsible for all design and construction related to activities on their side of the Point of Interconnection. Site preparation, including grading and an access road, as necessary, is assumed to be by the IC. Route selection, line design, and right-of-way acquisition of the direct connect facilities is not included in this report and is the responsibility of the IC. Protective relaying and metering design and installation must comply with ACE's applicable standards. The IC is also required to provide revenue metering and real-time telemetering data to PJM in conformance with the requirements contained in PJM Manuals M-01 and M-14 and the PJM Tariff.

ACE Interconnection Customer Scope of Direct Connection Work Requirements:

- ACE requires that an IC circuit breaker is located within 500 feet of the ACE substation to facilitate the relay protection scheme between ACE and the IC at the Point of Interconnection (POI).

Special Operating Requirements

1. ACE will require the capability to remotely disconnect the generator from the grid by communication from its System Operations facility. Such disconnection may be facilitated by a generator breaker, or other method depending upon the specific circumstances and the evaluation by ACE.

2. ACE reserves the right to charge the Interconnection Customer operation and maintenance expenses to maintain the Interconnection Customer attachment facilities, including metering and telecommunications facilities, owned by ACE.

Additional Interconnection Customer Responsibilities:

1. An Interconnection Customer entering the New Services Queue on or after October 1, 2012 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.
2. The Interconnection Customer may be required to install and/or pay for metering as necessary to properly track real time output of the facility as well as installing metering which shall be used for billing purposes. See Section 8 of Appendix 2 to the Interconnection Service Agreement as well as Section 4 of PJM Manual 14D for additional information.
3. The Interconnection Customer seeking to interconnect a wind generation facility shall maintain meteorological data facilities as well as provide that meteorological data which is required per item 5.IV of Schedule H to the Interconnection Service Agreement.

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 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/>

A three phase 138 kV revenue metering point will need to be established within the Interconnection Customer Facilities at the Point of Interconnection. The Interconnection Customer will purchase and install all metering instrument transformers as well as construct a metering structure per ACE's specifications. The secondary wiring connections at the instrument transformers will be completed by the Interconnection Customer and inspected by ACE, while the connections at the metering enclosure will be completed by ACE. The metering control cable and meter cabinets will be supplied by ACE and installed by the Interconnection Customer. The Interconnection Customer will install conduit for the control cable between the instrument transformers and the metering enclosure. The location of the metering enclosure will be determined during construction. The

Interconnection Customer will provide 120V power to the meter cabinet. ACE will provide, program, install, and own the primary & backup solid state multi-function meters for the new metering position.

Each meter will be equipped with load profile, telemetry, and DNP outputs. The Interconnection Customer will be provided with one-meter DNP output for each meter. ACE will supply a wireless modem for MV90 interrogation. In the event that a wireless modem is unable to reliably communicate, the IC will be required to make provisions for a POTS (Plain Old Telephone Service) line or equivalent technology approved by ACE within approximately three feet of the ACE metering position to facilitate remote interrogation and data collection. It is the Interconnection Customer's responsibility to send the data that PJM and ACE require directly to PJM. The Interconnection Customer will grant permission for PJM to send ACE the following telemetry that the Interconnection Customer sends to PJM: real time MW, MVAR, volts, amperes, generator status, and interval MWH and MVARH.

ACE's revenue meters will be the official meters and must be the source for reporting generation output to PJM. The Interconnection Customer is responsible for installing telemetry equipment necessary to obtain the revenue meter data and submitting the data to PJM.

11 Summer Peak - Load Flow Analysis

The Queue Project AF2-016 was evaluated as a 300 MW (Capacity 120 MW) injection at the Lewis 138 kV substation in the AEC area. Project AF2-016 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-016 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	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
99831318	213922	RICHMOND	230.0	PECO	214012	WANEETA3	230.0	PECO	1	Base Case	single	760.0	99.26	100.5	DC	20.57
101513894	227948	LEWIS #3	69.0	AE	227918	LEWIS #1	69.0	AE	1	AE_P1-2 LEWIS #1-LEWIS #3	single	166.0	84.34	111.94	DC	45.82
101513857	227949	LEWIS #3	138.0	AE	227948	LEWIS #3	69.0	AE	1	AE_P1-2 LEWIS #1-LEWIS #3	single	279.0	92.04	120.93	DC	80.58
101513907	227949	LEWIS #3	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P1-2 MNOTL A 1-MNOTL A 2	single	478.0	86.83	110.28	DC	112.05

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
101513908	227949	LEWIS #3	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P1-2 LANDIS-MINO	single	478.0	86.04	109.48	DC	112.05

11.2 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
99007352	206294	28LARRABEE	230.0	JCP&L	206318	28VANHISVL	230.0	JCP&L	1	JC-P7-1-JCC-230-12	tower	869.0	99.06	103.72	DC	40.51
99832187	219702	HILLTOP_1	230.0	PSE&G	219101	BEAVERBK_1	230.0	PSE&G	1	PS_P7-1_W2275+02241_LT	tower	886.0	99.65	101.17	DC	29.96
101514710	227901	DOROTHY	138.0	AE	228503	MNOTLA2	138.0	AE	1	JC-P7-1-JCC-230-13	tower	478.0	94.92	105.4	DC	50.09
101513495	227902	LEWIS #1	138.0	AE	227945	LEWIS #2	138.0	AE	1	AE_P4-2 AE33	breaker	286.799987793	71.43	145.9	DC	213.6
101514643	227949	LEWIS #3	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P7-1 AE13TOWER	tower	478.0	97.28	155.77	DC	279.6
101514697	227949	LEWIS #3	138.0	AE	227901	DOROTHY	138.0	AE	1	JC-P7-1-JCC-230-13	tower	478.0	98.66	109.14	DC	50.09

11.3 Contribution to Previously Identified Overloads

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
99005937	200051	ROCKSPGS	500.0	PJM	200065	PCHBTM2S	500.0	PJM	1	PJM500_PS_P2-3_NFRD5_910	breaker	2905.0	128.66	130.19	DC	96.37
99005834	206294	28LARRABEE	230.0	JCP&L	206309	28SMITHB RG	230.0	JCP&L	2	JC-P2-3-JCC-230-15F	breaker	813.0	160.34	161.83	DC	26.75
99005835	206294	28LARRABEE	230.0	JCP&L	206309	28SMITHB RG	230.0	JCP&L	2	JC-P2-3-JCC-230-13A	breaker	813.0	159.11	160.56	DC	26.12
99005839	206294	28LARRABEE	230.0	JCP&L	206309	28SMITHB RG	230.0	JCP&L	1	JC-P2-3-JCC-230-15G	breaker	817.0	159.55	161.04	DC	26.75
99005840	206294	28LARRABEE	230.0	JCP&L	206309	28SMITHB RG	230.0	JCP&L	1	JC-P2-3-JCC-230-15A	breaker	817.0	155.16	156.61	DC	26.12
99007351	206294	28LARRABEE	230.0	JCP&L	206318	28VANHISVL	230.0	JCP&L	1	JC-P7-1-JCC-230-11A	tower	869.0	109.29	113.75	DC	38.73
99007393	206294	28LARRABEE	230.0	JCP&L	206286	28ATLANTIC	230.0	JCP&L	1	JC-P7-1-JCC-230-7A	tower	1147.0	105.62	106.7	DC	27.32
99007216	206297	28MANITOU	230.0	JCP&L	206319	28WHITIN GS	230.0	JCP&L	1	JC-P7-1-JCC-230-12	tower	817.0	163.97	169.16	DC	42.38
99007217	206297	28MANITOU	230.0	JCP&L	206319	28WHITIN GS	230.0	JCP&L	1	JC-P7-1-JCC-230-10A	tower	817.0	180.16	180.3	DC	39.41
99005894	206302	28OYSTER C	230.0	JCP&L	227955	CEDAR	230.0	AE	1	AE_P4-2 AE46	breaker	564.0	128.68	143.31	DC	82.53
99005895	206302	28OYSTER C	230.0	JCP&L	227955	CEDAR	230.0	AE	1	JC-P2-3-JCC-230-18A	breaker	564.0	130.2	140.01	DC	55.31
99007250	206302	28OYSTER C	230.0	JCP&L	227955	CEDAR	230.0	AE	1	JC-P7-1-JCC-230-10A	tower	564.0	149.29	153.71	DC	47.29
99007251	206302	28OYSTER C	230.0	JCP&L	227955	CEDAR	230.0	AE	1	JC-P7-1-JCC-230-12	tower	564.0	135.3	143.47	DC	46.12

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 PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
990072 34	2063 18	28VANHIS VL	230 .0	JCP& L	2062 94	28LARRAB EE	230 .0	JCP& L	1	JC-P7-1-JCC-230-12	towe r	869.0	152.49	155.75	DC	40.51
990072 35	2063 18	28VANHIS VL	230 .0	JCP& L	2062 94	28LARRAB EE	230 .0	JCP& L	1	JC-P7-1-JCC-230-10A	towe r	869.0	146.32	148.32	DC	38.35
990072 47	2063 19	28WHITIN GS	230 .0	JCP& L	2067 20	28MANCH STR	230 .0	JCP& L	1	JC-P7-1-JCC-230-10A	towe r	869.0	152.5	154.57	DC	39.47
990072 48	2063 19	28WHITIN GS	230 .0	JCP& L	2067 20	28MANCH STR	230 .0	JCP& L	1	JC-P7-1-JCC-230-12	towe r	869.0	141.84	146.48	DC	41.87
990057 74	2063 23	28LAKEW OOD	230 .0	JCP& L	2062 94	28LARRAB EE	230 .0	JCP& L	2	JC-P2-3-JCC-230-15J	break er	817.0	190.84	193.24	DC	42.84
990072 54	2067 20	28MANCH STR	230 .0	JCP& L	2063 18	28VANHIS VL	230 .0	JCP& L	1	JC-P7-1-JCC-230-10A	towe r	869.0	150.93	153.01	DC	39.47
990072 55	2067 20	28MANCH STR	230 .0	JCP& L	2063 18	28VANHIS VL	230 .0	JCP& L	1	JC-P7-1-JCC-230-12	towe r	869.0	140.28	144.92	DC	41.87
998307 96	2139 22	RICHMON D	230 .0	PEC O	2140 12	WANEETA 3	230 .0	PEC O	1	PECO_P2-2_CHI230B1/* \$ DELCO \$ CHI230B1 \$ B	bus	1180.0	144.37	146.58	DC	57.45
998310 17	2139 22	RICHMON D	230 .0	PEC O	2140 12	WANEETA 3	230 .0	PEC O	1	PECO_P4_CHICH 045/* \$ DELCO \$ CHICH045 \$ STBK	break er	1180.0	144.36	146.56	DC	57.45
998310 18	2139 22	RICHMON D	230 .0	PEC O	2140 12	WANEETA 3	230 .0	PEC O	1	PECO_P4_PEACH 215/* \$ CHESCO \$ PEACH215 \$ STBK	break er	1180.0	131.36	133.92	DC	66.65
998308 21	2140 10	WANEETA 2	230 .0	PEC O	2138 17	N PHILA	230 .0	PEC O	1	PECO_P2-2_CHI230B1/* \$ DELCO \$ CHI230B1 \$ B	bus	621.0	129.63	131.79	DC	29.58
998310 68	2140 10	WANEETA 2	230 .0	PEC O	2138 17	N PHILA	230 .0	PEC O	1	PECO_P4_CHICH 045/* \$ DELCO \$ CHICH045 \$ STBK	break er	621.0	129.6	131.75	DC	29.58
998308 16	2142 06	RICHRE29	230 .0	PEC O	2139 22	RICHMON D	230 .0	PEC O	1	PECO_P2-2_CHI230B1/* \$ DELCO \$ CHI230B1 \$ B	bus	1336.0	138.08	140.07	DC	60.02
998310 53	2142 06	RICHRE29	230 .0	PEC O	2139 22	RICHMON D	230 .0	PEC O	1	PECO_P4_CHICH 045/* \$ DELCO \$ CHICH045 \$ STBK	break er	1336.0	138.07	140.06	DC	60.02
998310 54	2142 06	RICHRE29	230 .0	PEC O	2139 22	RICHMON D	230 .0	PEC O	1	PECO_P4_PEACH 215/* \$ CHESCO \$ PEACH215 \$ STBK	break er	1336.0	129.82	132.15	DC	69.92
998311 55	2191 00	NEWFRD M	230 .0	PSE &G	2197 04	HILLTOP_ 3	230 .0	PSE &G	1	PECO_P4_PEACH 215/* \$ CHESCO \$ PEACH215 \$ STBK	break er	886.0	108.91	110.35	DC	27.69
998321 39	2191 00	NEWFRD M	230 .0	PSE &G	2197 04	HILLTOP_ 3	230 .0	PSE &G	1	PS_P7-1_V2274+P2242_LT	towe r	886.0	117.66	119.27	DC	31.73
998310 89	2191 10	GLOUCSTR	230 .0	PSE &G	2191 25	CAMDEN	230 .0	PSE &G	1	PS_P2-3_CUTB_1-4_LT	break er	771.0	125.4	127.06	DC	29.8
998310 90	2191 10	GLOUCSTR	230 .0	PSE &G	2191 25	CAMDEN	230 .0	PSE &G	1	PS_P2-3_CUTB_3-4_LT	break er	771.0	123.67	125.31	DC	29.36
998313 87	2191 10	GLOUCSTR	230 .0	PSE &G	2197 55	CUTHBERT _4	230 .0	PSE &G	1	PS_P1-2_C-2308	single	758.0	104.49	105.14	DC	12.1
998313 88	2191 10	GLOUCSTR	230 .0	PSE &G	2197 55	CUTHBERT _4	230 .0	PSE &G	1	PS_P1-2_C-2308_LT	single	758.0	103.76	104.42	DC	12.1
998314 20	2191 10	GLOUCSTR	230 .0	PSE &G	2191 25	CAMDEN	230 .0	PSE &G	1	Base Case	single	500.0	100.17	100.82	DC	8.02
998308 11	2191 25	CAMDEN	230 .0	PSE &G	2142 06	RICHRE29	230 .0	PEC O	1	PECO_P2-2_CHI230B1/* \$ DELCO \$ CHI230B1 \$ B	bus	1336.0	138.09	140.09	DC	60.02
998310 48	2191 25	CAMDEN	230 .0	PSE &G	2142 06	RICHRE29	230 .0	PEC O	1	PECO_P4_CHICH 045/* \$ DELCO \$ CHICH045 \$ STBK	break er	1336.0	138.08	140.08	DC	60.02

ID	FROM BUS#	FROM BUS	kV	FROM BUS ARE A	TO BUS#	TO BUS	kV	TO BUS ARE A	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
99831049	219125	CAMDEN	230.0	PSE &G	214206	RICHRE29	230.0	PEC O	1	PECO_P4_PEA CH 215/* \$ CHESCO \$ PEACH215 \$ STBK	break er	1336.0	129.84	132.16	DC	69.92
99832186	219702	HILLTOP_1	230.0	PSE &G	219101	BEAVERBK _1	230.0	PSE &G	1	PS_P7-1_V2274+P2242_LT	towe r	886.0	104.49	106.01	DC	29.84
99830955	227900	CARDIFF	230.0	AE	219100	NEWFRD M	230.0	PSE &G	1	AE_P4-2 AE46	break er	692.0	218.11	234.5	DC	116.23
99830956	227900	CARDIFF	230.0	AE	219100	NEWFRD M	230.0	PSE &G	1	AE_P4-2 AE45	break er	692.0	200.32	214.76	DC	104.85
99830960	227900	CARDIFF	230.0	AE	227955	CEDAR	230.0	AE	1	AE_P4-2 AE6	break er	805.0	166.9	175.02	DC	69.87
99830961	227900	CARDIFF	230.0	AE	227955	CEDAR	230.0	AE	1	AE_P4-2 AE7	break er	805.0	166.92	175.04	DC	69.85
99831002	227900	CARDIFF	230.0	AE	228002	ORCHARD	230.0	AE	1	AE_P4-2 AE7	break er	805.0	130.81	140.63	DC	79.05
99831003	227900	CARDIFF	230.0	AE	228002	ORCHARD	230.0	AE	1	AE_P4-2 AE6	break er	805.0	130.78	140.61	DC	79.07
99832015	227900	CARDIFF	230.0	AE	219100	NEWFRD M	230.0	PSE &G	1	AE_P7-1 AE13TOWER	towe r	692.0	237.97	254.9	DC	119.84
99832039	227900	CARDIFF	230.0	AE	228002	ORCHARD	230.0	AE	1	JC-P7-1-JCC-230-13	towe r	805.0	139.24	147.54	DC	66.84
101513388	227905	SCULL#1	138.0	AE	227903	MILL #1	138.0	AE	1	AE_P4-2 AE29	break er	306.0	137.51	143.33	DC	33.89
101513398	227906	SCULL#2	138.0	AE	227904	MILL #2	138.0	AE	1	AE_P4-2 AE28	break er	306.0	139.53	146.09	DC	38.27
101514735	227911	CARDIFF2	69.0	AE	227922	MILL #1	69.0	AE	1	AE_P7-1 AE3TOWER	towe r	239.0	100.3	105.35	DC	22.78
101513484	227913	CARDIFF	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P4-2 AE9	break er	478.0	127.36	148.05	DC	98.88
101514637	227934	CARDIFF2	138.0	AE	227945	LEWIS #2	138.0	AE	1	AE_P7-1 AE3TOWER	towe r	478.0	138.6	159.15	DC	98.24
101513415	227945	LEWIS #2	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P4-2 AE33	break er	286.799987793	101.2	175.68	DC	213.6
101514594	227945	LEWIS #2	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P7-1 AE3TOWER	towe r	286.799987793	157.42	213.12	DC	159.76
99005749	227955	CEDAR	230.0	AE	206302	28OYSTER C	230.0	JCP& L	1	AE_P4-2 AE7	break er	564.0	228.94	242.94	DC	84.1
99005750	227955	CEDAR	230.0	AE	206302	28OYSTER C	230.0	JCP& L	1	AE_P4-2 AE6	break er	564.0	228.94	242.94	DC	84.11
101513373	228110	BLE	138.0	AE	227905	SCULL#1	138.0	AE	1	AE_P4-2 AE29	break er	306.0	144.73	150.56	DC	33.89
101513383	228110	BLE	138.0	AE	227906	SCULL#2	138.0	AE	1	AE_P4-2 AE28	break er	306.0	144.69	151.26	DC	38.27
101513425	228111	MDLE TP	138.0	AE	228107	CORSON 2	138.0	AE	1	AE_P4-2 AE28	break er	315.0	107.28	119.32	DC	37.93
99832175	228401	MCKLTON	230.0	AE	213559	DELCOTAP	230.0	PEC O	1	PS_P7-1_V2274+P2242_LT	towe r	725.0	102.96	104.96	DC	31.83
101514597	228502	MNOTLA 1	138.0	AE	228500	LANDIS	138.0	AE	1	JC-P7-1-JCC-230-13	towe r	478.0	167.58	178.06	DC	50.09
101514598	228502	MNOTLA 1	138.0	AE	228500	LANDIS	138.0	AE	1	PS_P7-1_R2244+M2213	towe r	478.0	146.32	157.76	DC	54.64
101513455	940000	AE1-240 TAP	69.0	AE	228226	SHRMAN# 2	69.0	AE	1	AE_P4-2 AE46	break er	93.0	130.64	136.51	DC	10.32

11.4 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/D C	MW IMPACT
99006459	200051	ROCKSPGS	500.0	PJM	200065	PCHBTM2S	500.0	PJM	1	PECO_P1-2_5038/* \$ CHESCO \$ 5038 \$ L	operation	2905.0	127.22	128.77	DC	97.5
99006322	206294	28LARRABE E	230.0	JCP& L	206309	28SMITHB RG	230.0	JCP& L	2	JC-P1-2-JCC-230-017	operation	813.0	158.04	159.53	DC	26.75
99006323	206294	28LARRABE E	230.0	JCP& L	206309	28SMITHB RG	230.0	JCP& L	2	Base Case	operation	678.0	123.92	125.09	DC	17.49
99006416	206294	28LARRABE E	230.0	JCP& L	206309	28SMITHB RG	230.0	JCP& L	1	JC-P1-2-JCC-230-018	operation	817.0	144.58	145.92	DC	24.2
99006417	206294	28LARRABE E	230.0	JCP& L	206309	28SMITHB RG	230.0	JCP& L	1	Base Case	operation	650.0	129.26	130.48	DC	17.49
99006502	206295	28LEISUR D	230.0	JCP& L	206323	28LAKEWO OD	230.0	JCP& L	1	JC-P1-2-JCC-230-020	operation	869.0	121.02	125.56	DC	41.16
99006400	206296	28LEISUR U	230.0	JCP& L	206323	28LAKEWO OD	230.0	JCP& L	1	JC-P1-2-JCC-230-019	operation	817.0	137.37	142.17	DC	40.96
99006316	206297	28MANITO U	230.0	JCP& L	206296	28LEISUR U	230.0	JCP& L	1	JC-P1-2-JCC-230-019	operation	817.0	150.27	155.16	DC	41.57
99006327	206297	28MANITO U	230.0	JCP& L	206295	28LEISUR D	230.0	JCP& L	1	JC-P1-2-JCC-230-020	operation	817.0	149.71	154.59	DC	41.57
99006180	206302	28OYSTER C	230.0	JCP& L	206297	28MANITO U	230.0	JCP& L	1	JC-P1-2-JCC-230-022	operation	817.0	239.3	245.86	DC	55.08
99006181	206302	28OYSTER C	230.0	JCP& L	206297	28MANITO U	230.0	JCP& L	1	Base Case	operation	650.0	158.49	160.55	DC	29.73
99006185	206302	28OYSTER C	230.0	JCP& L	206297	28MANITO U	230.0	JCP& L	2	JC-P1-2-JCC-230-021	operation	869.0	225.02	231.19	DC	55.09
99006187	206302	28OYSTER C	230.0	JCP& L	206297	28MANITO U	230.0	JCP& L	2	Base Case	operation	709.0	145.48	147.37	DC	29.77
99006344	206302	28OYSTER C	230.0	JCP& L	227955	CEDAR	230.0	AE	1	Base Case	operation	464.0	139.12	152.1	DC	60.24
99006345	206302	28OYSTER C	230.0	JCP& L	227955	CEDAR	230.0	AE	1	AE_P1-2 ORCHA RD XF	operation	564.0	123.32	135.68	DC	69.7
99006220	206323	28LAKEWO OD	230.0	JCP& L	206294	28LARRABE E	230.0	JCP& L	2	JC-P1-2-JCC-230-014	operation	817.0	190.51	192.9	DC	42.86
99006221	206323	28LAKEWO OD	230.0	JCP& L	206294	28LARRABE E	230.0	JCP& L	2	Base Case	operation	650.0	131.77	133.41	DC	23.43
99006245	206323	28LAKEWO OD	230.0	JCP& L	206294	28LARRABE E	230.0	JCP& L	1	JC-P1-2-JCC-230-013	operation	869.0	180.27	182.52	DC	42.86
99006246	206323	28LAKEWO OD	230.0	JCP& L	206294	28LARRABE E	230.0	JCP& L	1	Base Case	operation	709.0	121.13	122.64	DC	23.5
99831313	213922	RICHMOND	230.0	PECO	214012	WANEETA3	230.0	PECO	1	Base Case	operation	760.0	159.52	162.58	DC	51.43

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
99831314	213922	RICHMOND	230.0	PECO	214012	WANEETA3	230.0	PECO	1	PECO_P1-2_5014/*\$CHESCO\$5014\$L	operati on	1180.0	128.62	131.18	DC	66.65
99831436	214206	RICHRE29	230.0	PECO	213922	RICHMOND	230.0	PECO	1	Base Case	operati on	1075.0	127.99	130.21	DC	53.95
99831437	214206	RICHRE29	230.0	PECO	213922	RICHMOND	230.0	PECO	1	PECO_P1-2_5014/*\$CHESCO\$5014\$L	operati on	1336.0	127.63	129.96	DC	69.92
99831527	219100	NEWFRDM	230.0	PSE&G	219704	HILLTOP_3	230.0	PSE&G	1	PECO_P1-2_5014/*\$CHESCO\$5014\$L	operati on	886.0	107.97	109.41	DC	27.69
99831408	219108	CUTHBERT	230.0	PSE&G	219125	CAMDEN	230.0	PSE&G	1	PS_P1-2_U-2299_L T	operati on	771.0	130.04	131.84	DC	32.37
99831410	219108	CUTHBERT	230.0	PSE&G	219125	CAMDEN	230.0	PSE&G	1	Base Case	operati on	500.0	117.25	118.9	DC	19.26
99831382	219110	GLOUCSTR	230.0	PSE&G	219755	CUTHBERT_4	230.0	PSE&G	1	PS_P1-2_C-2308	operati on	758.0	134.41	136.13	DC	30.24
99831385	219110	GLOUCSTR	230.0	PSE&G	219755	CUTHBERT_4	230.0	PSE&G	1	Base Case	operati on	550.0	120.14	121.68	DC	19.62
99831415	219110	GLOUCSTR	230.0	PSE&G	219125	CAMDEN	230.0	PSE&G	1	Base Case	operati on	500.0	130.23	131.95	DC	20.04
99831416	219110	GLOUCSTR	230.0	PSE&G	219125	CAMDEN	230.0	PSE&G	1	PS_P1-2_D-2282	operati on	771.0	114.52	116.02	DC	26.93
99831446	219110	GLOUCSTR	230.0	PSE&G	219753	CUTHBERT_2	230.0	PSE&G	1	PS_P1-2_D-2282	operati on	771.0	125.3	126.89	DC	28.67
99831448	219110	GLOUCSTR	230.0	PSE&G	219753	CUTHBERT_2	230.0	PSE&G	1	Base Case	operati on	500.0	115.59	117.07	DC	17.15
99831431	219125	CAMDEN	230.0	PSE&G	214206	RICHRE29	230.0	PECO	1	Base Case	operati on	1075.0	128.01	130.24	DC	53.95
99831432	219125	CAMDEN	230.0	PSE&G	214206	RICHRE29	230.0	PECO	1	PECO_P1-2_5014/*\$CHESCO\$5014\$L	operati on	1336.0	127.64	129.97	DC	69.92
99831452	219754	CUTHBERT_3	230.0	PSE&G	219125	CAMDEN	230.0	PSE&G	1	PS_P1-2_Z-2305_L T	operati on	792.0	123.48	125.19	DC	31.58
99831454	219754	CUTHBERT_3	230.0	PSE&G	219125	CAMDEN	230.0	PSE&G	1	Base Case	operati on	504.0	105.75	107.28	DC	17.51
99831265	227900	CARDIFF	230.0	AE	219100	NEWFRDM	230.0	PSE&G	1	JC-P1-2-JCC-230-002T	operati on	692.0	198.41	212.71	DC	104.79
99831269	227900	CARDIFF	230.0	AE	219100	NEWFRDM	230.0	PSE&G	1	Base Case	operati on	650.0	167.69	179.28	DC	78.87
99831270	227900	CARDIFF	230.0	AE	227955	CEDAR	230.0	AE	1	PS_P1-2_2310	operati on	805.0	166.14	174.36	DC	70.69

ID	FROM BUS#	FROM BUS	kV	FROM BUS ARE A	TO BUS#	TO BUS	kV	TO BUS ARE A	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC D C	MW IMPA CT
99831271	227900	CARDIFF	230.0	AE	227955	CEDAR	230.0	AE	1	Base Case	operati on	650.0	161.03	168.38	DC	47.76
99831350	227900	CARDIFF	230.0	AE	228002	ORCHARD	230.0	AE	1	PS_P1-2_2310	operati on	805.0	129.41	139.37	DC	80.18
99831354	227900	CARDIFF	230.0	AE	228002	ORCHARD	230.0	AE	1	Base Case	operati on	650.0	95.82	103.63	DC	50.75
101513898	227902	LEWIS #1	138.0	AE	227949	LEWIS #3	138.0	AE	1	AE_P1-2 CARD-CEDAR	operati on	478.0	90.69	139.5	DC	233.31
101513903	227902	LEWIS #1	138.0	AE	227949	LEWIS #3	138.0	AE	1	Base Case	operati on	478.0	61.66	111.64	DC	238.88
101513944	227902	LEWIS #1	138.0	AE	227945	LEWIS #2	138.0	AE	1	AE_P1-2 BLE-ML-LEW2	operati on	286.799987793	67.89	100.77	DC	94.29
101514058	227902	LEWIS #1	138.0	AE	227903	MILL #1	138.0	AE	1	AE_P1-2 #2LEW-MILL	operati on	306.0	84.9	102.72	DC	54.54
101513790	227903	MILL #1	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P1-2 BLE-ML-LEW2	operati on	306.0	113.71	121.04	DC	42.77
101514050	227903	MILL #1	138.0	AE	227905	SCULL#1	138.0	AE	1	AE_P1-2 BLE-SC-ML2	operati on	306.0	89.65	103.7	DC	43.01
101514052	227904	MILL #2	138.0	AE	227906	SCULL#2	138.0	AE	1	AE_P1-2 BLE-SC-ML1	operati on	306.0	88.44	102.49	DC	43.0
101513773	227905	SCULL#1	138.0	AE	227903	MILL #1	138.0	AE	1	AE_P1-2 BLE-SC-ML2	operati on	306.0	129.17	136.53	DC	43.01
101513775	227905	SCULL#1	138.0	AE	227903	MILL #1	138.0	AE	1	Base Case	operati on	218.0	100.06	106.08	DC	24.78
101513768	227906	SCULL#2	138.0	AE	227904	MILL #2	138.0	AE	1	AE_P1-2 BLE-SC-ML1	operati on	306.0	130.7	138.07	DC	43.0
101513770	227906	SCULL#2	138.0	AE	227904	MILL #2	138.0	AE	1	Base Case	operati on	218.0	101.63	107.6	DC	24.56
101513950	227913	CARDIFF	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P1-3 CARD 7 XFR	operati on	478.0	109.77	132.31	DC	107.75
101513952	227913	CARDIFF	138.0	AE	227902	LEWIS #1	138.0	AE	1	Base Case	operati on	390.0	83.77	102.72	DC	73.92
101513957	227934	CARDIFF2	138.0	AE	227945	LEWIS #2	138.0	AE	1	AE_P1-3 CARD 6 XFR	operati on	478.0	108.05	130.18	DC	105.81
101513880	227945	LEWIS #2	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P1-3 CARD 6 XFR	operati on	286.799987793	105.08	162.79	DC	165.51
101513893	227948	LEWIS #3	69.0	AE	227918	LEWIS #1	69.0	AE	1	AE_P1-2 LEWIS #1-LEWIS #3	operati on	166.0	86.42	155.42	DC	114.54
101513972	227948	LEWIS #3	69.0	AE	227949	LEWIS #3	138.0	AE	1	AE_P1-2 LEWIS #1-LEWIS #3	operati on	279.0	52.54	124.74	DC	201.45
101513856	227949	LEWIS #3	138.0	AE	227948	LEWIS #3	69.0	AE	1	AE_P1-2 LEWIS #1-LEWIS #3	operati on	279.0	96.04	168.24	DC	201.45

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/D C	MW IMPACT
101513904	227949	LEWIS #3	138.0	AE	227902	LEWIS #1	138.0	AE	1	AE_P1-2 LANDIS-MINO	operation	478.0	97.0	155.6	DC	280.13
99006175	227955	CEDAR	230.0	AE	206302	28OYSTER C	230.0	JCP&L	1	PS_P1-2_2310	operation	564.0	228.28	242.36	DC	84.6
99006176	227955	CEDAR	230.0	AE	206302	28OYSTER C	230.0	JCP&L	1	Base Case	operation	464.0	214.23	226.53	DC	60.24
101513758	228110	BLE	138.0	AE	227905	SCULL#1	138.0	AE	1	AE_P1-2 BLE-SC-ML2	operation	306.0	136.42	143.79	DC	43.01
101513760	228110	BLE	138.0	AE	227905	SCULL#1	138.0	AE	1	Base Case	operation	218.0	110.25	116.27	DC	24.78
101513763	228110	BLE	138.0	AE	227906	SCULL#2	138.0	AE	1	AE_P1-2 BLE-SC-ML1	operation	306.0	135.83	143.2	DC	43.0
101513765	228110	BLE	138.0	AE	227906	SCULL#2	138.0	AE	1	Base Case	operation	218.0	108.88	114.85	DC	24.56
101513817	228111	MDLE TP	138.0	AE	228107	CORSON 2	138.0	AE	1	AE_P1-2 ENGMERION	operation	315.0	109.45	123.02	DC	42.73
101514009	228210	UNION	138.0	AE	228108	CORSON 3	138.0	AE	1	AE_P1-2 CUMB-DENN	operation	400.0	105.98	111.39	DC	41.02
99831441	228311	CHAMBERS	230.0	AE	228312	PEDRKTWN	230.0	AE	1	AE_P1-2 ORCHARDXF	operation	552.0	113.7	118.31	DC	56.36
99831361	228312	PEDRKTWN	230.0	AE	228313	BRIDGPRT	230.0	AE	1	AE_P1-2 ORCHARDXF	operation	552.0	130.69	135.29	DC	56.17
99831457	228313	BRIDGPRT	230.0	AE	228401	MCKLTON	230.0	AE	1	AE_P1-2 ORCHARDXF	operation	804.0	115.67	118.81	DC	55.83
99831458	228313	BRIDGPRT	230.0	AE	228401	MCKLTON	230.0	AE	1	Base Case	operation	650.0	114.06	115.99	DC	28.39
101513986	228482	FRANKLIN	138.0	AE	228404	MONROE	138.0	AE	1	AE_P1-2 MONROE-LANDIS_1	operation	331.0	116.65	120.73	DC	29.99
101513979	228500	LANDIS	138.0	AE	228404	MONROE	138.0	AE	1	AE_P1-2 FRNK-LAND	operation	331.0	120.49	124.57	DC	29.99
101513858	228502	MNOTLA 1	138.0	AE	228500	LANDIS	138.0	AE	1	JC-P1-2-JCC-230-002T	operation	478.0	141.56	152.18	DC	50.74
101513859	228502	MNOTLA 1	138.0	AE	228500	LANDIS	138.0	AE	1	Base Case	operation	390.0	137.56	148.88	DC	44.17
101513738	228503	MNOTLA 2	138.0	AE	228502	MNOTLA 1	138.0	AE	1	JC-P1-2-JCC-230-002T	operation	311.0	218.01	234.33	DC	50.75
101513743	228503	MNOTLA 2	138.0	AE	228502	MNOTLA 1	138.0	AE	1	Base Case	operation	311.0	173.0	187.2	DC	44.18
101513912	940000	AE1-240 TAP	69.0	AE	228226	SHRMAN#2	69.0	AE	1	AE_P1-2 ORCH-CUMB	operation	93.0	125.71	130.78	DC	8.91

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
101514710	7	DOROTHY 138.0 kV - MNOTLA 2 138.0 kV Ckt 1	ACE: at1421r0001_af1f (126) : To mitigate the (ACE) Dorothy - Minotola 69 kV line (from bus 227901 to bus 228503 ckt 1) overload, it will require increasing the emergency rating of the Dorothy to Minotola 69 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Project Type : FAC Cost : \$21,000,000 Time Estimate : 24-48 Months	\$21,000,000

ID	Idx	Facility	Upgrade Description	Cost
99831048,99831049,99830811	25	CAMDEN 230.0 kV - RICHRE29 230.0 kV Ckt 1	PECO: pe002 (1675) : Replace 1 piece of station cable in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$45,000 Time Estimate : 24.0 Months pe003 (1676) : Replace reactor in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$2,254,000 Time Estimate : 36.0 Months pe004 (1677) : Replace 2 circuit breakers in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$752,000 Time Estimate : 36.0 Months pe005 (1678) : Replace 6 disconnect switches in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$1,241,000 Time Estimate : 36.0 Months pe006 (1679) : Replace 8 pieces of station cable in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$363,000 Time Estimate : 36.0 Months pe007 (1680) : Reconductor PECO portion of line using 'Pecos' conductor on this bifurcated line (conductors run on parallel towers and remain tied together as they are today, which remains a 6-wire line) and also rebuild the Richmond 230 kV substation ring bus to increase bus rating (Does not include permitting or ROW acquisition). Cost & Ratings for PECO portion of the tie line only. Project Type : FAC Cost : \$15,653,000 Time Estimate : 36.0 Months PSEG: r_PS_I006a_CamRch (1943): Wreck and Rebuild (PSEG Portion). Upgrade Camden 230kV terminal equipment to achieve a SER of 1891MVA Project Type : FAC Cost : \$72,008,213 Time Estimate : 45.0 Months	\$92,316,213
99005834,99005835	11	28LARRABEE 230.0 kV - 28SMITHBRG 230.0 kV Ckt 2	JCP&L: JCP&L-AF2-F-0005 (1591): Replace substation conductor at Larrabee substation Reconductor the Larrabee - Smithburg 230 kV line (~11.8 miles). Replace wave trap and disconnect switch at Larrabee substation and wave trap at Smithburg Substation. Replace wave trap and gas insulated bus at Smithburg substation. Project Type : FAC Cost : \$57,290,121 Time Estimate : 54.0 Months	\$57,290,121

ID	Idx	Facility	Upgrade Description	Cost
99005839,99005840	12	28LARRABEE 230.0 kV - 28SMITHBRG 230.0 kV Ckt 1	JCP&L: JCP&L-AF2-F-0004 (1590): Replace substation conductor at Larrabee substation Reconductor the Larrabee - Smithburg 230 kV line (~11.9 miles). Replace wave trap and disconnect switch at Larrabee substation. Replace wave trap and gas insulated bus at Smithburg substation. Project Type : FAC Cost : \$57,827,111 Time Estimate : 54.0 Months	\$57,827,111
99831090,99831420,99831089	23	GLOUCSTR 230.0 kV - CAMDEN 230.0 kV Ckt 1	PSEG: r_PS_I022b_BvrCam (1961): Expand Beaver Brook 230kV to accommodate new cable. Construct new U/G Cable from Beaver Brook 230kV to Camden 230kV. Project Type : CON Cost : \$269,682,900 Time Estimate : 45.0 Months	\$269,682,900
99831387,99831388	24	GLOUCSTR 230.0 kV - CUTHBERT_4 230.0 kV Ckt 1	PSEG: r_PS_I022b_BvrCam (1961): Expand Beaver Brook 230kV to accommodate new cable. Construct new U/G Cable from Beaver Brook 230kV to Camden 230kV. Project Type : CON Cost : \$269,682,900 Time Estimate : 45.0 Months	\$269,682,900
101513455	41	AE1-240 TAP 69.0 kV - SHRMAN#2 69.0 kV Ckt 1	ACE: ACECCShermr01 (12) : To mitigate the AE1-240 tap to Sherman 69 kV line section overload a 600 amp disc switch must be upgraded at Sherman Project Type : FAC Cost : \$20,000 Time Estimate : 6 to 14 Months	\$20,000
99832175	39	MCKLTON 230.0 kV - DELCOTAP 230.0 kV Ckt 1	ACE: as2301r0001_ae2i (56): To mitigate the (ACE) Mickleton to Delco Tap 230 kV line (from bus 228401 to bus 213559 ckt 1) overload, it will require various terminal reinforcements at Mickleton. Project Type : FAC Cost : \$200,000 Time Estimate : 12-32 Months	\$200,000
99831155,99832139	22	NEWFRDM 230.0 kV - HILLTOP_3 230.0 kV Ckt 1	PSEG: r_PS_I001a_NFHill (1939) : Reconductor to 1080MVA SER Project Type : FAC Cost : \$29,523,000 Time Estimate : 33.0 Months	\$29,523,000

ID	Idx	Facility	Upgrade Description	Cost
99005749,9900 5750	35	CEDAR 230.0 kV - 28OYSTER C 230.0 kV Ckt 1	ACE: as2318r0001 (72) : To mitigate the (ACE) Cedar Oyster Creek 230 kV line (from bus 227955 to bus 206302 ckt 1) overload, it will require various terminal reinforcements at Cedar. Project Type : FAC Cost : \$700,000 Time Estimate : 24-48 Months at2318r0001 (141) : To mitigate the (ACE) Cedar Oyster Creek 230 kV line (from bus 227955 to bus 206302 ckt 1) overload, it will require increasing the emergency rating of the Cedar to Oyster Creek 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at Cedar. Project Type : FAC Cost : \$27,000,000 Time Estimate : 36-60 Months JCP&L: JCP&L-AF1-S-0010a (1570): Reconductor the Oyster Creek - Cedar 230 kV line (JCP&L portion only ~0.1 miles. AE portion ~14 miles) Upgrade terminal equipment at Oyster Creek Additionally, AE would need to replace their section of the limiting conductor and provide estimates for their replacement. Project Type : FAC Cost : \$469,866 Time Estimate : 12.0 Months JCP&L-AF1-S-0010b (1571): Replace disconnect switch at Oyster Creek Additionally, AE would need to replace their section of the limiting conductor and provide estimates for their replacement. Project Type : FAC Cost : \$402,742 Time Estimate : 12.0 Months	\$28,572,609
101513373	36	BLE 138.0 kV - SCULL#1 138.0 kV Ckt 1	ACE: at1407r0001 (114) : To mitigate the (ACE) B.L. England Scull#1 138 kV line (from bus 228110 to bus 227905 ckt 1) overload, it will require increasing the emergency rating of the B.L. England to Scull#1 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at both B.L. England and Scull#1 Project Type : FAC Cost : \$5,900,000 Time Estimate : 36-60 Months	\$5,900,000
101513388	29	SCULL#1 138.0 kV - MILL #1 138.0 kV Ckt 1	ACE: at1407r0003 (116) : To mitigate the (ACE) Scull#1-Mill#1 - 138 kV line (from bus 227905 to bus 227903 ckt 1) overload, it will require increasing the emergency rating of the Scull#1 to Mill#1 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements at both, Mill#1 & Scull#1. Project Type : FAC Cost : \$12,800,000 Time Estimate : 36-60 Months	\$12,800,000

ID	Idx	Facility	Upgrade Description	Cost
101513383	37	BLE 138.0 kV - SCULL#2 138.0 kV Ckt 1	ACE: at1408r0001 (118) : To mitigate the (ACE) B.L. England Scull#2 138 kV line (from bus 228110 to bus 227906 ckt 1) overload, it will require increasing the emergency rating of the B.L. England to Scull#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at both B.L. England and Scull#2 Project Type : FAC Cost : \$6,000,000 Time Estimate : 36-60 Months	\$6,000,000
99831018,99831318,99831017,99830796	1	RICHMOND 230.0 kV - WANEETA3 230.0 kV Ckt 1	PECO: pe010 (1681) : Add a second pair of underground cables in parallel with the existing underground portion of the Richmond - Waneeta 230 kV line (Does not include permitting) Project Type : FAC Cost : \$19,000,000 Time Estimate : 84.0 Months pe011 (1682) : Rebuild the aerial portion of the Richmond-Waneeta 230 kV line with bundled Pecos conductors (Does not include permitting) Project Type : FAC Cost : \$15,855,000 Time Estimate : 84.0 Months pe012 (1683) : Replace 3 circuit breakers on Richmond-Waneeta line Project Type : FAC Cost : \$1,129,000 Time Estimate : 36.0 Months pe013 (1684) : Replace 7 disconnect switches on Richmond-Waneeta line Project Type : FAC Cost : \$1,448,000 Time Estimate : 36.0 Months pe014 (1685) : Replace 10 pieces of station cable on Richmond-Waneeta line Project Type : FAC Cost : \$454,000 Time Estimate : 36.0 Months	\$37,886,000
99830821,99831068	20	WANEETA2 230.0 kV - N PHILA 230.0 kV Ckt 1	PECO: pe016 (1686) : Reconnector the North Philadelphia-Waneeta 230 kV line with Pecos conductor (Does not include permitting) Project Type : FAC Cost : \$6,335,000 Time Estimate : 36.0 Months pe017 (1687) : Replace 1 disconnect switch on Waneeta- N. Phila line Project Type : FAC Cost : \$207,000 Time Estimate : 24.0 Months pe018 (1688) : Replace 6 pieces of station cable on Waneeta- N. Phila line Project Type : FAC Cost : \$272,000 Time Estimate : 36.0 Months	\$6,814,000

99830956,99830955,99832015	26	CARDIFF 230.0 kV - NEWFRDM 230.0 kV Ckt 1	ACE: as2310r0001 (58): To mitigate the (ACE) Cardiff New Freedom 230 kV line (from bus 227900 to bus 219100 ckt 1) overload, it will require various terminal reinforcements are required at Cardiff. Project Type : FAC Cost : \$400,000 Time Estimate : 24-36 Months as2310r0002 (59): To mitigate the (ACE) Cardiff New Freedom 230 kV line (from bus 227900 to bus 219100 ckt 1) overload, it will require various terminal reinforcements at Cardiff. Project Type : FAC Cost : \$600,000 Time Estimate : 24-36 Months as2310r0003 (60) : To mitigate the (ACE) Cardiff New Freedom 230 kV line (from bus 227900 to bus 219100 ckt 1) overload, it will require various terminal reinforcements at Cardiff. Project Type : FAC Cost : \$600,000 Time Estimate : 24-36 Months as2310r0004_af1f (61): To mitigate the (ACE) Cardiff New Freedom 230 kV line (from bus 227900 to bus 219100 ckt 1) overload, it will require various terminal reinforcements at Cardiff. Project Type : FAC Cost : \$600,000 Time Estimate : 24-36 Months at2310r0001 (133) : To mitigate the (ACE) Cardiff New Freedom 230 kV line (from bus 227900 to bus 219100 ckt 1) overload, it will require increasing the emergency rating of the Cardiff to New Freedom 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Project Type : FAC Cost : \$63,200,000 Time Estimate : 36-60 Months at2310r0002_af1f (134) : To mitigate the (ACE) Cardiff New Freedom 230 kV line (from bus 227900 to bus 219100 ckt 1) overload, it will require increasing the emergency rating of the Cardiff to New Freedom 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Project Type : FAC Cost : \$160,000,000 Time Estimate : 60-72 Months PSEG: r_PS_I004a_NF (1941) : Upgrade New Freedom 230kV terminal equipment to achieve a SER of 1593 MVA Project Type : FAC Cost : \$4,851,583 Time Estimate : 13.0 Months r_PS_I004b_NF (1942) : Upgrade New Freedom 230kV terminal equipment to achieve a SER of 1992 MVA Project Type : FAC Cost : \$35,507,396	\$265,758,979
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ID	Idx	Facility	Upgrade Description	Cost
			Time Estimate : 27.0 Months	
99832186,9983 2187	6	HILLTOP_1 230.0 kV - BEAVERBK_1 230.0 kV Ckt 1	PSEG: r_PS_I002a_HillBvr (1940) : Reconductor to 1080MVA SER Project Type : FAC Cost : \$6,438,257 Time Estimate : 33.0 Months	\$6,438,2 57

ID	Idx	Facility	Upgrade Description	Cost
101514597,101 514598	40	MNOTLA 1 138.0 kV - LANDIS 138.0 kV Ckt 1	ACE: as1409r0001_ae2i (39): To mitigate the (AE - AE) MNOTLA 1 - LANDIS 138 kV line (from bus 228502 to bus 228500 ckt 1) overload, several terminal equipment reinforcement is required at both, Landis and Minotola substation. Project Type : FAC Cost : \$200,000 Time Estimate : 12-24 Months as1409r0002_ae2i (40): To mitigate the (AE - AE) MNOTLA 1-LANDIS 138 kV line (from bus 228502 to bus 228500 ckt 1) overload, several terminal equipment reinforcement is required at both, Landis and Minotola substation. Project Type : FAC Cost : \$200,000 Time Estimate : 12-24 Months as1409r0003_ae2i (41): To mitigate the (AE - AE) MNOTLA 1-LANDIS 138 kV line (from bus 228502 to bus 228500 ckt 1) overload, several terminal equipment reinforcement is required at both, Landis and Minotola substation. Project Type : FAC Cost : \$300,000 Time Estimate : 12-24 Months as1409r0004_ae2i (42) : To mitigate the (AE - AE) MNOTLA 1-LANDIS 138 kV line (from bus 228502 to bus 228500 ckt 1) overload, several terminal equipment reinforcement is required at both, Landis and Minotola substation. Project Type : FAC Cost : \$600,000 Time Estimate : 24-48 Months as1409r0005_ae2i (43): To mitigate the (AE - AE) MNOTLA 1-LANDIS 138 kV line (from bus 228502 to bus 228500 ckt 1) overload, several terminal equipment reinforcement is required at both, Landis and Minotola substation. Project Type : FAC Cost : \$400,000 Time Estimate : 12-24 Months as1409r0008_af1f (46): To mitigate the (AE - AE) MNOTLA 1-LANDIS 138 kV line (from bus 228502 to bus 228500 ckt 1) overload, several terminal equipment reinforcement is required at both, Landis and Minotola substation. Project Type : FAC Cost : \$400,000 Time Estimate : 12-24 Months asminotolar0002_ae2i (96): To mitigate the (AE - AE) MNOTLA 2-MNOTLA 1 138 kV line (from bus 228503 to bus 228502 ckt 1) overload will require terminal reinforcements at Minotola Substation. Project Type : FAC Cost : \$400,000 Time Estimate : 12-18 Months asminotolar0003_ae2i (97): To mitigate the (AE - AE) MNOTLA 2-MNOTLA 1 138 kV line (from bus 228503 to bus 228502 ckt 1) overload will require terminal reinforcements at Minotola Substation. Project Type : FAC Cost : \$600,000 Time Estimate : 12-24 Months at1409r0001 (122) : To mitigate the (AE - AE) MNOTLA 1-LANDIS 138 kV line (from bus 228502 to bus 228500 ckt 1) overload will include rebuilding the Minotola to Landis 138 kV transmission line. Also, upgrades to the terminals at Minotola and Landis Substation will be required. Project Type : FAC Cost : \$12,800,000 Time Estimate : 36-48 Months	\$15,900,000

ID	Idx	Facility	Upgrade Description	Cost
101513495	8	LEWIS #1 138.0 kV - LEWIS #2 138.0 kV Ckt 1	ACE: ACELewis1381to2r01 (14) : To mitigate the Lewis 138 kV bus tie overload, breaker 'U' will be replaced with a 2000 amp breaker. Project Type : FAC Cost : \$236,000 Time Estimate : 9 to 12 Months	\$236,000
99831002,99831003,99832039	28	CARDIFF 230.0 kV - ORCHARD 230.0 kV Ckt 1	ACE: as2321r0001_ae2s (74) : To mitigate the (ACE) Orchard Cardiff 230 kV line (from bus 228002 to bus 227900 ckt 1) overload, it will require reinforcement of terminal equipment at Orchard & Cardiff . Project Type : FAC Cost : \$200,000 Time Estimate : 24-36 Months at2321r0001_ae2s (143) : To mitigate the (ACE) Orchard Cardiff 230 kV line (from bus 228002 to bus 227900 ckt 1) overload, it will require increasing the emergency rating of the Orchard to Cardiff 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements is required at Orchard & Cardiff. Project Type : FAC Cost : \$74,000,000 Time Estimate : 48-60 Months at2321r0002_ae2s (144) : To mitigate the (ACE) Orchard Cardiff 230 kV line (from bus 228002 to bus 227900 ckt 1) overload, it will require increasing the emergency rating of the Orchard to Cardiff 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements is required at Orchard & Cumberland. Project Type : FAC Cost : \$300,000 Time Estimate : 24-36 Months	\$74,500,000

ID	Idx	Facility	Upgrade Description	Cost
99830816,99831054,99831053	21	RICHRE29 230.0 kV - RICHMOND 230.0 kV Ckt 1	PECO: pe002 (1675) : Replace 1 piece of station cable in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$45,000 Time Estimate : 24.0 Months pe003 (1676) : Replace reactor in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$2,254,000 Time Estimate : 36.0 Months pe004 (1677) : Replace 2 circuit breakers in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$752,000 Time Estimate : 36.0 Months pe005 (1678) : Replace 6 disconnect switches in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$1,241,000 Time Estimate : 36.0 Months pe006 (1679) : Replace 8 pieces of station cable in Richmond substation on Richmond-Camden tie line Project Type : FAC Cost : \$363,000 Time Estimate : 36.0 Months pe007 (1680) : Reconductor PECO portion of line using 'Pecos' conductor on this bifurcated line (conductors run on parralel towers and remain tied together as they are today, which remains a 6-wire line) and also rebuild the Richmond 230 kV substation ring bus to increase bus rating (Does not include permitting or ROW acquisition). Cost & Ratings for PECO portion of tie line only. Project Type : FAC Cost : \$15,653,000 Time Estimate : 36.0 Months	\$20,308,000

ID	Idx	Facility	Upgrade Description	Cost
99005894,99005895,99007251,99007250	15	28OYSTER C 230.0 kV - CEDAR 230.0 kV Ckt 1	ACE: at2318r0001 (141) : To mitigate the (ACE) Cedar Oyster Creek 230 kV line (from bus 227955 to bus 206302 ckt 1) overload, it will require increasing the emergency rating of the Cedar to Oyster Creek 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at Cedar. Project Type : FAC Cost : \$27,000,000 Time Estimate : 36-60 Months JCP&L: JCP&L-AF2-F-0011a (1598): Reconductor the Oyster Creek - Cedar 230 kV line (JCP&L portion only ~0.1 miles. AE portion ~14 miles) Upgrade terminal equipment at Oyster Creek Additionally, AE would need to replace their section of the limiting conductor and provide estimates for their replacement. Project Type : FAC Cost : \$469,866 Time Estimate : 24.0 Months	\$27,469,866
101513857	3	LEWIS #3 138.0 kV - LEWIS #3 69.0 kV Ckt 1	ACE: ACELewis138T3r01 (17): To mitigate the Lewis 138 /69 kV T3 overload, T3 will be upgraded to 336 MVA with associated equipment upgrades. Project Type : FAC Cost : \$5,400,000 Time Estimate : 30-48 Months	\$5,400,000
101513425	38	MDLE TP 138.0 kV - CORSON 2 138.0 kV Ckt 1	ACE: at1403r0001 (111) : To mitigate the (ACE) Middle Tap Corson#2 138 kV line (from bus 228111 to bus 228107 ckt 1) overload, it will require increasing the emergency rating of the Middle Tap to Corson#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at Corson#2. Project Type : FAC Cost : \$400,000 Time Estimate : 24-48 Months at1403r0002 (112) : To mitigate the (ACE) Middle Tap Corson#2 138 kV line (from bus 228111 to bus 228107 ckt 1) overload, it will require increasing the emergency rating of the Middle Tap to Corson#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at Corson#2. Project Type : FAC Cost : \$1,000,000 Time Estimate : 24-48 Months	\$1,400,000

ID	Idx	Facility	Upgrade Description	Cost
101513398	30	SCULL#2 138.0 kV - MILL #2 138.0 kV Ckt 1	ACE: at1408r0003 (120) : To mitigate the (ACE) Mill#2 Scull#2 138 kV line (from bus 228904 to bus 227906 ckt 1) overload, it will require increasing the emergency rating of the Mill#2 to Scull#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at both Mill#2 to Scull#2. Project Type : FAC Cost : \$12,800,000 Time Estimate : 36-60 Months at1408r0004 (121) : To mitigate the (ACE) Mill#2 Scull#2 138 kV line (from bus 228904 to bus 227906 ckt 1) overload, it will require increasing the emergency rating of the Mill#2 to Scull#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at Mill#2. Project Type : FAC Cost : \$12,500,000 Time Estimate : 36-60 Months	\$25,300,000
101514637	33	CARDIFF2 138.0 kV - LEWIS #2 138.0 kV Ckt 1	ACE: as1425r0001_af1f (55): To mitigate the (ACE) Cardiff to Lewis #2 138 kV line (from bus 227901 to bus 227945 ckt 1) overload, terminal reinforcement is required at both Cardiff & Lewis #2 substations. Project Type : FAC Cost : \$300,000 Time Estimate : 12-24 Months at1425r0001_af1f (131) : To mitigate the (ACE) Cardiff to Lewis #2 138 kV line (from bus 227934 to bus 227945 ckt 1) overload, it will require increasing the emergency rating of the Cardiff to Lewis 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Project Type : FAC Cost : \$10,000,000 Time Estimate : 48-60 Months ACECardLew1382r01 (147) : To mitigate the (ACE) Cardiff to Lewis #2 138 kV line (from bus 227901 to bus 227945 ckt 1) overload, terminal reinforcement is required at both Cardiff & Lewis #2 substations, including strand buses and disc switches. Project Type : FAC Cost : \$300,000 Time Estimate : 12 to 24 Months	\$10,600,000

ID	Idx	Facility	Upgrade Description	Cost
101514697	9	LEWIS #3 138.0 kV - DOROTHY 138.0 kV Ckt 1	ACE: as1422r0001_af1f (49) : To mitigate the (ACE) Dorothy to Lewis #3 138 kV line (from bus 227901 to bus 227949 ckt 1) overload, terminal reinforcement is required at both Dorothy & Lewis #3 substations. Project Type : FAC Cost : \$500,000 Time Estimate : 24-48 Months at1422r0001_af1f (127) : To mitigate the (ACE) Dorothy - Lewis 138 kV line (from bus 227901 to bus 227949 ckt 1) overload, it will require increasing the emergency rating of the Dorothy to Lewis 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Project Type : FAC Cost : \$25,000,000 Time Estimate : 36-48 Months	\$25,500,000
99005937	10	ROCKSPGS 500.0 kV - PCHBTM2S 500.0 kV Ckt 1	PECO: pe027 (1916): Expand Peach Bottom 500 kV station to build a new 500 kV line between Beach Bottom and Rock Springs. (The estimated cost is for PECO portion only, right of way cost not included) Project Type : CON Cost : \$153,600,000 Time Estimate : 84.0 Months	\$153,600,000
99007393	13	28LARRABEE 230.0 kV - 28ATLANTIC 230.0 kV Ckt 1	JCP&L: JCP&L-AF2-F-0003 (1589) : Replace disconnect switch at Atlantic substation. Project Type : FAC Cost : \$234,933 Time Estimate : 12.0 Months	\$234,933
101513894	2	LEWIS #3 69.0 kV - LEWIS #1 69.0 kV Ckt 1	ACE: ACELewis691to3r01 (18) : To mitigate the Lewis 69 kV bus tie overload, breaker 'CU' will be replaced with a 2000 amp breaker . Project Type : FAC Cost : \$190,000 Time Estimate : 8 to 12 Months	\$190,000
99007352,99007351	5	28LARRABEE 230.0 kV - 28VANHISVL 230.0 kV Ckt 1	JCP&L: JCP&L-AF2-F-0006a (1592) : Reconnector the Larrabee - Van Hiseville 230 kV line (~7.5 miles). Project Type : FAC Cost : \$35,239,969 Time Estimate : 42.0 Months JCP&L-AF2-F-0006b (1593) : Replace relaying and metering at Larrabee substation. Project Type : FAC Cost : \$536,990 Time Estimate : 12.0 Months	\$35,776,959

ID	Idx	Facility	Upgrade Description	Cost
99007254,99007255	19	28MANCHSTR 230.0 kV - 28VANHISVL 230.0 kV Ckt 1	JCP&L: JCP&L-AF2-F-0027 (1618) : Reconductor the Van Hiseville Tap - Manchester 230 kV line (~5.55 miles). Replace substation conductor at Manchester. Replace disconnect switches at Manchester. Project Type : FAC Cost : \$26,077,577 Time Estimate : 42.0 Months	\$26,077,577
99005774	18	28LAKEWOOD 230.0 kV - 28LARRABEE 230.0 kV Ckt 2	JCP&L: JCP&L-AF2-F-0021 (1611) : Replace substation conductor at Lakewood Gen. and Larrabee. Reconductor the Lakewood Gen. - Larrabee 230 kV line (~5.24 miles). Replace disconnect switches at Larrabee and Lakewood Gen. Replace wave trap at Larrabee. Replace relaying, metering, and fault switches at Lakewood Gen. and at Larrabee. Project Type : FAC Cost : \$26,010,453 Time Estimate : 42.0 Months	\$26,010,453
101513415,101514594	34	LEWIS #2 138.0 kV - LEWIS #1 138.0 kV Ckt 1	ACE: ACELewis1381to2r02 (146) : To mitigate the Lewis 138 kV bus tie overload, breaker 'U' will be replaced with a 3000 amp breaker. Project Type : FAC Cost : \$236,000 Time Estimate : 9 to 12 Months	\$236,000
99830960,99830961	27	CARDIFF 230.0 kV - CEDAR 230.0 kV Ckt 1	ACE: as2317r0001 (67) : To mitigate the (ACE) AE2-020 TAP Cedar 230 kV line (from bus 940360 to bus 227955 ckt 1) overload, various terminal reinforcements are required at Cedar. Project Type : FAC Cost : \$300,000 Time Estimate : 24-36 Months at2317r0001 (138) : To mitigate the (ACE) Cardiff Cedar 230 kV line (from bus 940360 to bus 227955 ckt 1) overload, it will require increasing the emergency rating of the Cardiff to Cedar 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Project Type : FAC Cost : \$66,000,000 Time Estimate : 48-60 Months	\$66,300,000
99007216,99007217	14	28MANITOU 230.0 kV - 28WHITINGS 230.0 kV Ckt 1	JCP&L: JCP&L-AF2-F-0007 (1594): Replace substation conductor at Manitou and Whitings substations. Reconductor the Manitou - Whitings 230 kV line (~8.78 miles). Replace wave trap, circuit breaker, and disconnect switch at Manitou substation Replace relaying at Manitou substation. Replace metering at Whitings substation. Project Type : FAC Cost : \$43,435,779 Time Estimate : 48.0 Months	\$43,435,779

ID	Idx	Facility	Upgrade Description	Cost
101513484	32	CARDIFF 138.0 kV - LEWIS #1 138.0 kV Ckt 1	ACE: as1418r0001_ae2i (47) : To mitigate the (ACE) Cardiff- Lewis#1 138 kV line (from bus 227913 to bus 227902 ckt 1) overload, will require substation reinforcements at both substations. Project Type : FAC Cost : \$900,000 Time Estimate : 24-32 Months at1418r0001_ae2i (125) : To mitigate the (ACE) Cardiff to Lewis#1 138 kV line (from bus 227913 to bus 227902 ckt 1) overload, it will require increasing the emergency rating of the Cardiff to Lewis#1 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Project Type : FAC Cost : \$9,000,000 Time Estimate : 36-60 Months as1418r0002_ae2i (145) : To mitigate the (ACE) Cardiff- Lewis#1 138 kV line (from bus 227913 to bus 227902 ckt 1) overload, will require substation reinforcements at both substations. Project Type : FAC Cost : \$900,000 Time Estimate : 24-32 Months	\$10,800,000
99007234,99007235	16	28VANHISVL 230.0 kV - 28LARRABEE 230.0 kV Ckt 1	JCP&L: JCP&L-AF2-F-0018 (1607): Reconductor the Larrabee - Van Hiseville 230 kV line (~7.5 miles). Replace wave trap at Larrabee. Replace relaying, metering, current transformers, and fault switch at Larrabee. Project Type : FAC Cost : \$37,018,748 Time Estimate : 42.0 Months	\$37,018,748
101514643,101513908,101513907	4	LEWIS #3 138.0 kV - LEWIS #1 138.0 kV Ckt 1	ACE: ACELewis1381to3r01 (15): To mitigate the Lewis 138 kV bus tie overload, breaker 'JN' will be replaced with a 3000 amp breaker. Project Type : FAC Cost : \$236,000 Time Estimate : 9 to 12 Months ACELewis1381to3r02 (16): To mitigate the Lewis 138 kV bus tie overload, breaker 'JN' will be replaced with a 4000 amp breaker. Project Type : FAC Cost : \$236,000 Time Estimate : 9 to 12 Months	\$472,000

ID	Idx	Facility	Upgrade Description	Cost
99007247,9900 7248	17	28WHITINGS 230.0 kV - 28MANCHSTR 230.0 kV Ckt 1	JCP&L: JCP&L-AF2-F-0019a (1608) : Reconductor the Manchester - Whitings 230 kV 1590 line (~12.65 miles). Replace wave trap at Whitings. Replace substation conductor at Manchester. Replace circuit breaker at Whitings. Replace disconnect switches at Manchester and Whitings. Replace relaying and metering at Whitings. Project Type : FAC Cost : \$62,324,402 Time Estimate : 54.0 Months JCP&L-AF2-F-0019b (1609): Replace fault switches at Whitings. Project Type : FAC Cost : \$536,990 Time Estimate : 12.0 Months	\$62,861, 392
101514735	31	CARDIFF2 69.0 kV - MILL #1 69.0 kV Ckt 1	ACE: ACECardMill69r01 (11) : To mitigate the Cardiff-Mill 69 kV line overload, the 2.94 mile line will be rebuilt with an ACSS conductor capable of 2300 amp minimum and 69 kV Mill breaker 'J' will be replaced with a 3000 amp breaker . Project Type : FAC Cost : \$6,100,000 Time Estimate : 30 to 36 Months	\$6,100,0 00
			TOTAL COST	\$1,526,2 13,963

11.6 Flow Gate Details

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	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	ACID C	MW IMPACT
99831017	213922	RICHMOND	PECO	214012	WANEETA3	PECO	1	PECO_P4_CHICH045/ * \$ DELCO \$ CHICH045 \$ STBK	breaker	1180.0	144.36	146.56	DC	57.45

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
213606	FAIRLESS (Deactivation : 01/06/2020)	8.2187	Adder	9.67
213878	PENNSBRY (Deactivation : 01/06/2020)	0.7257	Adder	0.85
213918	RICHMD91	3.9790	50/50	3.9790
213919	RICHMD92	3.9790	50/50	3.9790
214225	Y1-057 BAT	0.3381	Merchant Transmission	0.3381
218661	EHAMPSOLAR E	0.3679	Adder	0.43
219123	O-011 (Deactivation : 26/04/2020)	1.2448	Adder	1.46
219124	CAMDEN_STG	3.9428	50/50	3.9428
219126	CAMDEN_C TG	4.8439	50/50	4.8439
219128	GLOUCSTR_26	2.0016	50/50	2.0016
219229	EAGLEPT_G3	2.5466	50/50	2.5466
219230	EAGLEPT_G1	4.8051	50/50	4.8051
219231	EAGLEPT_G2	4.8025	50/50	4.8025
219235	EAGLEPT_ST2	1.7369	50/50	1.7369
219236	SOUTHERNHQ C	0.0199	50/50	0.0199
219237	SOUTHERNHQ E	0.1908	50/50	0.1908
219240	MANTUACREK E	0.7012	50/50	0.7012
219241	CAMDEN1	0.2928	50/50	0.2928
219242	CAMDEN2	0.0317	50/50	0.0317
219258	KINSLEYDEP C	0.1095	50/50	0.1095
219259	KINSLEYDEP E	1.0353	50/50	1.0353
219273	CLEANLIGHT E	0.3812	Adder	0.45
219288	REEVES ST E	1.3710	Adder	1.61
219292	REEVESSO E	0.1264	Adder	0.15
219305	NAMERICA E	0.9501	Adder	1.12
219340	CUTHBSP1_C	0.0063	50/50	0.0063
219344	CUTHBSP1_E	0.0592	50/50	0.0592
219345	CUTHBSP2_C	0.0063	50/50	0.0063
219347	CUTHBSP2_E	0.0592	50/50	0.0592
219349	LDSOLAR E	0.8319	Adder	0.98
219350	CUTHBSP3_C	0.0063	50/50	0.0063
219351	CUTHBSP3_E	0.0592	50/50	0.0592
219357	CUTHBSP4_C	0.0050	50/50	0.0050
219379	CUTHBSP4_E	0.0476	50/50	0.0476
219384	DEPTFDSP1_C	0.0014	50/50	0.0014
219385	DEPTFDSP1_E	0.0137	50/50	0.0137
219388	DEPTFDSP2_C	0.0014	50/50	0.0014
219390	DEPTFDSP2_E	0.0137	50/50	0.0137
219393	DEPTFDSP3_C	0.0036	50/50	0.0036

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
219394	DEPTFDSP3_E	0.0343	50/50	0.0343
219408	DEPTFDSP4_C	0.0014	50/50	0.0014
219416	DEPTFDSP4_E	0.0137	50/50	0.0137
219566	BURLINSP1_E	0.1141	Adder	0.13
219574	CAMDENSP1_C	0.0352	50/50	0.0352
219575	CAMDENSP1_E	0.3329	50/50	0.3329
219582	COXSCOSP1_E	0.0158	Adder	0.02
219608	WPEMNERT E	0.9501	Adder	1.12
219611	FLORENCE E	2.7146	Adder	3.19
219614	COXSCOSP2_E	0.0158	Adder	0.02
219619	MILLCREEK E	0.5309	Adder	0.62
219623	KINSLEYBEA C	0.0801	50/50	0.0801
219624	KINSLEYBEA E	0.7823	50/50	0.7823
219647	COOPERSOLA E	0.1391	50/50	0.1391
219652	LUMB23SP1_E	0.0418	Adder	0.05
219656	LUMB23SP2_E	0.0418	Adder	0.05
219662	THOROFSP1_C	0.0055	50/50	0.0055
219664	THOROFSP1_E	0.0524	50/50	0.0524
219665	THOROFSP2_C	0.0056	50/50	0.0056
219666	THOROFSP2_E	0.0527	50/50	0.0527
219683	THOSOLAR C	0.0307	50/50	0.0307
219684	THOSOLAR E	0.2902	50/50	0.2902
219687	LUMSOLAR_N E	0.4222	Adder	0.5
219689	LUMSOLAR_S E	0.4405	Adder	0.52
219706	BEAVBRSP1_C	0.0058	50/50	0.0058
219707	BEAVBRSP1_E	0.0547	50/50	0.0547
219708	BEAVBRSP2_C	0.0058	50/50	0.0058
219709	BEAVBRSP2_E	0.0546	50/50	0.0546
219710	CINNAMSP1_C	0.0033	50/50	0.0033
219711	CINNAMSP1_E	0.0314	50/50	0.0314
219712	CINNAMSP2_C	0.0020	50/50	0.0020
219713	CINNAMSP2_E	0.0188	50/50	0.0188
219714	CINNAMSP3_C	0.0033	50/50	0.0033
219715	CINNAMSP3_E	0.0314	50/50	0.0314
219716	CINNAMSP4_C	0.0033	50/50	0.0033
219717	CINNAMSP4_E	0.0313	50/50	0.0313
219718	GLOUCSP1_C	0.0108	50/50	0.0108
219719	GLOUCSP1_E	0.1027	50/50	0.1027
219726	BAT.STORG E	0.3409	50/50	0.3409
219765	PARADISE E	1.1219	50/50	1.1219
219766	PARADISE C	0.1149	50/50	0.1149
227881	GRENWCHG	0.3890	Adder	0.46
227928	V4-067E	0.2592	Adder	0.3
228102	BLE#2 ST (Deactivation : 30/04/2019)	24.6821	Adder	29.04
228261	V4-054E	1.1653	Adder	1.37
228334	MANNMILG	1.7277	Adder	2.03
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.3370	Adder	0.4
228357	V2-046E	2.6548	Adder	3.12
228712	V2-041E	0.4238	Adder	0.5
228721	V2-035E	0.2441	Adder	0.29
228733	AB1-119 E	0.1417	Adder	0.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
902092	W1-130E	1.0757	Adder	1.27
902432	W2-030 E	0.9703	Adder	1.14
910862	OWENSCORIN E	1.0087	50/50	1.0087
918622	AA1-079 E	7.0445	Adder	8.29
918632	AA1-079 E	7.0420	Adder	8.28
919901	AB1-000 1	0.8264	Adder	0.97
919911	AB1-000 2	0.8264	Adder	0.97
919921	AB1-000 3	0.8264	Adder	0.97
923153	AB1-116 E	0.1561	Adder	0.18
923532	AB1-169AC	103.6447	Adder	121.93
924051	AB2-049 C	0.7460	Adder	0.88
924052	AB2-049 E	1.2172	Adder	1.43
924531	AB2-102 C	37.4219	Adder	44.03
924532	AB2-102 E	0.8316	Adder	0.98
924701	AB2-122 C	0.1120	Adder	0.13
924702	AB2-122 E	0.1920	Adder	0.23
925391	AC1-010 C (Suspended)	0.7713	50/50	0.7713
925392	AC1-010 E (Suspended)	1.3322	50/50	1.3322
925441	AC1-016 C (Withdrawn : Unavailable)	0.7312	Adder	0.86
925442	AC1-016 E (Withdrawn : Unavailable)	1.1931	Adder	1.4
925452	AC1-017 E	0.5651	Adder	0.66
925561	AC1-030 C	0.0541	50/50	0.0541
925562	AC1-030 E	0.4950	50/50	0.4950
930001	AB1-001 C	0.1358	Adder	0.16
930002	AB1-001 E	0.2233	Adder	0.26
930242	AB1-063 E	0.1391	50/50	0.1391
932361	AC2-050 C O1	0.7643	Adder	0.9
932362	AC2-050 E O1	1.2471	Adder	1.47
933962	AD1-019 E	1.2295	Adder	1.45
934661	AD1-097 1	1.3332	Adder	1.57
934671	AD1-097 2	1.3332	Adder	1.57
934681	AD1-097 3	1.3332	Adder	1.57
934691	AD1-097 4	0.7892	Adder	0.93
936211	AD2-027 C	0.2406	50/50	0.2406
936212	AD2-027 E	2.2753	50/50	2.2753
936321	AD2-042 C	0.3165	50/50	0.3165
936322	AD2-042 E	3.0093	50/50	3.0093
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.1029	Adder	0.12
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.1417	Adder	0.17
936501	AD2-065 C	0.2105	Adder	0.25
936502	AD2-065 E	0.2903	Adder	0.34
937011	AD2-135 C	0.1142	Adder	0.13
937012	AD2-135 E	0.1942	Adder	0.23
938421	AE1-061 C	0.5190	Adder	0.61
938422	AE1-061 E	0.5190	Adder	0.61
938431	AE1-062 C	1.9388	Adder	2.28
938432	AE1-062 E	1.9388	Adder	2.28
938781	AE1-104 C O1	19.9229	Adder	23.44
938782	AE1-104 E O1	50.9724	Adder	59.97

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938871	AE1-115 C	2.0517	Adder	2.41
938872	AE1-115 E	2.0517	Adder	2.41
939301	AE1-161 C	3.9127	Adder	4.6
939302	AE1-161 E	5.8691	Adder	6.9
939501	AE1-179 C O1	6.3326	Adder	7.45
939502	AE1-179 E O1	4.4690	Adder	5.26
939821	AE1-218 C O1	0.1625	Adder	0.19
939822	AE1-218 E O1	0.2438	Adder	0.29
939831	AE1-219 C O1	0.3657	Adder	0.43
939832	AE1-219 E O1	0.5282	Adder	0.62
939931	AE1-229 C O1	17.6287	Adder	20.74
939932	AE1-229 E O1	11.9440	Adder	14.05
940001	AE1-240 C O1	5.2480	Adder	6.17
940002	AE1-240 E O1	3.7460	Adder	4.41
940271	AE2-010	-0.5762	Adder	-0.68
940361	AE2-020 C	16.7576	Adder	19.71
940362	AE2-020 E	78.4603	Adder	92.31
940371	AE2-021 C	16.7576	Adder	19.71
940372	AE2-021 E	78.4603	Adder	92.31
940381	AE2-022 C	9.7753	Adder	11.5
940382	AE2-022 E	45.7685	Adder	53.85
940771	AE2-064 C	0.0486	50/50	0.0486
940772	AE2-064 E	0.3812	50/50	0.3812
940781	AE2-065 C	0.0403	50/50	0.0403
940782	AE2-065 E	0.3674	50/50	0.3674
942101	AE2-222 C O1	13.8200	Adder	16.26
942102	AE2-222 E O1	34.7167	Adder	40.84
942381	AE2-251 C	53.0878	Adder	62.46
942382	AE2-251 E	135.8367	Adder	159.81
943071	AE2-334 C	5.7714	Adder	6.79
943072	AE2-334 E	3.0767	Adder	3.62
943732	AF1-041 E	0.3874	Adder	0.46
944611	AF1-126 C O1	7.0971	Adder	8.35
944612	AF1-126 E O1	28.3883	Adder	33.4
944951	AF1-160 C	1.9388	Adder	2.28
944952	AF1-160 E	2.0357	Adder	2.39
945431	AF1-208 C O1	5.1975	Adder	6.11
945432	AF1-208 E O1	3.4650	Adder	4.08
945731	AF1-238 C	9.1070	Adder	10.71
945732	AF1-238 E	13.6605	Adder	16.07
945741	AF1-239 C	2.1428	Adder	2.52
945742	AF1-239 E	3.2142	Adder	3.78
945961	AF1-261	0.1970	Adder	0.23
945971	AF1-262	0.1772	Adder	0.21
945991	AF1-264	0.4371	50/50	0.4371
957221	AF2-016 C	10.3530	Adder	22.98
957222	AF2-016 E	15.5295	Adder	34.47
957251	AF2-019 C	1.4040	Adder	3.12
957252	AF2-019 E	2.1061	Adder	4.68
957261	AF2-020 C	0.7975	Adder	1.77
957262	AF2-020 E	1.1963	Adder	2.66
957281	AF2-022 C	1.7903	Adder	3.97

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957282	AF2-022 E	2.6854	Adder	5.96
957291	AF2-023 C O1	2.1749	Adder	4.83
957292	AF2-023 E O1	3.2624	Adder	7.24
957301	AF2-024 C	2.4876	Adder	5.52
957302	AF2-024 E	3.7314	Adder	8.28
957311	AF2-025 C	0.6859	Adder	1.52
957312	AF2-025 E	1.0288	Adder	2.28
957321	AF2-026 C	1.0990	Adder	2.44
957322	AF2-026 E	1.6485	Adder	3.66
957443	AF2-038 BAT	2.4208	Merchant Transmission	2.4208
957641	AF2-058	0.2490	Adder	0.55
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.4001	Adder	0.89
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	47.6118	Adder	105.69
958811	AF2-172 C	0.3708	Adder	0.82
958812	AF2-172 E	0.6050	Adder	1.34
958831	AF2-174 C	0.4925	Adder	1.09
958832	AF2-174 E	0.6801	Adder	1.51
959111	AF2-202 C	0.1136	Adder	0.25
959112	AF2-202 E	0.1555	Adder	0.35
999905	MARINGEN 2	0.6471	Adder	0.76
999906	PVILLEG 2	0.2751	Adder	0.32
NEWTON	NEWTON	1.2905	Confirmed LTF	1.2905
FARMERCITY	FARMERCITY	0.0672	Confirmed LTF	0.0672
G-007A	G-007A	12.9129	Confirmed LTF	12.9129
VFT	VFT	23.4651	Confirmed LTF	23.4651
CALDERWOOD	CALDERWOOD	0.5934	Confirmed LTF	0.5934
PRAIRIE	PRAIRIE	3.0996	Confirmed LTF	3.0996
CHEOAH	CHEOAH	0.5976	Confirmed LTF	0.5976
EDWARDS	EDWARDS	0.4207	Confirmed LTF	0.4207
TILTON	TILTON	0.7573	Confirmed LTF	0.7573
MADISON	MADISON	0.0040	Confirmed LTF	0.0040
GIBSON	GIBSON	0.6557	Confirmed LTF	0.6557
BLUEG	BLUEG	2.0849	Confirmed LTF	2.0849
TRIMBLE	TRIMBLE	0.6684	Confirmed LTF	0.6684
CATAWBA	CATAWBA	0.4161	Confirmed LTF	0.4161

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
101513894	227948	LEWIS #3	AE	227918	LEWIS #1	AE	1	AE_P1-2 LEWIS #1- LEWIS #3	single	166.0	84.34	111.94	DC	45.82

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227927	V4-067C	0.0089	80/20	0.0089
228720	V2-035C	0.0087	80/20	0.0087
228728	W1-130C	0.0923	80/20	0.0923
923532	AB1-169AC	85.4700	80/20	85.4700
924701	AB2-122 C	0.0362	80/20	0.0362
930001	AB1-001 C	0.0684	80/20	0.0684
938421	AE1-061 C	0.4206	80/20	0.4206
939301	AE1-161 C	1.8398	80/20	1.8398
945971	AF1-262	0.0599	80/20	0.0599
957221	AF2-016 C	45.8172	80/20	45.8172
WEC	WEC	0.0016	Confirmed LTF	0.0016
LGEE	LGEE	0.0023	Confirmed LTF	0.0023
CPL	CPL	0.0020	Confirmed LTF	0.0020
G-007A	G-007A	0.2469	Confirmed LTF	0.2469
VFT	VFT	0.3741	Confirmed LTF	0.3741
CBM-W2	CBM-W2	0.0328	Confirmed LTF	0.0328
CBM-W1	CBM-W1	0.0625	Confirmed LTF	0.0625
TVA	TVA	0.0056	Confirmed LTF	0.0056
CBM-S2	CBM-S2	0.0173	Confirmed LTF	0.0173
CBM-S1	CBM-S1	0.0341	Confirmed LTF	0.0341
MEC	MEC	0.0064	Confirmed LTF	0.0064

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
101513857	227949	LEWIS #3	AE	227948	LEWIS #3	AE	1	AE_P1-2 LEWIS #1- LEWIS #3	single	279.0	92.04	120.93	DC	80.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
228720	V2-035C	0.0161	80/20	0.0161
228728	W1-130C	0.1650	80/20	0.1650
923532	AB1-169AC	152.6140	80/20	152.6140
924701	AB2-122 C	-0.0557	Adder	-0.07
938421	AE1-061 C	0.7514	80/20	0.7514
939301	AE1-161 C	3.3422	80/20	3.3422
939931	AE1-229 C O1	7.2802	80/20	7.2802
945971	AF1-262	0.1107	80/20	0.1107
957221	AF2-016 C	80.5812	80/20	80.5812
WEC	WEC	0.0022	Confirmed LTF	0.0022
LGEE	LGEE	0.0040	Confirmed LTF	0.0040
CPLE	CPLE	0.0066	Confirmed LTF	0.0066
CBM-W2	CBM-W2	0.0655	Confirmed LTF	0.0655
NY	NY	0.0503	Confirmed LTF	0.0503
CBM-W1	CBM-W1	0.0876	Confirmed LTF	0.0876
TVA	TVA	0.0112	Confirmed LTF	0.0112
CBM-S2	CBM-S2	0.0520	Confirmed LTF	0.0520
CBM-S1	CBM-S1	0.0682	Confirmed LTF	0.0682
MEC	MEC	0.0111	Confirmed LTF	0.0111

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
101514643	227949	LEWIS #3	AE	227902	LEWIS #1	AE	1	AE_P7-1 AE13TOWER	tower	478.0	97.28	155.77	DC	279.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227842	MARINGEN	0.0985	50/50	0.0985
228014	PVILLEG	0.0468	50/50	0.0468
228728	W1-130C	0.5627	50/50	0.5627
228731	V3-036	0.1586	50/50	0.1586
902092	W1-130E	5.3123	50/50	5.3123
902432	W2-030 E	0.4106	Adder	0.48
923532	AB1-169AC	512.5945	50/50	512.5945
930001	AB1-001 C	0.1620	50/50	0.1620
930002	AB1-001 E	0.2662	50/50	0.2662
933962	AD1-019 E	1.2707	50/50	1.2707
938421	AE1-061 C	2.5630	50/50	2.5630
938422	AE1-061 E	2.5630	50/50	2.5630
942101	AE2-222 C O1	16.2426	50/50	16.2426
942102	AE2-222 E O1	40.8024	50/50	40.8024
943732	AF1-041 E	0.4589	50/50	0.4589
957221	AF2-016 C	111.8400	50/50	111.8400
957222	AF2-016 E	167.7600	50/50	167.7600
957311	AF2-025 C	1.1559	50/50	1.1559
957312	AF2-025 E	1.7339	50/50	1.7339
999905	MARINGEN 2	0.6014	50/50	0.6014
999906	PVILLEG 2	0.3544	50/50	0.3544
NEWTON	NEWTON	0.0032	Confirmed LTF	0.0032
FARMERCITY	FARMERCITY	0.0002	Confirmed LTF	0.0002
G-007A	G-007A	0.1870	Confirmed LTF	0.1870
VFT	VFT	0.2193	Confirmed LTF	0.2193
CALDERWOOD	CALDERWOOD	0.0015	Confirmed LTF	0.0015
PRAIRIE	PRAIRIE	0.0077	Confirmed LTF	0.0077
CHEOAH	CHEOAH	0.0015	Confirmed LTF	0.0015
EDWARDS	EDWARDS	0.0010	Confirmed LTF	0.0010
TILTON	TILTON	0.0019	Confirmed LTF	0.0019
GIBSON	GIBSON	0.0016	Confirmed LTF	0.0016
BLUEG	BLUEG	0.0052	Confirmed LTF	0.0052
TRIMBLE	TRIMBLE	0.0017	Confirmed LTF	0.0017
CATAWBA	CATAWBA	0.0010	Confirmed LTF	0.0010

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
99007351	206294	28LARRABEE	JCP&L	206318	28VANHISVL	JCP&L	1	JC-P7-1-JCC-230-11A	tower	869.0	109.29	113.75	DC	38.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206201	28JERSVGEN	0.0424	50/50	0.0424
206271	28MCRC/REC	0.9145	50/50	0.9145
206306	28LKWD G1	2.8690	50/50	2.8690
206308	28LKWD G2	2.8690	50/50	2.8690
206312	28LKWD G3	2.0785	50/50	2.0785
206366	28LKWD CT1	5.7827	50/50	5.7827
206367	28LKWD CT2	5.7827	50/50	5.7827
206368	28MDLSEXCO	0.3733	50/50	0.3733
206370	LKWD CT3	39.8860	50/50	39.8860
206412	28R11	37.7403	Adder	44.4
206414	28X4-005E	1.5766	Adder	1.85
206416	28MLH_W1-032	0.0224	50/50	0.0224
207143	28BYD_X4-031	0.2666	50/50	0.2666
207144	28HOW_X1-037	0.1404	50/50	0.1404
207145	28FRN_Y2-051	0.0344	50/50	0.0344
207148	28MDF_W3-079	0.0555	50/50	0.0555
207169	28W4-060COL	0.0756	50/50	0.0756
207204	28HOL_W1-112	0.0350	50/50	0.0350
207205	28MAN_W1-024	0.0295	50/50	0.0295
207206	28TIN_W1-124	0.1583	50/50	0.1583
207401	AA1-060 BAT	4.8934	50/50	4.8934
207419	AB2-139 E	0.0342	Adder	0.04
207420	AC1-207 C	0.4235	Adder	0.5
218629	LAKENESP1_E	0.0211	Adder	0.02
227928	V4-067E	-0.1852	Adder	-0.22
228261	V4-054E	-0.4079	Adder	-0.48
901032	W1-024E OP1	0.2812	50/50	0.2812
901112	W1-032 E OP1	0.2194	50/50	0.2194
901422	W1-113 E	0.3600	Adder	0.42
901912	W1-112E OP1	0.3311	50/50	0.3311
902032	W1-124E	1.5054	50/50	1.5054
902322	W2-019 E	-1.0038	Adder	-1.18
902912	W2-078 E	0.4030	Adder	0.47
903982	W3-079 E	0.5325	50/50	0.5325
905502	W4-060 E OP1	0.7149	50/50	0.7149
907082	X1-037 E	1.3280	50/50	1.3280
914092	Y2-051 E	0.3255	50/50	0.3255
919662	AA2-048 E	0.8471	50/50	0.8471
920732	AA2-184 E	1.6518	50/50	1.6518
923791	AB2-014	0.2786	50/50	0.2786
924701	AB2-122 C	-0.0800	Adder	-0.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927132	AC1-207 E	0.7087	Adder	0.83
934351	AD1-059	0.5126	50/50	0.5126
934841	AD1-113 (Suspended)	5.9122	Adder	6.96
938423	AE1-061 BAT	0.4923	Merchant Transmission	0.4923
939121	AE1-142 C O1	-2.7297	Adder	-3.21
939303	AE1-161 BAT	3.9475	Merchant Transmission	3.9475
939981	AE1-238 C	35.1225	50/50	35.1225
939982	AE1-238 E	92.2551	50/50	92.2551
940401	AE2-024 C O1	30.9622	50/50	30.9622
940402	AE2-024 E O1	144.9615	50/50	144.9615
940411	AE2-025 C	15.6297	50/50	15.6297
940412	AE2-025 E	73.1699	50/50	73.1699
940691	AE2-056 C	0.2011	50/50	0.2011
940692	AE2-056 E	0.1760	50/50	0.1760
940701	AE2-057 C	0.0614	50/50	0.0614
940702	AE2-057 E	0.0614	50/50	0.0614
940921	AE2-081 C	0.2137	50/50	0.2137
940922	AE2-081 E	0.2200	50/50	0.2200
940931	AE2-082 C	0.2988	Adder	0.35
940932	AE2-082 E	0.3163	Adder	0.37
943521	AF1-023	1.1962	50/50	1.1962
944613	AF1-126 BAT	99.8850	50/50	99.8850
945201	AF1-185 1	0.3547	Adder	0.42
945211	AF1-185 2	0.0788	Adder	0.09
945571	AF1-222 C	21.8930	50/50	21.8930
945572	AF1-222 E	57.7180	50/50	57.7180
945733	AF1-238 BAT	10.5812	Merchant Transmission	10.5812
945743	AF1-239 BAT	2.4897	Merchant Transmission	2.4897
945951	AF1-260	0.1210	50/50	0.1210
957223	AF2-016 BAT	38.7300	50/50	38.7300
957253	AF2-019 BAT	2.1919	Merchant Transmission	2.1919
957263	AF2-020 BAT	0.8196	Merchant Transmission	0.8196
957273	AF2-021 BAT	11.5068	50/50	11.5068
957283	AF2-022 BAT	2.3503	Merchant Transmission	2.3503
957313	AF2-025 BAT	2.6296	50/50	2.6296
957323	AF2-026 BAT	1.3776	Merchant Transmission	1.3776
957781	AF2-072 C	4.9865	50/50	4.9865
957782	AF2-072 E	4.9865	50/50	4.9865
958761	AF2-167 C O1	0.4801	50/50	0.4801
958762	AF2-167 E O1	0.6630	50/50	0.6630
959151	AF2-206 C O1	0.7283	50/50	0.7283
959152	AF2-206 E O1	1.0052	50/50	1.0052
961221	AF2-413 O1	10.4448	Adder	23.18
999905	MARINGEN 2	-0.4475	Adder	-0.53
999906	PVILLEG 2	-0.1924	Adder	-0.23
NEWTON	NEWTON	0.0580	Confirmed LTF	0.0580
FARMERCITY	FARMERCITY	0.0032	Confirmed LTF	0.0032
G-007A	G-007A	22.2344	Confirmed LTF	22.2344
VFT	VFT	23.2845	Confirmed LTF	23.2845
CALDERWOOD	CALDERWOOD	0.0403	Confirmed LTF	0.0403
PRAIRIE	PRAIRIE	0.1498	Confirmed LTF	0.1498
CHEOAH	CHEOAH	0.0410	Confirmed LTF	0.0410

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
EDWARDS	EDWARDS	0.0175	Confirmed LTF	0.0175
TILTON	TILTON	0.0315	Confirmed LTF	0.0315
GIBSON	GIBSON	0.0289	Confirmed LTF	0.0289
BLUEG	BLUEG	0.0920	Confirmed LTF	0.0920
TRIMBLE	TRIMBLE	0.0295	Confirmed LTF	0.0295
CATAWBA	CATAWBA	0.0367	Confirmed LTF	0.0367

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 LOADIN G %	POST PROJECT LOADIN G %	ACID C	MW IMPACT
99832186	219702	HILLTOP_1	PSE&G	219101	BEAVERBK_1	PSE&G	1	PS_P7-1_V2274+P2242_L T	tower	886.0	104.49	106.01	DC	29.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200062	SALEM G3	2.4692	Adder	2.9
219259	KINSLEYDEP E	0.2446	Adder	0.29
219385	DEPTFDSP1_E	0.0032	Adder	0.0
219390	DEPTFDSP2_E	0.0032	Adder	0.0
219394	DEPTFDSP3_E	0.0081	Adder	0.01
219416	DEPTFDSP4_E	0.0032	Adder	0.0
219664	THOROFSP1_E	0.0133	Adder	0.02
219666	THOROFSP2_E	0.0133	Adder	0.02
219684	THOSOLAR E	0.0734	Adder	0.09
227881	GRENWCHG	0.1410	Adder	0.17
227928	V4-067E	0.1360	Adder	0.16
228102	BLE#2 ST (Deactivation : 30/04/2019)	12.6204	Adder	14.85
228201	CARL#2CT	0.5033	50/50	0.5033
228260	V4-054C	0.1326	50/50	0.1326
228261	V4-054E	0.6271	50/50	0.6271
228334	MANNMILG	0.7151	Adder	0.84
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.1429	Adder	0.17
228357	V2-046E	1.1064	Adder	1.3
228702	WEST CT	0.4379	50/50	0.4379
228712	V2-041E	0.2089	Adder	0.25
228717	S121	1.0655	50/50	1.0655
228720	V2-035C	0.0143	50/50	0.0143
228721	V2-035E	0.1351	50/50	0.1351
228727	W2-039G	1.1130	50/50	1.1130
228728	W1-130C	0.0671	50/50	0.0671
228733	AB1-119 E	0.0889	50/50	0.0889
902092	W1-130E	0.6338	50/50	0.6338
902432	W2-030 E	0.5034	Adder	0.59
918622	AA1-079 E	-2.9623	Adder	-3.49
918632	AA1-079 E	-2.9613	Adder	-3.48
923153	AB1-116 E	0.0950	50/50	0.0950
923532	AB1-169AC	61.0830	50/50	61.0830
924051	AB2-049 C	0.4709	50/50	0.4709
924052	AB2-049 E	0.7683	50/50	0.7683
924531	AB2-102 C	18.5207	Adder	21.79
924532	AB2-102 E	0.4116	Adder	0.48
924701	AB2-122 C	0.0588	Adder	0.07
924702	AB2-122 E	0.1007	Adder	0.12
925441	AC1-016 C (Withdrawn : Unavailable)	-0.2762	Adder	-0.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930001	AB1-001 C	0.0683	Adder	0.08
930002	AB1-001 E	0.1123	Adder	0.13
930242	AB1-063 E	-0.0375	Adder	-0.04
933962	AD1-019 E	0.6366	Adder	0.75
936212	AD2-027 E	-0.9532	Adder	-1.12
936322	AD2-042 E	-1.2607	Adder	-1.48
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.0645	50/50	0.0645
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.0889	50/50	0.0889
936501	AD2-065 C	0.1180	50/50	0.1180
936502	AD2-065 E	0.1628	50/50	0.1628
937011	AD2-135 C	0.0820	50/50	0.0820
937012	AD2-135 E	0.1394	50/50	0.1394
938421	AE1-061 C	0.3058	50/50	0.3058
938422	AE1-061 E	0.3058	50/50	0.3058
938431	AE1-062 C	1.1322	50/50	1.1322
938432	AE1-062 E	1.1322	50/50	1.1322
938781	AE1-104 C O1	10.1869	Adder	11.98
938782	AE1-104 E O1	26.0631	Adder	30.66
938871	AE1-115 C	0.8259	Adder	0.97
938872	AE1-115 E	0.8259	Adder	0.97
939301	AE1-161 C	2.2862	50/50	2.2862
939302	AE1-161 E	3.4293	50/50	3.4293
939501	AE1-179 C O1	3.5640	50/50	3.5640
939502	AE1-179 E O1	2.5152	50/50	2.5152
939821	AE1-218 C O1	0.0965	50/50	0.0965
939822	AE1-218 E O1	0.1447	50/50	0.1447
939831	AE1-219 C O1	0.2170	50/50	0.2170
939832	AE1-219 E O1	0.3135	50/50	0.3135
939931	AE1-229 C O1	9.2578	50/50	9.2578
939932	AE1-229 E O1	6.2724	50/50	6.2724
940001	AE1-240 C O1	2.9432	50/50	2.9432
940002	AE1-240 E O1	2.1008	50/50	2.1008
940361	AE2-020 C	8.9479	Adder	10.53
940362	AE2-020 E	41.8946	Adder	49.29
940371	AE2-021 C	8.9479	Adder	10.53
940372	AE2-021 E	41.8946	Adder	49.29
940381	AE2-022 C	5.2196	Adder	6.14
940382	AE2-022 E	24.4385	Adder	28.75
940782	AE2-065 E	0.0868	Adder	0.1
942101	AE2-222 C O1	7.1511	Adder	8.41
942102	AE2-222 E O1	17.9639	Adder	21.13
942381	AE2-251 C	28.3467	Adder	33.35
942382	AE2-251 E	72.5313	Adder	85.33
943071	AE2-334 C	3.4489	50/50	3.4489
943072	AE2-334 E	1.8386	50/50	1.8386
943732	AF1-041 E	0.2009	Adder	0.24
944951	AF1-160 C	1.1322	50/50	1.1322
944952	AF1-160 E	1.1888	50/50	1.1888
945431	AF1-208 C O1	2.3028	Adder	2.71
945432	AF1-208 E O1	1.5352	Adder	1.81
945731	AF1-238 C	5.2413	50/50	5.2413

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945732	AF1-238 E	7.8619	50/50	7.8619
945741	AF1-239 C	1.2332	50/50	1.2332
945742	AF1-239 E	1.8499	50/50	1.8499
945971	AF1-262	0.0981	50/50	0.0981
957221	AF2-016 C	5.3768	Adder	11.94
957222	AF2-016 E	8.0652	Adder	17.9
957251	AF2-019 C	0.7073	Adder	1.57
957252	AF2-019 E	1.0610	Adder	2.36
957261	AF2-020 C	0.3643	Adder	0.81
957262	AF2-020 E	0.5464	Adder	1.21
957281	AF2-022 C	0.8849	Adder	1.96
957282	AF2-022 E	1.3273	Adder	2.95
957291	AF2-023 C O1	0.8753	Adder	1.94
957292	AF2-023 E O1	1.3130	Adder	2.91
957301	AF2-024 C	0.8730	Adder	1.94
957302	AF2-024 E	1.3095	Adder	2.91
957311	AF2-025 C	0.3553	Adder	0.79
957312	AF2-025 E	0.5330	Adder	1.18
957321	AF2-026 C	0.5397	Adder	1.2
957322	AF2-026 E	0.8096	Adder	1.8
957641	AF2-058	0.2529	50/50	0.2529
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2046	Adder	0.45
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	24.3447	Adder	54.04
958811	AF2-172 C	0.3858	50/50	0.3858
958812	AF2-172 E	0.6295	50/50	0.6295
959111	AF2-202 C	0.0519	Adder	0.12
959112	AF2-202 E	0.0710	Adder	0.16
999905	MARINGEN 2	0.3352	Adder	0.39
999906	PVILLEG 2	0.1423	Adder	0.17
NEWTON	NEWTON	0.0860	Confirmed LTF	0.0860
FARMERCITY	FARMERCITY	0.0044	Confirmed LTF	0.0044
CALDERWOOD	CALDERWOOD	0.0313	Confirmed LTF	0.0313
NY	NY	0.3711	Confirmed LTF	0.3711
PRAIRIE	PRAIRIE	0.2015	Confirmed LTF	0.2015
O-066	O-066	5.4768	Confirmed LTF	5.4768
CHEOAH	CHEOAH	0.0310	Confirmed LTF	0.0310
EDWARDS	EDWARDS	0.0290	Confirmed LTF	0.0290
TILTON	TILTON	0.0523	Confirmed LTF	0.0523
G-007	G-007	0.1144	Confirmed LTF	0.1144
MADISON	MADISON	0.0081	Confirmed LTF	0.0081
GIBSON	GIBSON	0.0442	Confirmed LTF	0.0442
BLUEG	BLUEG	0.1406	Confirmed LTF	0.1406
TRIMBLE	TRIMBLE	0.0451	Confirmed LTF	0.0451
CATAWBA	CATAWBA	0.0168	Confirmed LTF	0.0168

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
101514710	227901	DOROTHY	AE	228503	MNOTLA 2	AE	1	JC-P7-1-JCC-230-13	tower	478.0	94.92	105.4	DC	50.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206360	280 CRK C1	0.5885	50/50	0.5885
206361	280 CRK C2	0.3892	50/50	0.3892
227842	MARINGEN	0.0965	50/50	0.0965
227927	V4-067C	0.0210	50/50	0.0210
227928	V4-067E	0.2017	50/50	0.2017
228014	PVILLEG	0.0344	50/50	0.0344
228102	BLE#2 ST (Deactivation : 30/04/2019)	19.0211	50/50	19.0211
228712	V2-041E	0.1220	Adder	0.14
228729	W2-030 C	0.0880	50/50	0.0880
228731	V3-036	0.1413	50/50	0.1413
902432	W2-030 E	0.8387	50/50	0.8387
924531	AB2-102 C	11.0485	Adder	13.0
924532	AB2-102 E	0.2455	Adder	0.29
924701	AB2-122 C	0.0871	50/50	0.0871
924702	AB2-122 E	0.1494	50/50	0.1494
930001	AB1-001 C	0.1278	50/50	0.1278
930002	AB1-001 E	0.2101	50/50	0.2101
933962	AD1-019 E	1.1319	50/50	1.1319
938423	AE1-061 BAT	1.8508	50/50	1.8508
938781	AE1-104 C O1	15.3535	50/50	15.3535
938782	AE1-104 E O1	39.2816	50/50	39.2816
939303	AE1-161 BAT	10.2120	50/50	10.2120
940161	AE2-000 C O1	23.0103	50/50	23.0103
940162	AE2-000 E O1	58.8753	50/50	58.8753
940361	AE2-020 C	10.7111	50/50	10.7111
940362	AE2-020 E	50.1500	50/50	50.1500
940371	AE2-021 C	10.7111	50/50	10.7111
940372	AE2-021 E	50.1500	50/50	50.1500
940381	AE2-022 C	6.2481	50/50	6.2481
940382	AE2-022 E	29.2541	50/50	29.2541
942101	AE2-222 C O1	12.9326	50/50	12.9326
942102	AE2-222 E O1	32.4874	50/50	32.4874
942381	AE2-251 C	33.9324	50/50	33.9324
942382	AE2-251 E	86.8236	50/50	86.8236
943732	AF1-041 E	0.3558	50/50	0.3558
944332	AF1-101 E O1	57.7213	50/50	57.7213
957221	AF2-016 C	20.0364	50/50	20.0364
957222	AF2-016 E	30.0546	50/50	30.0546
957251	AF2-019 C	0.6860	Adder	1.52
957252	AF2-019 E	1.0290	Adder	2.28
957271	AF2-021 C	1.6885	50/50	1.6885

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957272	AF2-021 E	2.5327	50/50	2.5327
957281	AF2-022 C	0.5429	Adder	1.21
957282	AF2-022 E	0.8144	Adder	1.81
957311	AF2-025 C	1.1722	50/50	1.1722
957312	AF2-025 E	1.7584	50/50	1.7584
957321	AF2-026 C	0.2907	Adder	0.65
957322	AF2-026 E	0.4360	Adder	0.97
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.5818	50/50	0.5818
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	69.2297	50/50	69.2297
999905	MARINGEN 2	0.5886	50/50	0.5886
999906	PVILLEG 2	0.2610	50/50	0.2610
NEWTON	NEWTON	0.0075	Confirmed LTF	0.0075
FARMERCITY	FARMERCITY	0.0004	Confirmed LTF	0.0004
CALDERWOOD	CALDERWOOD	0.0035	Confirmed LTF	0.0035
NY	NY	0.0166	Confirmed LTF	0.0166
PRAIRIE	PRAIRIE	0.0181	Confirmed LTF	0.0181
O-066	O-066	0.2352	Confirmed LTF	0.2352
CHEOAH	CHEOAH	0.0035	Confirmed LTF	0.0035
EDWARDS	EDWARDS	0.0028	Confirmed LTF	0.0028
TILTON	TILTON	0.0050	Confirmed LTF	0.0050
G-007	G-007	0.0073	Confirmed LTF	0.0073
MADISON	MADISON	0.0020	Confirmed LTF	0.0020
GIBSON	GIBSON	0.0038	Confirmed LTF	0.0038
BLUEG	BLUEG	0.0122	Confirmed LTF	0.0122
TRIMBLE	TRIMBLE	0.0039	Confirmed LTF	0.0039
CATAWBA	CATAWBA	0.0021	Confirmed LTF	0.0021

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
101513495	227902	LEWIS #1	AE	227945	LEWIS #2	AE	1	AE_P4-2 AE33	breaker	286.8	71.43	145.9	DC	213.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
228014	PVILLEG	0.0279	50/50	0.0279
228720	V2-035C	0.0169	50/50	0.0169
228721	V2-035E	0.1599	50/50	0.1599
228728	W1-130C	0.1747	50/50	0.1747
902092	W1-130E	1.6494	50/50	1.6494
923532	AB1-169AC	161.6340	50/50	161.6340
930001	AB1-001 C	0.0933	50/50	0.0933
930002	AB1-001 E	0.1534	50/50	0.1534
933962	AD1-019 E	0.5058	Adder	0.6
938421	AE1-061 C	0.7958	50/50	0.7958
938422	AE1-061 E	0.7958	50/50	0.7958
939301	AE1-161 C	3.5356	50/50	3.5356
939302	AE1-161 E	5.3034	50/50	5.3034
939931	AE1-229 C O1	6.3750	Adder	7.5
939932	AE1-229 E O1	4.3193	Adder	5.08
942101	AE2-222 C O1	8.8376	50/50	8.8376
942102	AE2-222 E O1	22.2004	50/50	22.2004
943732	AF1-041 E	0.2546	50/50	0.2546
945971	AF1-262	0.1160	50/50	0.1160
957221	AF2-016 C	85.4388	50/50	85.4388
957222	AF2-016 E	128.1582	50/50	128.1582
957253	AF2-019 BAT	4.0904	50/50	4.0904
957283	AF2-022 BAT	1.6597	Merchant Transmission	1.6597
957311	AF2-025 C	0.1928	Adder	0.43
957312	AF2-025 E	0.2892	Adder	0.64
957323	AF2-026 BAT	0.8818	Merchant Transmission	0.8818
999905	MARINGEN 2	0.2043	Adder	0.24
999906	PVILLEG 2	0.2114	50/50	0.2114
WEC	WEC	0.0028	Confirmed LTF	0.0028
LGEE	LGEE	0.0051	Confirmed LTF	0.0051
CPL	CPL	0.0066	Confirmed LTF	0.0066
CBM-W2	CBM-W2	0.0737	Confirmed LTF	0.0737
NY	NY	0.0249	Confirmed LTF	0.0249
CBM-W1	CBM-W1	0.1126	Confirmed LTF	0.1126
TVA	TVA	0.0126	Confirmed LTF	0.0126
O-066	O-066	0.5174	Confirmed LTF	0.5174
CBM-S2	CBM-S2	0.0520	Confirmed LTF	0.0520
CBM-S1	CBM-S1	0.0767	Confirmed LTF	0.0767
G-007	G-007	0.2652	Confirmed LTF	0.2652
MEC	MEC	0.0143	Confirmed LTF	0.0143

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
101514697	227949	LEWIS #3	AE	227901	DOROTHY	AE	1	JC-P7-1-JCC-230-13	tower	478.0	98.66	109.14	DC	50.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206360	280 CRK C1	0.5885	50/50	0.5885
206361	280 CRK C2	0.3892	50/50	0.3892
227842	MARINGEN	0.0965	50/50	0.0965
227927	V4-067C	0.0210	50/50	0.0210
227928	V4-067E	0.2017	50/50	0.2017
228014	PVILLEG	0.0344	50/50	0.0344
228102	BLE#2 ST (Deactivation : 30/04/2019)	19.0211	50/50	19.0211
228712	V2-041E	0.1220	Adder	0.14
228729	W2-030 C	0.0880	50/50	0.0880
228731	V3-036	0.1413	50/50	0.1413
902432	W2-030 E	0.8387	50/50	0.8387
924531	AB2-102 C	11.0485	Adder	13.0
924532	AB2-102 E	0.2455	Adder	0.29
924701	AB2-122 C	0.0871	50/50	0.0871
924702	AB2-122 E	0.1494	50/50	0.1494
930001	AB1-001 C	0.1278	50/50	0.1278
930002	AB1-001 E	0.2101	50/50	0.2101
933962	AD1-019 E	1.1319	50/50	1.1319
938423	AE1-061 BAT	1.8508	50/50	1.8508
938781	AE1-104 C O1	15.3535	50/50	15.3535
938782	AE1-104 E O1	39.2816	50/50	39.2816
939303	AE1-161 BAT	10.2120	50/50	10.2120
940161	AE2-000 C O1	23.0103	50/50	23.0103
940162	AE2-000 E O1	58.8753	50/50	58.8753
940361	AE2-020 C	10.7111	50/50	10.7111
940362	AE2-020 E	50.1500	50/50	50.1500
940371	AE2-021 C	10.7111	50/50	10.7111
940372	AE2-021 E	50.1500	50/50	50.1500
940381	AE2-022 C	6.2481	50/50	6.2481
940382	AE2-022 E	29.2541	50/50	29.2541
942101	AE2-222 C O1	12.9326	50/50	12.9326
942102	AE2-222 E O1	32.4874	50/50	32.4874
942381	AE2-251 C	33.9324	50/50	33.9324
942382	AE2-251 E	86.8236	50/50	86.8236
943732	AF1-041 E	0.3558	50/50	0.3558
944332	AF1-101 E O1	57.7213	50/50	57.7213
957221	AF2-016 C	20.0364	50/50	20.0364
957222	AF2-016 E	30.0546	50/50	30.0546
957251	AF2-019 C	0.6860	Adder	1.52
957252	AF2-019 E	1.0290	Adder	2.28
957271	AF2-021 C	1.6885	50/50	1.6885

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957272	AF2-021 E	2.5327	50/50	2.5327
957281	AF2-022 C	0.5429	Adder	1.21
957282	AF2-022 E	0.8144	Adder	1.81
957311	AF2-025 C	1.1722	50/50	1.1722
957312	AF2-025 E	1.7584	50/50	1.7584
957321	AF2-026 C	0.2907	Adder	0.65
957322	AF2-026 E	0.4360	Adder	0.97
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.5818	50/50	0.5818
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	69.2297	50/50	69.2297
999905	MARINGEN 2	0.5886	50/50	0.5886
999906	PVILLEG 2	0.2610	50/50	0.2610
NEWTON	NEWTON	0.0075	Confirmed LTF	0.0075
FARMERCITY	FARMERCITY	0.0004	Confirmed LTF	0.0004
CALDERWOOD	CALDERWOOD	0.0035	Confirmed LTF	0.0035
NY	NY	0.0166	Confirmed LTF	0.0166
PRAIRIE	PRAIRIE	0.0181	Confirmed LTF	0.0181
O-066	O-066	0.2352	Confirmed LTF	0.2352
CHEOAH	CHEOAH	0.0035	Confirmed LTF	0.0035
EDWARDS	EDWARDS	0.0028	Confirmed LTF	0.0028
TILTON	TILTON	0.0050	Confirmed LTF	0.0050
G-007	G-007	0.0073	Confirmed LTF	0.0073
MADISON	MADISON	0.0020	Confirmed LTF	0.0020
GIBSON	GIBSON	0.0038	Confirmed LTF	0.0038
BLUEG	BLUEG	0.0122	Confirmed LTF	0.0122
TRIMBLE	TRIMBLE	0.0039	Confirmed LTF	0.0039
CATAWBA	CATAWBA	0.0021	Confirmed LTF	0.0021

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
99005937	200051	ROCKSPGS	PJM	200065	PCHBTM2S	PJM	1	PJM500_PS_P2-3_NFRD5_910	breaker	2905.0	128.66	130.19	DC	96.37

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200052	ROCKSP 1	16.6890	50/50	16.6890
200053	ROCKSP 2	16.6890	50/50	16.6890
200054	ROCKSP 3	16.8421	50/50	16.8421
200055	ROCKSP 4	16.8421	50/50	16.8421
200062	SALEM G3	16.2247	Adder	19.09
227928	V4-067E	0.4406	Adder	0.52
228102	BLE#2 ST (Deactivation : 30/04/2019)	42.5055	Adder	50.01
228261	V4-054E	1.7764	Adder	2.09
228334	MANNMILG	2.3111	Adder	2.72
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.4777	Adder	0.56
228357	V2-046E	3.5420	Adder	4.17
228712	V2-041E	0.7384	Adder	0.87
228721	V2-035E	0.3430	Adder	0.4
228733	AB1-119 E	0.2013	Adder	0.24
231708	CHRIST3	3.9092	Adder	4.6
231903	GEN4	4.5764	Adder	5.38
231904	DC1 NUG	11.8569	Adder	13.95
231905	DC2 NUG	11.8569	Adder	13.95
231911	HR5	11.3695	50/50	11.3695
231912	HR6	11.3695	50/50	11.3695
231913	HR7	11.3695	50/50	11.3695
231914	HR8	17.2816	50/50	17.2816
232003	CARTANZA	27.4782	50/50	27.4782
232405	W1-003 E	1.9515	Adder	2.3
232407	W1-004 E	1.9515	Adder	2.3
232409	W1-005 E	1.9515	Adder	2.3
232411	W1-006 E	1.9515	Adder	2.3
232412	X1-032 E	1.7334	Adder	2.04
232418	X3-008 E	5.3366	Adder	6.28
232423	X3-066 E	1.5503	Adder	1.82
232425	Y1-079 E	2.6117	Adder	3.07
232427	Y1-080 E	0.9063	Adder	1.07
232429	Y3-058 E	4.0261	Adder	4.74
232433	Z2-076 E	0.8725	Adder	1.03
232435	Z2-077 E	0.8725	Adder	1.03
232436	AB1-176 C	0.6293	Adder	0.74
232922	MR3 (Deactivation : 01/06/2021)	44.6678	Adder	52.55
902092	W1-130E	1.5601	Adder	1.84
902432	W2-030 E	1.6428	Adder	1.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
913271	Y1-065 C	132.2819	50/50	132.2819
917082	Z2-012 E	5.3751	Adder	6.32
919831	AA2-069 (Suspended)	197.5019	Adder	232.36
923153	AB1-116 E	0.2133	Adder	0.25
923282	AB1-137 C	1.8237	Adder	2.15
923283	AB1-137 E	0.7816	Adder	0.92
923322	AB1-141 C OP	5.6214	Adder	6.61
923323	AB1-141 E OP	2.6233	Adder	3.09
923332	AB1-142 C OP	5.6214	Adder	6.61
923532	AB1-169AC	150.5350	Adder	177.1
923603	AB1-176 E	1.0377	Adder	1.22
923921	AB2-032 C	5.6630	Adder	6.66
923922	AB2-032 E	2.6649	Adder	3.14
923951	AB2-036 C	14.7305	Adder	17.33
923952	AB2-036 E	24.1005	Adder	28.35
923961	AB2-037 C	33.1367	Adder	38.98
923962	AB2-037 E	54.1333	Adder	63.69
924051	AB2-049 C	1.0480	Adder	1.23
924052	AB2-049 E	1.7099	Adder	2.01
924531	AB2-102 C	68.4675	Adder	80.55
924532	AB2-102 E	1.5215	Adder	1.79
924681	AB2-120 C OP	16.4727	Adder	19.38
924682	AB2-120 E OP	26.8765	Adder	31.62
924701	AB2-122 C	0.1904	Adder	0.22
924702	AB2-122 E	0.3264	Adder	0.38
924781	AB2-130 C OP	13.9977	Adder	16.47
924782	AB2-130 E OP	22.8383	Adder	26.87
924801	AB2-133 C OP	10.1386	Adder	11.93
924802	AB2-133 E OP	12.8588	Adder	15.13
924821	AB2-135 C	12.4478	Adder	14.64
924822	AB2-135 E	14.1963	Adder	16.7
924831	AB2-136 C	10.6939	Adder	12.58
924832	AB2-136 E	11.3407	Adder	13.34
924971	AB2-153 C	3.1646	Adder	3.72
924972	AB2-153 E	5.1633	Adder	6.07
925151	AB2-172 C OP	8.1771	Adder	9.62
925152	AB2-172 E OP	13.3415	Adder	15.7
925251	AB2-179 C OP	14.7173	Adder	17.31
925252	AB2-179 E OP	4.8536	Adder	5.71
925261	AB2-180 C	6.0608	Adder	7.13
925262	AB2-180 E	2.5975	Adder	3.06
925271	AB2-185 C OP	5.8973	Adder	6.94
925272	AB2-185 E OP	2.5274	Adder	2.97
926131	AC1-091 C	3.2822	Adder	3.86
926132	AC1-091 E	5.3828	Adder	6.33
926141	AC1-092 C	3.2822	Adder	3.86
926142	AC1-092 E	5.3828	Adder	6.33
926151	AC1-093 C	3.1071	Adder	3.66
926152	AC1-093 E	5.1202	Adder	6.02
926161	AC1-094 C	2.6257	Adder	3.09
926162	AC1-094 E	4.3325	Adder	5.1
927031	AC1-190 C	15.0684	Adder	17.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927032	AC1-190 E	6.4579	Adder	7.6
927191	AC1-213 C	1.3862	Adder	1.63
927192	AC1-213 E	0.9097	Adder	1.07
930201	AB1-056 C	27.9738	Adder	32.91
930202	AB1-056 E	79.6645	Adder	93.72
930881	AB1-137 C	1.8237	Adder	2.15
930882	AB1-137 E	0.7816	Adder	0.92
930932	AB1-142 E OP	2.6233	Adder	3.09
932081	AC2-018 C1	0.5629	50/50	0.5629
932082	AC2-018 E1	21.2116	50/50	21.2116
932091	AC2-018 C2	0.5629	50/50	0.5629
932092	AC2-018 E2	21.2116	50/50	21.2116
932161	AC2-023 C	11.4670	Adder	13.49
932162	AC2-023 E	8.3515	Adder	9.83
933631	AC2-185 C	6.6519	Adder	7.83
933632	AC2-185 E	10.8530	Adder	12.77
933641	AC2-186 C	8.2210	Adder	9.67
933642	AC2-186 E	13.4132	Adder	15.78
933962	AD1-019 E	2.0666	Adder	2.43
936451	AD2-059 C	0.0915	Adder	0.11
936452	AD2-059 E	0.2872	Adder	0.34
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.1461	Adder	0.17
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.2013	Adder	0.24
936501	AD2-065 C	0.2923	Adder	0.34
936502	AD2-065 E	0.4032	Adder	0.47
936611	AD2-076 C O1	7.7313	Adder	9.1
936612	AD2-076 E O1	12.6143	Adder	14.84
937011	AD2-135 C	0.1697	Adder	0.2
937012	AD2-135 E	0.2885	Adder	0.34
937281	AD2-167	7.3177	50/50	7.3177
938421	AE1-061 C	0.7527	Adder	0.89
938422	AE1-061 E	0.7527	Adder	0.89
938431	AE1-062 C	2.7281	Adder	3.21
938432	AE1-062 E	2.7281	Adder	3.21
938651	AE1-087 C	6.8860	Adder	8.1
938652	AE1-087 E	1.7215	Adder	2.03
938781	AE1-104 C O1	34.3096	Adder	40.36
938782	AE1-104 E O1	87.7807	Adder	103.27
938811	AE1-107 C	12.1342	Adder	14.28
938812	AE1-107 E	8.6505	Adder	10.18
938871	AE1-115 C	2.7742	Adder	3.26
938872	AE1-115 E	2.7742	Adder	3.26
938891	AE1-117 C O1	18.0199	Adder	21.2
938892	AE1-117 E O1	47.9806	Adder	56.45
938901	AE1-118 C O1 (Withdrawn : 07/10/2020)	18.0195	Adder	21.2
938902	AE1-118 E O1 (Withdrawn : 07/10/2020)	47.9797	Adder	56.45
939151	AE1-145	8.6698	Adder	10.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939301	AE1-161 C	5.4777	Adder	6.44
939302	AE1-161 E	8.2166	Adder	9.67
939501	AE1-179 C O1	10.1819	Adder	11.98
939502	AE1-179 E O1	7.1855	Adder	8.45
939621	AE1-192 C O1	20.3733	Adder	23.97
939622	AE1-192 E O1	9.9699	Adder	11.73
939821	AE1-218 C O1	0.2175	Adder	0.26
939822	AE1-218 E O1	0.3262	Adder	0.38
939831	AE1-219 C O1	0.4893	Adder	0.58
939832	AE1-219 E O1	0.7068	Adder	0.83
939931	AE1-229 C O1	24.8457	Adder	29.23
939932	AE1-229 E O1	16.8337	Adder	19.8
940001	AE1-240 C O1	8.4379	Adder	9.93
940002	AE1-240 E O1	6.0229	Adder	7.09
940361	AE2-020 C	28.7011	Adder	33.77
940362	AE2-020 E	134.3805	Adder	158.09
940371	AE2-021 C	28.7011	Adder	33.77
940372	AE2-021 E	134.3805	Adder	158.09
940381	AE2-022 C	16.7423	Adder	19.7
940382	AE2-022 E	78.3886	Adder	92.22
940741	AE2-061	0.9851	50/50	0.9851
941021	AE2-093 C	8.4185	Adder	9.9
941022	AE2-093 E	13.3757	Adder	15.74
941181	AE2-112 C	2.6823	Adder	3.16
941182	AE2-112 E	4.3764	Adder	5.15
942101	AE2-222 C O1	23.1841	Adder	27.28
942102	AE2-222 E O1	58.2399	Adder	68.52
942381	AE2-251 C	90.9245	Adder	106.97
942382	AE2-251 E	232.6501	Adder	273.71
942441	AE2-257 C	14.3299	Adder	16.86
942442	AE2-257 E	37.7788	Adder	44.45
943071	AE2-334 C	7.8723	Adder	9.26
943072	AE2-334 E	4.1967	Adder	4.94
943361	AF1-007 C	0.8253	Adder	0.97
943362	AF1-007 E	2.3456	Adder	2.76
943441	AF1-015 C	2.6922	Adder	3.17
943442	AF1-015 E	3.7178	Adder	4.37
943651	AF1-036 C	3.4878	Adder	4.1
943652	AF1-036 E	4.8165	Adder	5.67
943732	AF1-041 E	0.6506	Adder	0.77
944921	AF1-157 C O1	6.5061	Adder	7.65
944922	AF1-157 E O1	4.3374	Adder	5.1
944951	AF1-160 C	2.7281	Adder	3.21
944952	AF1-160 E	2.8645	Adder	3.37
945431	AF1-208 C O1	7.6664	Adder	9.02
945432	AF1-208 E O1	5.1110	Adder	6.01
945661	AF1-231 C	3.2944	Adder	3.88
945662	AF1-231 E	4.9416	Adder	5.81
945731	AF1-238 C	14.9050	Adder	17.54
945732	AF1-238 E	22.3575	Adder	26.3
945741	AF1-239 C	3.5071	Adder	4.13
945742	AF1-239 E	5.2606	Adder	6.19

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945781	AF1-243	2.1674	Adder	2.55
945791	AF1-244	3.4666	Adder	4.08
945931	AF1-258	1.3853	Adder	1.63
945941	AF1-259	0.3334	Adder	0.39
945971	AF1-262	0.2490	Adder	0.29
946041	AF1-269 (Withdrawn : 05/12/2020)	4.7471	Adder	5.58
957221	AF2-016 C	17.3652	Adder	38.55
957222	AF2-016 E	26.0477	Adder	57.82
957251	AF2-019 C	2.4710	Adder	5.49
957252	AF2-019 E	3.7066	Adder	8.23
957261	AF2-020 C	1.2145	Adder	2.7
957262	AF2-020 E	1.8218	Adder	4.04
957281	AF2-022 C	3.1768	Adder	7.05
957282	AF2-022 E	4.7653	Adder	10.58
957291	AF2-023 C O1	2.9406	Adder	6.53
957292	AF2-023 E O1	4.4109	Adder	9.79
957311	AF2-025 C	1.1550	Adder	2.56
957312	AF2-025 E	1.7325	Adder	3.85
957321	AF2-026 C	1.8860	Adder	4.19
957322	AF2-026 E	2.8291	Adder	6.28
957611	AF2-055 C	8.0410	Adder	17.85
957612	AF2-055 E	3.4461	Adder	7.65
957641	AF2-058	0.3796	Adder	0.84
957661	AF2-060	2.0678	Adder	4.59
957671	AF2-061 O1	9.1900	Adder	20.4
958151	AF2-109 C	2.1843	Adder	4.85
958152	AF2-109 E	2.1843	Adder	4.85
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.6890	Adder	1.53
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	81.9933	Adder	182.01
958811	AF2-172 C	0.5819	Adder	1.29
958812	AF2-172 E	0.9494	Adder	2.11
959021	AF2-193 C O1	27.3961	Adder	60.81
959022	AF2-193 E O1	73.9003	Adder	164.04
959031	AF2-194 C O1	27.3961	Adder	60.81
959032	AF2-194 E O1	73.9003	Adder	164.04
959051	AF2-196 C	2.0713	Adder	4.6
959052	AF2-196 E	4.8331	Adder	10.73
959111	AF2-202 C	0.1731	Adder	0.38
959112	AF2-202 E	0.2369	Adder	0.53
959161	AF2-207 C O1	4.6291	Adder	10.28
959162	AF2-207 E O1	6.9437	Adder	15.41
959571	AF2-248 C	0.7807	Adder	1.73
959572	AF2-248 E	0.8725	Adder	1.94
959581	AF2-249 C	0.1378	Adder	0.31
959582	AF2-249 E	0.5511	Adder	1.22
959591	AF2-250 C	0.2526	Adder	0.56
959592	AF2-250 E	0.1952	Adder	0.43
960221	AF2-313 C	2.8051	Adder	6.23
960222	AF2-313 E	1.5903	Adder	3.53

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960341	AF2-325 C	0.9592	Adder	2.13
960342	AF2-325 E	1.3246	Adder	2.94
960671	AF2-358 C O1	13.7275	Adder	30.47
960672	AF2-358 E O1	9.1516	Adder	20.31
960871	AF2-378 C	0.2536	Adder	0.56
960872	AF2-378 E	0.3518	Adder	0.78
960881	AF2-379 C	0.3766	Adder	0.84
960882	AF2-379 E	0.5189	Adder	1.15
960941	AF2-385 C O1	11.0218	Adder	24.47
960942	AF2-385 E O1	6.1997	Adder	13.76
960961	AF2-387 C O1	14.9938	Adder	33.28
960962	AF2-387 E O1	7.5194	Adder	16.69
961181	AF2-409 O1	22.9205	Adder	50.88
999905	MARINGEN 2	1.0891	Adder	1.28
999906	PVILLEG 2	0.4607	Adder	0.54
NEWTON	NEWTON	5.7851	Confirmed LTF	5.7851
FARMERCITY	FARMERCITY	0.3024	Confirmed LTF	0.3024
G-007A	G-007A	25.6916	Confirmed LTF	25.6916
VFT	VFT	55.8505	Confirmed LTF	55.8505
CALDERWOOD	CALDERWOOD	2.7509	Confirmed LTF	2.7509
PRAIRIE	PRAIRIE	13.9689	Confirmed LTF	13.9689
CHEOAH	CHEOAH	2.7728	Confirmed LTF	2.7728
EDWARDS	EDWARDS	1.8767	Confirmed LTF	1.8767
TILTON	TILTON	3.3793	Confirmed LTF	3.3793
GIBSON	GIBSON	2.9358	Confirmed LTF	2.9358
BLUEG	BLUEG	9.3362	Confirmed LTF	9.3362
TRIMBLE	TRIMBLE	2.9917	Confirmed LTF	2.9917
CATAWBA	CATAWBA	1.9831	Confirmed LTF	1.9831

11.6.11 Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
99005834	206294	28LARRABEE	JCP&L	206309	28SMITHBRG	JCP&L	2	JC-P2-3-JCC-230-15F	breaker	813.0	160.34	161.83	DC	26.75

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206271	28MCRC/REC	1.0635	Adder	1.25
206280	28LAKEHURS	0.7655	50/50	0.7655
206306	28LKWD G1	5.1218	50/50	5.1218
206308	28LKWD G2	5.1218	50/50	5.1218
206312	28LKWD G3	3.7106	50/50	3.7106
206325	28O C GEN (Deactivation : 17/09/2018)	57.4750	Adder	67.62
206366	28LKWD CT1	10.3235	50/50	10.3235
206367	28LKWD CT2	10.3235	50/50	10.3235
206370	LKWD CT3	71.2060	50/50	71.2060
206412	28R11	31.3375	Adder	36.87
207143	28BYD_X4-031	0.3462	Adder	0.41
207145	28FRN_Y2-051	0.1032	50/50	0.1032
207148	28MDF_W3-079	0.1447	50/50	0.1447
207400	28AA1-060 E	2.3542	Adder	2.77
207419	AB2-139 E	-0.0276	Adder	-0.03
227928	V4-067E	0.1293	Adder	0.15
228102	BLE#2 ST (Deactivation : 30/04/2019)	9.9677	Adder	11.73
901912	W1-112E OP1	0.3069	Adder	0.36
901982	W1-119 E	1.0538	Adder	1.24
901992	W1-120E	1.0538	Adder	1.24
902032	W1-124E	1.7146	Adder	2.02
902082	W1-129E	0.5531	Adder	0.65
902322	W2-019 E	0.6524	Adder	0.77
902432	W2-030 E	0.4583	Adder	0.54
902952	W2-082 E OP1	1.9000	Adder	2.24
903982	W3-079 E	1.3871	50/50	1.3871
905252	W4-025 E	0.7850	Adder	0.92
905502	W4-060 E OP1	0.4647	Adder	0.55
907082	X1-037 E	1.2820	Adder	1.51
907272	X1-085 E	0.3061	Adder	0.36
912102	X4-015 E	0.5564	Adder	0.65
914092	Y2-051 E	0.9757	50/50	0.9757
917612	Z2-102 E	1.5531	Adder	1.83
919662	AA2-048 E	2.2068	50/50	2.2068
920732	AA2-184 E	1.8523	Adder	2.18
923292	AB1-138 C	0.1955	50/50	0.1955
923293	AB1-138 E	1.8886	50/50	1.8886
923463	AB1-163 E	1.2288	Adder	1.45
923791	AB2-014	0.4974	50/50	0.4974

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924701	AB2-122 C	0.0558	Adder	0.07
924702	AB2-122 E	0.0957	Adder	0.11
930001	AB1-001 C	0.0824	Adder	0.1
930002	AB1-001 E	0.1354	Adder	0.16
933962	AD1-019 E	0.5928	Adder	0.7
934351	AD1-059	0.9151	50/50	0.9151
938781	AE1-104 C O1	8.0457	Adder	9.47
938782	AE1-104 E O1	20.5849	Adder	24.22
939121	AE1-142 C O1	2.6794	50/50	2.6794
939122	AE1-142 E O1	3.8557	50/50	3.8557
939981	AE1-238 C	39.6232	Adder	46.62
939982	AE1-238 E	104.0769	Adder	122.44
940161	AE2-000 C O1	58.6255	Adder	68.97
940162	AE2-000 E O1	150.0025	Adder	176.47
940361	AE2-020 C	8.9814	Adder	10.57
940362	AE2-020 E	42.0514	Adder	49.47
940371	AE2-021 C	8.9814	Adder	10.57
940372	AE2-021 E	42.0514	Adder	49.47
940381	AE2-022 C	5.2391	Adder	6.16
940382	AE2-022 E	24.5300	Adder	28.86
940401	AE2-024 C O1	57.6291	50/50	57.6291
940402	AE2-024 E O1	269.8134	50/50	269.8134
940411	AE2-025 C	29.0912	50/50	29.0912
940412	AE2-025 E	136.1893	50/50	136.1893
940691	AE2-056 C	0.1913	Adder	0.23
940692	AE2-056 E	0.1674	Adder	0.2
940701	AE2-057 C	0.0357	Adder	0.04
940702	AE2-057 E	0.0357	Adder	0.04
940921	AE2-081 C	0.2033	Adder	0.24
940922	AE2-081 E	0.2092	Adder	0.25
942101	AE2-222 C O1	6.7002	Adder	7.88
942102	AE2-222 E O1	16.8312	Adder	19.8
942381	AE2-251 C	28.4528	Adder	33.47
942382	AE2-251 E	72.8026	Adder	85.65
943521	AF1-023	1.3413	Adder	1.58
943561	AF1-027	0.2616	Adder	0.31
943732	AF1-041 E	0.1899	Adder	0.22
944332	AF1-101 E O1	147.0623	Adder	173.01
944611	AF1-126 C O1	8.8617	Adder	10.43
944612	AF1-126 E O1	35.4467	Adder	41.7
945571	AF1-222 C	24.6984	Adder	29.06
945572	AF1-222 E	65.1141	Adder	76.6
945951	AF1-260	0.3153	50/50	0.3153
957221	AF2-016 C	4.8211	Adder	10.7
957222	AF2-016 E	7.2316	Adder	16.05
957271	AF2-021 C	1.6415	Adder	3.64
957272	AF2-021 E	2.4623	Adder	5.47
957311	AF2-025 C	0.3289	Adder	0.73
957312	AF2-025 E	0.4934	Adder	1.1
957772	AF2-071 BAT	4.7080	Merchant Transmission	4.7080
957781	AF2-072 C	9.2813	50/50	9.2813
957782	AF2-072 E	9.2813	50/50	9.2813

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958761	AF2-167 C O1	0.2790	Adder	0.62
958762	AF2-167 E O1	0.3854	Adder	0.86
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.1616	Adder	0.36
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	19.2277	Adder	42.68
959151	AF2-206 C O1	2.0544	50/50	2.0544
959152	AF2-206 E O1	2.8355	50/50	2.8355
959631	AF2-254 C	0.4093	Adder	0.91
959632	AF2-254 E	0.5652	Adder	1.25
999905	MARINGEN 2	0.3108	Adder	0.37
999906	PVILLEG 2	0.1340	Adder	0.16
NEWTON	NEWTON	0.3417	Confirmed LTF	0.3417
FARMERCITY	FARMERCITY	0.0177	Confirmed LTF	0.0177
G-007A	G-007A	16.1424	Confirmed LTF	16.1424
CALDERWOOD	CALDERWOOD	0.1521	Confirmed LTF	0.1521
NY	NY	0.5591	Confirmed LTF	0.5591
PRAIRIE	PRAIRIE	0.8162	Confirmed LTF	0.8162
O-066	O-066	5.7926	Confirmed LTF	5.7926
CHEOAH	CHEOAH	0.1532	Confirmed LTF	0.1532
EDWARDS	EDWARDS	0.1117	Confirmed LTF	0.1117
TILTON	TILTON	0.2010	Confirmed LTF	0.2010
MADISON	MADISON	0.0060	Confirmed LTF	0.0060
GIBSON	GIBSON	0.1736	Confirmed LTF	0.1736
BLUEG	BLUEG	0.5520	Confirmed LTF	0.5520
TRIMBLE	TRIMBLE	0.1770	Confirmed LTF	0.1770
CATAWBA	CATAWBA	0.1040	Confirmed LTF	0.1040

11.6.12 Index 12

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
99005839	206294	28LARRABEE	JCP&L	206309	28SMITHBRG	JCP&L	1	JC-P2-3-JCC-230-15G	breaker	817.0	159.55	161.04	DC	26.75

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206271	28MCRC/REC	1.0635	Adder	1.25
206280	28LAKEHURS	0.7655	50/50	0.7655
206306	28LKWD G1	5.1218	50/50	5.1218
206308	28LKWD G2	5.1218	50/50	5.1218
206312	28LKWD G3	3.7106	50/50	3.7106
206325	28O C GEN (Deactivation : 17/09/2018)	57.4750	Adder	67.62
206366	28LKWD CT1	10.3235	50/50	10.3235
206367	28LKWD CT2	10.3235	50/50	10.3235
206370	LKWD CT3	71.2060	50/50	71.2060
206412	28R11	31.3375	Adder	36.87
207143	28BYD_X4-031	0.3462	Adder	0.41
207145	28FRN_Y2-051	0.1032	50/50	0.1032
207148	28MDF_W3-079	0.1447	50/50	0.1447
207400	28AA1-060 E	2.3542	Adder	2.77
207419	AB2-139 E	-0.0276	Adder	-0.03
227928	V4-067E	0.1293	Adder	0.15
228102	BLE#2 ST (Deactivation : 30/04/2019)	9.9677	Adder	11.73
901912	W1-112E OP1	0.3069	Adder	0.36
901982	W1-119 E	1.0538	Adder	1.24
901992	W1-120E	1.0538	Adder	1.24
902032	W1-124E	1.7146	Adder	2.02
902082	W1-129E	0.5531	Adder	0.65
902322	W2-019 E	0.6524	Adder	0.77
902432	W2-030 E	0.4583	Adder	0.54
902952	W2-082 E OP1	1.9000	Adder	2.24
903982	W3-079 E	1.3871	50/50	1.3871
905252	W4-025 E	0.7850	Adder	0.92
905502	W4-060 E OP1	0.4647	Adder	0.55
907082	X1-037 E	1.2820	Adder	1.51
907272	X1-085 E	0.3061	Adder	0.36
912102	X4-015 E	0.5564	Adder	0.65
914092	Y2-051 E	0.9757	50/50	0.9757
917612	Z2-102 E	1.5531	Adder	1.83
919662	AA2-048 E	2.2068	50/50	2.2068
920732	AA2-184 E	1.8523	Adder	2.18
923292	AB1-138 C	0.1955	50/50	0.1955
923293	AB1-138 E	1.8886	50/50	1.8886
923463	AB1-163 E	1.2288	Adder	1.45
923791	AB2-014	0.4974	50/50	0.4974

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924701	AB2-122 C	0.0558	Adder	0.07
924702	AB2-122 E	0.0957	Adder	0.11
930001	AB1-001 C	0.0824	Adder	0.1
930002	AB1-001 E	0.1354	Adder	0.16
933962	AD1-019 E	0.5928	Adder	0.7
934351	AD1-059	0.9151	50/50	0.9151
938781	AE1-104 C O1	8.0457	Adder	9.47
938782	AE1-104 E O1	20.5849	Adder	24.22
939121	AE1-142 C O1	2.6794	50/50	2.6794
939122	AE1-142 E O1	3.8557	50/50	3.8557
939981	AE1-238 C	39.6232	Adder	46.62
939982	AE1-238 E	104.0769	Adder	122.44
940161	AE2-000 C O1	58.6255	Adder	68.97
940162	AE2-000 E O1	150.0025	Adder	176.47
940361	AE2-020 C	8.9814	Adder	10.57
940362	AE2-020 E	42.0514	Adder	49.47
940371	AE2-021 C	8.9814	Adder	10.57
940372	AE2-021 E	42.0514	Adder	49.47
940381	AE2-022 C	5.2391	Adder	6.16
940382	AE2-022 E	24.5300	Adder	28.86
940401	AE2-024 C O1	57.6291	50/50	57.6291
940402	AE2-024 E O1	269.8134	50/50	269.8134
940411	AE2-025 C	29.0912	50/50	29.0912
940412	AE2-025 E	136.1893	50/50	136.1893
940691	AE2-056 C	0.1913	Adder	0.23
940692	AE2-056 E	0.1674	Adder	0.2
940701	AE2-057 C	0.0357	Adder	0.04
940702	AE2-057 E	0.0357	Adder	0.04
940921	AE2-081 C	0.2033	Adder	0.24
940922	AE2-081 E	0.2092	Adder	0.25
942101	AE2-222 C O1	6.7002	Adder	7.88
942102	AE2-222 E O1	16.8312	Adder	19.8
942381	AE2-251 C	28.4528	Adder	33.47
942382	AE2-251 E	72.8026	Adder	85.65
943521	AF1-023	1.3413	Adder	1.58
943561	AF1-027	0.2616	Adder	0.31
943732	AF1-041 E	0.1899	Adder	0.22
944332	AF1-101 E O1	147.0623	Adder	173.01
944611	AF1-126 C O1	8.8617	Adder	10.43
944612	AF1-126 E O1	35.4467	Adder	41.7
945571	AF1-222 C	24.6984	Adder	29.06
945572	AF1-222 E	65.1141	Adder	76.6
945951	AF1-260	0.3153	50/50	0.3153
957221	AF2-016 C	4.8211	Adder	10.7
957222	AF2-016 E	7.2316	Adder	16.05
957271	AF2-021 C	1.6415	Adder	3.64
957272	AF2-021 E	2.4623	Adder	5.47
957311	AF2-025 C	0.3289	Adder	0.73
957312	AF2-025 E	0.4934	Adder	1.1
957772	AF2-071 BAT	4.7080	Merchant Transmission	4.7080
957781	AF2-072 C	9.2813	50/50	9.2813
957782	AF2-072 E	9.2813	50/50	9.2813

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958761	AF2-167 C O1	0.2790	Adder	0.62
958762	AF2-167 E O1	0.3854	Adder	0.86
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.1616	Adder	0.36
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	19.2277	Adder	42.68
959151	AF2-206 C O1	2.0544	50/50	2.0544
959152	AF2-206 E O1	2.8355	50/50	2.8355
959631	AF2-254 C	0.4093	Adder	0.91
959632	AF2-254 E	0.5652	Adder	1.25
999905	MARINGEN 2	0.3108	Adder	0.37
999906	PVILLEG 2	0.1340	Adder	0.16
NEWTON	NEWTON	0.3417	Confirmed LTF	0.3417
FARMERCITY	FARMERCITY	0.0177	Confirmed LTF	0.0177
G-007A	G-007A	16.1424	Confirmed LTF	16.1424
CALDERWOOD	CALDERWOOD	0.1521	Confirmed LTF	0.1521
NY	NY	0.5591	Confirmed LTF	0.5591
PRAIRIE	PRAIRIE	0.8162	Confirmed LTF	0.8162
O-066	O-066	5.7926	Confirmed LTF	5.7926
CHEOAH	CHEOAH	0.1532	Confirmed LTF	0.1532
EDWARDS	EDWARDS	0.1117	Confirmed LTF	0.1117
TILTON	TILTON	0.2010	Confirmed LTF	0.2010
MADISON	MADISON	0.0060	Confirmed LTF	0.0060
GIBSON	GIBSON	0.1736	Confirmed LTF	0.1736
BLUEG	BLUEG	0.5520	Confirmed LTF	0.5520
TRIMBLE	TRIMBLE	0.1770	Confirmed LTF	0.1770
CATAWBA	CATAWBA	0.1040	Confirmed LTF	0.1040

11.6.13 Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
99007393	206294	28LARRABEE	JCP&L	206286	28ATLANTIC	JCP&L	1	JC-P7-1-JCC-230-7A	tower	1147.0	105.62	106.7	DC	27.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206280	28LAKEHURS	0.7044	50/50	0.7044
206306	28LKWD G1	4.7672	50/50	4.7672
206308	28LKWD G2	4.7672	50/50	4.7672
206312	28LKWD G3	3.4537	50/50	3.4537
206325	28O C GEN (Deactivation : 17/09/2018)	53.7871	Adder	63.28
206366	28LKWD CT1	9.6088	50/50	9.6088
206367	28LKWD CT2	9.6088	50/50	9.6088
206370	LKWD CT3	66.2760	50/50	66.2760
206414	28X4-005E	-1.4909	Adder	-1.75
207400	28AA1-060 E	2.3247	Adder	2.73
219288	REEVES ST E	0.4290	Adder	0.5
219652	LUMB23SP1_E	0.0131	Adder	0.02
219656	LUMB23SP2_E	0.0131	Adder	0.02
219687	LUMSOLAR_N E	0.1321	Adder	0.16
227928	V4-067E	0.1312	Adder	0.15
228102	BLE#2 ST (Deactivation : 30/04/2019)	10.3486	Adder	12.17
901982	W1-119 E	0.9920	Adder	1.17
901992	W1-120E	0.9920	Adder	1.17
902082	W1-129E	0.5222	Adder	0.61
902322	W2-019 E	0.6162	Adder	0.72
902432	W2-030 E	0.4676	Adder	0.55
902952	W2-082 E OP1	1.7929	Adder	2.11
903982	W3-079 E	0.9425	Adder	1.11
905252	W4-025 E	0.7412	Adder	0.87
907272	X1-085 E	0.3189	Adder	0.38
912102	X4-015 E	0.5252	Adder	0.62
914092	Y2-051 E	0.7290	Adder	0.86
917612	Z2-102 E	1.4620	Adder	1.72
919662	AA2-048 E	1.4995	Adder	1.76
923292	AB1-138 C	0.1799	50/50	0.1799
923293	AB1-138 E	1.7378	50/50	1.7378
923463	AB1-163 E	1.0949	Adder	1.29
923791	AB2-014	0.4630	50/50	0.4630
924701	AB2-122 C	0.0567	Adder	0.07
924702	AB2-122 E	0.0972	Adder	0.11
930001	AB1-001 C	0.0821	Adder	0.1
930002	AB1-001 E	0.1350	Adder	0.16
933962	AD1-019 E	0.6032	Adder	0.71
934351	AD1-059	0.8517	50/50	0.8517
938781	AE1-104 C O1	8.3532	Adder	9.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938782	AE1-104 E O1	21.3716	Adder	25.14
939121	AE1-142 C O1	2.4962	50/50	2.4962
939122	AE1-142 E O1	3.5920	50/50	3.5920
940161	AE2-000 C O1	54.8638	Adder	64.55
940162	AE2-000 E O1	140.3777	Adder	165.15
940361	AE2-020 C	9.0646	Adder	10.66
940362	AE2-020 E	42.4411	Adder	49.93
940371	AE2-021 C	9.0646	Adder	10.66
940372	AE2-021 E	42.4411	Adder	49.93
940381	AE2-022 C	5.2877	Adder	6.22
940382	AE2-022 E	24.7573	Adder	29.13
940401	AE2-024 C O1	53.6040	50/50	53.6040
940402	AE2-024 E O1	250.9682	50/50	250.9682
940411	AE2-025 C	27.0593	50/50	27.0593
940412	AE2-025 E	126.6772	50/50	126.6772
942101	AE2-222 C O1	6.8134	Adder	8.02
942102	AE2-222 E O1	17.1158	Adder	20.14
942381	AE2-251 C	28.7165	Adder	33.78
942382	AE2-251 E	73.4773	Adder	86.44
943561	AF1-027	0.2583	Adder	0.3
943732	AF1-041 E	0.1929	Adder	0.23
944332	AF1-101 E O1	137.6261	Adder	161.91
944611	AF1-126 C O1	8.4197	Adder	9.91
944612	AF1-126 E O1	33.6787	Adder	39.62
945201	AF1-185 1	-0.3355	Adder	-0.39
945211	AF1-185 2	-0.0745	Adder	-0.09
945951	AF1-260	0.2142	Adder	0.25
957221	AF2-016 C	4.9222	Adder	10.93
957222	AF2-016 E	7.3832	Adder	16.39
957251	AF2-019 C	0.5147	Adder	1.14
957252	AF2-019 E	0.7720	Adder	1.71
957271	AF2-021 C	1.5552	Adder	3.45
957272	AF2-021 E	2.3328	Adder	5.18
957311	AF2-025 C	0.3349	Adder	0.74
957312	AF2-025 E	0.5024	Adder	1.12
957781	AF2-072 C	8.6330	50/50	8.6330
957782	AF2-072 E	8.6330	50/50	8.6330
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.1678	Adder	0.37
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	19.9626	Adder	44.31
959151	AF2-206 C O1	0.7607	Adder	1.69
959152	AF2-206 E O1	1.0499	Adder	2.33
959631	AF2-254 C	0.3860	Adder	0.86
959632	AF2-254 E	0.5330	Adder	1.18
961222	AF2-413 BAT	11.6202	Merchant Transmission	11.6202
999905	MARINGEN 2	0.3164	Adder	0.37
999906	PVILLEG 2	0.1361	Adder	0.16
NEWTON	NEWTON	0.0741	Confirmed LTF	0.0741
FARMERCITY	FARMERCITY	0.0038	Confirmed LTF	0.0038
CALDERWOOD	CALDERWOOD	0.0253	Confirmed LTF	0.0253
NY	NY	0.9628	Confirmed LTF	0.9628

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
PRAIRIE	PRAIRIE	0.1705	Confirmed LTF	0.1705
O-066	O-066	18.1574	Confirmed LTF	18.1574
CHEOAH	CHEOAH	0.0250	Confirmed LTF	0.0250
EDWARDS	EDWARDS	0.0248	Confirmed LTF	0.0248
TILTON	TILTON	0.0447	Confirmed LTF	0.0447
G-007	G-007	9.1198	Confirmed LTF	9.1198
MADISON	MADISON	0.0101	Confirmed LTF	0.0101
GIBSON	GIBSON	0.0377	Confirmed LTF	0.0377
BLUEG	BLUEG	0.1198	Confirmed LTF	0.1198
TRIMBLE	TRIMBLE	0.0384	Confirmed LTF	0.0384
CATAWBA	CATAWBA	0.0126	Confirmed LTF	0.0126

11.6.14 Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
99007217	206297	28MANITOU	JCP&L	206319	28WHITINGS	JCP&L	1	JC-P7-1-JCC-230-10A	tower	817.0	180.16	180.3	DC	39.41

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206306	28LKWD G1	7.9934	50/50	7.9934
206308	28LKWD G2	7.9934	50/50	7.9934
206312	28LKWD G3	5.7910	50/50	5.7910
206325	28O C GEN (Deactivation : 17/09/2018)	114.1085	50/50	114.1085
206360	28O CRK C1	2.9770	50/50	2.9770
206361	28O CRK C2	1.9688	50/50	1.9688
206366	28LKWD CT1	16.1114	50/50	16.1114
206367	28LKWD CT2	16.1114	50/50	16.1114
206370	LKWD CT3	111.1280	50/50	111.1280
227928	V4-067E	0.1924	Adder	0.23
228102	BLE#2 ST (Deactivation : 30/04/2019)	14.3961	Adder	16.94
902432	W2-030 E	0.6773	Adder	0.8
923293	AB1-138 E	0.7359	Adder	0.87
923791	AB2-014	0.7763	50/50	0.7763
924701	AB2-122 C	0.0831	Adder	0.1
924702	AB2-122 E	0.1425	Adder	0.17
930001	AB1-001 C	0.1263	Adder	0.15
930002	AB1-001 E	0.2076	Adder	0.24
933962	AD1-019 E	0.8784	Adder	1.03
934351	AD1-059	1.4281	50/50	1.4281
938781	AE1-104 C O1	11.6202	Adder	13.67
938782	AE1-104 E O1	29.7302	Adder	34.98
939121	AE1-142 C O1	3.9315	50/50	3.9315
939122	AE1-142 E O1	5.6575	50/50	5.6575
940161	AE2-000 C O1	116.3927	50/50	116.3927
940162	AE2-000 E O1	297.8089	50/50	297.8089
940361	AE2-020 C	13.4951	Adder	15.88
940362	AE2-020 E	63.1851	Adder	74.34
940371	AE2-021 C	13.4951	Adder	15.88
940372	AE2-021 E	63.1851	Adder	74.34
940381	AE2-022 C	7.8721	Adder	9.26
940382	AE2-022 E	36.8580	Adder	43.36
942101	AE2-222 C O1	9.9334	Adder	11.69
942102	AE2-222 E O1	24.9532	Adder	29.36
942381	AE2-251 C	42.7522	Adder	50.3
942382	AE2-251 E	109.3910	Adder	128.7
943732	AF1-041 E	0.2819	Adder	0.33
944332	AF1-101 E O1	291.9715	50/50	291.9715
957221	AF2-016 C	7.1013	Adder	15.76

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957222	AF2-016 E	10.6520	Adder	23.64
957251	AF2-019 C	0.6836	Adder	1.52
957252	AF2-019 E	1.0254	Adder	2.28
957271	AF2-021 C	2.7222	Adder	6.04
957272	AF2-021 E	9.0641	50/50	9.0641
957311	AF2-025 C	0.4870	Adder	1.08
957312	AF2-025 E	0.7305	Adder	1.62
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2334	Adder	0.52
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	27.7700	Adder	61.64
999905	MARINGEN 2	0.4602	Adder	0.54
999906	PVILLEG 2	0.1987	Adder	0.23
NEWTON	NEWTON	0.2149	Confirmed LTF	0.2149
FARMERCITY	FARMERCITY	0.0111	Confirmed LTF	0.0111
CALDERWOOD	CALDERWOOD	0.0949	Confirmed LTF	0.0949
NY	NY	0.5663	Confirmed LTF	0.5663
PRAIRIE	PRAIRIE	0.5140	Confirmed LTF	0.5140
O-066	O-066	9.5491	Confirmed LTF	9.5491
CHEOAH	CHEOAH	0.0951	Confirmed LTF	0.0951
EDWARDS	EDWARDS	0.0707	Confirmed LTF	0.0707
TILTON	TILTON	0.1273	Confirmed LTF	0.1273
G-007	G-007	3.0846	Confirmed LTF	3.0846
MADISON	MADISON	0.0060	Confirmed LTF	0.0060
GIBSON	GIBSON	0.1097	Confirmed LTF	0.1097
BLUEG	BLUEG	0.3489	Confirmed LTF	0.3489
TRIMBLE	TRIMBLE	0.1119	Confirmed LTF	0.1119
CATAWBA	CATAWBA	0.0637	Confirmed LTF	0.0637

11.6.15 Index 15

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
99007250	206302	28OYSTER C	JCP&L	227955	CEDAR	AE	1	JC-P7-1-JCC-230-10A	tower	564.0	149.29	153.71	DC	47.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206306	28LKWD G1	4.9410	50/50	4.9410
206308	28LKWD G2	4.9410	50/50	4.9410
206312	28LKWD G3	3.5796	50/50	3.5796
206325	28O C GEN (Deactivation : 17/09/2018)	90.7630	50/50	90.7630
206360	28O CRK C1	2.3679	50/50	2.3679
206361	28O CRK C2	1.5660	50/50	1.5660
206366	28LKWD CT1	9.9590	50/50	9.9590
206367	28LKWD CT2	9.9590	50/50	9.9590
206370	LKWD CT3	68.6920	50/50	68.6920
207143	28BYD_X4-031	0.1135	Adder	0.13
207400	28AA1-060 E	1.1359	Adder	1.34
227928	V4-067E	-0.2305	Adder	-0.27
228261	V4-054E	-0.3469	Adder	-0.41
901982	W1-119 E	0.5531	Adder	0.65
901992	W1-120E	0.5531	Adder	0.65
902082	W1-129E	0.2366	Adder	0.28
902322	W2-019 E	0.2691	Adder	0.32
902952	W2-082 E OP1	0.8470	Adder	1.0
903982	W3-079 E	0.3400	Adder	0.4
905252	W4-025 E	0.3359	Adder	0.4
907082	X1-037 E	0.5839	Adder	0.69
907272	X1-085 E	0.1769	Adder	0.21
912102	X4-015 E	0.2422	Adder	0.28
914092	Y2-051 E	0.2863	Adder	0.34
917612	Z2-102 E	0.8120	Adder	0.96
919662	AA2-048 E	0.5410	Adder	0.64
923293	AB1-138 E	1.2025	Adder	1.41
923463	AB1-163 E	0.6335	Adder	0.75
923791	AB2-014	0.4799	50/50	0.4799
924701	AB2-122 C	-0.0996	Adder	-0.12
934351	AD1-059	0.8827	50/50	0.8827
938423	AE1-061 BAT	0.4548	Merchant Transmission	0.4548
939121	AE1-142 C O1	2.7178	50/50	2.7178
939122	AE1-142 E O1	3.9110	50/50	3.9110
940161	AE2-000 C O1	92.5799	50/50	92.5799
940162	AE2-000 E O1	236.8801	50/50	236.8801
940401	AE2-024 C O1	8.9208	Adder	10.5
940402	AE2-024 E O1	41.7664	Adder	49.14
940411	AE2-025 C	4.5032	Adder	5.3
940412	AE2-025 E	21.0817	Adder	24.8
940691	AE2-056 C	0.0886	Adder	0.1

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
940692	AE2-056 E	0.0775	Adder	0.09
940921	AE2-081 C	0.0941	Adder	0.11
940922	AE2-081 E	0.0969	Adder	0.11
943561	AF1-027	0.1262	Adder	0.15
944332	AF1-101 E O1	232.2370	50/50	232.2370
944611	AF1-126 C O1	2.8271	Adder	3.33
944612	AF1-126 E O1	11.3084	Adder	13.3
945733	AF1-238 BAT	9.6683	Merchant Transmission	9.6683
945743	AF1-239 BAT	2.2749	Merchant Transmission	2.2749
945951	AF1-260	0.0773	Adder	0.09
957223	AF2-016 BAT	25.0632	Merchant Transmission	25.0632
957253	AF2-019 BAT	2.4382	Merchant Transmission	2.4382
957263	AF2-020 BAT	0.6965	Merchant Transmission	0.6965
957273	AF2-021 BAT	17.7912	50/50	17.7912
957283	AF2-022 BAT	2.3813	Merchant Transmission	2.3813
957313	AF2-025 BAT	1.7175	Merchant Transmission	1.7175
957323	AF2-026 BAT	1.3474	Merchant Transmission	1.3474
957781	AF2-072 C	0.7615	Adder	1.69
957782	AF2-072 E	0.7615	Adder	1.69
959151	AF2-206 C O1	0.2807	Adder	0.62
959152	AF2-206 E O1	0.3875	Adder	0.86
959631	AF2-254 C	0.1906	Adder	0.42
959632	AF2-254 E	0.2632	Adder	0.58
999905	MARINGEN 2	-0.5518	Adder	-0.65
999906	PVILLEG 2	-0.2382	Adder	-0.28
NEWTON	NEWTON	0.1322	Confirmed LTF	0.1322
FARMERCITY	FARMERCITY	0.0069	Confirmed LTF	0.0069
G-007A	G-007A	7.9933	Confirmed LTF	7.9933
VFT	VFT	8.7655	Confirmed LTF	8.7655
CALDERWOOD	CALDERWOOD	0.0671	Confirmed LTF	0.0671
PRAIRIE	PRAIRIE	0.3229	Confirmed LTF	0.3229
CHEOAH	CHEOAH	0.0676	Confirmed LTF	0.0676
EDWARDS	EDWARDS	0.0424	Confirmed LTF	0.0424
TILTON	TILTON	0.0762	Confirmed LTF	0.0762
GIBSON	GIBSON	0.0666	Confirmed LTF	0.0666
BLUEG	BLUEG	0.2135	Confirmed LTF	0.2135
TRIMBLE	TRIMBLE	0.0679	Confirmed LTF	0.0679
CATAWBA	CATAWBA	0.0507	Confirmed LTF	0.0507

11.6.16 Index 16

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
99007234	206318	28VANHISVL	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P7-1-JCC-230-12	tower	869.0	152.49	155.75	DC	40.51

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206280	28LAKEHURS	0.4830	50/50	0.4830
206325	28O C GEN (Deactivation : 17/09/2018)	88.2925	50/50	88.2925
206360	28O CRK C1	2.3035	50/50	2.3035
206361	28O CRK C2	1.5234	50/50	1.5234
206414	28X4-005E	-1.6118	Adder	-1.9
207149	28UPF_X1-085	0.0619	50/50	0.0619
207150	28HAN_X4-015	0.1045	50/50	0.1045
207157	28PEM_W1-119	0.1924	50/50	0.1924
207158	28PEM_W1-120	0.1924	50/50	0.1924
207160	28EGP_W2-019	0.1252	50/50	0.1252
207164	28NHV_W2-082	0.3595	50/50	0.3595
207171	28DIX_Z2-102	0.2843	50/50	0.2843
207207	28JCB_W1-129	0.1042	50/50	0.1042
207208	28JCB_W4-025	0.1425	50/50	0.1425
207400	28AA1-060 E	4.3434	50/50	4.3434
207419	AB2-139 E	-0.0351	Adder	-0.04
207420	AC1-207 C	-0.4347	Adder	-0.51
218661	EHAMPSOLAR E	0.1854	Adder	0.22
219273	CLEANLIGHT E	0.1592	Adder	0.19
219287	REEVES ST C	0.1035	50/50	0.1035
219288	REEVES ST E	0.9792	50/50	0.9792
219292	REEVESSO E	0.0625	Adder	0.07
219582	COXSCOSP1_E	0.0074	Adder	0.01
219614	COXSCOSP2_E	0.0074	Adder	0.01
219628	LUMB23SP1_C	0.0032	50/50	0.0032
219652	LUMB23SP1_E	0.0299	50/50	0.0299
219653	LUMB23SP2_C	0.0032	50/50	0.0032
219656	LUMB23SP2_E	0.0299	50/50	0.0299
219686	LUMSOLAR_N C	0.0322	50/50	0.0322
219687	LUMSOLAR_N E	0.3015	50/50	0.3015
219689	LUMSOLAR_S E	0.1836	Adder	0.22
227842	MARINGEN	0.0903	50/50	0.0903
227927	V4-067C	0.0238	50/50	0.0238
227928	V4-067E	0.2280	50/50	0.2280
228014	PVILLEG	0.0312	50/50	0.0312
228102	BLE#2 ST (Deactivation : 30/04/2019)	15.4699	Adder	18.2
228712	V2-041E	0.1928	Adder	0.23
228729	W2-030 C	0.0855	50/50	0.0855
228731	V3-036	0.1311	50/50	0.1311
901982	W1-119 E	1.8235	50/50	1.8235

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
901992	W1-120E	1.8235	50/50	1.8235
902082	W1-129E	0.9851	50/50	0.9851
902092	W1-130E	0.4495	Adder	0.53
902322	W2-019 E	1.1672	50/50	1.1672
902432	W2-030 E	0.8149	50/50	0.8149
902952	W2-082 E OP1	3.3663	50/50	3.3663
905252	W4-025 E	1.3983	50/50	1.3983
907272	X1-085 E	0.5854	50/50	0.5854
912102	X4-015 E	0.9888	50/50	0.9888
917612	Z2-102 E	2.6889	50/50	2.6889
919663	AA2-048 BAT	1.0046	50/50	1.0046
923292	AB1-138 C	0.1233	50/50	0.1233
923293	AB1-138 E	1.1915	50/50	1.1915
923463	AB1-163 E	0.4827	Adder	0.57
923532	AB1-169AC	43.5804	Adder	51.27
924531	AB2-102 C	17.3139	Adder	20.37
924532	AB2-102 E	0.3848	Adder	0.45
924701	AB2-122 C	0.0985	50/50	0.0985
924702	AB2-122 E	0.1689	50/50	0.1689
930001	AB1-001 C	0.1410	50/50	0.1410
930002	AB1-001 E	0.2318	50/50	0.2318
932361	AC2-050 C O1	0.3452	Adder	0.41
932362	AC2-050 E O1	0.5632	Adder	0.66
933962	AD1-019 E	1.0502	50/50	1.0502
938421	AE1-061 C	0.2168	Adder	0.26
938422	AE1-061 E	0.2168	Adder	0.26
938781	AE1-104 C O1	12.4870	Adder	14.69
938782	AE1-104 E O1	31.9479	Adder	37.59
939121	AE1-142 C O1	3.2823	50/50	3.2823
939122	AE1-142 E O1	4.7233	50/50	4.7233
939501	AE1-179 C O1	2.5151	Adder	2.96
939502	AE1-179 E O1	1.7749	Adder	2.09
940001	AE1-240 C O1	2.0842	Adder	2.45
940002	AE1-240 E O1	1.4877	Adder	1.75
940161	AE2-000 C O1	90.0599	50/50	90.0599
940162	AE2-000 E O1	230.4323	50/50	230.4323
940361	AE2-020 C	15.6946	50/50	15.6946
940362	AE2-020 E	73.4832	50/50	73.4832
940371	AE2-021 C	15.6946	50/50	15.6946
940372	AE2-021 E	73.4832	50/50	73.4832
940381	AE2-022 C	9.1552	50/50	9.1552
940382	AE2-022 E	42.8652	50/50	42.8652
940691	AE2-056 C	-0.1907	Adder	-0.22
940701	AE2-057 C	-0.0568	Adder	-0.07
940921	AE2-081 C	-0.2026	Adder	-0.24
942101	AE2-222 C O1	11.8580	50/50	11.8580
942102	AE2-222 E O1	29.7880	50/50	29.7880
942381	AE2-251 C	49.7201	50/50	49.7201
942382	AE2-251 E	127.2199	50/50	127.2199
943561	AF1-027	0.4826	50/50	0.4826
943732	AF1-041 E	0.3355	50/50	0.3355
944332	AF1-101 E O1	225.9156	50/50	225.9156

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944611	AF1-126 C O1	20.0270	50/50	20.0270
944612	AF1-126 E O1	80.1080	50/50	80.1080
945201	AF1-185 1	-0.3626	Adder	-0.43
945211	AF1-185 2	-0.0806	Adder	-0.09
945731	AF1-238 C	3.7281	Adder	4.39
945732	AF1-238 E	5.5922	Adder	6.58
945741	AF1-239 C	0.8772	Adder	1.03
945742	AF1-239 E	1.3158	Adder	1.55
957221	AF2-016 C	7.2997	Adder	16.2
957222	AF2-016 E	24.3054	50/50	24.3054
957251	AF2-019 C	0.7769	Adder	1.72
957252	AF2-019 E	1.1653	Adder	2.59
957271	AF2-021 C	4.8613	50/50	4.8613
957272	AF2-021 E	7.2919	50/50	7.2919
957281	AF2-022 C	0.8305	Adder	1.84
957282	AF2-022 E	1.2458	Adder	2.77
957311	AF2-025 C	1.1005	50/50	1.1005
957312	AF2-025 E	1.6507	50/50	1.6507
957321	AF2-026 C	0.4863	Adder	1.08
957322	AF2-026 E	0.7294	Adder	1.62
957783	AF2-072 BAT	10.1220	50/50	10.1220
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2508	Adder	0.56
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	29.8415	Adder	66.24
958831	AF2-174 C	0.2224	Adder	0.49
958832	AF2-174 E	0.3072	Adder	0.68
959631	AF2-254 C	1.3600	50/50	1.3600
959632	AF2-254 E	1.8782	50/50	1.8782
961222	AF2-413 BAT	12.5623	Merchant Transmission	12.5623
999905	MARINGEN 2	0.5509	50/50	0.5509
999906	PVILLEG 2	0.2369	50/50	0.2369
WEC	WEC	0.0161	Confirmed LTF	0.0161
LGEE	LGEE	0.0314	Confirmed LTF	0.0314
CPL	CPL	0.0840	Confirmed LTF	0.0840
CBM-W2	CBM-W2	0.5324	Confirmed LTF	0.5324
NY	NY	1.3720	Confirmed LTF	1.3720
CBM-W1	CBM-W1	0.5755	Confirmed LTF	0.5755
TVA	TVA	0.1050	Confirmed LTF	0.1050
O-066	O-066	25.2269	Confirmed LTF	25.2269
CBM-S2	CBM-S2	0.6416	Confirmed LTF	0.6416
CBM-S1	CBM-S1	0.6134	Confirmed LTF	0.6134
G-007	G-007	9.8602	Confirmed LTF	9.8602
MADISON	MADISON	0.0141	Confirmed LTF	0.0141
MEC	MEC	0.0890	Confirmed LTF	0.0890

11.6.17 Index 17

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
99007247	206319	28WHITINGS	JCP&L	206720	28MANCHSTR	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	152.5	154.57	DC	39.47

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206306	28LKWD G1	7.9331	50/50	7.9331
206308	28LKWD G2	7.9331	50/50	7.9331
206312	28LKWD G3	5.7473	50/50	5.7473
206325	28O C GEN (Deactivation : 17/09/2018)	114.1647	50/50	114.1647
206360	28O CRK C1	2.9784	50/50	2.9784
206361	28O CRK C2	1.9698	50/50	1.9698
206366	28LKWD CT1	15.9899	50/50	15.9899
206367	28LKWD CT2	15.9899	50/50	15.9899
206370	LKWD CT3	110.2900	50/50	110.2900
227928	V4-067E	0.1927	Adder	0.23
228102	BLE#2 ST (Deactivation : 30/04/2019)	14.4191	Adder	16.96
901982	W1-119 E	0.4652	Adder	0.55
901992	W1-120E	0.4652	Adder	0.55
902432	W2-030 E	0.6782	Adder	0.8
917612	Z2-102 E	0.6734	Adder	0.79
923293	AB1-138 E	1.9035	Adder	2.24
923463	AB1-163 E	0.6617	Adder	0.78
923791	AB2-014	0.7705	50/50	0.7705
924701	AB2-122 C	0.0833	Adder	0.1
924702	AB2-122 E	0.1427	Adder	0.17
930001	AB1-001 C	0.1264	Adder	0.15
930002	AB1-001 E	0.2078	Adder	0.24
933962	AD1-019 E	0.8796	Adder	1.03
934351	AD1-059	1.4173	50/50	1.4173
938781	AE1-104 C O1	11.6388	Adder	13.69
938782	AE1-104 E O1	29.7777	Adder	35.03
939121	AE1-142 C O1	4.4401	50/50	4.4401
939122	AE1-142 E O1	6.3895	50/50	6.3895
940161	AE2-000 C O1	116.4500	50/50	116.4500
940162	AE2-000 E O1	297.9556	50/50	297.9556
940361	AE2-020 C	13.5123	Adder	15.9
940362	AE2-020 E	63.2656	Adder	74.43
940371	AE2-021 C	13.5123	Adder	15.9
940372	AE2-021 E	63.2656	Adder	74.43
940381	AE2-022 C	7.8822	Adder	9.27
940382	AE2-022 E	36.9049	Adder	43.42
942101	AE2-222 C O1	9.9472	Adder	11.7
942102	AE2-222 E O1	24.9878	Adder	29.4
942381	AE2-251 C	42.8067	Adder	50.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942382	AE2-251 E	109.5303	Adder	128.86
943732	AF1-041 E	0.2824	Adder	0.33
944332	AF1-101 E O1	292.1153	50/50	292.1153
957221	AF2-016 C	7.1116	Adder	15.79
957222	AF2-016 E	10.6674	Adder	23.68
957251	AF2-019 C	0.6848	Adder	1.52
957252	AF2-019 E	1.0272	Adder	2.28
957271	AF2-021 C	2.7239	Adder	6.05
957272	AF2-021 E	9.0696	50/50	9.0696
957311	AF2-025 C	0.4877	Adder	1.08
957312	AF2-025 E	0.7315	Adder	1.62
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2337	Adder	0.52
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	27.8144	Adder	61.74
999905	MARINGEN 2	0.4608	Adder	0.54
999906	PVILLEG 2	0.1990	Adder	0.23
NEWTON	NEWTON	0.2181	Confirmed LTF	0.2181
FARMERCITY	FARMERCITY	0.0113	Confirmed LTF	0.0113
CALDERWOOD	CALDERWOOD	0.0964	Confirmed LTF	0.0964
NY	NY	0.5724	Confirmed LTF	0.5724
PRAIRIE	PRAIRIE	0.5218	Confirmed LTF	0.5218
O-066	O-066	9.6634	Confirmed LTF	9.6634
CHEOAH	CHEOAH	0.0966	Confirmed LTF	0.0966
EDWARDS	EDWARDS	0.0718	Confirmed LTF	0.0718
TILTON	TILTON	0.1292	Confirmed LTF	0.1292
G-007	G-007	3.1179	Confirmed LTF	3.1179
MADISON	MADISON	0.0060	Confirmed LTF	0.0060
GIBSON	GIBSON	0.1114	Confirmed LTF	0.1114
BLUEG	BLUEG	0.3541	Confirmed LTF	0.3541
TRIMBLE	TRIMBLE	0.1135	Confirmed LTF	0.1135
CATAWBA	CATAWBA	0.0648	Confirmed LTF	0.0648

11.6.18 Index 18

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
99005774	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	2	JC-P2-3-JCC-230-15J	breaker	817.0	190.84	193.24	DC	42.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206306	28LKWD G1	10.4154	50/50	10.4154
206308	28LKWD G2	10.4154	50/50	10.4154
206312	28LKWD G3	7.5457	50/50	7.5457
206325	28O C GEN (Deactivation : 17/09/2018)	117.5704	50/50	117.5704
206360	28O CRK C1	3.0673	50/50	3.0673
206361	28O CRK C2	2.0285	50/50	2.0285
206366	28LKWD CT1	20.9932	50/50	20.9932
206367	28LKWD CT2	20.9932	50/50	20.9932
206370	LKWD CT3	144.8000	50/50	144.8000
227928	V4-067E	0.2083	Adder	0.25
228102	BLE#2 ST (Deactivation : 30/04/2019)	15.7959	Adder	18.58
901982	W1-119 E	0.5766	Adder	0.68
901992	W1-120E	0.5766	Adder	0.68
902432	W2-030 E	0.7355	Adder	0.87
917612	Z2-102 E	0.8431	Adder	0.99
923293	AB1-138 E	1.6937	Adder	1.99
923463	AB1-163 E	0.6140	Adder	0.72
923791	AB2-014	1.0116	50/50	1.0116
924701	AB2-122 C	0.0900	Adder	0.11
924702	AB2-122 E	0.1543	Adder	0.18
930001	AB1-001 C	0.1351	Adder	0.16
930002	AB1-001 E	0.2220	Adder	0.26
933962	AD1-019 E	0.9526	Adder	1.12
934351	AD1-059	1.8608	50/50	1.8608
938781	AE1-104 C O1	12.7502	Adder	15.0
938782	AE1-104 E O1	32.6211	Adder	38.38
939121	AE1-142 C O1	4.4378	50/50	4.4378
939122	AE1-142 E O1	6.3862	50/50	6.3862
940161	AE2-000 C O1	119.9239	50/50	119.9239
940162	AE2-000 E O1	306.8441	50/50	306.8441
940361	AE2-020 C	14.5518	Adder	17.12
940362	AE2-020 E	68.1328	Adder	80.16
940371	AE2-021 C	14.5518	Adder	17.12
940372	AE2-021 E	68.1328	Adder	80.16
940381	AE2-022 C	8.4886	Adder	9.99
940382	AE2-022 E	39.7441	Adder	46.76
942101	AE2-222 C O1	10.7691	Adder	12.67
942102	AE2-222 E O1	27.0525	Adder	31.83
942381	AE2-251 C	46.1000	Adder	54.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942382	AE2-251 E	117.9568	Adder	138.77
943732	AF1-041 E	0.3055	Adder	0.36
944332	AF1-101 E O1	300.8296	50/50	300.8296
957221	AF2-016 C	7.7198	Adder	17.14
957222	AF2-016 E	11.5797	Adder	25.7
957251	AF2-019 C	0.7594	Adder	1.69
957252	AF2-019 E	1.1390	Adder	2.53
957271	AF2-021 C	2.8235	Adder	6.27
957272	AF2-021 E	9.4013	50/50	9.4013
957311	AF2-025 C	0.5283	Adder	1.17
957312	AF2-025 E	0.7925	Adder	1.76
957783	AF2-072 BAT	2.7072	Merchant Transmission	2.7072
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2561	Adder	0.57
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	30.4704	Adder	67.64
999905	MARINGEN 2	0.4992	Adder	0.59
999906	PVILLEG 2	0.2154	Adder	0.25
NEWTON	NEWTON	0.2740	Confirmed LTF	0.2740
FARMERCITY	FARMERCITY	0.0142	Confirmed LTF	0.0142
CALDERWOOD	CALDERWOOD	0.1198	Confirmed LTF	0.1198
NY	NY	0.8693	Confirmed LTF	0.8693
PRAIRIE	PRAIRIE	0.6535	Confirmed LTF	0.6535
O-066	O-066	14.9050	Confirmed LTF	14.9050
CHEOAH	CHEOAH	0.1201	Confirmed LTF	0.1201
EDWARDS	EDWARDS	0.0903	Confirmed LTF	0.0903
TILTON	TILTON	0.1625	Confirmed LTF	0.1625
G-007	G-007	5.1106	Confirmed LTF	5.1106
MADISON	MADISON	0.0081	Confirmed LTF	0.0081
GIBSON	GIBSON	0.1398	Confirmed LTF	0.1398
BLUEG	BLUEG	0.4444	Confirmed LTF	0.4444
TRIMBLE	TRIMBLE	0.1425	Confirmed LTF	0.1425
CATAWBA	CATAWBA	0.0795	Confirmed LTF	0.0795

11.6.19 Index 19

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
99007254	206720	28MANCHSTR	JCP&L	206318	28VANHISVL	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	150.93	153.01	DC	39.47

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206306	28LKWD G1	7.9331	50/50	7.9331
206308	28LKWD G2	7.9331	50/50	7.9331
206312	28LKWD G3	5.7473	50/50	5.7473
206325	28O C GEN (Deactivation : 17/09/2018)	114.1647	50/50	114.1647
206360	28O CRK C1	2.9784	50/50	2.9784
206361	28O CRK C2	1.9698	50/50	1.9698
206366	28LKWD CT1	15.9899	50/50	15.9899
206367	28LKWD CT2	15.9899	50/50	15.9899
206370	LKWD CT3	110.2900	50/50	110.2900
227928	V4-067E	0.1927	Adder	0.23
228102	BLE#2 ST (Deactivation : 30/04/2019)	14.4191	Adder	16.96
901982	W1-119 E	0.4652	Adder	0.55
901992	W1-120E	0.4652	Adder	0.55
902432	W2-030 E	0.6782	Adder	0.8
917612	Z2-102 E	0.6734	Adder	0.79
923293	AB1-138 E	1.9035	Adder	2.24
923463	AB1-163 E	0.6617	Adder	0.78
923791	AB2-014	0.7705	50/50	0.7705
924701	AB2-122 C	0.0833	Adder	0.1
924702	AB2-122 E	0.1427	Adder	0.17
930001	AB1-001 C	0.1264	Adder	0.15
930002	AB1-001 E	0.2078	Adder	0.24
933962	AD1-019 E	0.8796	Adder	1.03
934351	AD1-059	1.4173	50/50	1.4173
938781	AE1-104 C O1	11.6388	Adder	13.69
938782	AE1-104 E O1	29.7777	Adder	35.03
939121	AE1-142 C O1	4.4401	50/50	4.4401
939122	AE1-142 E O1	6.3895	50/50	6.3895
940161	AE2-000 C O1	116.4500	50/50	116.4500
940162	AE2-000 E O1	297.9556	50/50	297.9556
940361	AE2-020 C	13.5123	Adder	15.9
940362	AE2-020 E	63.2656	Adder	74.43
940371	AE2-021 C	13.5123	Adder	15.9
940372	AE2-021 E	63.2656	Adder	74.43
940381	AE2-022 C	7.8822	Adder	9.27
940382	AE2-022 E	36.9049	Adder	43.42
942101	AE2-222 C O1	9.9472	Adder	11.7
942102	AE2-222 E O1	24.9878	Adder	29.4
942381	AE2-251 C	42.8067	Adder	50.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942382	AE2-251 E	109.5303	Adder	128.86
943732	AF1-041 E	0.2824	Adder	0.33
944332	AF1-101 E O1	292.1153	50/50	292.1153
957221	AF2-016 C	7.1116	Adder	15.79
957222	AF2-016 E	10.6674	Adder	23.68
957251	AF2-019 C	0.6848	Adder	1.52
957252	AF2-019 E	1.0272	Adder	2.28
957271	AF2-021 C	2.7239	Adder	6.05
957272	AF2-021 E	9.0696	50/50	9.0696
957311	AF2-025 C	0.4877	Adder	1.08
957312	AF2-025 E	0.7315	Adder	1.62
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2337	Adder	0.52
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	27.8144	Adder	61.74
999905	MARINGEN 2	0.4608	Adder	0.54
999906	PVILLEG 2	0.1990	Adder	0.23
NEWTON	NEWTON	0.2181	Confirmed LTF	0.2181
FARMERCITY	FARMERCITY	0.0113	Confirmed LTF	0.0113
CALDERWOOD	CALDERWOOD	0.0964	Confirmed LTF	0.0964
NY	NY	0.5724	Confirmed LTF	0.5724
PRAIRIE	PRAIRIE	0.5218	Confirmed LTF	0.5218
O-066	O-066	9.6634	Confirmed LTF	9.6634
CHEOAH	CHEOAH	0.0966	Confirmed LTF	0.0966
EDWARDS	EDWARDS	0.0718	Confirmed LTF	0.0718
TILTON	TILTON	0.1292	Confirmed LTF	0.1292
G-007	G-007	3.1179	Confirmed LTF	3.1179
MADISON	MADISON	0.0060	Confirmed LTF	0.0060
GIBSON	GIBSON	0.1114	Confirmed LTF	0.1114
BLUEG	BLUEG	0.3541	Confirmed LTF	0.3541
TRIMBLE	TRIMBLE	0.1135	Confirmed LTF	0.1135
CATAWBA	CATAWBA	0.0648	Confirmed LTF	0.0648

11.6.20 Index 20

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
99831068	214010	WANEETA2	PECO	213817	N PHILA	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ CHICH045 \$ STBK	breaker	621.0	129.6	131.75	DC	29.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
213606	FAIRLESS (Deactivation : 01/06/2020)	5.6212	Adder	6.61
213878	PENNSBRY (Deactivation : 01/06/2020)	0.4985	Adder	0.59
213918	RICHMD91	1.9246	50/50	1.9246
213919	RICHMD92	1.9246	50/50	1.9246
218661	EHAMPSOLAR E	0.1933	Adder	0.23
219123	O-011 (Deactivation : 26/04/2020)	0.6929	Adder	0.82
219124	CAMDEN_STG	1.9641	50/50	1.9641
219126	CAMDEN_CTG	2.4130	50/50	2.4130
219128	GLOUCSTR_26	0.9971	50/50	0.9971
219229	EAGLEPT_G3	1.2699	50/50	1.2699
219230	EAGLEPT_G1	2.3961	50/50	2.3961
219231	EAGLEPT_G2	2.3948	50/50	2.3948
219235	EAGLEPT_ST2	0.8662	50/50	0.8662
219236	SOUTHERNHQ C	0.0102	50/50	0.0102
219237	SOUTHERNHQ E	0.0979	50/50	0.0979
219240	MANTUACREK E	0.3493	50/50	0.3493
219241	CAMDEN1	0.1456	50/50	0.1456
219242	CAMDEN2	0.0157	50/50	0.0157
219258	KINSLEYDEP C	0.0546	50/50	0.0546
219259	KINSLEYDEP E	0.5163	50/50	0.5163
219273	CLEANLIGHT E	0.1979	Adder	0.23
219288	REEVES ST E	0.7192	Adder	0.85
219292	REEVESSO E	0.0663	Adder	0.08
219305	NAMERICA E	0.5263	Adder	0.62
219340	CUTHBSP1_C	0.0031	50/50	0.0031
219344	CUTHBSP1_E	0.0295	50/50	0.0295
219345	CUTHBSP2_C	0.0031	50/50	0.0031
219347	CUTHBSP2_E	0.0294	50/50	0.0294
219349	LDSOLAR E	0.4609	Adder	0.54
219350	CUTHBSP3_C	0.0031	50/50	0.0031
219351	CUTHBSP3_E	0.0295	50/50	0.0295
219357	CUTHBSP4_C	0.0025	50/50	0.0025
219379	CUTHBSP4_E	0.0237	50/50	0.0237
219384	DEPTFDSP1_C	0.0007	50/50	0.0007
219385	DEPTFDSP1_E	0.0068	50/50	0.0068
219388	DEPTFDSP2_C	0.0007	50/50	0.0007
219390	DEPTFDSP2_E	0.0068	50/50	0.0068
219393	DEPTFDSP3_C	0.0018	50/50	0.0018
219394	DEPTFDSP3_E	0.0171	50/50	0.0171

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
219408	DEPTFDSP4_C	0.0007	50/50	0.0007
219416	DEPTFDSP4_E	0.0068	50/50	0.0068
219566	BURLINSP1_E	0.0632	Adder	0.07
219574	CAMDENSP1_C	0.0175	50/50	0.0175
219575	CAMDENSP1_E	0.1656	50/50	0.1656
219582	COXSCOSP1_E	0.0083	Adder	0.01
219608	WPEMNERT E	0.5263	Adder	0.62
219611	FLORENCE E	1.5038	Adder	1.77
219614	COXSCOSP2_E	0.0083	Adder	0.01
219615	MILLCREEK C	0.0318	50/50	0.0318
219619	MILLCREEK E	0.3335	50/50	0.3335
219623	KINSLEYBEA C	0.0400	50/50	0.0400
219624	KINSLEYBEA E	0.3907	50/50	0.3907
219647	COOPERSOLA E	0.0696	50/50	0.0696
219652	LUMB23SP1_E	0.0219	Adder	0.03
219656	LUMB23SP2_E	0.0219	Adder	0.03
219662	THOROFSP1_C	0.0028	50/50	0.0028
219664	THOROFSP1_E	0.0262	50/50	0.0262
219665	THOROFSP2_C	0.0028	50/50	0.0028
219666	THOROFSP2_E	0.0263	50/50	0.0263
219683	THOSOLAR C	0.0153	50/50	0.0153
219684	THOSOLAR E	0.1450	50/50	0.1450
219687	LUMSOLAR_N E	0.2215	Adder	0.26
219689	LUMSOLAR_S E	0.2330	Adder	0.27
219706	BEAVBRSP1_C	0.0029	50/50	0.0029
219707	BEAVBRSP1_E	0.0273	50/50	0.0273
219708	BEAVBRSP2_C	0.0029	50/50	0.0029
219709	BEAVBRSP2_E	0.0273	50/50	0.0273
219710	CINNAMSP1_C	0.0017	50/50	0.0017
219711	CINNAMSP1_E	0.0161	50/50	0.0161
219712	CINNAMSP2_C	0.0010	50/50	0.0010
219713	CINNAMSP2_E	0.0096	50/50	0.0096
219714	CINNAMSP3_C	0.0017	50/50	0.0017
219715	CINNAMSP3_E	0.0161	50/50	0.0161
219716	CINNAMSP4_C	0.0017	50/50	0.0017
219717	CINNAMSP4_E	0.0160	50/50	0.0160
219718	GLOUCSP1_C	0.0054	50/50	0.0054
219719	GLOUCSP1_E	0.0512	50/50	0.0512
219726	BAT.STORG E	0.1703	50/50	0.1703
219765	PARADISE E	0.5588	50/50	0.5588
219766	PARADISE C	0.0572	50/50	0.0572
227881	GRENWCHG	0.1955	Adder	0.23
227928	V4-067E	0.1336	Adder	0.16
228102	BLE#2 ST (Deactivation : 30/04/2019)	12.6728	Adder	14.91
228261	V4-054E	0.5915	Adder	0.7
228334	MANNMILG	0.8724	Adder	1.03
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.1704	Adder	0.2
228357	V2-046E	1.3409	Adder	1.58
228712	V2-041E	0.2163	Adder	0.25
228721	V2-035E	0.1238	Adder	0.15
228733	AB1-119 E	0.0725	Adder	0.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
902092	W1-130E	0.5476	Adder	0.64
902432	W2-030 E	0.4997	Adder	0.59
910862	OWENSCORIN E	0.5041	50/50	0.5041
918622	AA1-079 E	4.2992	Adder	5.06
918632	AA1-079 E	4.2973	Adder	5.06
923153	AB1-116 E	0.0795	Adder	0.09
923532	AB1-169AC	52.7667	Adder	62.08
924051	AB2-049 C	0.3807	Adder	0.45
924052	AB2-049 E	0.6211	Adder	0.73
924531	AB2-102 C	19.1059	Adder	22.48
924532	AB2-102 E	0.4246	Adder	0.5
924701	AB2-122 C	0.0577	Adder	0.07
924702	AB2-122 E	0.0990	Adder	0.12
925391	AC1-010 C (Suspended)	0.3842	50/50	0.3842
925392	AC1-010 E (Suspended)	0.6636	50/50	0.6636
925441	AC1-016 C (Withdrawn : Unavailable)	0.4051	Adder	0.48
925442	AC1-016 E (Withdrawn : Unavailable)	0.6610	Adder	0.78
925451	AC1-017 C	0.0374	50/50	0.0374
925452	AC1-017 E	0.3550	50/50	0.3550
925561	AC1-030 C	0.0277	50/50	0.0277
925562	AC1-030 E	0.2536	50/50	0.2536
930001	AB1-001 C	0.0703	Adder	0.08
930002	AB1-001 E	0.1155	Adder	0.14
930242	AB1-063 E	0.0696	50/50	0.0696
932361	AC2-050 C O1	0.3985	Adder	0.47
932362	AC2-050 E O1	0.6502	Adder	0.76
933962	AD1-019 E	0.6333	Adder	0.75
936211	AD2-027 C	0.1197	50/50	0.1197
936212	AD2-027 E	1.1318	50/50	1.1318
936321	AD2-042 C	0.1574	50/50	0.1574
936322	AD2-042 E	1.4969	50/50	1.4969
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.0526	Adder	0.06
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.0725	Adder	0.09
936501	AD2-065 C	0.1080	Adder	0.13
936502	AD2-065 E	0.1490	Adder	0.18
937011	AD2-135 C	0.0584	Adder	0.07
937012	AD2-135 E	0.0992	Adder	0.12
938421	AE1-061 C	0.2642	Adder	0.31
938422	AE1-061 E	0.2642	Adder	0.31
938431	AE1-062 C	0.9948	Adder	1.17
938432	AE1-062 E	0.9948	Adder	1.17
938781	AE1-104 C O1	10.2292	Adder	12.03
938782	AE1-104 E O1	26.1713	Adder	30.79
938871	AE1-115 C	1.0353	Adder	1.22
938872	AE1-115 E	1.0353	Adder	1.22
939301	AE1-161 C	1.9868	Adder	2.34
939302	AE1-161 E	2.9802	Adder	3.51
939501	AE1-179 C O1	3.2219	Adder	3.79
939502	AE1-179 E O1	2.2738	Adder	2.68

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939821	AE1-218 C O1	0.0825	Adder	0.1
939822	AE1-218 E O1	0.1238	Adder	0.15
939831	AE1-219 C O1	0.1857	Adder	0.22
939832	AE1-219 E O1	0.2683	Adder	0.32
939931	AE1-229 C O1	8.9237	Adder	10.5
939932	AE1-229 E O1	6.0460	Adder	7.11
940001	AE1-240 C O1	2.6698	Adder	3.14
940002	AE1-240 E O1	1.9057	Adder	2.24
940271	AE2-010	-0.6977	Adder	-0.82
940361	AE2-020 C	8.6575	Adder	10.19
940362	AE2-020 E	40.5349	Adder	47.69
940371	AE2-021 C	8.6575	Adder	10.19
940372	AE2-021 E	40.5349	Adder	47.69
940381	AE2-022 C	5.0502	Adder	5.94
940382	AE2-022 E	23.6453	Adder	27.82
940771	AE2-064 C	0.0243	50/50	0.0243
940772	AE2-064 E	0.1904	50/50	0.1904
940781	AE2-065 C	0.0201	50/50	0.0201
940782	AE2-065 E	0.1832	50/50	0.1832
942101	AE2-222 C O1	7.1198	Adder	8.38
942102	AE2-222 E O1	17.8855	Adder	21.04
942381	AE2-251 C	27.4267	Adder	32.27
942382	AE2-251 E	70.1771	Adder	82.56
943071	AE2-334 C	2.9303	Adder	3.45
943072	AE2-334 E	1.5622	Adder	1.84
943732	AF1-041 E	0.1996	Adder	0.23
944951	AF1-160 C	0.9948	Adder	1.17
944952	AF1-160 E	1.0445	Adder	1.23
945431	AF1-208 C O1	2.6340	Adder	3.1
945432	AF1-208 E O1	1.7560	Adder	2.07
945731	AF1-238 C	4.6385	Adder	5.46
945732	AF1-238 E	6.9577	Adder	8.19
945741	AF1-239 C	1.0914	Adder	1.28
945742	AF1-239 E	1.6371	Adder	1.93
945961	AF1-261	0.1092	Adder	0.13
945971	AF1-262	0.0898	Adder	0.11
945991	AF1-264	0.2184	50/50	0.2184
957221	AF2-016 C	5.3298	Adder	11.83
957222	AF2-016 E	7.9947	Adder	17.75
957251	AF2-019 C	0.7190	Adder	1.6
957252	AF2-019 E	1.0785	Adder	2.39
957261	AF2-020 C	0.4048	Adder	0.9
957262	AF2-020 E	0.6072	Adder	1.35
957281	AF2-022 C	0.9139	Adder	2.03
957282	AF2-022 E	1.3708	Adder	3.04
957291	AF2-023 C O1	1.0975	Adder	2.44
957292	AF2-023 E O1	1.6463	Adder	3.65
957301	AF2-024 C	1.2487	Adder	2.77
957302	AF2-024 E	1.8730	Adder	4.16
957311	AF2-025 C	0.3533	Adder	0.78
957312	AF2-025 E	0.5300	Adder	1.18
957321	AF2-026 C	0.5604	Adder	1.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957322	AF2-026 E	0.8407	Adder	1.87
957443	AF2-038 BAT	5.7378	50/50	5.7378
957641	AF2-058	0.1264	Adder	0.28
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2054	Adder	0.46
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	24.4458	Adder	54.26
958811	AF2-172 C	0.1885	Adder	0.42
958812	AF2-172 E	0.3075	Adder	0.68
958831	AF2-174 C	0.2568	Adder	0.57
958832	AF2-174 E	0.3546	Adder	0.79
959111	AF2-202 C	0.0577	Adder	0.13
959112	AF2-202 E	0.0789	Adder	0.18
999905	MARINGEN 2	0.3333	Adder	0.39
999906	PVILLEG 2	0.1417	Adder	0.17
NEWTON	NEWTON	0.5566	Confirmed LTF	0.5566
FARMERCITY	FARMERCITY	0.0290	Confirmed LTF	0.0290
G-007A	G-007A	8.3241	Confirmed LTF	8.3241
VFT	VFT	16.8861	Confirmed LTF	16.8861
CALDERWOOD	CALDERWOOD	0.2609	Confirmed LTF	0.2609
PRAIRIE	PRAIRIE	1.3406	Confirmed LTF	1.3406
CHEOAH	CHEOAH	0.2628	Confirmed LTF	0.2628
EDWARDS	EDWARDS	0.1809	Confirmed LTF	0.1809
TILTON	TILTON	0.3257	Confirmed LTF	0.3257
GIBSON	GIBSON	0.2828	Confirmed LTF	0.2828
BLUEG	BLUEG	0.8992	Confirmed LTF	0.8992
TRIMBLE	TRIMBLE	0.2877	Confirmed LTF	0.2877
CATAWBA	CATAWBA	0.1855	Confirmed LTF	0.1855

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
99831053	214206	RICHRE29	PECO	213922	RICHMOND	PECO	1	PECO_P4_CHICH045/ * \$ DELCO \$ CHICH045 \$ STBK	breaker	1336.0	138.07	140.06	DC	60.02

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
218661	EHAMPSOLAR E	0.3426	Adder	0.4
219123	O-011 (Deactivation : 26/04/2020)	0.8444	Adder	0.99
219124	CAMDEN_STG	4.4029	50/50	4.4029
219126	CAMDEN_CTG	5.4091	50/50	5.4091
219128	GLOUCSTR_26	2.2352	50/50	2.2352
219229	EAGLEPT_G3	2.8352	50/50	2.8352
219230	EAGLEPT_G1	5.3498	50/50	5.3498
219231	EAGLEPT_G2	5.3467	50/50	5.3467
219235	EAGLEPT_ST2	1.9339	50/50	1.9339
219236	SOUTHERNHQ C	0.0199	50/50	0.0199
219237	SOUTHERNHQ E	0.1911	50/50	0.1911
219240	MANTUACREK E	0.7830	50/50	0.7830
219241	CAMDEN1	0.3282	50/50	0.3282
219242	CAMDEN2	0.0355	50/50	0.0355
219258	KINSLEYDEP C	0.1218	50/50	0.1218
219259	KINSLEYDEP E	1.1523	50/50	1.1523
219273	CLEANLIGHT E	0.3709	Adder	0.44
219288	REEVES ST E	1.2928	Adder	1.52
219292	REEVESSO E	0.1184	Adder	0.14
219305	NAMERICA E	0.6473	Adder	0.76
219340	CUTHBSP1_C	0.0070	50/50	0.0070
219344	CUTHBSP1_E	0.0663	50/50	0.0663
219345	CUTHBSP2_C	0.0070	50/50	0.0070
219347	CUTHBSP2_E	0.0662	50/50	0.0662
219349	LDSOLAR E	0.5668	Adder	0.67
219350	CUTHBSP3_C	0.0070	50/50	0.0070
219351	CUTHBSP3_E	0.0663	50/50	0.0663
219357	CUTHBSP4_C	0.0056	50/50	0.0056
219379	CUTHBSP4_E	0.0533	50/50	0.0533
219384	DEPTFDSP1_C	0.0016	50/50	0.0016
219385	DEPTFDSP1_E	0.0152	50/50	0.0152
219388	DEPTFDSP2_C	0.0016	50/50	0.0016
219390	DEPTFDSP2_E	0.0152	50/50	0.0152
219393	DEPTFDSP3_C	0.0040	50/50	0.0040
219394	DEPTFDSP3_E	0.0382	50/50	0.0382
219408	DEPTFDSP4_C	0.0016	50/50	0.0016
219416	DEPTFDSP4_E	0.0152	50/50	0.0152
219566	BURLINSP1_E	0.0777	Adder	0.09
219574	CAMDENSP1_C	0.0395	50/50	0.0395
219575	CAMDENSP1_E	0.3731	50/50	0.3731
219582	COXSCOSP1_E	0.0149	Adder	0.02

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
219608	WPEMNERT E	0.6473	Adder	0.76
219611	FLORENCE E	1.8496	Adder	2.18
219614	COXSCOSP2_E	0.0149	Adder	0.02
219619	MILLCREEK E	0.4440	Adder	0.52
219623	KINSLEYBEA C	0.0888	50/50	0.0888
219624	KINSLEYBEA E	0.8682	50/50	0.8682
219647	COOPERSOLA E	0.1530	50/50	0.1530
219652	LUMB23SP1_E	0.0394	Adder	0.05
219656	LUMB23SP2_E	0.0394	Adder	0.05
219662	THOROFSP1_C	0.0061	50/50	0.0061
219664	THOROFSP1_E	0.0581	50/50	0.0581
219665	THOROFSP2_C	0.0062	50/50	0.0062
219666	THOROFSP2_E	0.0584	50/50	0.0584
219683	THOSOLAR C	0.0340	50/50	0.0340
219684	THOSOLAR E	0.3214	50/50	0.3214
219687	LUMSOLAR_N E	0.3981	Adder	0.47
219689	LUMSOLAR_S E	0.3949	Adder	0.46
219706	BEAVBRSP1_C	0.0064	50/50	0.0064
219707	BEAVBRSP1_E	0.0607	50/50	0.0607
219708	BEAVBRSP2_C	0.0064	50/50	0.0064
219709	BEAVBRSP2_E	0.0606	50/50	0.0606
219710	CINNAMSP1_C	0.0033	50/50	0.0033
219711	CINNAMSP1_E	0.0315	50/50	0.0315
219712	CINNAMSP2_C	0.0020	50/50	0.0020
219713	CINNAMSP2_E	0.0188	50/50	0.0188
219714	CINNAMSP3_C	0.0033	50/50	0.0033
219715	CINNAMSP3_E	0.0315	50/50	0.0315
219716	CINNAMSP4_C	0.0033	50/50	0.0033
219717	CINNAMSP4_E	0.0313	50/50	0.0313
219718	GLOUCSP1_C	0.0121	50/50	0.0121
219719	GLOUCSP1_E	0.1147	50/50	0.1147
219726	BAT.STORG E	0.3771	50/50	0.3771
219765	PARADISE E	1.2528	50/50	1.2528
219766	PARADISE C	0.1283	50/50	0.1283
227881	GRENWCHG	0.4248	Adder	0.5
227928	V4-067E	0.2699	Adder	0.32
228102	BLE#2 ST (Deactivation : 30/04/2019)	25.8978	Adder	30.47
228261	V4-054E	1.2467	Adder	1.47
228334	MANNMILG	1.8675	Adder	2.2
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.3632	Adder	0.43
228357	V2-046E	2.8680	Adder	3.37
228400	MICK 1CT	2.4200	50/50	2.4200
228423	Q-090 2	40.8139	50/50	40.8139
228712	V2-041E	0.4491	Adder	0.53
228721	V2-035E	0.2617	Adder	0.31
228733	AB1-119 E	0.1471	Adder	0.17
902092	W1-130E	1.1439	Adder	1.35
902432	W2-030 E	1.0131	Adder	1.19
910862	OWENSCORIN E	1.1157	50/50	1.1157
917471	Z2-083	4.1288	50/50	4.1288
919901	AB1-000 1	0.9066	Adder	1.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
919911	AB1-000 2	0.9066	Adder	1.07
919921	AB1-000 3	0.9066	Adder	1.07
923153	AB1-116 E	0.1645	Adder	0.19
923532	AB1-169AC	110.1944	Adder	129.64
924051	AB2-049 C	0.7807	Adder	0.92
924052	AB2-049 E	1.2738	Adder	1.5
924531	AB2-102 C	39.6289	Adder	46.62
924532	AB2-102 E	0.8806	Adder	1.04
924701	AB2-122 C	0.1166	Adder	0.14
924702	AB2-122 E	0.2000	Adder	0.24
925391	AC1-010 C (Suspended)	0.8613	50/50	0.8613
925392	AC1-010 E (Suspended)	1.4877	50/50	1.4877
925441	AC1-016 C (Withdrawn : Unavailable)	0.4982	Adder	0.59
925442	AC1-016 E (Withdrawn : Unavailable)	0.8129	Adder	0.96
925452	AC1-017 E	0.4726	Adder	0.56
925561	AC1-030 C	0.0544	50/50	0.0544
925562	AC1-030 E	0.4975	50/50	0.4975
930001	AB1-001 C	0.1409	Adder	0.17
930002	AB1-001 E	0.2316	Adder	0.27
930242	AB1-063 E	0.1530	50/50	0.1530
932361	AC2-050 C O1	0.7353	Adder	0.87
932362	AC2-050 E O1	1.1997	Adder	1.41
933962	AD1-019 E	1.2831	Adder	1.51
934661	AD1-097 1	1.4627	Adder	1.72
934671	AD1-097 2	1.4627	Adder	1.72
934681	AD1-097 3	1.4627	Adder	1.72
934691	AD1-097 4	0.8658	Adder	1.02
936211	AD2-027 C	0.2697	50/50	0.2697
936212	AD2-027 E	2.5507	50/50	2.5507
936321	AD2-042 C	0.3548	50/50	0.3548
936322	AD2-042 E	3.3735	50/50	3.3735
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.1068	Adder	0.13
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.1471	Adder	0.17
936501	AD2-065 C	0.2156	Adder	0.25
936502	AD2-065 E	0.2974	Adder	0.35
937011	AD2-135 C	0.1193	Adder	0.14
937012	AD2-135 E	0.2028	Adder	0.24
938421	AE1-061 C	0.5519	Adder	0.65
938422	AE1-061 E	0.5519	Adder	0.65
938431	AE1-062 C	1.9897	Adder	2.34
938432	AE1-062 E	1.9897	Adder	2.34
938781	AE1-104 C O1	20.9042	Adder	24.59
938782	AE1-104 E O1	53.4831	Adder	62.92
938871	AE1-115 C	2.2224	Adder	2.61
938872	AE1-115 E	2.2224	Adder	2.61
939301	AE1-161 C	4.1767	Adder	4.91
939302	AE1-161 E	6.2651	Adder	7.37
939501	AE1-179 C O1	6.7419	Adder	7.93
939502	AE1-179 E O1	4.7579	Adder	5.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939821	AE1-218 C O1	0.1726	Adder	0.2
939822	AE1-218 E O1	0.2588	Adder	0.3
939831	AE1-219 C O1	0.3882	Adder	0.46
939832	AE1-219 E O1	0.5608	Adder	0.66
939931	AE1-229 C O1	18.9647	Adder	22.31
939932	AE1-229 E O1	12.8491	Adder	15.12
940001	AE1-240 C O1	5.5886	Adder	6.57
940002	AE1-240 E O1	3.9891	Adder	4.69
940271	AE2-010	-0.5405	Adder	-0.64
940361	AE2-020 C	17.3972	Adder	20.47
940362	AE2-020 E	81.4552	Adder	95.83
940371	AE2-021 C	17.3972	Adder	20.47
940372	AE2-021 E	81.4552	Adder	95.83
940381	AE2-022 C	10.1484	Adder	11.94
940382	AE2-022 E	47.5155	Adder	55.9
940771	AE2-064 C	0.0539	50/50	0.0539
940772	AE2-064 E	0.4231	50/50	0.4231
940781	AE2-065 C	0.0449	50/50	0.0449
940782	AE2-065 E	0.4089	50/50	0.4089
942101	AE2-222 C O1	14.4205	Adder	16.97
942102	AE2-222 E O1	36.2251	Adder	42.62
942381	AE2-251 C	55.1142	Adder	64.84
942382	AE2-251 E	141.0216	Adder	165.91
943071	AE2-334 C	6.1368	Adder	7.22
943072	AE2-334 E	3.2715	Adder	3.85
943732	AF1-041 E	0.4041	Adder	0.48
944951	AF1-160 C	1.9897	Adder	2.34
944952	AF1-160 E	2.0892	Adder	2.46
945431	AF1-208 C O1	5.5789	Adder	6.56
945432	AF1-208 E O1	3.7193	Adder	4.38
945731	AF1-238 C	9.6736	Adder	11.38
945732	AF1-238 E	14.5103	Adder	17.07
945741	AF1-239 C	2.2761	Adder	2.68
945742	AF1-239 E	3.4142	Adder	4.02
945961	AF1-261	0.1342	Adder	0.16
945971	AF1-262	0.1899	Adder	0.22
945991	AF1-264	0.4835	50/50	0.4835
957221	AF2-016 C	10.8152	Adder	24.01
957222	AF2-016 E	16.2229	Adder	36.01
957251	AF2-019 C	1.4794	Adder	3.28
957252	AF2-019 E	2.2191	Adder	4.93
957261	AF2-020 C	0.8534	Adder	1.89
957262	AF2-020 E	1.2801	Adder	2.84
957281	AF2-022 C	1.8961	Adder	4.21
957282	AF2-022 E	2.8441	Adder	6.31
957291	AF2-023 C O1	2.3559	Adder	5.23
957292	AF2-023 E O1	3.5339	Adder	7.84
957301	AF2-024 C	2.7228	Adder	6.04
957302	AF2-024 E	9.0660	50/50	9.0660
957311	AF2-025 C	0.7159	Adder	1.59
957312	AF2-025 E	1.0738	Adder	2.38
957321	AF2-026 C	1.1655	Adder	2.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957322	AF2-026 E	1.7482	Adder	3.88
957443	AF2-038 BAT	2.2472	Merchant Transmission	2.2472
957641	AF2-058	0.2664	Adder	0.59
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.4198	Adder	0.93
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	49.9570	Adder	110.89
958811	AF2-172 C	0.3957	Adder	0.88
958812	AF2-172 E	0.6456	Adder	1.43
958831	AF2-174 C	0.4738	Adder	1.05
958832	AF2-174 E	0.6543	Adder	1.45
959111	AF2-202 C	0.1215	Adder	0.27
959112	AF2-202 E	0.1663	Adder	0.37
999905	MARINGEN 2	0.6753	Adder	0.79
999906	PVILLEG 2	0.2870	Adder	0.34
NEWTON	NEWTON	1.0842	Confirmed LTF	1.0842
FARMERCITY	FARMERCITY	0.0564	Confirmed LTF	0.0564
G-007A	G-007A	10.1294	Confirmed LTF	10.1294
VFT	VFT	15.0930	Confirmed LTF	15.0930
CALDERWOOD	CALDERWOOD	0.4945	Confirmed LTF	0.4945
PRAIRIE	PRAIRIE	2.6011	Confirmed LTF	2.6011
CHEOAH	CHEOAH	0.4975	Confirmed LTF	0.4975
EDWARDS	EDWARDS	0.3539	Confirmed LTF	0.3539
TILTON	TILTON	0.6369	Confirmed LTF	0.6369
MADISON	MADISON	0.0081	Confirmed LTF	0.0081
GIBSON	GIBSON	0.5515	Confirmed LTF	0.5515
BLUEG	BLUEG	1.7534	Confirmed LTF	1.7534
TRIMBLE	TRIMBLE	0.5621	Confirmed LTF	0.5621
CATAWBA	CATAWBA	0.3437	Confirmed LTF	0.3437

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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
99832139	219100	NEWFRDM	PSE&G	219704	HILLTOP_3	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	886.0	117.66	119.27	DC	31.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200062	SALEM G3	2.6265	Adder	3.09
219259	KINSLEYDEP E	0.2602	Adder	0.31
219385	DEPTFDSP1_E	0.0034	Adder	0.0
219390	DEPTFDSP2_E	0.0034	Adder	0.0
219394	DEPTFDSP3_E	0.0086	Adder	0.01
219416	DEPTFDSP4_E	0.0034	Adder	0.0
219664	THOROFSP1_E	0.0141	Adder	0.02
219666	THOROFSP2_E	0.0141	Adder	0.02
219684	THOSOLAR E	0.0781	Adder	0.09
219727	Z1-082 BAT	0.2598	50/50	0.2598
227881	GRENWCHG	0.1499	Adder	0.18
227928	V4-067E	0.1446	Adder	0.17
228102	BLE#2 ST (Deactivation : 30/04/2019)	13.4194	Adder	15.79
228201	CARL#2CT	0.5352	50/50	0.5352
228260	V4-054C	0.1410	50/50	0.1410
228261	V4-054E	0.6669	50/50	0.6669
228334	MANNMILG	0.7605	Adder	0.89
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.1520	Adder	0.18
228357	V2-046E	1.1767	Adder	1.38
228702	WEST CT	0.4656	50/50	0.4656
228712	V2-041E	0.2221	Adder	0.26
228717	S121	1.1331	50/50	1.1331
228720	V2-035C	0.0152	50/50	0.0152
228721	V2-035E	0.1437	50/50	0.1437
228727	W2-039G	1.1836	50/50	1.1836
228728	W1-130C	0.0714	50/50	0.0714
228733	AB1-119 E	0.0944	50/50	0.0944
902092	W1-130E	0.6740	50/50	0.6740
902432	W2-030 E	0.5353	Adder	0.63
918622	AA1-079 E	-3.1639	Adder	-3.72
918632	AA1-079 E	-3.1629	Adder	-3.72
923153	AB1-116 E	0.1010	50/50	0.1010
923532	AB1-169AC	64.9660	50/50	64.9660
924051	AB2-049 C	0.5004	50/50	0.5004
924052	AB2-049 E	0.8165	50/50	0.8165
924531	AB2-102 C	19.6949	Adder	23.17
924532	AB2-102 E	0.4377	Adder	0.51
924701	AB2-122 C	0.0625	Adder	0.07
924702	AB2-122 E	0.1071	Adder	0.13

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925441	AC1-016 C (Withdrawn : Unavailable)	-0.2954	Adder	-0.35
930001	AB1-001 C	0.0726	Adder	0.09
930002	AB1-001 E	0.1194	Adder	0.14
930242	AB1-063 E	-0.0739	Adder	-0.09
933962	AD1-019 E	0.6769	Adder	0.8
936212	AD2-027 E	-1.0110	Adder	-1.19
936322	AD2-042 E	-1.3372	Adder	-1.57
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.0685	50/50	0.0685
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.0944	50/50	0.0944
936501	AD2-065 C	0.1250	50/50	0.1250
936502	AD2-065 E	0.1725	50/50	0.1725
937011	AD2-135 C	0.0871	50/50	0.0871
937012	AD2-135 E	0.1481	50/50	0.1481
938421	AE1-061 C	0.3252	50/50	0.3252
938422	AE1-061 E	0.3252	50/50	0.3252
938431	AE1-062 C	1.2018	50/50	1.2018
938432	AE1-062 E	1.2018	50/50	1.2018
938781	AE1-104 C O1	10.8319	Adder	12.74
938782	AE1-104 E O1	27.7131	Adder	32.6
938871	AE1-115 C	0.8785	Adder	1.03
938872	AE1-115 E	0.8785	Adder	1.03
939301	AE1-161 C	2.4316	50/50	2.4316
939302	AE1-161 E	3.6474	50/50	3.6474
939501	AE1-179 C O1	3.7902	50/50	3.7902
939502	AE1-179 E O1	2.6748	50/50	2.6748
939821	AE1-218 C O1	0.1025	50/50	0.1025
939822	AE1-218 E O1	0.1538	50/50	0.1538
939831	AE1-219 C O1	0.2307	50/50	0.2307
939832	AE1-219 E O1	0.3333	50/50	0.3333
939931	AE1-229 C O1	9.8470	50/50	9.8470
939932	AE1-229 E O1	6.6716	50/50	6.6716
940001	AE1-240 C O1	3.1300	50/50	3.1300
940002	AE1-240 E O1	2.2342	50/50	2.2342
940361	AE2-020 C	9.5133	Adder	11.19
940362	AE2-020 E	44.5422	Adder	52.4
940371	AE2-021 C	9.5133	Adder	11.19
940372	AE2-021 E	44.5422	Adder	52.4
940381	AE2-022 C	5.5494	Adder	6.53
940382	AE2-022 E	25.9829	Adder	30.57
940782	AE2-065 E	0.0923	Adder	0.11
942101	AE2-222 C O1	7.6041	Adder	8.95
942102	AE2-222 E O1	19.1020	Adder	22.47
942381	AE2-251 C	30.1381	Adder	35.46
942382	AE2-251 E	77.1149	Adder	90.72
943071	AE2-334 C	3.6670	50/50	3.6670
943072	AE2-334 E	1.9549	50/50	1.9549
943732	AF1-041 E	0.2136	Adder	0.25
944951	AF1-160 C	1.2018	50/50	1.2018
944952	AF1-160 E	1.2619	50/50	1.2619
945431	AF1-208 C O1	2.4490	Adder	2.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945432	AF1-208 E O1	1.6327	Adder	1.92
945731	AF1-238 C	5.5733	50/50	5.5733
945732	AF1-238 E	8.3599	50/50	8.3599
945741	AF1-239 C	1.3114	50/50	1.3114
945742	AF1-239 E	1.9670	50/50	1.9670
945971	AF1-262	0.1043	50/50	0.1043
957221	AF2-016 C	5.7174	Adder	12.69
957222	AF2-016 E	8.5761	Adder	19.04
957251	AF2-019 C	0.7522	Adder	1.67
957252	AF2-019 E	1.1282	Adder	2.5
957261	AF2-020 C	0.3874	Adder	0.86
957262	AF2-020 E	0.5810	Adder	1.29
957281	AF2-022 C	0.9410	Adder	2.09
957282	AF2-022 E	1.4115	Adder	3.13
957291	AF2-023 C O1	0.9310	Adder	2.07
957292	AF2-023 E O1	1.3965	Adder	3.1
957301	AF2-024 C	0.9285	Adder	2.06
957302	AF2-024 E	1.3927	Adder	3.09
957311	AF2-025 C	0.3778	Adder	0.84
957312	AF2-025 E	0.5667	Adder	1.26
957321	AF2-026 C	0.5740	Adder	1.27
957322	AF2-026 E	0.8609	Adder	1.91
957641	AF2-058	0.2689	50/50	0.2689
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2175	Adder	0.48
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	25.8860	Adder	57.46
958811	AF2-172 C	0.4103	50/50	0.4103
958812	AF2-172 E	0.6694	50/50	0.6694
959111	AF2-202 C	0.0552	Adder	0.12
959112	AF2-202 E	0.0755	Adder	0.17
999905	MARINGEN 2	0.3564	Adder	0.42
999906	PVILLEG 2	0.1513	Adder	0.18
NEWTON	NEWTON	0.0913	Confirmed LTF	0.0913
FARMERCITY	FARMERCITY	0.0046	Confirmed LTF	0.0046
CALDERWOOD	CALDERWOOD	0.0333	Confirmed LTF	0.0333
NY	NY	0.3976	Confirmed LTF	0.3976
PRAIRIE	PRAIRIE	0.2118	Confirmed LTF	0.2118
O-066	O-066	5.8800	Confirmed LTF	5.8800
CHEOAH	CHEOAH	0.0330	Confirmed LTF	0.0330
EDWARDS	EDWARDS	0.0308	Confirmed LTF	0.0308
TILTON	TILTON	0.0554	Confirmed LTF	0.0554
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	0.0081	Confirmed LTF	0.0081
GIBSON	GIBSON	0.0470	Confirmed LTF	0.0470
BLUEG	BLUEG	0.1493	Confirmed LTF	0.1493
TRIMBLE	TRIMBLE	0.0479	Confirmed LTF	0.0479
CATAWBA	CATAWBA	0.0178	Confirmed LTF	0.0178

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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
99831089	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	PS_P2-3_CUTB_1-4_LT	breaker	771.0	125.4	127.06	DC	29.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
219124	CAMDEN_STG	3.6488	50/50	3.6488
219126	CAMDEN_CTG	4.4827	50/50	4.4827
219128	GLOUCSTR_26	1.8524	50/50	1.8524
219229	EAGLEPT_G3	2.2794	50/50	2.2794
219230	EAGLEPT_G1	4.3020	50/50	4.3020
219231	EAGLEPT_G2	4.2978	50/50	4.2978
219235	EAGLEPT_ST2	1.5552	50/50	1.5552
219240	MANTUACREK E	0.6489	50/50	0.6489
219258	KINSLEYDEP C	0.0976	50/50	0.0976
219259	KINSLEYDEP E	0.9233	50/50	0.9233
219384	DEPTFDSP1_C	0.0013	50/50	0.0013
219385	DEPTFDSP1_E	0.0122	50/50	0.0122
219388	DEPTFDSP2_C	0.0013	50/50	0.0013
219390	DEPTFDSP2_E	0.0122	50/50	0.0122
219393	DEPTFDSP3_C	0.0032	50/50	0.0032
219394	DEPTFDSP3_E	0.0306	50/50	0.0306
219408	DEPTFDSP4_C	0.0013	50/50	0.0013
219416	DEPTFDSP4_E	0.0122	50/50	0.0122
219623	KINSLEYBEA C	0.0703	50/50	0.0703
219624	KINSLEYBEA E	0.6866	50/50	0.6866
219662	THOROFSP1_C	0.0047	50/50	0.0047
219664	THOROFSP1_E	0.0441	50/50	0.0441
219665	THOROFSP2_C	0.0047	50/50	0.0047
219666	THOROFSP2_E	0.0445	50/50	0.0445
219683	THOSOLAR C	0.0258	50/50	0.0258
219684	THOSOLAR E	0.2443	50/50	0.2443
219706	BEAVBRSP1_C	0.0051	50/50	0.0051
219707	BEAVBRSP1_E	0.0480	50/50	0.0480
219708	BEAVBRSP2_C	0.0051	50/50	0.0051
219709	BEAVBRSP2_E	0.0478	50/50	0.0478
219718	GLOUCSP1_C	0.0100	50/50	0.0100
219719	GLOUCSP1_E	0.0951	50/50	0.0951
219726	BAT.STORG E	0.1379	Adder	0.16
219765	PARADISE E	1.0382	50/50	1.0382
219766	PARADISE C	0.1063	50/50	0.1063
227881	GRENWCHG	0.2880	Adder	0.34
227928	V4-067E	0.1312	Adder	0.15
228102	BLE#2 ST (Deactivation : 30/04/2019)	13.2148	Adder	15.55
228261	V4-054E	0.7295	Adder	0.86
228334	MANNMILG	1.1774	Adder	1.39

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.2247	Adder	0.26
228357	V2-046E	1.8018	Adder	2.12
228423	Q-090 2	29.3972	50/50	29.3972
228712	V2-041E	0.2439	Adder	0.29
228721	V2-035E	0.1555	Adder	0.18
228733	AB1-119 E	0.0654	Adder	0.08
902092	W1-130E	0.6438	Adder	0.76
902432	W2-030 E	0.5008	Adder	0.59
910862	OWENSCORIN E	0.4805	Adder	0.57
917471	Z2-083	2.9739	50/50	2.9739
918622	AA1-079 E	-2.8726	Adder	-3.38
918632	AA1-079 E	-2.8720	Adder	-3.38
923153	AB1-116 E	0.0845	Adder	0.1
923532	AB1-169AC	61.9484	Adder	72.88
924051	AB2-049 C	0.3748	Adder	0.44
924052	AB2-049 E	0.6115	Adder	0.72
924531	AB2-102 C	21.3416	Adder	25.11
924532	AB2-102 E	0.4743	Adder	0.56
924701	AB2-122 C	0.0567	Adder	0.07
924702	AB2-122 E	0.0972	Adder	0.11
925391	AC1-010 C (Suspended)	0.7138	50/50	0.7138
925392	AC1-010 E (Suspended)	1.2329	50/50	1.2329
925441	AC1-016 C (Withdrawn : Unavailable)	-0.2706	Adder	-0.32
930001	AB1-001 C	0.0672	Adder	0.08
930002	AB1-001 E	0.1105	Adder	0.13
933962	AD1-019 E	0.6330	Adder	0.74
936212	AD2-027 E	-0.8929	Adder	-1.05
936322	AD2-042 E	-1.1809	Adder	-1.39
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.0475	Adder	0.06
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.0654	Adder	0.08
936501	AD2-065 C	0.0832	Adder	0.1
936502	AD2-065 E	0.1147	Adder	0.13
937011	AD2-135 C	0.0561	Adder	0.07
937012	AD2-135 E	0.0954	Adder	0.11
938421	AE1-061 C	0.3106	Adder	0.37
938422	AE1-061 E	0.3106	Adder	0.37
938431	AE1-062 C	0.7676	Adder	0.9
938432	AE1-062 E	0.7676	Adder	0.9
938781	AE1-104 C O1	10.6668	Adder	12.55
938782	AE1-104 E O1	27.2907	Adder	32.11
938871	AE1-115 C	1.4215	Adder	1.67
938872	AE1-115 E	1.4215	Adder	1.67
939301	AE1-161 C	2.4108	Adder	2.84
939302	AE1-161 E	3.6162	Adder	4.25
939501	AE1-179 C O1	3.7979	Adder	4.47
939502	AE1-179 E O1	2.6802	Adder	3.15
939821	AE1-218 C O1	0.0946	Adder	0.11
939822	AE1-218 E O1	0.1419	Adder	0.17
939831	AE1-219 C O1	0.2128	Adder	0.25

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939832	AE1-219 E O1	0.3074	Adder	0.36
939931	AE1-229 C O1	11.5646	Adder	13.61
939932	AE1-229 E O1	7.8354	Adder	9.22
940001	AE1-240 C O1	3.1557	Adder	3.71
940002	AE1-240 E O1	2.2525	Adder	2.65
940361	AE2-020 C	8.2368	Adder	9.69
940362	AE2-020 E	38.5651	Adder	45.37
940371	AE2-021 C	8.2368	Adder	9.69
940372	AE2-021 E	38.5651	Adder	45.37
940381	AE2-022 C	4.8048	Adder	5.65
940382	AE2-022 E	22.4963	Adder	26.47
940771	AE2-064 C	0.0427	50/50	0.0427
940772	AE2-064 E	0.3346	50/50	0.3346
940781	AE2-065 C	0.0360	50/50	0.0360
940782	AE2-065 E	0.3276	50/50	0.3276
942101	AE2-222 C O1	7.1104	Adder	8.37
942102	AE2-222 E O1	17.8617	Adder	21.01
942381	AE2-251 C	26.0939	Adder	30.7
942382	AE2-251 E	66.7669	Adder	78.55
943071	AE2-334 C	3.4102	Adder	4.01
943072	AE2-334 E	1.8180	Adder	2.14
943732	AF1-041 E	0.1986	Adder	0.23
944951	AF1-160 C	0.7676	Adder	0.9
944952	AF1-160 E	0.8059	Adder	0.95
945431	AF1-208 C O1	3.3454	Adder	3.94
945432	AF1-208 E O1	2.2303	Adder	2.62
945731	AF1-238 C	5.3490	Adder	6.29
945732	AF1-238 E	8.0234	Adder	9.44
945741	AF1-239 C	1.2586	Adder	1.48
945742	AF1-239 E	1.8879	Adder	2.22
945971	AF1-262	0.1129	Adder	0.13
945991	AF1-264	0.2082	Adder	0.24
957221	AF2-016 C	5.3692	Adder	11.92
957222	AF2-016 E	8.0539	Adder	17.88
957251	AF2-019 C	0.7741	Adder	1.72
957252	AF2-019 E	1.1612	Adder	2.58
957261	AF2-020 C	0.4999	Adder	1.11
957262	AF2-020 E	0.7499	Adder	1.66
957281	AF2-022 C	1.0241	Adder	2.27
957282	AF2-022 E	1.5361	Adder	3.41
957291	AF2-023 C O1	1.5070	Adder	3.35
957292	AF2-023 E O1	2.2605	Adder	5.02
957301	AF2-024 C	4.1618	50/50	4.1618
957302	AF2-024 E	6.2427	50/50	6.2427
957311	AF2-025 C	0.3533	Adder	0.78
957312	AF2-025 E	0.5300	Adder	1.18
957321	AF2-026 C	0.6366	Adder	1.41
957322	AF2-026 E	0.9548	Adder	2.12
957641	AF2-058	0.1559	Adder	0.35
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2142	Adder	0.48

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	25.4914	Adder	56.58
958811	AF2-172 C	0.2269	Adder	0.5
958812	AF2-172 E	0.3702	Adder	0.82
959111	AF2-202 C	0.0712	Adder	0.16
959112	AF2-202 E	0.0974	Adder	0.22
999905	MARINGEN 2	0.3333	Adder	0.39
999906	PVILLEG 2	0.1415	Adder	0.17
NEWTON	NEWTON	0.2858	Confirmed LTF	0.2858
FARMERCITY	FARMERCITY	0.0148	Confirmed LTF	0.0148
CALDERWOOD	CALDERWOOD	0.1233	Confirmed LTF	0.1233
NY	NY	0.5630	Confirmed LTF	0.5630
PRAIRIE	PRAIRIE	0.6793	Confirmed LTF	0.6793
O-066	O-066	8.3731	Confirmed LTF	8.3731
CHEOAH	CHEOAH	0.1236	Confirmed LTF	0.1236
EDWARDS	EDWARDS	0.0938	Confirmed LTF	0.0938
TILTON	TILTON	0.1688	Confirmed LTF	0.1688
G-007	G-007	0.7270	Confirmed LTF	0.7270
MADISON	MADISON	0.0101	Confirmed LTF	0.0101
GIBSON	GIBSON	0.1458	Confirmed LTF	0.1458
BLUEG	BLUEG	0.4618	Confirmed LTF	0.4618
TRIMBLE	TRIMBLE	0.1486	Confirmed LTF	0.1486
CATAWBA	CATAWBA	0.0812	Confirmed LTF	0.0812

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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
99831387	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308	single	758.0	104.49	105.14	DC	12.1

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
213400	COVANTA DELA	2.0653	80/20	2.0653
219124	CAMDEN_STG	3.7035	80/20	3.7035
219126	CAMDEN_CTG	4.5499	80/20	4.5499
219128	GLOUCSTR_26	1.8802	80/20	1.8802
219229	EAGLEPT_G3	2.3136	80/20	2.3136
219230	EAGLEPT_G1	4.3664	80/20	4.3664
219231	EAGLEPT_G2	4.3621	80/20	4.3621
219235	EAGLEPT_ST2	1.5785	80/20	1.5785
219258	KINSLEYDEP C	0.0991	80/20	0.0991
219259	KINSLEYDEP E	0.9371	80/20	0.9371
219384	DEPTFDSP1_C	0.0013	80/20	0.0013
219388	DEPTFDSP2_C	0.0013	80/20	0.0013
219393	DEPTFDSP3_C	0.0033	80/20	0.0033
219408	DEPTFDSP4_C	0.0013	80/20	0.0013
219623	KINSLEYBEA C	0.0713	80/20	0.0713
219662	THOROFSP1_C	0.0047	80/20	0.0047
219665	THOROFSP2_C	0.0048	80/20	0.0048
219683	THOSOLAR C	0.0262	80/20	0.0262
219706	BEAVBRSP1_C	0.0051	80/20	0.0051
219708	BEAVBRSP2_C	0.0051	80/20	0.0051
219718	GLOUCSP1_C	0.0102	80/20	0.0102
219766	PARADISE C	0.1079	80/20	0.1079
228102	BLE#2 ST (Deactivation : 30/04/2019)	13.4130	Adder	15.78
228200	CARL#1CT	0.6623	80/20	0.6623
228201	CARL#2CT	0.7011	80/20	0.7011
228251	CARLLS#4	0.0752	80/20	0.0752
228260	V4-054C	0.1842	80/20	0.1842
228304	LOGAN	7.7932	80/20	7.7932
228306	PCLP STM	2.0053	80/20	2.0053
228307	PCLP GT	2.0053	80/20	2.0053
228309	CCLP NUG	7.0916	80/20	7.0916
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.2683	80/20	0.2683
228351	V2-046C	0.2014	80/20	0.2014
228400	MICK 1CT	1.6911	80/20	1.6911
228423	Q-090 2	29.8376	80/20	29.8376
228471	VALERO1	0.5742	80/20	0.5742
228472	VALERO2	0.3833	80/20	0.3833
228473	VALERO3	0.3833	80/20	0.3833
228484	VALERO4	0.3378	80/20	0.3378
228717	S121	1.2878	80/20	1.2878

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
228720	V2-035C	0.0196	80/20	0.0196
228728	W1-130C	0.0814	80/20	0.0814
917471	Z2-083	3.0184	80/20	3.0184
923532	AB1-169AC	73.9750	80/20	73.9750
924051	AB2-049 C	0.3804	Adder	0.45
924531	AB2-102 C	21.6610	Adder	25.48
924701	AB2-122 C	0.0575	Adder	0.07
925391	AC1-010 C (Suspended)	0.7245	80/20	0.7245
925441	AC1-016 C (Withdrawn : Unavailable)	-0.2746	Adder	-0.32
930001	AB1-001 C	0.0682	Adder	0.08
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.0482	Adder	0.06
936501	AD2-065 C	0.0844	Adder	0.1
937011	AD2-135 C	0.0570	Adder	0.07
938421	AE1-061 C	0.3709	80/20	0.3709
938431	AE1-062 C	0.7790	Adder	0.92
938781	AE1-104 C O1	10.8267	Adder	12.74
938871	AE1-115 C	1.6974	80/20	1.6974
939301	AE1-161 C	2.8788	80/20	2.8788
939501	AE1-179 C O1	4.5350	80/20	4.5350
939821	AE1-218 C O1	0.1129	80/20	0.1129
939831	AE1-219 C O1	0.2541	80/20	0.2541
939931	AE1-229 C O1	13.8092	80/20	13.8092
940001	AE1-240 C O1	3.7683	80/20	3.7683
940361	AE2-020 C	8.3607	Adder	9.84
940371	AE2-021 C	8.3607	Adder	9.84
940381	AE2-022 C	4.8771	Adder	5.74
940771	AE2-064 C	0.0433	80/20	0.0433
940781	AE2-065 C	0.0365	80/20	0.0365
942101	AE2-222 C O1	7.2171	Adder	8.49
942381	AE2-251 C	26.4866	Adder	31.16
942571	AE2-272	0.0230	80/20	0.0230
943071	AE2-334 C	4.0722	80/20	4.0722
944951	AF1-160 C	0.7790	Adder	0.92
945431	AF1-208 C O1	3.9949	80/20	3.9949
945731	AF1-238 C	5.4292	Adder	6.39
945741	AF1-239 C	1.2774	Adder	1.5
945971	AF1-262	0.1348	80/20	0.1348
945991	AF1-264	0.2486	80/20	0.2486
957221	AF2-016 C	5.4492	Adder	12.1
957251	AF2-019 C	0.7857	Adder	1.74
957261	AF2-020 C	1.1263	80/20	1.1263
957281	AF2-022 C	1.0395	Adder	2.31
957291	AF2-023 C O1	3.3954	80/20	3.3954
957301	AF2-024 C	4.2240	80/20	4.2240
957311	AF2-025 C	0.3586	Adder	0.8
957321	AF2-026 C	0.6461	Adder	1.43
957641	AF2-058	0.3512	80/20	0.3512
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2174	Adder	0.48
958811	AF2-172 C	0.5112	80/20	0.5112

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959111	AF2-202 C	0.1604	80/20	0.1604
NEWTON	NEWTON	0.2890	Confirmed LTF	0.2890
FARMERCITY	FARMERCITY	0.0150	Confirmed LTF	0.0150
CALDERWOOD	CALDERWOOD	0.1247	Confirmed LTF	0.1247
NY	NY	0.5707	Confirmed LTF	0.5707
PRAIRIE	PRAIRIE	0.6871	Confirmed LTF	0.6871
CHEOAH	CHEOAH	0.1251	Confirmed LTF	0.1251
EDWARDS	EDWARDS	0.0952	Confirmed LTF	0.0952
TILTON	TILTON	0.1707	Confirmed LTF	0.1707
MADISON	MADISON	0.0101	Confirmed LTF	0.0101
GIBSON	GIBSON	0.1474	Confirmed LTF	0.1474
BLUEG	BLUEG	0.4687	Confirmed LTF	0.4687
TRIMBLE	TRIMBLE	0.1503	Confirmed LTF	0.1503
CATAWBA	CATAWBA	0.0822	Confirmed LTF	0.0822

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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
99831048	219125	CAMDEN	PSE&G	214206	RICHRE29	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ CHICH045 \$ STBK	breaker	1336.0	138.08	140.08	DC	60.02

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
218661	EHAMPSOLAR E	0.3426	Adder	0.4
219123	O-011 (Deactivation : 26/04/2020)	0.8444	Adder	0.99
219124	CAMDEN_STG	4.4029	50/50	4.4029
219126	CAMDEN_CTG	5.4091	50/50	5.4091
219128	GLOUCSTR_26	2.2352	50/50	2.2352
219229	EAGLEPT_G3	2.8352	50/50	2.8352
219230	EAGLEPT_G1	5.3498	50/50	5.3498
219231	EAGLEPT_G2	5.3467	50/50	5.3467
219235	EAGLEPT_ST2	1.9339	50/50	1.9339
219236	SOUTHERNHQ C	0.0199	50/50	0.0199
219237	SOUTHERNHQ E	0.1911	50/50	0.1911
219240	MANTUACREK E	0.7830	50/50	0.7830
219241	CAMDEN1	0.3282	50/50	0.3282
219242	CAMDEN2	0.0355	50/50	0.0355
219258	KINSLEYDEP C	0.1218	50/50	0.1218
219259	KINSLEYDEP E	1.1523	50/50	1.1523
219273	CLEANLIGHT E	0.3709	Adder	0.44
219288	REEVES ST E	1.2928	Adder	1.52
219292	REEVESSO E	0.1184	Adder	0.14
219305	NAMERICA E	0.6473	Adder	0.76
219340	CUTHBSP1_C	0.0070	50/50	0.0070
219344	CUTHBSP1_E	0.0663	50/50	0.0663
219345	CUTHBSP2_C	0.0070	50/50	0.0070
219347	CUTHBSP2_E	0.0662	50/50	0.0662
219349	LDSOLAR E	0.5668	Adder	0.67
219350	CUTHBSP3_C	0.0070	50/50	0.0070
219351	CUTHBSP3_E	0.0663	50/50	0.0663
219357	CUTHBSP4_C	0.0056	50/50	0.0056
219379	CUTHBSP4_E	0.0533	50/50	0.0533
219384	DEPTFDSP1_C	0.0016	50/50	0.0016
219385	DEPTFDSP1_E	0.0152	50/50	0.0152
219388	DEPTFDSP2_C	0.0016	50/50	0.0016
219390	DEPTFDSP2_E	0.0152	50/50	0.0152
219393	DEPTFDSP3_C	0.0040	50/50	0.0040
219394	DEPTFDSP3_E	0.0382	50/50	0.0382
219408	DEPTFDSP4_C	0.0016	50/50	0.0016
219416	DEPTFDSP4_E	0.0152	50/50	0.0152
219566	BURLINSP1_E	0.0777	Adder	0.09
219574	CAMDENSP1_C	0.0395	50/50	0.0395
219575	CAMDENSP1_E	0.3731	50/50	0.3731
219582	COXSCOSP1_E	0.0149	Adder	0.02

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
219608	WPEMNERT E	0.6473	Adder	0.76
219611	FLORENCE E	1.8496	Adder	2.18
219614	COXSCOSP2_E	0.0149	Adder	0.02
219619	MILLCREEK E	0.4440	Adder	0.52
219623	KINSLEYBEA C	0.0888	50/50	0.0888
219624	KINSLEYBEA E	0.8682	50/50	0.8682
219647	COOPERSOLA E	0.1530	50/50	0.1530
219652	LUMB23SP1_E	0.0394	Adder	0.05
219656	LUMB23SP2_E	0.0394	Adder	0.05
219662	THOROFSP1_C	0.0061	50/50	0.0061
219664	THOROFSP1_E	0.0581	50/50	0.0581
219665	THOROFSP2_C	0.0062	50/50	0.0062
219666	THOROFSP2_E	0.0584	50/50	0.0584
219683	THOSOLAR C	0.0340	50/50	0.0340
219684	THOSOLAR E	0.3214	50/50	0.3214
219687	LUMSOLAR_N E	0.3981	Adder	0.47
219689	LUMSOLAR_S E	0.3949	Adder	0.46
219706	BEAVBRSP1_C	0.0064	50/50	0.0064
219707	BEAVBRSP1_E	0.0607	50/50	0.0607
219708	BEAVBRSP2_C	0.0064	50/50	0.0064
219709	BEAVBRSP2_E	0.0606	50/50	0.0606
219710	CINNAMSP1_C	0.0033	50/50	0.0033
219711	CINNAMSP1_E	0.0315	50/50	0.0315
219712	CINNAMSP2_C	0.0020	50/50	0.0020
219713	CINNAMSP2_E	0.0188	50/50	0.0188
219714	CINNAMSP3_C	0.0033	50/50	0.0033
219715	CINNAMSP3_E	0.0315	50/50	0.0315
219716	CINNAMSP4_C	0.0033	50/50	0.0033
219717	CINNAMSP4_E	0.0313	50/50	0.0313
219718	GLOUCSP1_C	0.0121	50/50	0.0121
219719	GLOUCSP1_E	0.1147	50/50	0.1147
219726	BAT.STORG E	0.3771	50/50	0.3771
219765	PARADISE E	1.2528	50/50	1.2528
219766	PARADISE C	0.1283	50/50	0.1283
227881	GRENWCHG	0.4248	Adder	0.5
227928	V4-067E	0.2699	Adder	0.32
228102	BLE#2 ST (Deactivation : 30/04/2019)	25.8978	Adder	30.47
228261	V4-054E	1.2467	Adder	1.47
228334	MANNMILG	1.8675	Adder	2.2
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.3632	Adder	0.43
228357	V2-046E	2.8680	Adder	3.37
228400	MICK 1CT	2.4200	50/50	2.4200
228423	Q-090 2	40.8139	50/50	40.8139
228712	V2-041E	0.4491	Adder	0.53
228721	V2-035E	0.2617	Adder	0.31
228733	AB1-119 E	0.1471	Adder	0.17
902092	W1-130E	1.1439	Adder	1.35
902432	W2-030 E	1.0131	Adder	1.19
910862	OWENSCORIN E	1.1157	50/50	1.1157
917471	Z2-083	4.1288	50/50	4.1288
919901	AB1-000 1	0.9066	Adder	1.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
919911	AB1-000 2	0.9066	Adder	1.07
919921	AB1-000 3	0.9066	Adder	1.07
923153	AB1-116 E	0.1645	Adder	0.19
923532	AB1-169AC	110.1944	Adder	129.64
924051	AB2-049 C	0.7807	Adder	0.92
924052	AB2-049 E	1.2738	Adder	1.5
924531	AB2-102 C	39.6289	Adder	46.62
924532	AB2-102 E	0.8806	Adder	1.04
924701	AB2-122 C	0.1166	Adder	0.14
924702	AB2-122 E	0.2000	Adder	0.24
925391	AC1-010 C (Suspended)	0.8613	50/50	0.8613
925392	AC1-010 E (Suspended)	1.4877	50/50	1.4877
925441	AC1-016 C (Withdrawn : Unavailable)	0.4982	Adder	0.59
925442	AC1-016 E (Withdrawn : Unavailable)	0.8129	Adder	0.96
925452	AC1-017 E	0.4726	Adder	0.56
925561	AC1-030 C	0.0544	50/50	0.0544
925562	AC1-030 E	0.4975	50/50	0.4975
930001	AB1-001 C	0.1409	Adder	0.17
930002	AB1-001 E	0.2316	Adder	0.27
930242	AB1-063 E	0.1530	50/50	0.1530
932361	AC2-050 C O1	0.7353	Adder	0.87
932362	AC2-050 E O1	1.1997	Adder	1.41
933962	AD1-019 E	1.2831	Adder	1.51
934661	AD1-097 1	1.4627	Adder	1.72
934671	AD1-097 2	1.4627	Adder	1.72
934681	AD1-097 3	1.4627	Adder	1.72
934691	AD1-097 4	0.8658	Adder	1.02
936211	AD2-027 C	0.2697	50/50	0.2697
936212	AD2-027 E	2.5507	50/50	2.5507
936321	AD2-042 C	0.3548	50/50	0.3548
936322	AD2-042 E	3.3735	50/50	3.3735
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.1068	Adder	0.13
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.1471	Adder	0.17
936501	AD2-065 C	0.2156	Adder	0.25
936502	AD2-065 E	0.2974	Adder	0.35
937011	AD2-135 C	0.1193	Adder	0.14
937012	AD2-135 E	0.2028	Adder	0.24
938421	AE1-061 C	0.5519	Adder	0.65
938422	AE1-061 E	0.5519	Adder	0.65
938431	AE1-062 C	1.9897	Adder	2.34
938432	AE1-062 E	1.9897	Adder	2.34
938781	AE1-104 C O1	20.9042	Adder	24.59
938782	AE1-104 E O1	53.4831	Adder	62.92
938871	AE1-115 C	2.2224	Adder	2.61
938872	AE1-115 E	2.2224	Adder	2.61
939301	AE1-161 C	4.1767	Adder	4.91
939302	AE1-161 E	6.2651	Adder	7.37
939501	AE1-179 C O1	6.7419	Adder	7.93
939502	AE1-179 E O1	4.7579	Adder	5.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939821	AE1-218 C O1	0.1726	Adder	0.2
939822	AE1-218 E O1	0.2588	Adder	0.3
939831	AE1-219 C O1	0.3882	Adder	0.46
939832	AE1-219 E O1	0.5608	Adder	0.66
939931	AE1-229 C O1	18.9647	Adder	22.31
939932	AE1-229 E O1	12.8491	Adder	15.12
940001	AE1-240 C O1	5.5886	Adder	6.57
940002	AE1-240 E O1	3.9891	Adder	4.69
940271	AE2-010	-0.5405	Adder	-0.64
940361	AE2-020 C	17.3972	Adder	20.47
940362	AE2-020 E	81.4552	Adder	95.83
940371	AE2-021 C	17.3972	Adder	20.47
940372	AE2-021 E	81.4552	Adder	95.83
940381	AE2-022 C	10.1484	Adder	11.94
940382	AE2-022 E	47.5155	Adder	55.9
940771	AE2-064 C	0.0539	50/50	0.0539
940772	AE2-064 E	0.4231	50/50	0.4231
940781	AE2-065 C	0.0449	50/50	0.0449
940782	AE2-065 E	0.4089	50/50	0.4089
942101	AE2-222 C O1	14.4205	Adder	16.97
942102	AE2-222 E O1	36.2251	Adder	42.62
942381	AE2-251 C	55.1142	Adder	64.84
942382	AE2-251 E	141.0216	Adder	165.91
943071	AE2-334 C	6.1368	Adder	7.22
943072	AE2-334 E	3.2715	Adder	3.85
943732	AF1-041 E	0.4041	Adder	0.48
944951	AF1-160 C	1.9897	Adder	2.34
944952	AF1-160 E	2.0892	Adder	2.46
945431	AF1-208 C O1	5.5789	Adder	6.56
945432	AF1-208 E O1	3.7193	Adder	4.38
945731	AF1-238 C	9.6736	Adder	11.38
945732	AF1-238 E	14.5103	Adder	17.07
945741	AF1-239 C	2.2761	Adder	2.68
945742	AF1-239 E	3.4142	Adder	4.02
945961	AF1-261	0.1342	Adder	0.16
945971	AF1-262	0.1899	Adder	0.22
945991	AF1-264	0.4835	50/50	0.4835
957221	AF2-016 C	10.8152	Adder	24.01
957222	AF2-016 E	16.2229	Adder	36.01
957251	AF2-019 C	1.4794	Adder	3.28
957252	AF2-019 E	2.2191	Adder	4.93
957261	AF2-020 C	0.8534	Adder	1.89
957262	AF2-020 E	1.2801	Adder	2.84
957281	AF2-022 C	1.8961	Adder	4.21
957282	AF2-022 E	2.8441	Adder	6.31
957291	AF2-023 C O1	2.3559	Adder	5.23
957292	AF2-023 E O1	3.5339	Adder	7.84
957301	AF2-024 C	2.7228	Adder	6.04
957302	AF2-024 E	9.0660	50/50	9.0660
957311	AF2-025 C	0.7159	Adder	1.59
957312	AF2-025 E	1.0738	Adder	2.38
957321	AF2-026 C	1.1655	Adder	2.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957322	AF2-026 E	1.7482	Adder	3.88
957443	AF2-038 BAT	2.2472	Merchant Transmission	2.2472
957641	AF2-058	0.2664	Adder	0.59
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.4198	Adder	0.93
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	49.9570	Adder	110.89
958811	AF2-172 C	0.3957	Adder	0.88
958812	AF2-172 E	0.6456	Adder	1.43
958831	AF2-174 C	0.4738	Adder	1.05
958832	AF2-174 E	0.6543	Adder	1.45
959111	AF2-202 C	0.1215	Adder	0.27
959112	AF2-202 E	0.1663	Adder	0.37
999905	MARINGEN 2	0.6753	Adder	0.79
999906	PVILLEG 2	0.2870	Adder	0.34
NEWTON	NEWTON	1.0842	Confirmed LTF	1.0842
FARMERCITY	FARMERCITY	0.0564	Confirmed LTF	0.0564
G-007A	G-007A	10.1294	Confirmed LTF	10.1294
VFT	VFT	15.0930	Confirmed LTF	15.0930
CALDERWOOD	CALDERWOOD	0.4945	Confirmed LTF	0.4945
PRAIRIE	PRAIRIE	2.6011	Confirmed LTF	2.6011
CHEOAH	CHEOAH	0.4975	Confirmed LTF	0.4975
EDWARDS	EDWARDS	0.3539	Confirmed LTF	0.3539
TILTON	TILTON	0.6369	Confirmed LTF	0.6369
MADISON	MADISON	0.0081	Confirmed LTF	0.0081
GIBSON	GIBSON	0.5515	Confirmed LTF	0.5515
BLUEG	BLUEG	1.7534	Confirmed LTF	1.7534
TRIMBLE	TRIMBLE	0.5621	Confirmed LTF	0.5621
CATAWBA	CATAWBA	0.3437	Confirmed LTF	0.3437

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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
99832015	227900	CARDIFF	AE	219100	NEWFRDM	PSE&G	1	AE_P7-1 AE13TOWER	tower	692.0	237.97	254.9	DC	119.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206325	280 C GEN (Deactivation : 17/09/2018)	32.6567	50/50	32.6567
206360	280 CRK C1	0.8520	50/50	0.8520
206361	280 CRK C2	0.5634	50/50	0.5634
227842	MARINGEN	0.2545	50/50	0.2545
227927	V4-067C	0.0716	50/50	0.0716
227928	V4-067E	0.6858	50/50	0.6858
228014	PVILLEG	0.0874	50/50	0.0874
228102	BLE#2 ST (Deactivation : 30/04/2019)	46.9037	50/50	46.9037
228712	V2-041E	0.2825	Adder	0.33
228728	W1-130C	0.2412	50/50	0.2412
228729	W2-030 C	0.2436	50/50	0.2436
228731	V3-036	0.3687	50/50	0.3687
228732	V1-021 C	0.0793	50/50	0.0793
902092	W1-130E	2.2769	50/50	2.2769
902432	W2-030 E	2.3218	50/50	2.3218
923532	AB1-169AC	219.6975	50/50	219.6975
924531	AB2-102 C	24.4647	Adder	28.78
924532	AB2-102 E	0.5437	Adder	0.64
924701	AB2-122 C	0.2963	50/50	0.2963
924702	AB2-122 E	0.5079	50/50	0.5079
930001	AB1-001 C	0.3230	50/50	0.3230
930002	AB1-001 E	0.5309	50/50	0.5309
933962	AD1-019 E	2.9538	50/50	2.9538
938421	AE1-061 C	1.0985	50/50	1.0985
938422	AE1-061 E	1.0985	50/50	1.0985
938781	AE1-104 C O1	37.8598	50/50	37.8598
938782	AE1-104 E O1	96.8637	50/50	96.8637
939121	AE1-142 C O1	0.6819	Adder	0.8
939122	AE1-142 E O1	0.9812	Adder	1.15
939501	AE1-179 C O1	2.8251	Adder	3.32
939502	AE1-179 E O1	1.9937	Adder	2.35
940001	AE1-240 C O1	2.3528	Adder	2.77
940002	AE1-240 E O1	1.6794	Adder	1.98
940161	AE2-000 C O1	33.3104	50/50	33.3104
940162	AE2-000 E O1	85.2299	50/50	85.2299
940361	AE2-020 C	50.6537	50/50	50.6537
940362	AE2-020 E	237.1645	50/50	237.1645
940371	AE2-021 C	50.6537	50/50	50.6537
940372	AE2-021 E	237.1645	50/50	237.1645
940381	AE2-022 C	29.5480	50/50	29.5480

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
940382	AE2-022 E	138.3460	50/50	138.3460
942101	AE2-222 C O1	33.2378	50/50	33.2378
942102	AE2-222 E O1	83.4952	50/50	83.4952
942381	AE2-251 C	160.4701	50/50	160.4701
942382	AE2-251 E	410.5979	50/50	410.5979
943732	AF1-041 E	0.9497	50/50	0.9497
944332	AF1-101 E O1	83.5593	50/50	83.5593
945731	AF1-238 C	4.3849	Adder	5.16
945732	AF1-238 E	6.5773	Adder	7.74
945741	AF1-239 C	1.0317	Adder	1.21
945742	AF1-239 E	1.5476	Adder	1.82
957221	AF2-016 C	47.9364	50/50	47.9364
957222	AF2-016 E	71.9046	50/50	71.9046
957251	AF2-019 C	3.7059	50/50	3.7059
957252	AF2-019 E	5.5589	50/50	5.5589
957271	AF2-021 C	4.0931	50/50	4.0931
957272	AF2-021 E	6.1397	50/50	6.1397
957281	AF2-022 C	1.2445	Adder	2.76
957282	AF2-022 E	1.8667	Adder	4.14
957311	AF2-025 C	3.1057	50/50	3.1057
957312	AF2-025 E	4.6585	50/50	4.6585
957321	AF2-026 C	0.6763	Adder	1.5
957322	AF2-026 E	1.0145	Adder	2.25
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	1.4346	50/50	1.4346
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	170.7122	50/50	170.7122
958811	AF2-172 C	0.1455	Adder	0.32
958812	AF2-172 E	0.2375	Adder	0.53
999905	MARINGEN 2	1.5533	50/50	1.5533
999906	PVILLEG 2	0.6623	50/50	0.6623
NEWTON	NEWTON	0.0946	Confirmed LTF	0.0946
FARMERCITY	FARMERCITY	0.0050	Confirmed LTF	0.0050
G-007A	G-007A	6.3126	Confirmed LTF	6.3126
VFT	VFT	6.3533	Confirmed LTF	6.3533
CALDERWOOD	CALDERWOOD	0.0477	Confirmed LTF	0.0477
PRAIRIE	PRAIRIE	0.2299	Confirmed LTF	0.2299
CHEOAH	CHEOAH	0.0480	Confirmed LTF	0.0480
EDWARDS	EDWARDS	0.0304	Confirmed LTF	0.0304
TILTON	TILTON	0.0548	Confirmed LTF	0.0548
GIBSON	GIBSON	0.0475	Confirmed LTF	0.0475
BLUEG	BLUEG	0.1510	Confirmed LTF	0.1510
TRIMBLE	TRIMBLE	0.0484	Confirmed LTF	0.0484
CATAWBA	CATAWBA	0.0361	Confirmed LTF	0.0361

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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
99830961	227900	CARDIFF	AE	227955	CEDAR	AE	1	AE_P4-2 AE7	breaker	805.0	166.92	175.04	DC	69.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227842	MARINGEN	0.1443	50/50	0.1443
227927	V4-067C	0.0417	50/50	0.0417
227928	V4-067E	0.3995	50/50	0.3995
228014	PVILLEG	0.0484	50/50	0.0484
228102	BLE#2 ST (Deactivation : 30/04/2019)	30.0514	50/50	30.0514
228202	CUMB CT	1.4271	50/50	1.4271
228203	P06	1.5204	50/50	1.5204
228261	V4-054E	0.4922	Adder	0.58
228334	MANNMILG	0.4439	Adder	0.52
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.1092	Adder	0.13
228357	V2-046E	0.6780	Adder	0.8
228711	V2-041C	0.0337	50/50	0.0337
228712	V2-041E	0.3191	50/50	0.3191
228721	V2-035E	0.0838	Adder	0.1
228729	W2-030 C	0.1417	50/50	0.1417
228731	V3-036	0.2077	50/50	0.2077
228732	V1-021 C	0.0582	50/50	0.0582
902092	W1-130E	0.5586	Adder	0.66
902432	W2-030 E	1.3503	50/50	1.3503
919663	AA2-048 BAT	0.5223	Merchant Transmission	0.5223
923532	AB1-169AC	54.4871	Adder	64.1
924531	AB2-102 C	29.4953	50/50	29.4953
924532	AB2-102 E	0.6555	50/50	0.6555
924701	AB2-122 C	0.1727	50/50	0.1727
924702	AB2-122 E	0.2960	50/50	0.2960
930001	AB1-001 C	0.1281	50/50	0.1281
930002	AB1-001 E	0.2106	50/50	0.2106
933962	AD1-019 E	1.6639	50/50	1.6639
938421	AE1-061 C	0.2695	Adder	0.32
938422	AE1-061 E	0.2695	Adder	0.32
938781	AE1-104 C O1	24.2569	50/50	24.2569
938782	AE1-104 E O1	62.0610	50/50	62.0610
938871	AE1-115 C	0.5397	Adder	0.63
938872	AE1-115 E	0.5397	Adder	0.63
939121	AE1-142 C O1	-0.9053	Adder	-1.07
939301	AE1-161 C	1.4277	Adder	1.68
939302	AE1-161 E	2.1415	Adder	2.52
939501	AE1-179 C O1	3.1392	Adder	3.69
939502	AE1-179 E O1	2.2154	Adder	2.61
939931	AE1-229 C O1	5.7033	Adder	6.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939932	AE1-229 E O1	3.8641	Adder	4.55
940001	AE1-240 C O1	2.6117	Adder	3.07
940002	AE1-240 E O1	1.8642	Adder	2.19
940361	AE2-020 C	33.2572	50/50	33.2572
940362	AE2-020 E	155.7126	50/50	155.7126
940371	AE2-021 C	33.2572	50/50	33.2572
940372	AE2-021 E	155.7126	50/50	155.7126
940381	AE2-022 C	19.4000	50/50	19.4000
940382	AE2-022 E	90.8323	50/50	90.8323
940691	AE2-056 C	-0.0828	Adder	-0.1
940701	AE2-057 C	-0.0241	Adder	-0.03
940921	AE2-081 C	-0.0879	Adder	-0.1
942101	AE2-222 C O1	18.5626	50/50	18.5626
942102	AE2-222 E O1	46.6304	50/50	46.6304
942381	AE2-251 C	105.3581	50/50	105.3581
942382	AE2-251 E	269.5819	50/50	269.5819
943732	AF1-041 E	0.5305	50/50	0.5305
945431	AF1-208 C O1	1.9629	Adder	2.31
945432	AF1-208 E O1	1.3086	Adder	1.54
945731	AF1-238 C	4.7074	Adder	5.54
945732	AF1-238 E	7.0611	Adder	8.31
945741	AF1-239 C	1.1076	Adder	1.3
945742	AF1-239 E	1.6614	Adder	1.95
945971	AF1-262	0.0608	Adder	0.07
957221	AF2-016 C	27.9408	50/50	27.9408
957222	AF2-016 E	41.9112	50/50	41.9112
957251	AF2-019 C	2.7083	50/50	2.7083
957252	AF2-019 E	4.0625	50/50	4.0625
957261	AF2-020 C	0.3361	Adder	0.75
957262	AF2-020 E	0.5042	Adder	1.12
957273	AF2-021 BAT	11.2644	50/50	11.2644
957281	AF2-022 C	2.6434	50/50	2.6434
957282	AF2-022 E	3.9651	50/50	3.9651
957291	AF2-023 C O1	0.5723	Adder	1.27
957292	AF2-023 E O1	0.8585	Adder	1.91
957311	AF2-025 C	1.7643	50/50	1.7643
957312	AF2-025 E	2.6465	50/50	2.6465
957321	AF2-026 C	0.6679	Adder	1.48
957322	AF2-026 E	2.2237	50/50	2.2237
957641	AF2-058	0.1052	Adder	0.23
957783	AF2-072 BAT	2.0386	Merchant Transmission	2.0386
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.9191	50/50	0.9191
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	109.3760	50/50	109.3760
958811	AF2-172 C	0.1712	Adder	0.38
958812	AF2-172 E	0.2794	Adder	0.62
959111	AF2-202 C	0.0480	Adder	0.11
959112	AF2-202 E	0.0656	Adder	0.15
999905	MARINGEN 2	0.8805	50/50	0.8805
999906	PVILLEG 2	0.3672	50/50	0.3672
WEC	WEC	0.0063	Confirmed LTF	0.0063

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LGEE	LGEE	0.0126	Confirmed LTF	0.0126
CPL	CPL	0.0370	Confirmed LTF	0.0370
CBM-W2	CBM-W2	0.2211	Confirmed LTF	0.2211
NY	NY	0.6100	Confirmed LTF	0.6100
CBM-W1	CBM-W1	0.2127	Confirmed LTF	0.2127
TVA	TVA	0.0434	Confirmed LTF	0.0434
O-066	O-066	11.1014	Confirmed LTF	11.1014
CBM-S2	CBM-S2	0.2774	Confirmed LTF	0.2774
CBM-S1	CBM-S1	0.2471	Confirmed LTF	0.2471
G-007	G-007	3.9499	Confirmed LTF	3.9499
MADISON	MADISON	0.0060	Confirmed LTF	0.0060
MEC	MEC	0.0350	Confirmed LTF	0.0350

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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
99832039	227900	CARDIFF	AE	228002	ORCHARD	AE	1	JC-P7-1-JCC-230-13	tower	805.0	139.24	147.54	DC	66.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206360	28O CRK C1	1.6370	50/50	1.6370
206361	28O CRK C2	1.0826	50/50	1.0826
227842	MARINGEN	0.1455	50/50	0.1455
227927	V4-067C	0.0429	50/50	0.0429
227928	V4-067E	0.4110	50/50	0.4110
228014	PVILLEG	0.0502	50/50	0.0502
228102	BLE#2 ST (Deactivation : 30/04/2019)	22.5389	50/50	22.5389
228729	W2-030 C	0.1382	50/50	0.1382
228731	V3-036	0.2111	50/50	0.2111
902092	W1-130E	0.4173	Adder	0.49
902432	W2-030 E	1.3174	50/50	1.3174
923532	AB1-169AC	40.9530	Adder	48.18
924701	AB2-122 C	0.1776	50/50	0.1776
924702	AB2-122 E	0.3044	50/50	0.3044
930001	AB1-001 C	0.2018	50/50	0.2018
930002	AB1-001 E	0.3317	50/50	0.3317
933962	AD1-019 E	1.6914	50/50	1.6914
938421	AE1-061 C	0.2013	Adder	0.24
938422	AE1-061 E	0.2013	Adder	0.24
938781	AE1-104 C O1	18.1930	50/50	18.1930
938782	AE1-104 E O1	46.5465	50/50	46.5465
940161	AE2-000 C O1	64.0022	50/50	64.0022
940162	AE2-000 E O1	163.7597	50/50	163.7597
940361	AE2-020 C	32.2343	50/50	32.2343
940362	AE2-020 E	150.9233	50/50	150.9233
940371	AE2-021 C	32.2343	50/50	32.2343
940372	AE2-021 E	150.9233	50/50	150.9233
940381	AE2-022 C	18.8033	50/50	18.8033
940382	AE2-022 E	88.0386	50/50	88.0386
942101	AE2-222 C O1	19.0768	50/50	19.0768
942102	AE2-222 E O1	47.9222	50/50	47.9222
942381	AE2-251 C	102.1176	50/50	102.1176
942382	AE2-251 E	261.2904	50/50	261.2904
943732	AF1-041 E	0.5510	50/50	0.5510
944332	AF1-101 E O1	160.5498	50/50	160.5498
957221	AF2-016 C	26.7348	50/50	26.7348
957222	AF2-016 E	40.1022	50/50	40.1022
957251	AF2-019 C	0.5872	Adder	1.3
957252	AF2-019 E	0.8807	Adder	1.95
957271	AF2-021 C	4.4816	50/50	4.4816
957272	AF2-021 E	6.7224	50/50	6.7224

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957311	AF2-025 C	1.7742	50/50	1.7742
957312	AF2-025 E	2.6614	50/50	2.6614
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.6894	50/50	0.6894
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	82.0334	50/50	82.0334
999905	MARINGEN 2	0.8879	50/50	0.8879
999906	PVILLEG 2	0.3809	50/50	0.3809
NEWTON	NEWTON	0.0161	Confirmed LTF	0.0161
FARMERCITY	FARMERCITY	0.0008	Confirmed LTF	0.0008
G-007A	G-007A	1.0597	Confirmed LTF	1.0597
VFT	VFT	1.9544	Confirmed LTF	1.9544
CALDERWOOD	CALDERWOOD	0.0089	Confirmed LTF	0.0089
PRAIRIE	PRAIRIE	0.0387	Confirmed LTF	0.0387
CHEOAH	CHEOAH	0.0090	Confirmed LTF	0.0090
EDWARDS	EDWARDS	0.0049	Confirmed LTF	0.0049
TILTON	TILTON	0.0088	Confirmed LTF	0.0088
GIBSON	GIBSON	0.0076	Confirmed LTF	0.0076
BLUEG	BLUEG	0.0243	Confirmed LTF	0.0243
TRIMBLE	TRIMBLE	0.0078	Confirmed LTF	0.0078
CATAWBA	CATAWBA	0.0070	Confirmed LTF	0.0070

11.6.29 Index 29

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
101513388	227905	SCULL#1	AE	227903	MILL #1	AE	1	AE_P4-2 AE29	breaker	306.0	137.51	143.33	DC	33.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227928	V4-067E	-0.1098	Adder	-0.13
228102	BLE#2 ST (Deactivation : 30/04/2019)	95.6965	50/50	95.6965
228202	CUMB CT	1.7557	50/50	1.7557
228203	P06	1.7147	50/50	1.7147
228206	SHRMN CT	1.5597	50/50	1.5597
228261	V4-054E	0.4770	Adder	0.56
228711	V2-041C	0.0416	50/50	0.0416
228712	V2-041E	0.3937	50/50	0.3937
228732	V1-021 C	0.0839	50/50	0.0839
924531	AB2-102 C	33.2640	50/50	33.2640
924532	AB2-102 E	0.6283	Adder	0.74
924701	AB2-122 C	-0.0475	Adder	-0.06
938781	AE1-104 C O1	77.2444	50/50	77.2444
938782	AE1-104 E O1	197.6286	50/50	197.6286
939501	AE1-179 C O1	3.4263	Adder	4.03
939502	AE1-179 E O1	2.4180	Adder	2.84
940001	AE1-240 C O1	2.8510	Adder	3.35
940002	AE1-240 E O1	2.0350	Adder	2.39
945431	AF1-208 C O1	1.6795	Adder	1.98
945432	AF1-208 E O1	1.1197	Adder	1.32
945731	AF1-238 C	5.2978	Adder	6.23
945732	AF1-238 E	7.9467	Adder	9.35
945741	AF1-239 C	1.2465	Adder	1.47
945742	AF1-239 E	1.8698	Adder	2.2
957223	AF2-016 BAT	17.9638	Merchant Transmission	17.9638
957251	AF2-019 C	4.2674	50/50	4.2674
957252	AF2-019 E	6.4010	50/50	6.4010
957261	AF2-020 C	0.3249	Adder	0.72
957262	AF2-020 E	0.4874	Adder	1.08
957281	AF2-022 C	3.2520	50/50	3.2520
957282	AF2-022 E	4.8780	50/50	4.8780
957313	AF2-025 BAT	1.0554	Merchant Transmission	1.0554
957321	AF2-026 C	1.7837	50/50	1.7837
957322	AF2-026 E	2.6755	50/50	2.6755
957641	AF2-058	0.1019	Adder	0.23
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	2.9269	50/50	2.9269
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	348.2997	50/50	348.2997
958811	AF2-172 C	0.1780	Adder	0.4

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958812	AF2-172 E	0.2905	Adder	0.64
959111	AF2-202 C	0.0464	Adder	0.1
959112	AF2-202 E	0.0636	Adder	0.14
999905	MARINGEN 2	-0.3396	Adder	-0.4
999906	PVILLEG 2	-0.1490	Adder	-0.18
NEWTON	NEWTON	0.0322	Confirmed LTF	0.0322
FARMERCITY	FARMERCITY	0.0017	Confirmed LTF	0.0017
CALDERWOOD	CALDERWOOD	0.0144	Confirmed LTF	0.0144
NY	NY	0.0951	Confirmed LTF	0.0951
PRAIRIE	PRAIRIE	0.0775	Confirmed LTF	0.0775
O-066	O-066	1.6061	Confirmed LTF	1.6061
CHEOAH	CHEOAH	0.0145	Confirmed LTF	0.0145
EDWARDS	EDWARDS	0.0109	Confirmed LTF	0.0109
TILTON	TILTON	0.0195	Confirmed LTF	0.0195
G-007	G-007	0.4826	Confirmed LTF	0.4826
MADISON	MADISON	0.0020	Confirmed LTF	0.0020
GIBSON	GIBSON	0.0164	Confirmed LTF	0.0164
BLUEG	BLUEG	0.0521	Confirmed LTF	0.0521
TRIMBLE	TRIMBLE	0.0167	Confirmed LTF	0.0167
CATAWBA	CATAWBA	0.0094	Confirmed LTF	0.0094

11.6.30 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
101513398	227906	SCULL#2	AE	227904	MILL #2	AE	1	AE_P4-2 AE28	breaker	306.0	139.53	146.09	DC	38.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227928	V4-067E	-0.1249	Adder	-0.15
228102	BLE#2 ST (Deactivation : 30/04/2019)	88.7375	50/50	88.7375
228202	CUMB CT	1.9864	50/50	1.9864
228203	P06	1.9393	50/50	1.9393
228206	SHRMN CT	1.7647	50/50	1.7647
228261	V4-054E	0.5398	Adder	0.64
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.0814	Adder	0.1
228711	V2-041C	0.0471	50/50	0.0471
228712	V2-041E	0.4454	50/50	0.4454
228732	V1-021 C	0.0945	50/50	0.0945
924531	AB2-102 C	37.6222	50/50	37.6222
924532	AB2-102 E	0.7106	Adder	0.84
924701	AB2-122 C	-0.0540	Adder	-0.06
938781	AE1-104 C O1	71.6272	50/50	71.6272
938782	AE1-104 E O1	183.2571	50/50	183.2571
939501	AE1-179 C O1	3.8764	Adder	4.56
939502	AE1-179 E O1	2.7356	Adder	3.22
940001	AE1-240 C O1	3.2259	Adder	3.8
940002	AE1-240 E O1	2.3027	Adder	2.71
945431	AF1-208 C O1	1.9003	Adder	2.24
945432	AF1-208 E O1	1.2668	Adder	1.49
945731	AF1-238 C	5.9944	Adder	7.05
945732	AF1-238 E	8.9917	Adder	10.58
945741	AF1-239 C	1.4105	Adder	1.66
945742	AF1-239 E	2.1157	Adder	2.49
957223	AF2-016 BAT	20.2836	Merchant Transmission	20.2836
957251	AF2-019 C	4.8528	50/50	4.8528
957252	AF2-019 E	7.2792	50/50	7.2792
957261	AF2-020 C	0.3676	Adder	0.82
957262	AF2-020 E	0.5515	Adder	1.22
957281	AF2-022 C	3.6794	50/50	3.6794
957282	AF2-022 E	5.5191	50/50	5.5191
957313	AF2-025 BAT	1.1988	Merchant Transmission	1.1988
957321	AF2-026 C	2.0182	50/50	2.0182
957322	AF2-026 E	3.0272	50/50	3.0272
957641	AF2-058	0.1154	Adder	0.26
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	2.7140	50/50	2.7140
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	322.9715	50/50	322.9715

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958811	AF2-172 C	0.2014	Adder	0.45
958812	AF2-172 E	0.3286	Adder	0.73
959111	AF2-202 C	0.0526	Adder	0.12
959112	AF2-202 E	0.0719	Adder	0.16
999905	MARINGEN 2	-0.3856	Adder	-0.45
999906	PVILLEG 2	-0.1686	Adder	-0.2
NEWTON	NEWTON	0.0365	Confirmed LTF	0.0365
FARMERCITY	FARMERCITY	0.0018	Confirmed LTF	0.0018
CALDERWOOD	CALDERWOOD	0.0159	Confirmed LTF	0.0159
NY	NY	0.1078	Confirmed LTF	0.1078
PRAIRIE	PRAIRIE	0.0852	Confirmed LTF	0.0852
O-066	O-066	1.8144	Confirmed LTF	1.8144
CHEOAH	CHEOAH	0.0155	Confirmed LTF	0.0155
EDWARDS	EDWARDS	0.0119	Confirmed LTF	0.0119
TILTON	TILTON	0.0214	Confirmed LTF	0.0214
G-007	G-007	0.5450	Confirmed LTF	0.5450
MADISON	MADISON	0.0020	Confirmed LTF	0.0020
GIBSON	GIBSON	0.0186	Confirmed LTF	0.0186
BLUEG	BLUEG	0.0590	Confirmed LTF	0.0590
TRIMBLE	TRIMBLE	0.0189	Confirmed LTF	0.0189
CATAWBA	CATAWBA	0.0105	Confirmed LTF	0.0105

11.6.31 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
101514735	227911	CARDIFF2	AE	227922	MILL #1	AE	1	AE_P7-1 AE3TOWER	tower	239.0	100.3	105.35	DC	22.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227927	V4-067C	0.0455	50/50	0.0455
227928	V4-067E	0.4365	50/50	0.4365
924701	AB2-122 C	0.1895	50/50	0.1895
924702	AB2-122 E	0.3249	50/50	0.3249
940361	AE2-020 C	5.5144	Adder	6.49
940362	AE2-020 E	25.8188	Adder	30.38
940371	AE2-021 C	5.5144	Adder	6.49
940372	AE2-021 E	25.8188	Adder	30.38
940381	AE2-022 C	3.2167	Adder	3.78
940382	AE2-022 E	15.0610	Adder	17.72
942381	AE2-251 C	17.4695	Adder	20.55
942382	AE2-251 E	44.6995	Adder	52.59
957223	AF2-016 BAT	12.0729	Merchant Transmission	12.0729
957253	AF2-019 BAT	4.1504	50/50	4.1504
957283	AF2-022 BAT	1.5489	Merchant Transmission	1.5489
957313	AF2-025 BAT	3.6164	50/50	3.6164
957323	AF2-026 BAT	0.8529	Merchant Transmission	0.8529
999905	MARINGEN 2	-0.5781	Adder	-0.68
999906	PVILLEG 2	-0.0865	Adder	-0.1
WEC	WEC	0.0057	Confirmed LTF	0.0057
LGEE	LGEE	0.0103	Confirmed LTF	0.0103
CPL	CPL	0.0119	Confirmed LTF	0.0119
VFT	VFT	0.0064	Confirmed LTF	0.0064
CBM-W2	CBM-W2	0.1474	Confirmed LTF	0.1474
CBM-W1	CBM-W1	0.2252	Confirmed LTF	0.2252
TVA	TVA	0.0252	Confirmed LTF	0.0252
CBM-S2	CBM-S2	0.1040	Confirmed LTF	0.1040
CBM-S1	CBM-S1	0.1534	Confirmed LTF	0.1534
G-007	G-007	0.0364	Confirmed LTF	0.0364
MEC	MEC	0.0286	Confirmed LTF	0.0286

11.6.32 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
101513484	227913	CARDIFF	AE	227902	LEWIS #1	AE	1	AE_P4-2 AE9	breaker	478.0	127.36	148.05	DC	98.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
228261	V4-054E	-0.3674	Adder	-0.43
938423	AE1-061 BAT	0.7696	50/50	0.7696
939303	AE1-161 BAT	4.4700	Merchant Transmission	4.4700
940361	AE2-020 C	17.7531	50/50	17.7531
940362	AE2-020 E	83.1215	50/50	83.1215
940371	AE2-021 C	17.7531	50/50	17.7531
940372	AE2-021 E	83.1215	50/50	83.1215
940381	AE2-022 C	10.3560	50/50	10.3560
940382	AE2-022 E	48.4875	50/50	48.4875
942381	AE2-251 C	56.2416	50/50	56.2416
942382	AE2-251 E	143.9064	50/50	143.9064
945733	AF1-238 BAT	11.1397	Merchant Transmission	11.1397
945743	AF1-239 BAT	2.6211	Merchant Transmission	2.6211
957223	AF2-016 BAT	98.8770	50/50	98.8770
957253	AF2-019 BAT	6.7636	50/50	6.7636
957263	AF2-020 BAT	0.7368	Merchant Transmission	0.7368
957283	AF2-022 BAT	5.5000	50/50	5.5000
957313	AF2-025 BAT	4.5782	50/50	4.5782
957323	AF2-026 BAT	3.0630	50/50	3.0630
999905	MARINGEN 2	-0.7894	Adder	-0.93
999906	PVILLEG 2	-0.3842	Adder	-0.45
WEC	WEC	0.0072	Confirmed LTF	0.0072
LGEE	LGEE	0.0126	Confirmed LTF	0.0126
CPL	CPL	0.0099	Confirmed LTF	0.0099
G-007A	G-007A	2.0642	Confirmed LTF	2.0642
VFT	VFT	2.6123	Confirmed LTF	2.6123
CBM-W2	CBM-W2	0.1720	Confirmed LTF	0.1720
CBM-W1	CBM-W1	0.2877	Confirmed LTF	0.2877
TVA	TVA	0.0280	Confirmed LTF	0.0280
CBM-S2	CBM-S2	0.0925	Confirmed LTF	0.0925
CBM-S1	CBM-S1	0.1789	Confirmed LTF	0.1789
MEC	MEC	0.0350	Confirmed LTF	0.0350

11.6.33 Index 33

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
101514637	227934	CARDIFF2	AE	227945	LEWIS #2	AE	1	AE_P7-1 AE3TOWER	tower	478.0	138.6	159.15	DC	98.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227928	V4-067E	-0.0776	Adder	-0.09
924701	AB2-122 C	-0.0336	Adder	-0.04
938423	AE1-061 BAT	0.7302	50/50	0.7302
939303	AE1-161 BAT	4.0450	Merchant Transmission	4.0450
940361	AE2-020 C	16.2694	50/50	16.2694
940362	AE2-020 E	76.1743	50/50	76.1743
940371	AE2-021 C	16.2694	50/50	16.2694
940372	AE2-021 E	76.1743	50/50	76.1743
940381	AE2-022 C	9.4905	50/50	9.4905
940382	AE2-022 E	44.4350	50/50	44.4350
942381	AE2-251 C	51.5410	50/50	51.5410
942382	AE2-251 E	131.8790	50/50	131.8790
945733	AF1-238 BAT	8.5387	Merchant Transmission	8.5387
945743	AF1-239 BAT	2.0091	Merchant Transmission	2.0091
957223	AF2-016 BAT	98.2350	50/50	98.2350
957253	AF2-019 BAT	6.1060	50/50	6.1060
957283	AF2-022 BAT	2.2673	Merchant Transmission	2.2673
957313	AF2-025 BAT	4.6114	50/50	4.6114
957323	AF2-026 BAT	1.2613	Merchant Transmission	1.2613
999905	MARINGEN 2	-0.7952	Adder	-0.94
999906	PVILLEG 2	-0.3874	Adder	-0.46
WEC	WEC	0.0104	Confirmed LTF	0.0104
LGEE	LGEE	0.0188	Confirmed LTF	0.0188
CPL	CPL	0.0238	Confirmed LTF	0.0238
CBM-W2	CBM-W2	0.2785	Confirmed LTF	0.2785
NY	NY	0.0321	Confirmed LTF	0.0321
CBM-W1	CBM-W1	0.4128	Confirmed LTF	0.4128
TVA	TVA	0.0476	Confirmed LTF	0.0476
O-066	O-066	0.6922	Confirmed LTF	0.6922
CBM-S2	CBM-S2	0.2023	Confirmed LTF	0.2023
CBM-S1	CBM-S1	0.2897	Confirmed LTF	0.2897
G-007	G-007	0.2943	Confirmed LTF	0.2943
MEC	MEC	0.0524	Confirmed LTF	0.0524

11.6.34 Index 34

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
101514594	227945	LEWIS #2	AE	227902	LEWIS #1	AE	1	AE_P7-1 AE3TOWER	tower	286.8	157.42	213.12	DC	159.76

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938423	AE1-061 BAT	1.1835	50/50	1.1835
939303	AE1-161 BAT	6.5325	50/50	6.5325
940361	AE2-020 C	12.8750	50/50	12.8750
940362	AE2-020 E	60.2816	50/50	60.2816
940371	AE2-021 C	12.8750	50/50	12.8750
940372	AE2-021 E	60.2816	50/50	60.2816
940381	AE2-022 C	7.5104	50/50	7.5104
940382	AE2-022 E	35.1643	50/50	35.1643
942381	AE2-251 C	40.7877	50/50	40.7877
942382	AE2-251 E	104.3643	50/50	104.3643
957223	AF2-016 BAT	159.7590	50/50	159.7590
957313	AF2-025 BAT	2.0646	50/50	2.0646
999905	MARINGEN 2	-0.3654	Adder	-0.43
999906	PVILLEG 2	-0.2101	Adder	-0.25
WEC	WEC	0.0041	Confirmed LTF	0.0041
LGEE	LGEE	0.0074	Confirmed LTF	0.0074
CPL	CPL	0.0106	Confirmed LTF	0.0106
CBM-W2	CBM-W2	0.1147	Confirmed LTF	0.1147
NY	NY	0.0326	Confirmed LTF	0.0326
CBM-W1	CBM-W1	0.1626	Confirmed LTF	0.1626
TVA	TVA	0.0196	Confirmed LTF	0.0196
O-066	O-066	0.6115	Confirmed LTF	0.6115
CBM-S2	CBM-S2	0.0867	Confirmed LTF	0.0867
CBM-S1	CBM-S1	0.1193	Confirmed LTF	0.1193
G-007	G-007	0.2038	Confirmed LTF	0.2038
MEC	MEC	0.0207	Confirmed LTF	0.0207

11.6.35 Index 35

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
99005750	227955	CEDAR	AE	206302	28OYSTER C	JCP&L	1	AE_P4-2 AE6	breaker	564.0	228.94	242.94	DC	84.11

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227842	MARINGEN	0.1858	50/50	0.1858
227927	V4-067C	0.0496	50/50	0.0496
227928	V4-067E	0.4754	50/50	0.4754
228014	PVILLEG	0.0644	50/50	0.0644
228102	BLE#2 ST (Deactivation : 30/04/2019)	35.9501	50/50	35.9501
228202	CUMB CT	1.6611	50/50	1.6611
228203	P06	1.7600	50/50	1.7600
228261	V4-054E	0.5700	Adder	0.67
228334	MANNMILG	0.5062	Adder	0.6
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.1250	Adder	0.15
228357	V2-046E	0.7749	Adder	0.91
228712	V2-041E	0.3160	Adder	0.37
228721	V2-035E	0.0979	Adder	0.12
228729	W2-030 C	0.1758	50/50	0.1758
228731	V3-036	0.2699	50/50	0.2699
228732	V1-021 C	0.0689	50/50	0.0689
902092	W1-130E	0.6657	Adder	0.78
902432	W2-030 E	1.6754	50/50	1.6754
919663	AA2-048 BAT	0.5909	Merchant Transmission	0.5909
923532	AB1-169AC	64.9451	Adder	76.41
924531	AB2-102 C	34.1437	50/50	34.1437
924532	AB2-102 E	0.6449	Adder	0.76
924701	AB2-122 C	0.2053	50/50	0.2053
924702	AB2-122 E	0.3520	50/50	0.3520
930001	AB1-001 C	0.2897	50/50	0.2897
930002	AB1-001 E	0.4761	50/50	0.4761
933962	AD1-019 E	2.1622	50/50	2.1622
938421	AE1-061 C	0.3212	Adder	0.38
938422	AE1-061 E	0.3212	Adder	0.38
938781	AE1-104 C O1	29.0182	50/50	29.0182
938782	AE1-104 E O1	74.2427	50/50	74.2427
938871	AE1-115 C	0.6100	Adder	0.72
938872	AE1-115 E	0.6100	Adder	0.72
939121	AE1-142 C O1	-1.0248	Adder	-1.21
939301	AE1-161 C	1.6883	Adder	1.99
939302	AE1-161 E	2.5324	Adder	2.98
939501	AE1-179 C O1	3.6491	Adder	4.29
939502	AE1-179 E O1	2.5752	Adder	3.03
939931	AE1-229 C O1	6.5740	Adder	7.73
939932	AE1-229 E O1	4.4541	Adder	5.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
940001	AE1-240 C O1	3.0354	Adder	3.57
940002	AE1-240 E O1	2.1666	Adder	2.55
940361	AE2-020 C	35.3583	50/50	35.3583
940362	AE2-020 E	165.5502	50/50	165.5502
940371	AE2-021 C	35.3583	50/50	35.3583
940372	AE2-021 E	165.5502	50/50	165.5502
940381	AE2-022 C	20.6257	50/50	20.6257
940382	AE2-022 E	96.5710	50/50	96.5710
940691	AE2-056 C	-0.0936	Adder	-0.11
940921	AE2-081 C	-0.0995	Adder	-0.12
942101	AE2-222 C O1	24.4216	50/50	24.4216
942102	AE2-222 E O1	61.3484	50/50	61.3484
942381	AE2-251 C	112.0145	50/50	112.0145
942382	AE2-251 E	286.6136	50/50	286.6136
943732	AF1-041 E	0.6928	50/50	0.6928
945431	AF1-208 C O1	2.2640	Adder	2.66
945432	AF1-208 E O1	1.5093	Adder	1.78
945731	AF1-238 C	5.4812	Adder	6.45
945732	AF1-238 E	8.2218	Adder	9.67
945741	AF1-239 C	1.2897	Adder	1.52
945742	AF1-239 E	1.9345	Adder	2.28
945971	AF1-262	0.0711	Adder	0.08
957221	AF2-016 C	33.6444	50/50	33.6444
957222	AF2-016 E	50.4666	50/50	50.4666
957251	AF2-019 C	3.2080	50/50	3.2080
957252	AF2-019 E	4.8120	50/50	4.8120
957261	AF2-020 C	0.3892	Adder	0.86
957262	AF2-020 E	0.5837	Adder	1.3
957271	AF2-021 C	9.8923	50/50	9.8923
957272	AF2-021 E	14.8385	50/50	14.8385
957281	AF2-022 C	3.0768	50/50	3.0768
957282	AF2-022 E	4.6152	50/50	4.6152
957291	AF2-023 C O1	0.6469	Adder	1.44
957292	AF2-023 E O1	0.9704	Adder	2.15
957311	AF2-025 C	2.2648	50/50	2.2648
957312	AF2-025 E	3.3972	50/50	3.3972
957321	AF2-026 C	0.7777	Adder	1.73
957322	AF2-026 E	1.1665	Adder	2.59
957641	AF2-058	0.1218	Adder	0.27
957783	AF2-072 BAT	2.3068	Merchant Transmission	2.3068
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	1.0995	50/50	1.0995
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	130.8450	50/50	130.8450
958811	AF2-172 C	0.1987	Adder	0.44
958812	AF2-172 E	0.3243	Adder	0.72
959111	AF2-202 C	0.0555	Adder	0.12
959112	AF2-202 E	0.0760	Adder	0.17
999905	MARINGEN 2	1.1338	50/50	1.1338
999906	PVILLEG 2	0.4881	50/50	0.4881
WEC	WEC	0.0063	Confirmed LTF	0.0063
LGEE	LGEE	0.0126	Confirmed LTF	0.0126

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CPLE	CPLE	0.0404	Confirmed LTF	0.0404
CBM-W2	CBM-W2	0.2293	Confirmed LTF	0.2293
NY	NY	0.6896	Confirmed LTF	0.6896
CBM-W1	CBM-W1	0.2127	Confirmed LTF	0.2127
TVA	TVA	0.0462	Confirmed LTF	0.0462
O-066	O-066	12.5530	Confirmed LTF	12.5530
CBM-S2	CBM-S2	0.3006	Confirmed LTF	0.3006
CBM-S1	CBM-S1	0.2641	Confirmed LTF	0.2641
G-007	G-007	4.4689	Confirmed LTF	4.4689
MADISON	MADISON	0.0081	Confirmed LTF	0.0081
MEC	MEC	0.0365	Confirmed LTF	0.0365

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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
101513373	228110	BLE	AE	227905	SCULL#1	AE	1	AE_P4-2 AE29	breaker	306.0	144.73	150.56	DC	33.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227928	V4-067E	-0.1098	Adder	-0.13
228102	BLE#2 ST (Deactivation : 30/04/2019)	95.6965	50/50	95.6965
228202	CUMB CT	1.7557	50/50	1.7557
228203	P06	1.7147	50/50	1.7147
228206	SHRMN CT	1.5597	50/50	1.5597
228261	V4-054E	0.4770	Adder	0.56
228711	V2-041C	0.0416	50/50	0.0416
228712	V2-041E	0.3937	50/50	0.3937
228732	V1-021 C	0.0839	50/50	0.0839
924531	AB2-102 C	33.2640	50/50	33.2640
924532	AB2-102 E	0.6283	Adder	0.74
924701	AB2-122 C	-0.0475	Adder	-0.06
938781	AE1-104 C O1	77.2444	50/50	77.2444
938782	AE1-104 E O1	197.6286	50/50	197.6286
939501	AE1-179 C O1	3.4263	Adder	4.03
939502	AE1-179 E O1	2.4180	Adder	2.84
940001	AE1-240 C O1	2.8510	Adder	3.35
940002	AE1-240 E O1	2.0350	Adder	2.39
945431	AF1-208 C O1	1.6795	Adder	1.98
945432	AF1-208 E O1	1.1197	Adder	1.32
945731	AF1-238 C	5.2978	Adder	6.23
945732	AF1-238 E	7.9467	Adder	9.35
945741	AF1-239 C	1.2465	Adder	1.47
945742	AF1-239 E	1.8698	Adder	2.2
957223	AF2-016 BAT	17.9638	Merchant Transmission	17.9638
957251	AF2-019 C	4.2674	50/50	4.2674
957252	AF2-019 E	6.4010	50/50	6.4010
957261	AF2-020 C	0.3249	Adder	0.72
957262	AF2-020 E	0.4874	Adder	1.08
957281	AF2-022 C	3.2520	50/50	3.2520
957282	AF2-022 E	4.8780	50/50	4.8780
957313	AF2-025 BAT	1.0554	Merchant Transmission	1.0554
957321	AF2-026 C	1.7837	50/50	1.7837
957322	AF2-026 E	2.6755	50/50	2.6755
957641	AF2-058	0.1019	Adder	0.23
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	2.9269	50/50	2.9269
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	348.2997	50/50	348.2997
958811	AF2-172 C	0.1780	Adder	0.4

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958812	AF2-172 E	0.2905	Adder	0.64
959111	AF2-202 C	0.0464	Adder	0.1
959112	AF2-202 E	0.0636	Adder	0.14
999905	MARINGEN 2	-0.3396	Adder	-0.4
999906	PVILLEG 2	-0.1490	Adder	-0.18
NEWTON	NEWTON	0.0322	Confirmed LTF	0.0322
FARMERCITY	FARMERCITY	0.0017	Confirmed LTF	0.0017
CALDERWOOD	CALDERWOOD	0.0144	Confirmed LTF	0.0144
NY	NY	0.0951	Confirmed LTF	0.0951
PRAIRIE	PRAIRIE	0.0775	Confirmed LTF	0.0775
O-066	O-066	1.6061	Confirmed LTF	1.6061
CHEOAH	CHEOAH	0.0145	Confirmed LTF	0.0145
EDWARDS	EDWARDS	0.0109	Confirmed LTF	0.0109
TILTON	TILTON	0.0195	Confirmed LTF	0.0195
G-007	G-007	0.4826	Confirmed LTF	0.4826
MADISON	MADISON	0.0020	Confirmed LTF	0.0020
GIBSON	GIBSON	0.0164	Confirmed LTF	0.0164
BLUEG	BLUEG	0.0521	Confirmed LTF	0.0521
TRIMBLE	TRIMBLE	0.0167	Confirmed LTF	0.0167
CATAWBA	CATAWBA	0.0094	Confirmed LTF	0.0094

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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
101513383	228110	BLE	AE	227906	SCULL#2	AE	1	AE_P4-2 AE28	breaker	306.0	144.69	151.26	DC	38.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227928	V4-067E	-0.1249	Adder	-0.15
228102	BLE#2 ST (Deactivation : 30/04/2019)	88.7375	50/50	88.7375
228202	CUMB CT	1.9864	50/50	1.9864
228203	P06	1.9393	50/50	1.9393
228206	SHRMN CT	1.7647	50/50	1.7647
228261	V4-054E	0.5398	Adder	0.64
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.0814	Adder	0.1
228711	V2-041C	0.0471	50/50	0.0471
228712	V2-041E	0.4454	50/50	0.4454
228732	V1-021 C	0.0945	50/50	0.0945
924531	AB2-102 C	37.6222	50/50	37.6222
924532	AB2-102 E	0.7106	Adder	0.84
924701	AB2-122 C	-0.0540	Adder	-0.06
938781	AE1-104 C O1	71.6272	50/50	71.6272
938782	AE1-104 E O1	183.2571	50/50	183.2571
939501	AE1-179 C O1	3.8764	Adder	4.56
939502	AE1-179 E O1	2.7356	Adder	3.22
940001	AE1-240 C O1	3.2259	Adder	3.8
940002	AE1-240 E O1	2.3027	Adder	2.71
945431	AF1-208 C O1	1.9003	Adder	2.24
945432	AF1-208 E O1	1.2668	Adder	1.49
945731	AF1-238 C	5.9944	Adder	7.05
945732	AF1-238 E	8.9917	Adder	10.58
945741	AF1-239 C	1.4105	Adder	1.66
945742	AF1-239 E	2.1157	Adder	2.49
957223	AF2-016 BAT	20.2836	Merchant Transmission	20.2836
957251	AF2-019 C	4.8528	50/50	4.8528
957252	AF2-019 E	7.2792	50/50	7.2792
957261	AF2-020 C	0.3676	Adder	0.82
957262	AF2-020 E	0.5515	Adder	1.22
957281	AF2-022 C	3.6794	50/50	3.6794
957282	AF2-022 E	5.5191	50/50	5.5191
957313	AF2-025 BAT	1.1988	Merchant Transmission	1.1988
957321	AF2-026 C	2.0182	50/50	2.0182
957322	AF2-026 E	3.0272	50/50	3.0272
957641	AF2-058	0.1154	Adder	0.26
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	2.7140	50/50	2.7140
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	322.9715	50/50	322.9715

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958811	AF2-172 C	0.2014	Adder	0.45
958812	AF2-172 E	0.3286	Adder	0.73
959111	AF2-202 C	0.0526	Adder	0.12
959112	AF2-202 E	0.0719	Adder	0.16
999905	MARINGEN 2	-0.3856	Adder	-0.45
999906	PVILLEG 2	-0.1686	Adder	-0.2
NEWTON	NEWTON	0.0365	Confirmed LTF	0.0365
FARMERCITY	FARMERCITY	0.0018	Confirmed LTF	0.0018
CALDERWOOD	CALDERWOOD	0.0159	Confirmed LTF	0.0159
NY	NY	0.1078	Confirmed LTF	0.1078
PRAIRIE	PRAIRIE	0.0852	Confirmed LTF	0.0852
O-066	O-066	1.8144	Confirmed LTF	1.8144
CHEOAH	CHEOAH	0.0155	Confirmed LTF	0.0155
EDWARDS	EDWARDS	0.0119	Confirmed LTF	0.0119
TILTON	TILTON	0.0214	Confirmed LTF	0.0214
G-007	G-007	0.5450	Confirmed LTF	0.5450
MADISON	MADISON	0.0020	Confirmed LTF	0.0020
GIBSON	GIBSON	0.0186	Confirmed LTF	0.0186
BLUEG	BLUEG	0.0590	Confirmed LTF	0.0590
TRIMBLE	TRIMBLE	0.0189	Confirmed LTF	0.0189
CATAWBA	CATAWBA	0.0105	Confirmed LTF	0.0105

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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
101513425	228111	MDLE TP	AE	228107	CORSON 2	AE	1	AE_P4-2 AE28	breaker	315.0	107.28	119.32	DC	37.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
227842	MARINGEN	0.0745	50/50	0.0745
227928	V4-067E	0.1257	Adder	0.15
228014	PVILLEG	0.0260	50/50	0.0260
228102	BLE#2 ST (Deactivation : 30/04/2019)	60.3495	50/50	60.3495
228261	V4-054E	-0.5414	Adder	-0.64
228729	W2-030 C	0.0699	50/50	0.0699
228731	V3-036	0.1085	50/50	0.1085
902432	W2-030 E	0.6659	50/50	0.6659
924701	AB2-122 C	0.0543	Adder	0.06
924702	AB2-122 E	0.0931	Adder	0.11
930001	AB1-001 C	0.0920	50/50	0.0920
930002	AB1-001 E	0.1513	50/50	0.1513
933962	AD1-019 E	0.8691	50/50	0.8691
938781	AE1-104 C O1	48.7130	50/50	48.7130
938782	AE1-104 E O1	124.6314	50/50	124.6314
940361	AE2-020 C	5.6130	Adder	6.6
940362	AE2-020 E	26.2805	Adder	30.92
940371	AE2-021 C	5.6130	Adder	6.6
940372	AE2-021 E	26.2805	Adder	30.92
940381	AE2-022 C	3.2743	Adder	3.85
940382	AE2-022 E	15.3303	Adder	18.04
942101	AE2-222 C O1	9.8455	50/50	9.8455
942102	AE2-222 E O1	24.7325	50/50	24.7325
942381	AE2-251 C	17.7819	Adder	20.92
942382	AE2-251 E	45.4989	Adder	53.53
943732	AF1-041 E	0.2676	50/50	0.2676
945733	AF1-238 BAT	17.6894	50/50	17.6894
945743	AF1-239 BAT	4.1622	50/50	4.1622
957221	AF2-016 C	15.1704	50/50	15.1704
957222	AF2-016 E	22.7556	50/50	22.7556
957263	AF2-020 BAT	2.0462	50/50	2.0462
957283	AF2-022 BAT	9.2185	50/50	9.2185
957311	AF2-025 C	0.9076	50/50	0.9076
957312	AF2-025 E	1.3614	50/50	1.3614
957323	AF2-026 BAT	5.0622	50/50	5.0622
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	1.8458	50/50	1.8458
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	219.6497	50/50	219.6497
999905	MARINGEN 2	0.4547	50/50	0.4547

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
999906	PVILLEG 2	0.1973	50/50	0.1973
WEC	WEC	0.0107	Confirmed LTF	0.0107
LGEE	LGEE	0.0194	Confirmed LTF	0.0194
CPL	CPL	0.0185	Confirmed LTF	0.0185
G-007A	G-007A	1.2515	Confirmed LTF	1.2515
VFT	VFT	1.7350	Confirmed LTF	1.7350
CBM-W2	CBM-W2	0.2703	Confirmed LTF	0.2703
CBM-W1	CBM-W1	0.4253	Confirmed LTF	0.4253
TVA	TVA	0.0448	Confirmed LTF	0.0448
CBM-S2	CBM-S2	0.1734	Confirmed LTF	0.1734
CBM-S1	CBM-S1	0.2726	Confirmed LTF	0.2726
MEC	MEC	0.0524	Confirmed LTF	0.0524

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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
99832175	228401	MCKLTON	AE	213559	DELCOTAP	PECO	1	PS_P7-1_V2274+P2242_LT	tower	725.0	102.96	104.96	DC	31.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
219229	EAGLEPT_G3	2.3268	50/50	2.3268
219230	EAGLEPT_G1	4.3891	50/50	4.3891
219231	EAGLEPT_G2	4.3891	50/50	4.3891
219235	EAGLEPT_ST2	1.5864	50/50	1.5864
219258	KINSLEYDEP C	0.1005	50/50	0.1005
219259	KINSLEYDEP E	0.9504	50/50	0.9504
219384	DEPTFDSP1_C	0.0013	50/50	0.0013
219385	DEPTFDSP1_E	0.0126	50/50	0.0126
219388	DEPTFDSP2_C	0.0013	50/50	0.0013
219390	DEPTFDSP2_E	0.0126	50/50	0.0126
219393	DEPTFDSP3_C	0.0033	50/50	0.0033
219394	DEPTFDSP3_E	0.0316	50/50	0.0316
219408	DEPTFDSP4_C	0.0013	50/50	0.0013
219416	DEPTFDSP4_E	0.0126	50/50	0.0126
219662	THOROFSP1_C	0.0054	50/50	0.0054
219664	THOROFSP1_E	0.0515	50/50	0.0515
219665	THOROFSP2_C	0.0054	50/50	0.0054
219666	THOROFSP2_E	0.0515	50/50	0.0515
219683	THOSOLAR C	0.0301	50/50	0.0301
219684	THOSOLAR E	0.2851	50/50	0.2851
227881	GRENWCHG	0.4313	50/50	0.4313
227928	V4-067E	0.1387	Adder	0.16
228102	BLE#2 ST (Deactivation : 30/04/2019)	14.2030	Adder	16.71
228261	V4-054E	0.8440	Adder	0.99
228304	LOGAN	9.8475	50/50	9.8475
228306	PCLP STM	2.5105	50/50	2.5105
228307	PCLP GT	2.5105	50/50	2.5105
228309	CCLP NUG	8.5881	50/50	8.5881
228334	MANNMILG	1.4298	Adder	1.68
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.2694	Adder	0.32
228357	V2-046E	2.1837	Adder	2.57
228400	MICK 1CT	2.1406	50/50	2.1406
228423	Q-090 2	38.6815	50/50	38.6815
228471	VALERO1	0.7244	50/50	0.7244
228472	VALERO2	0.4835	50/50	0.4835
228473	VALERO3	0.4835	50/50	0.4835
228484	VALERO4	0.4261	50/50	0.4261
228712	V2-041E	0.2674	Adder	0.31
228721	V2-035E	0.1795	Adder	0.21
228733	AB1-119 E	0.0679	Adder	0.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
902092	W1-130E	0.7193	Adder	0.85
902432	W2-030 E	0.5344	Adder	0.63
917471	Z2-083	3.9131	50/50	3.9131
919901	AB1-000 1	-0.6115	Adder	-0.72
919911	AB1-000 2	-0.6115	Adder	-0.72
919921	AB1-000 3	-0.6115	Adder	-0.72
923153	AB1-116 E	0.0921	Adder	0.11
923532	AB1-169AC	69.1947	Adder	81.41
924051	AB2-049 C	0.3943	Adder	0.46
924052	AB2-049 E	0.6433	Adder	0.76
924531	AB2-102 C	23.1604	Adder	27.25
924532	AB2-102 E	0.5147	Adder	0.61
924701	AB2-122 C	0.0599	Adder	0.07
924702	AB2-122 E	0.1027	Adder	0.12
930001	AB1-001 C	0.0733	Adder	0.09
930002	AB1-001 E	0.1205	Adder	0.14
933962	AD1-019 E	0.6771	Adder	0.8
936491	AD2-064 C (Withdrawn : 06/16/2020)	0.0493	Adder	0.06
936492	AD2-064 E (Withdrawn : 06/16/2020)	0.0679	Adder	0.08
936501	AD2-065 C	0.0917	Adder	0.11
936502	AD2-065 E	0.1265	Adder	0.15
937011	AD2-135 C	0.0531	Adder	0.06
937012	AD2-135 E	0.0902	Adder	0.11
938421	AE1-061 C	0.3470	Adder	0.41
938422	AE1-061 E	0.3470	Adder	0.41
938431	AE1-062 C	0.8220	Adder	0.97
938432	AE1-062 E	0.8220	Adder	0.97
938781	AE1-104 C O1	11.4644	Adder	13.49
938782	AE1-104 E O1	29.3315	Adder	34.51
938871	AE1-115 C	1.7392	Adder	2.05
938872	AE1-115 E	2.0461	50/50	2.0461
939301	AE1-161 C	2.7156	Adder	3.19
939302	AE1-161 E	4.0734	Adder	4.79
939501	AE1-179 C O1	4.2772	Adder	5.03
939502	AE1-179 E O1	3.0185	Adder	3.55
939821	AE1-218 C O1	0.1055	Adder	0.12
939822	AE1-218 E O1	0.1582	Adder	0.19
939831	AE1-219 C O1	0.2373	Adder	0.28
939832	AE1-219 E O1	0.3428	Adder	0.4
939931	AE1-229 C O1	13.6276	Adder	16.03
939932	AE1-229 E O1	9.2331	Adder	10.86
940001	AE1-240 C O1	3.5604	Adder	4.19
940002	AE1-240 E O1	2.5414	Adder	2.99
940271	AE2-010	-0.2476	Adder	-0.29
940361	AE2-020 C	8.5815	Adder	10.1
940362	AE2-020 E	40.1790	Adder	47.27
940371	AE2-021 C	8.5815	Adder	10.1
940372	AE2-021 E	40.1790	Adder	47.27
940381	AE2-022 C	5.0059	Adder	5.89
940382	AE2-022 E	23.4378	Adder	27.57
940781	AE2-065 C	0.0370	50/50	0.0370

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
940782	AE2-065 E	0.3372	50/50	0.3372
942101	AE2-222 C O1	7.6114	Adder	8.95
942102	AE2-222 E O1	19.1203	Adder	22.49
942381	AE2-251 C	27.1859	Adder	31.98
942382	AE2-251 E	69.5611	Adder	81.84
943071	AE2-334 C	3.7890	Adder	4.46
943072	AE2-334 E	2.0199	Adder	2.38
943732	AF1-041 E	0.2122	Adder	0.25
944951	AF1-160 C	0.8220	Adder	0.97
944952	AF1-160 E	0.8631	Adder	1.02
945431	AF1-208 C O1	3.9345	Adder	4.63
945432	AF1-208 E O1	2.6230	Adder	3.09
945731	AF1-238 C	5.9403	Adder	6.99
945732	AF1-238 E	8.9104	Adder	10.48
945741	AF1-239 C	1.3977	Adder	1.64
945742	AF1-239 E	2.0966	Adder	2.47
945971	AF1-262	0.1303	Adder	0.15
957221	AF2-016 C	5.7363	Adder	12.73
957222	AF2-016 E	8.6045	Adder	19.1
957251	AF2-019 C	0.8368	Adder	1.86
957252	AF2-019 E	1.2552	Adder	2.79
957261	AF2-020 C	0.5789	Adder	1.29
957262	AF2-020 E	0.8683	Adder	1.93
957281	AF2-022 C	1.1178	Adder	2.48
957282	AF2-022 E	1.6767	Adder	3.72
957291	AF2-023 C O1	4.0932	50/50	4.0932
957292	AF2-023 E O1	6.1398	50/50	6.1398
957301	AF2-024 C	5.3470	50/50	5.3470
957302	AF2-024 E	8.0205	50/50	8.0205
957311	AF2-025 C	0.3777	Adder	0.84
957312	AF2-025 E	0.5666	Adder	1.26
957321	AF2-026 C	0.7008	Adder	1.56
957322	AF2-026 E	1.0512	Adder	2.33
957443	AF2-038 BAT	0.9689	Merchant Transmission	0.9689
957641	AF2-058	0.1804	Adder	0.4
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.2302	Adder	0.51
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	27.3977	Adder	60.82
958811	AF2-172 C	0.2588	Adder	0.57
958812	AF2-172 E	0.4223	Adder	0.94
959111	AF2-202 C	0.0824	Adder	0.18
959112	AF2-202 E	0.1128	Adder	0.25
999905	MARINGEN 2	0.3564	Adder	0.42
999906	PVILLEG 2	0.1515	Adder	0.18
NEWTON	NEWTON	0.3073	Confirmed LTF	0.3073
FARMERCITY	FARMERCITY	0.0161	Confirmed LTF	0.0161
G-007A	G-007A	4.2316	Confirmed LTF	4.2316
VFT	VFT	7.5142	Confirmed LTF	7.5142
CALDERWOOD	CALDERWOOD	0.1466	Confirmed LTF	0.1466
PRAIRIE	PRAIRIE	0.7413	Confirmed LTF	0.7413
CHEOAH	CHEOAH	0.1476	Confirmed LTF	0.1476

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
EDWARDS	EDWARDS	0.0998	Confirmed LTF	0.0998
TILTON	TILTON	0.1796	Confirmed LTF	0.1796
GIBSON	GIBSON	0.1562	Confirmed LTF	0.1562
BLUEG	BLUEG	0.4965	Confirmed LTF	0.4965
TRIMBLE	TRIMBLE	0.1592	Confirmed LTF	0.1592
CATAWBA	CATAWBA	0.1061	Confirmed LTF	0.1061

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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
101514597	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	JC-P7-1-JCC-230-13	tower	478.0	167.58	178.06	DC	50.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
206360	280 CRK C1	0.5884	50/50	0.5884
206361	280 CRK C2	0.3891	50/50	0.3891
227842	MARINGEN	0.0964	50/50	0.0964
227927	V4-067C	0.0210	50/50	0.0210
227928	V4-067E	0.2016	50/50	0.2016
228014	PVILLEG	0.0344	50/50	0.0344
228102	BLE#2 ST (Deactivation : 30/04/2019)	19.0196	50/50	19.0196
228712	V2-041E	0.1219	Adder	0.14
228728	W1-130C	0.4006	50/50	0.4006
228729	W2-030 C	0.0880	50/50	0.0880
228731	V3-036	0.1413	50/50	0.1413
902092	W1-130E	3.7818	50/50	3.7818
902432	W2-030 E	0.8386	50/50	0.8386
923532	AB1-169AC	361.9880	50/50	361.9880
924531	AB2-102 C	11.0447	Adder	12.99
924532	AB2-102 E	0.2454	Adder	0.29
924701	AB2-122 C	0.0871	50/50	0.0871
924702	AB2-122 E	0.1494	50/50	0.1494
930001	AB1-001 C	0.1278	50/50	0.1278
930002	AB1-001 E	0.2100	50/50	0.2100
933962	AD1-019 E	1.1319	50/50	1.1319
938421	AE1-061 C	1.8245	50/50	1.8245
938422	AE1-061 E	1.8245	50/50	1.8245
938781	AE1-104 C O1	15.3522	50/50	15.3522
938782	AE1-104 E O1	39.2785	50/50	39.2785
939303	AE1-161 BAT	10.2125	50/50	10.2125
940161	AE2-000 C O1	23.0057	50/50	23.0057
940162	AE2-000 E O1	58.8636	50/50	58.8636
940361	AE2-020 C	10.7100	50/50	10.7100
940362	AE2-020 E	50.1450	50/50	50.1450
940371	AE2-021 C	10.7100	50/50	10.7100
940372	AE2-021 E	50.1450	50/50	50.1450
940381	AE2-022 C	6.2475	50/50	6.2475
940382	AE2-022 E	29.2512	50/50	29.2512
942101	AE2-222 C O1	12.9309	50/50	12.9309
942102	AE2-222 E O1	32.4831	50/50	32.4831
942381	AE2-251 C	33.9291	50/50	33.9291
942382	AE2-251 E	86.8149	50/50	86.8149
943732	AF1-041 E	0.3558	50/50	0.3558
944332	AF1-101 E O1	57.7098	50/50	57.7098
957221	AF2-016 C	20.0340	50/50	20.0340

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957222	AF2-016 E	30.0510	50/50	30.0510
957251	AF2-019 C	0.6858	Adder	1.52
957252	AF2-019 E	1.0288	Adder	2.28
957271	AF2-021 C	1.6882	50/50	1.6882
957272	AF2-021 E	2.5322	50/50	2.5322
957281	AF2-022 C	0.5428	Adder	1.2
957282	AF2-022 E	0.8141	Adder	1.81
957311	AF2-025 C	1.1721	50/50	1.1721
957312	AF2-025 E	1.7581	50/50	1.7581
957321	AF2-026 C	0.2906	Adder	0.65
957322	AF2-026 E	0.4359	Adder	0.97
958781	AF2-169 C O1 (Withdrawn : 06/09/2020)	0.5817	50/50	0.5817
958782	AF2-169 E O1 (Withdrawn : 06/09/2020)	69.2242	50/50	69.2242
999905	MARINGEN 2	0.5885	50/50	0.5885
999906	PVILLEG 2	0.2610	50/50	0.2610
NEWTON	NEWTON	0.0097	Confirmed LTF	0.0097
FARMERCITY	FARMERCITY	0.0005	Confirmed LTF	0.0005
CALDERWOOD	CALDERWOOD	0.0045	Confirmed LTF	0.0045
NY	NY	0.0177	Confirmed LTF	0.0177
PRAIRIE	PRAIRIE	0.0232	Confirmed LTF	0.0232
O-066	O-066	0.2486	Confirmed LTF	0.2486
CHEOAH	CHEOAH	0.0045	Confirmed LTF	0.0045
EDWARDS	EDWARDS	0.0035	Confirmed LTF	0.0035
TILTON	TILTON	0.0063	Confirmed LTF	0.0063
G-007	G-007	0.0094	Confirmed LTF	0.0094
MADISON	MADISON	0.0020	Confirmed LTF	0.0020
GIBSON	GIBSON	0.0049	Confirmed LTF	0.0049
BLUEG	BLUEG	0.0156	Confirmed LTF	0.0156
TRIMBLE	TRIMBLE	0.0050	Confirmed LTF	0.0050
CATAWBA	CATAWBA	0.0028	Confirmed LTF	0.0028

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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
101513455	940000	AE1-240 TAP	AE	228226	SHRMAN#2	AE	1	AE_P4-2 AE46	breaker	93.0	130.64	136.51	DC	10.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
228200	CARL#1CT	2.0154	50/50	2.0154
228201	CARL#2CT	2.1333	50/50	2.1333
228251	CARLLS#4	0.2308	50/50	0.2308
228260	V4-054C	0.3406	50/50	0.3406
228261	V4-054E	1.6109	50/50	1.6109
228334	MANNMILG	0.6930	Adder	0.82
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.3260	50/50	0.3260
228351	V2-046C	0.1285	50/50	0.1285
228357	V2-046E	1.3727	50/50	1.3727
938871	AE1-115 C	0.5038	Adder	0.59
938872	AE1-115 E	0.5038	Adder	0.59
940001	AE1-240 C O1	20.6996	50/50	20.6996
940002	AE1-240 E O1	14.7752	50/50	14.7752
942571	AE2-272	0.0147	50/50	0.0147
945431	AF1-208 C O1	8.1116	50/50	8.1116
945432	AF1-208 E O1	5.4077	50/50	5.4077
945733	AF1-238 BAT	17.1921	50/50	17.1921
945743	AF1-239 BAT	4.0452	50/50	4.0452
957223	AF2-016 BAT	5.4696	Merchant Transmission	5.4696
957253	AF2-019 BAT	1.4149	Merchant Transmission	1.4149
957261	AF2-020 C	3.4272	50/50	3.4272
957262	AF2-020 E	5.1408	50/50	5.1408
957283	AF2-022 BAT	2.4595	Merchant Transmission	2.4595
957291	AF2-023 C O1	0.5365	Adder	1.19
957292	AF2-023 E O1	0.8048	Adder	1.79
957323	AF2-026 BAT	3.4767	50/50	3.4767
957641	AF2-058	0.6496	50/50	0.6496
958811	AF2-172 C	0.4088	50/50	0.4088
958812	AF2-172 E	0.6669	50/50	0.6669
959111	AF2-202 C	0.4920	50/50	0.4920
959112	AF2-202 E	0.6733	50/50	0.6733
NEWTON	NEWTON	0.0054	Confirmed LTF	0.0054
FARMERCITY	FARMERCITY	0.0003	Confirmed LTF	0.0003
CALDERWOOD	CALDERWOOD	0.0025	Confirmed LTF	0.0025
NY	NY	0.0310	Confirmed LTF	0.0310
PRAIRIE	PRAIRIE	0.0129	Confirmed LTF	0.0129
O-066	O-066	0.5510	Confirmed LTF	0.5510
CHEOAH	CHEOAH	0.0025	Confirmed LTF	0.0025
EDWARDS	EDWARDS	0.0017	Confirmed LTF	0.0017
TILTON	TILTON	0.0031	Confirmed LTF	0.0031
G-007	G-007	0.2049	Confirmed LTF	0.2049

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
GIBSON	GIBSON	0.0027	Confirmed LTF	0.0027
BLUEG	BLUEG	0.0087	Confirmed LTF	0.0087
TRIMBLE	TRIMBLE	0.0028	Confirmed LTF	0.0028
CATAWBA	CATAWBA	0.0017	Confirmed LTF	0.0017

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
AA1-060	Great Adventure 34.5kV	In Service
AA1-079	Emilie 230kV	In Service
AA2-048	Allenwood-Larrabee 34kV	Engineering and Procurement
AA2-069	Cartanza 230kV	Suspended
AA2-184	Atlantic-Red Bank 34kV	In Service
AB1-000	N/A	N/A
AB1-001	Absecon 12 kV	Engineering and Procurement
AB1-056	Indian River 230kV I	Engineering and Procurement
AB1-063	Locust St. 13kV	Partially in Service - Under Construction
AB1-116	Egg Harbor Road 12kV	In Service
AB1-119	Tansboro Road 12kV	In Service
AB1-137	Frankford 25kV	Engineering and Procurement
AB1-138	Navy 34.5kV	In Service
AB1-141	Church-Wye Mills 138 kV I	Engineering and Procurement
AB1-142	Church-Wye Mills 138 kV II	Engineering and Procurement
AB1-163	Glidden-Van Hiseville 34.5 kV	Engineering and Procurement
AB1-169A	Minotola 138 kV	Withdrawn
AB1-176	Price 25kV II	Active
AB2-014	Lakewood 230kV	Partially in Service - Under Construction
AB2-032	Church-Wye Mills 138 kV	Engineering and Procurement
AB2-036	Church-Steele 138kV	Active
AB2-037	Keeney-Steele 230kV	Active
AB2-049	Gloucester Township 12kV	Active
AB2-102	Cumberland 230kV	Active
AB2-120	Piney Grove-New Church 138kV	Active
AB2-122	Egg Harbor 12kV	Engineering and Procurement
AB2-130	Laurel 69kV	Active
AB2-133	Chestertown-Church 69kV	Active
AB2-135	Church-Kent 69kV	Active
AB2-136	West Cambridge-Vienna 69kV	Active
AB2-139	Raceway Mall 34.5kV	In Service
AB2-153	Church-Wye Mills 138 kV	Engineering and Procurement
AB2-172	Todd 69kV	Active
AB2-179	Townsend 138kV	Engineering and Procurement
AB2-180	Rockawalkin 69kV	Active
AB2-185	Wye Mills 25kV	Active
AC1-010	Gloucester 26kV	Suspended
AC1-016	Burlington 26 kV	Withdrawn
AC1-017	Levittown 13 kV	In Service

Queue Number	Project Name	Status
AC1-030	Cinnaminson 13kV	In Service
AC1-091	Cedar Creek 138kV I	Active
AC1-092	Cedar Creek 138kV II	Active
AC1-093	Cedar Creek 138kV III	Active
AC1-094	Cedar Creek 138kV IV	Active
AC1-190	East New Market 69kV	Active
AC1-207	Monroe 34.5kV	In Service
AC1-213	North Salisbury 25kV	Active
AC2-018	Rock Springs 500kV	In Service
AC2-023	Hebron 69kV	Active
AC2-050	Tabernacle 12kV	Active
AC2-185	Cedar Creek 138kV II	Active
AC2-186	Harrington 25kV	Active
AD1-019	Ontario 23 kV	Active
AD1-059	Lakewood 230 kV	In Service
AD1-097	Linwood 230 kV II	Active
AD1-113	Raritan River 230 kV	Suspended
AD2-027	Camden Switch 26 kV	In Service
AD2-042	Camden Switch 26 kV II	In Service
AD2-059	Chapel Street 138 kV	Active
AD2-064	Tansboro 12kV	Withdrawn
AD2-065	Berlin 12kV	Engineering and Procurement
AD2-076	Centreville 69 kV	Active
AD2-135	Williamstown 12kV	Active
AD2-167	Rock Springs 500kV	In Service
AE1-061	Minotola 12 kV	Active
AE1-062	Silver Lake 69 kV	Active
AE1-087	Todd 69 kV	Active
AE1-104	BL England 138 kV	Active
AE1-107	Mt. Pleasant-Lums Pond 138 kV	Active
AE1-115	Churchtown 69 kV	Active
AE1-117	Bethany 138 kV	Active
AE1-118	Bethany-138th Street 138 kV	Withdrawn
AE1-142	Manitou-Pleasant Plains 34.5 kV	Under Construction
AE1-145	Wallops Island 69 kV	Active
AE1-161	Landis 138 kV	Active
AE1-179	South Millville-Newport 69 kV	Active
AE1-192	Belle Haven-Tasley 69 kV	Active
AE1-218	Glassboro 12 kV	Engineering and Procurement
AE1-219	Glassboro 12 kV II	Engineering and Procurement
AE1-229	Deepwater-Upper Pittsgrove 138 kV	Active
AE1-238	Oceanview Wind 230 kV	Active
AE1-240	Carlls Corner-Sherman Avenue 69 kV	Active
AE2-000	N/A	N/A
AE2-010	Paper Tap 69 kV	Engineering and Procurement
AE2-020	Cardiff 230 kV I	Active
AE2-021	Cardiff 230 kV II	Active
AE2-022	Cardiff 230 kV III	Active
AE2-024	Larrabee 230 kV I	Active
AE2-025	Larrabee 230 kV II	Active
AE2-056	Howell 12.47 kV Solar I	Engineering and Procurement
AE2-057	Jerseyville 12.47 kV Solar	Engineering and Procurement

Queue Number	Project Name	Status
AE2-061	Rock Springs 500 kV	In Service
AE2-064	Beaverbrook 13 kV	Under Construction
AE2-065	Deptford 13 kV	Under Construction
AE2-081	Howell 12.47 kV Solar II	Engineering and Procurement
AE2-082	Englishtown-Wyckoff 34.5 kV Solar	Active
AE2-093	Easton-Steele 138 kV	Active
AE2-112	Carville 138 kV	Active
AE2-222	Higbee 69 kV	Active
AE2-251	Cardiff 230 kV	Active
AE2-257	Cedar Neck 69 kV	Active
AE2-272	Woodstown 12 kV	In Service
AE2-334	Clayton-Williamstown 69 kV	Active
AF1-007	Indian River 230 kV I	Active
AF1-015	Easton-Steele 138 kV	Active
AF1-023	Atlantic-Red Bank 34 kV II	Active
AF1-027	Plumsted 537 Energy Storage (CIRs)	Active
AF1-036	Carville 138 kV	Active
AF1-041	Absecon 12.47 kV	In Service
AF1-101	Oyster Creek 230 kV III	Active
AF1-126	Cookstown 230 kV	Active
AF1-157	Laurel-Sussex 69 kV	Active
AF1-160	Silver Lake 69 kV	Active
AF1-185	Sayreville 1-2-3 230 kV	In Service
AF1-208	Quinton-Roadstown 69 kV	Active
AF1-222	Oceanview Wind 2 230 kV	Active
AF1-231	New Church 138 kV	Active
AF1-238	Sherman Ave. 69 kV	Active
AF1-239	Sherman Ave-Vineland 69 kV	Active
AF1-243	Tasley 25 kV	Active
AF1-244	Kingston 25 kV	Active
AF1-258	Rockawalkin 69 kV	Active
AF1-259	Price 25 kV	Active
AF1-260	Allenwood-Larrabee 2 34.5 kV	Active
AF1-261	Burlington 26 kV	Active
AF1-262	Upper Pittsgrove 12 kV	Active
AF1-264	Runnemede 13 kV	Active
AF1-269	Airey-Golden Hill 69 kV	Withdrawn
AF2-016	Lewis 138 kV	Active
AF2-019	Rio Grande 69 kV	Active
AF2-020	Carll's Corner 69 kV	Active
AF2-021	Cedar 69 kV	Active
AF2-022	Cumberland 138 kV	Active
AF2-023	Churchtown 69 kV	Active
AF2-024	Mickleton 69 kV	Active
AF2-025	Missouri Ave 69 kV	Active
AF2-026	Sherman Ave 138 kV	Active
AF2-038	Printz 230 kV	Active
AF2-055	Plantation 69 kV	Active
AF2-058	Fairton 12 kV	Active
AF2-060	Wattsville 12 kV	Active
AF2-061	Wattsville 69kV	Active
AF2-071	Windsor 230 kV	Active

Queue Number	Project Name	Status
AF2-072	Larrabee 230 kV	Active
AF2-109	Church 69 kV	Active
AF2-167	Eaton Crest-Red Bank 34.5 kV	Active
AF2-169	BL England 138 kV	Withdrawn
AF2-172	Whibco 12 kV	Active
AF2-174	Tabernacle 12 kV	Active
AF2-193	Indian River 230 kV I	Active
AF2-194	Indian River 230 kV II	Active
AF2-196	Cedar Neck 69 kV II	Active
AF2-202	Landis 12 V	Active
AF2-206	Larrabee-Point Pleasant 34.5 kV	Active
AF2-207	Nelson 69 kV	Active
AF2-248	Edgewood 12 kV I	Active
AF2-249	Edgewood 12 kV II	Active
AF2-250	Edgewood 12 kV III	Active
AF2-254	Cookstown-New Lisbon 34.5 kV	Active
AF2-313	Price 69 kV	Active
AF2-325	Jacktown 12 kV	Active
AF2-358	Airey-Vienna 69 kV	Active
AF2-378	Cambridge 12 kV	Active
AF2-379	Princess Anne 25 kV	Active
AF2-385	Nelson 69 kV	Active
AF2-387	Hillsboro 138 kV	Active
AF2-409	Vienna 138 kV	Active
AF2-413	Raritan River 230 kV	Active
V1-021	Cape May County 12kV	In Service
V2-035	Pittsgrove	In Service
V2-041	Clayville 12kV	In Service
V2-046	Pilesgrove Township 12kV	In Service
V3-036	Ontario 23kV	In Service
V4-054	Fairfield Township 12kV	In Service
V4-067	Cates Road Egg Harbor Township 12kV	In Service
W1-003	Oak Hall	In Service
W1-004	Oak Hall	In Service
W1-005	Oak Hall	In Service
W1-006	Oak Hall	In Service
W1-024	Manalapan 12.5kV	In Service
W1-032	Millhurst 12.5kV	In Service
W1-112	Holmdel	In Service
W1-113	Millstone 2	In Service
W1-119	Pemberton Township 1 34.5 kV	In Service
W1-120	Pemberton Township 2 34.5 kV	In Service
W1-124	Tinton Falls 34.5kV	In Service
W1-129	Cookstown 34.5kV	In Service
W1-130	Vine Road 12kV	In Service
W2-019	Wrightstown 34.5kV	In Service
W2-030	Egg Harbor Township	In Service
W2-039	Clayville 69kV	In Service
W2-078	Applegarth 12.5kV	In Service
W2-082	Fort Dix-McGuire 34.5kV	In Service
W3-079	Allenwood-Larabee 34.5kV	In Service
W4-025	Cookstown-Fort Dix 34.5kV	In Service

Queue Number	Project Name	Status
W4-060	Midland-Werner 34.5kV	In Service
X1-032	Costen 25kV	In Service
X1-037	Howell	In Service
X1-085	Hornerstown-Windsor 34kV	In Service
X3-008	Todd 69kV	Under Construction
X3-066	Church Hill 69kV	In Service
X4-005	Raritan River 230kV	In Service
X4-015	Cookstown-Fort Dix 34kV	In Service
X4-031	Bennett-Farmingdale 34kV	In Service
Y1-057	Barbadoes 34kV	Deactivated
Y1-065	Rock Springs 500kV	In Service
Y1-079	Wye Mills 69kV	In Service
Y1-080	Dorchester 12kV	In Service
Y2-051	Brick-Lane Mill 34.5kV	In Service
Y3-058	Rockawalkin 69kV	In Service
Z1-082	Lawnside 13kV	In Service
Z2-012	Weirwood-Eastville 69kV	In Service
Z2-076	Worcester South 25kV	In Service
Z2-077	Worcester North 25kV	In Service
Z2-083	Mickleton 230kV	In Service
Z2-102	Argonne-New Lisbon 34.5kV	In Service

11.8 Contingency Descriptions

Contingency Name	Contingency Definition
AE_P1-2 CUMB-DENN	CONTINGENCY 'AE_P1-2 CUMB-DENN' OPEN LINE FROM BUS 228207 TO BUS 228213 CIRCUIT 1 / END
PS_P1-2_U-2299_LT	CONTINGENCY 'PS_P1-2_U-2299_LT' /* CAMDEN CUTBERTH DISCONNECT BUS 219754 /* CUTHBERTH SECTION 3 CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219676 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219724 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWNSIDE END
JC-P7-1-JCC-230-7A	CONTINGENCY 'JC-P7-1-JCC-230-7A' /* SMITHBURG - LARRABEE 230 LINES DISCONNECT BRANCH FROM BUS 206309 TO BUS 206294 CKT 1 DISCONNECT BRANCH FROM BUS 206309 TO BUS 206294 CKT 2 END
AE_P1-2 #2LEW-MILL	CONTINGENCY 'AE_P1-2 #2LEW-MILL' OPEN LINE FROM BUS 227945 TO BUS 227904 CIRCUIT 1 / END
AE_P1-2 ORCH-CUMB	CONTINGENCY 'AE_P1-2 ORCH-CUMB' OPEN LINE FROM BUS 228002 TO BUS 228207 CIRCUIT 1 / END
PS_P7-1_V2274+P2242_LT	CONTINGENCY 'PS_P7-1_V2274+P2242_LT' /* EAGLE POINT - GLOUCESTER & DEPTFORD - GLOUCESTER DISCONNECT BUS 219757 /* DEPTFORD SECTION 2 TRIP LINE FROM BUS 219110 TO BUS 219128 CKT 1 CLOSE LINE FROM BUS 219255 TO BUS 219256 CKT Z /* DEPTFORD CLOSE LINE FROM BUS 219180 TO BUS 219181 CKT Z /* DEPTFORD DISCONNECT BUS 219760 /* EAGLE POINT SECTION 4 MOVE 8 MW LOAD FROM BUS 219180 TO BUS 219162 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T1 MOVE 8 MW LOAD FROM BUS 219181 TO BUS 219163 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T2 MOVE 8 MW LOAD FROM BUS 219255 TO BUS 219162 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T1 MOVE 8 MW LOAD FROM BUS 219256 TO BUS 219163 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T2 END

Contingency Name	Contingency Definition
PS_P2-3_CUTB_3-4_LT	CONTINGENCY 'PS_P2-3_CUTB_3-4_LT' DISCONNECT BUS 219754 /* CUTHBERTH SECTION 3 DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219629 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWNSIDE END
AE_P1-2 MNOTLA 1-MNOTLA 2	CONTINGENCY 'AE_P1-2 MNOTLA 1-MNOTLA 2' DISCONNECT BRANCH FROM BUS 228502 TO BUS 228503 CKT 1 END
PECO_P1-2_5014/* \$ CHESCO \$ 5014 \$ L	CONTINGENCY 'PECO_P1-2_5014/* \$ CHESCO \$ 5014 \$ L' TRIP BRANCH FROM BUS 200065 TO BUS 200051 CKT 1 /* PCHBTM2S 500.00 ROCKSPGS 500.00 \$ CHESCO \$ 5014 \$ L END
AE_P4-2 AE28	CONTINGENCY 'AE_P4-2 AE28' /*ENGLAND TO MERION CITY BREAKER C DISCONNECT BRANCH FROM BUS 228110 TO BUS 228197 CKT 1 /*ENGLAND MERION 138 138 DISCONNECT BRANCH FROM BUS 228110 TO BUS 227905 CKT 1 /*ENGLAND #1 SCULL 138 138 END
AE_P4-2 AE29	CONTINGENCY 'AE_P4-2 AE29' /*ENGLAND TO CORSON BREAKER D DISCONNECT BRANCH FROM BUS 228110 TO BUS 228111 CKT 1 /*ENGLAND MIDDLE TAP 138 138 DISCONNECT BRANCH FROM BUS 228110 TO BUS 227906 CKT 1 /*ENGLAND #2 SCULL 138 138 END
PECO_P4_CHICH045/* \$ DELCO \$ CHICH045 \$ STBK	CONTINGENCY 'PECO_P4_CHICH045/* \$ DELCO \$ CHICH045 \$ STBK' DISCONNECT BUS 213489 /* CHICHST1 230.00 \$ DELCO \$ CHICH045 \$ STBK DISCONNECT BUS 213627 /* FOULK8 230.00 \$ DELCO \$ CHICH045 \$ STBK END

Contingency Name	Contingency Definition
JC-P1-2-JCC-230-018	CONTINGENCY 'JC-P1-2-JCC-230-018' /* LARRABEE - SMITHBURG (H2008) 230 KV DISCONNECT BRANCH FROM BUS 206309 TO BUS 206294 CKT 2 DISCONNECT BRANCH FROM BUS 200017 TO BUS 206309 CKT 4 /* SMITHBURG SMITHBURG 500 230 END
JC-P1-2-JCC-230-019	CONTINGENCY 'JC-P1-2-JCC-230-019' /* LEISURE VILLAGE - MANITOU (A2027) 230 KV DISCONNECT BRANCH FROM BUS 206295 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 END
JC-P1-2-JCC-230-002T	CONTINGENCY 'JC-P1-2-JCC-230-002T' /** OYSTER CREEK - CEDAR (S2045) 230 KV DISCONNECT BRANCH FROM BUS 206302 TO BUS 227955 CKT 1 /* 28OYSTER C 230 CEDAR 230 END
JC-P1-2-JCC-230-017	CONTINGENCY 'JC-P1-2-JCC-230-017' /* FUTURE BREAKERS LARRABEE - SMITHBURG (D2004) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 1 END
PS_P1-2_C-2308	CONTINGENCY 'PS_P1-2_C-2308' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219753 /* CUTHBERTH SECTOIN 2 CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT END
JC-P1-2-JCC-230-014	CONTINGENCY 'JC-P1-2-JCC-230-014' /* FUTURE BREAKERS LAKEWOOD - LARRABEE (Z2026) 230 KV & LAR BK 8 & 12 DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 1 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 SET BUS 206294 LOAD TO 38 MW END
JC-P7-1-JCC-230-10A	CONTINGENCY 'JC-P7-1-JCC-230-10A' /* LAKEWOOD - LARRABEE 230 KV LINES DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 2 DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 1 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206274 CKT 3 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 /* LARRABEE 12 FUTURE BREAKER AND A HALF SET BUS 206294 LOAD TO 38 MW /* LARRABEE 8 FUTURE BREAKER AND A HALF END

Contingency Name	Contingency Definition
JC-P2-3-JCC-230-13A	CONTINGENCY 'JC-P2-3-JCC-230-13A' /* LARRABEE - SMITHBURG (D2004) & LAKEWOOD (Z2026) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 1 /* LARRABEE- SMITHBURG (D2004) DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 2 /* LARRABEE- LAKEWOOD (Z2026) SET BUS 206294 LOAD TO 0 MW /* LARRABEE BK8 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 /* LARRABEE BK12 END
AE_P7-1 AE13TOWER	CONTINGENCY 'AE_P7-1 AE13TOWER' DISCONNECT BRANCH FROM BUS 228500 TO BUS 228502 CKT 1 /* LANDIS TO MINO 138 KV DISCONNECT BRANCH FROM BUS 228002 TO BUS 227900 CKT 1 /* ORCH TO CARD 230 KV END
AE_P1-3 CARD 7 XFR	CONTINGENCY 'AE_P1-3 CARD 7 XFR' OPEN LINE FROM BUS 227900 TO BUS 227934 CIRCUIT 1 / END
JC-P1-2-JCC-230-013	CONTINGENCY 'JC-P1-2-JCC-230-013' /* LAKEWOOD - LARRABEE (K2011) 230 KV DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 2 END
AE_P1-2 BLE-ML-LEW2	CONTINGENCY 'AE_P1-2 BLE-ML-LEW2' DISCONNECT BUS 227904 / DISCONNECT BUS 227906 / DISCONNECT BUS 227930 / 227930 CIRCUIT 1 / CLOSE LINE FROM BUS 227929 TO BUS 227930 CIRCUIT 1 / END
AE_P1-2 ENG-MERION	CONTINGENCY 'AE_P1-2 ENG-MERION' OPEN LINE FROM BUS 228197 TO BUS 228110 CIRCUIT 1 / OPEN LINE FROM BUS 228197 TO BUS 228199 CIRCUIT 1 / CLOSE LINE FROM BUS 228198 TO BUS 228199 CIRCUIT 1 / END
AE_P4-2 AE45	CONTINGENCY 'AE_P4-2 AE45' /*ORCHARD 230 BUS BREAKER E DISCONNECT BRANCH FROM BUS 228002 TO BUS 227900 CKT 1 /* ORCHARD TO CARDIFF 230 230 DISCONNECT BRANCH FROM BUS 200063 TO BUS 228002 CKT 1 /*ORCHARD ORCHARD 500 230 T1 END

Contingency Name	Contingency Definition
AE_P1-2 ORCHARD XF	CONTINGENCY 'AE_P1-2 ORCHARD XF' OPEN LINE FROM BUS 200063 TO BUS 228002 CIRCUIT 1 / END
JC-P2-3-JCC-230-15J	CONTINGENCY 'JC-P2-3-JCC-230-15J' /* LAKEWOOD-LARRABEE (K2011) & LARRABEE SE BUS 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 1 /* LARRABEE - LAKEWOOD (K2011) DISCONNECT BRANCH FROM BUS 206294 TO BUS 206274 CKT 4 /* LARRABEE BK4 REDUCE BUS 206294 SHUNT BY 100 PERCENT /* LARRABEE 2X 130MVAR CAPS END
AE_P7-1 AE3TOWER	CONTINGENCY 'AE_P7-1 AE3TOWER' DISCONNECT BRANCH FROM BUS 227900 TO BUS 227955 CKT 1 /* CARDIFF TO CEDAR 230 KV DISCONNECT BRANCH FROM BUS 227913 TO BUS 227902 CKT 1 /* CARDIFF TO LEWIS 138 KV END
JC-P2-3-JCC-230-15G	CONTINGENCY 'JC-P2-3-JCC-230-15G' /* LARRABEE-SMITHBURG (H2008) 230 KV & LARRABEE NW BUS 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 2 /* LARRABEE- SMITHBURG (H2008) REMOVE LOAD 7 FROM BUS 206294 /* LARRABEE BK7 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 9 /* LARRABEE BK9 END
JC-P2-3-JCC-230-15F	CONTINGENCY 'JC-P2-3-JCC-230-15F' /* LARRABEE - SMITHBURG (D2004) & LARRABEE NW BUS 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 1 /* LARRABEE- SMITHBURG (D2004) REMOVE LOAD 7 FROM BUS 206294 /* LARRABEE BK7 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 9 /* LARRABEE BK9 END
JC-P2-3-JCC-230-15A	CONTINGENCY 'JC-P2-3-JCC-230-15A' /* LAKEWOOD-LARRABEE (K2011) & LARRABEE-SMITHBURG (H2008) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 1 /* LARRABEE - LAKEWOOD (K2011) DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 2 /* LARRABEE- SMITHBURG (H2008) END

Contingency Name	Contingency Definition
PS_P2-3_CUTB_1-4_LT	CONTINGENCY 'PS_P2-3_CUTB_1-4_LT' DISCONNECT BUS 219108 /* CUTBERTH SECTION 1 DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219629 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWN SIDE END
PS_P1-2_2310	CONTINGENCY 'PS_P1-2_2310' /* NEW FREEDOM TO CARDIFF TIELINE TRIP LINE FROM BUS 219100 TO BUS 227900 CKT 1 /* NEW FREEDOM TO CARDIFF END
JC-P7-1-JCC-230-12	CONTINGENCY 'JC-P7-1-JCC-230-12' /* LEISURE VILLAGE-MANITOU A2027 & C2029 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206276 CKT 3 SET BUS 206296 LOAD TO 0 MW END
JC-P7-1-JCC-230-13	CONTINGENCY 'JC-P7-1-JCC-230-13' /* MANITOU-OYSTER CREEK 230 LINES & OYSTER GEN DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 2 DISCONNECT BRANCH FROM BUS 206302 TO BUS 206325 CKT 1 END
AE_P4-2 AE33	CONTINGENCY 'AE_P4-2 AE33' /* LEWIS TO CARDIFF BREAKER V DISCONNECT BRANCH FROM BUS 227902 TO BUS 227913 CKT 1 /* LEWIS CARDIFF 138 138 DISCONNECT BRANCH FROM BUS 227902 TO BUS 227903 CKT 1 /* LEWIS MILL #1 138 138 DISCONNECT BRANCH FROM BUS 227902 TO BUS 227918 CKT 1 /* LEWIS 138 69 T1 END

Contingency Name	Contingency Definition
PS_P1-2_D-2282	CONTINGENCY 'PS_P1-2_D-2282' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT END
PECO_P1-2_5038/* \$ CHESCO \$ 5038 \$ L	CONTINGENCY 'PECO_P1-2_5038/* \$ CHESCO \$ 5038 \$ L' TRIP BRANCH FROM BUS 200012 TO BUS 200028 CKT 1 /* NFREEDOM 500.00 WINDSOR 500.00 \$ CHESCO \$ 5038 \$ L END
PS_P1-2_Z-2305_LT	CONTINGENCY 'PS_P1-2_Z-2305_LT' /* CAMDEN TO CUTHBERT DISCONNECT BUS 219108 /* CUTHBERT SECTION 1 CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTHBERT MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219724 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWN SIDE END
AE_P1-2 BLE-SC-ML2	CONTINGENCY 'AE_P1-2 BLE-SC-ML2' DISCONNECT BUS 227906 / DISCONNECT BUS 227930 / CLOSE LINE FROM BUS 227929 TO BUS 227930 CIRCUIT 1 / END
PECO_P4_PEACH215/* \$ CHESCO \$ PEACH215 \$ STBK	CONTINGENCY 'PECO_P4_PEACH215/* \$ CHESCO \$ PEACH215 \$ STBK' TRIP BRANCH FROM BUS 200065 TO BUS 200051 CKT 1 /* PCHBTM2S 500.00 ROCKSPGS 500.00 \$ CHESCO \$ PEACH215 \$ STBK REMOVE MACHINE 1 FROM BUS 200034 /* PCHBTM 2 22.00 \$ CHESCO \$ PEACH215 \$ STBK END
AE_P1-2 FRNK-LAND	CONTINGENCY 'AE_P1-2 FRNK-LAND' OPEN LINE FROM BUS 228482 TO BUS 228500 CIRCUIT 1 / END
PECO_P2-2_CHI230B1/* \$ DELCO \$ CHI230B1 \$ B	CONTINGENCY 'PECO_P2-2_CHI230B1/* \$ DELCO \$ CHI230B1 \$ B' DISCONNECT BUS 213489 /* CHICHST1 230.00 \$ DELCO \$ CHI230B1 \$ B END

Contingency Name	Contingency Definition
PJM500_PS_P2-3_NFRD5_910	CONTINGENCY 'PJM500_PS_P2-3_NFRD5_910' DISCONNECT BRANCH FROM BUS 200012 TO BUS 219100 CKT 4 /* 500/230 KV TX NEW FREED TRIP LINE FROM BUS 200012 TO BUS 200028 CKT 1 /* 5038 NEW FREEDOM TO WINSOR END
JC-P1-2-JCC-230-022	CONTINGENCY 'JC-P1-2-JCC-230-022' /* MANITOU - OYSTER CREEK (O1019) 230 KV DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 2 END
JC-P1-2-JCC-230-021	CONTINGENCY 'JC-P1-2-JCC-230-021' /* MANITOU - OYSTER CREEK (N1028) 230 KV DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 1 END
JC-P1-2-JCC-230-020	CONTINGENCY 'JC-P1-2-JCC-230-020' /* LEISURE VILLAGE - MANITOU (C2029) 230 KV DISCONNECT BRANCH FROM BUS 206296 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206276 CKT 3 SET BUS 206296 LOAD TO 0 MW END
Base Case	
AE_P1-2 LANDIS-MINO	CONTINGENCY 'AE_P1-2 LANDIS-MINO' OPEN LINE FROM BUS 228500 TO BUS 228502 CIRCUIT 1 / END
AE_P1-3 CARD 6 XFR	CONTINGENCY 'AE_P1-3 CARD 6 XFR' OPEN LINE FROM BUS 227900 TO BUS 227913 CIRCUIT 1 / END
AE_P1-2 LEWIS #1-LEWIS #3	CONTINGENCY 'AE_P1-2 LEWIS #1-LEWIS #3' DISCONNECT BRANCH FROM BUS 227902 TO BUS 227949 CKT 1 END
AE_P4-2 AE7	CONTINGENCY 'AE_P4-2 AE7' /*CARDIFF TO NEW FREEDOM BREAKER V DISCONNECT BRANCH FROM BUS 219100 TO BUS 227900 CKT 1 /*NEW FREEDOM TO CARDIFF 230 230 DISCONNECT BRANCH FROM BUS 227900 TO BUS 227910 CKT 1 /*CARDIFF CARDIFF 230 69 T1 END

Contingency Name	Contingency Definition
AE_P4-2 AE6	CONTINGENCY 'AE_P4-2 AE6' /*CARDIFF TO NEW FREEDOM BREAKER W DISCONNECT BRANCH FROM BUS 219100 TO BUS 227900 CKT 1 /*NEW FREEDOM TO CARDIFF 230 230 DISCONNECT BRANCH FROM BUS 227900 TO BUS 227911 CKT 1 /*CARDIFF CARDIFF 230 69 T2 END
AE_P4-2 AE9	CONTINGENCY 'AE_P4-2 AE9' /*CARDIFF TO ORCHARD BREAKER NEW1 DISCONNECT BRANCH FROM BUS 228002 TO BUS 227900 CKT 1 /* CARDIFF TO ORCHARD 230 230 DISCONNECT BRANCH FROM BUS 227900 TO BUS 227934 CKT 1 /*CARDIFF CARDIFF 230 138 T7 END
AE_P1-2 CARD-CEDAR	CONTINGENCY 'AE_P1-2 CARD-CEDAR' OPEN LINE FROM BUS 227900 TO BUS 227955 CIRCUIT 1 / END
PS_P1-2_C-2308_LT	CONTINGENCY 'PS_P1-2_C-2308_LT' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219753 /* CUTHBERTH SECTOIN 2 CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE END
JC-P7-1-JCC-230-11A	CONTINGENCY 'JC-P7-1-JCC-230-11A' /* LAKEWOOD - LEISURE V 230 KV LINES DISCONNECT BRANCH FROM BUS 206323 TO BUS 206295 CKT 1 DISCONNECT BRANCH FROM BUS 206323 TO BUS 206296 CKT 1 DISCONNECT BRANCH FROM BUS 206323 TO BUS 206282 CKT 6 DISCONNECT BRANCH FROM BUS 206282 TO BUS 206999 CKT 1 SET BUS 206295 LOAD TO 0 MW DISCONNECT BUS 206999 DISCONNECT BUS 207110 DISCONNECT BUS 207010 DISCONNECT BUS 207111 END
AE_P4-2 AE46	CONTINGENCY 'AE_P4-2 AE46' /*ORCHARD 230 BUS BREAKER D DISCONNECT BRANCH FROM BUS 228002 TO BUS 228310 CKT 1 /* ORCHARD TO CHURCHTOWN 230 230 DISCONNECT BRANCH FROM BUS 200063 TO BUS 228002 CKT 1 /*ORCHARD ORCHARD 500 230 T1 END

Contingency Name	Contingency Definition
PS_P7-1_W2275+O2241_LT	CONTINGENCY 'PS_P7-1_W2275+O2241_LT' /* MICKLETON -DEPTFORD & MICKLETON - THOROFARE DISCONNECT BUS 219121 /* THOROFARE SECTION 1 DISCONNECT BUS 219109 /* DEPTFORD BUS SECTION 1 CLOSE LINE FROM BUS 219255 TO BUS 219256 CKT Z /* DEPTFORD T3 TO T4 CLOSE LINE FROM BUS 219180 TO BUS 219181 CKT Z /* DEPTFORD T1 TO T2 DISCONNECT BUS 219762 /* THOROFARE SECTION 2 DISCONNECT BUS 219759 /* EAGLE POINT BUS SECTION 3 MOVE 8 MW LOAD FROM BUS 219180 TO BUS 219162 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T1 MOVE 8 MW LOAD FROM BUS 219181 TO BUS 219163 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T2 MOVE 8 MW LOAD FROM BUS 219255 TO BUS 219162 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T1 MOVE 8 MW LOAD FROM BUS 219256 TO BUS 219163 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T2 END
JC-P2-3-JCC-230-18A	CONTINGENCY 'JC-P2-3-JCC-230-18A' /* OYSTER CRK-MANITOU & MANITOU-WHITINGS 230 KV DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206319 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 DISCONNECT BRANCH FROM BUS 206319 TO BUS 206281 CKT 4 END
AE_P1-2 BLE-SC-ML1	CONTINGENCY 'AE_P1-2 BLE-SC-ML1' DISCONNECT BUS 227905 / DISCONNECT BUS 227929 / CLOSE LINE FROM BUS 227929 TO BUS 227930 CIRCUIT 1 / END
AE_P1-2 MONROE-LANDIS_1	CONTINGENCY 'AE_P1-2 MONROE-LANDIS_1' OPEN BRANCH FROM BUS 228404 TO BUS 228500 CKT 1 END
PS_P7-1_R2244+M2213	CONTINGENCY 'PS_P7-1_R2244+M2213' TRIP LINE FROM BUS 219100 TO BUS 227900 CKT 1 /* NEW FREEDOM TO CARDIFF TRIP LINE FROM BUS 219100 TO BUS 228600 CKT 1 /* NEW FREEDOM TO SICKLER END

12 Affected Systems

None

13 Attachment 1: One Line Diagram