



**Generation Interconnection
System Impact Study Report
for
Queue Project AG1-061
LAUREL-SHARPTOWN 69 KV
65.58 MW Capacity / 109.3 MW Energy**

October 2021

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1 Introduction

This System Impact Study has been prepared in accordance with the PJM Open Access Transmission Tariff, 205, as well as the System Impact Study Agreement between the Interconnection Customer (IC), and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is DPL.

2 Preface

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

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

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

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

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

3 General

The Interconnection Customer (IC), has proposed a Solar generating facility located in Sussex County, Delaware. The installed facilities will have a total capability of 109.3 MW with 65.58 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is December 31, 2021. This study does not imply a TO commitment to this in-service date.

Queue Number	AG1-061
Project Name	LAUREL-SHARPTOWN 69 KV
State	Delaware
County	Sussex
Transmission Owner	DPL
MFO	109.3
MWE	109.3
MWC	65.58
Fuel	Solar
Basecase Study Year	2024

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

4 Point of Interconnection

AG1-061 will interconnect with the DPL system via a terminal position at a new 3-breaker ring bus to be constructed on the Laurel – Sharptown 69 kV line.

5 Cost Summary

The AG1-061 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$7,659,319
Allocation towards System Network Upgrade Costs (PJM Identified - Summer Peak)*	\$309,973,055
Allocation towards System Network Upgrade Costs (PJM Identified - Light Load)*	\$0
Allocation towards System Network Upgrade Costs (TO Identified)*	\$0
Total Costs	\$317,632,374

*As your project progresses through the study process and other projects modify their request or withdraw, then your cost allocation could change.

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.

Note 1: PJM Open Access Transmission Tariff (OATT) section 217.3A outline cost allocation rules. The rules are further clarified in PJM Manual 14A Attachment B. The allocation of costs for a network upgrade will start with the first Queue project to cause the need for the upgrade. Later queue projects will receive cost allocation contingent on their contribution to the violation and are allocated to the queues that have not closed less than 5 years following the execution of the first Interconnection Service Agreement which identifies the need for this upgrade.

Note 2: For customers with System Reinforcements listed: If your present cost allocation to a System Reinforcement indicates \$0, then please be aware that as changes to the interconnection process occur, such as prior queued projects withdrawing from the queue, reducing in size, etc, the cost responsibilities can change and a cost allocation may be assigned to your project. In addition, although your present cost allocation to a System Reinforcement is presently \$0, your project may need this system reinforcement completed to be deliverable to the PJM system. If your project comes into service prior to completion of the system reinforcement, an interim deliverability study for your project will be required.

6 Transmission Owner Scope of Work

Scope of work for this project includes cutting a new 3-breaker ring bus into the Laurel – Sharptown 69kV line. Two terminals will be designated for the lines running in and out of the substation, with the 3rd terminal being designated for the generator.

Estimate: \$7,659,319

Major Equipment Included in Estimate:

• 2000A Power Circuit Breaker, 69 kV, 3 cycle	Qty. 3
• Disconnect Switch, 69 kV	Qty. 6
• Line Switch 69 kV	Qty. 3
• Relay Panel, Transmission Bus, FL/BU (20")	Qty. 3
• Control Panel, 69 kV Circuit Breaker (10")	Qty. 3
• Control Enclosure, 47'x 16'	Qty. 1
• CVT, 69 kV	Qty. 6
• 69kV Takeoff structures	Qty. 3

Estimate Assumptions:

- The required land (≥4 acres) is available for use.
- Developer responsible for land purchase for the substation, price is not included.
- Site clearing, permitting and grading performed by Developer.
- Land for substation is adjacent to passing transmission line

7 Schedule

Based on the scope of work for the interconnection facilities, it is expected to take a minimum of 36-48 months after the signing of an Interconnection Construction Service Agreement (or "Interconnection Agreement" if non-FERC) and construction kickoff call to complete the installation of the physical connection work. This assumes that there will be no environmental issues with any of the new properties associated with this project, that there will be no delays in acquiring the necessary permits for implementing the defined interconnection work, and that all system outages will be allowed when requested.

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

8 Transmission Owner Analysis

None

9 Interconnection Customer Requirements

9.1 Required Relaying and Communications

Front line and back-up line protection will be required. One relay panel for each terminal will be required for front line and back-up protection

A breaker control relay on a breaker control panel will be required for the control and operation of each new 69 kV circuit breaker

9.2 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 DPL'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.

9.3 DPL Interconnection Customer Scope of Direct Connection Work Requirements

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

9.4 Special Operating Requirements

1. DPL 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 DPL.
2. DPL 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 DPL.
3. Interconnection Customer shall design its non-synchronous generation facility with the ability to maintain a power factor between 0.95 leading and 0.95 lagging measured at the generator terminals.

10 Revenue Metering and SCADA Requirements

10.1 PJM Requirements

The Interconnection Customer will be required to install equipment necessary to provide Revenue Metering (KWH, KVARH) and real time data (KW, KVAR) for IC's generating Resource. See PJM Manuals M-01 and M-14D, and PJM Tariff Section 8 of Attachment O.

10.2 Meteorological Data Reporting Requirements

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

- Back Panel temperature (Fahrenheit) - (Required for plants with Maximum Facility Output of 3 MW or higher)
- Irradiance (Watts/meter²) - (Required for plants with Maximum Facility Output of 3 MW or higher)
- Ambient air temperature (Fahrenheit) - (Accepted, not required)

10.3 Interconnected Transmission Owner Requirements

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

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

A three phase 69 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 the DPL's specifications. The secondary wiring connections at the instrument transformers will be completed by the Interconnection Customer and inspected by DPL, while the connections at the metering enclosure will be completed by the DPL. The metering control cable and meter cabinets will be supplied by the DPL 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. The DPL 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. DPL 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 DPL within approximately three feet of the DPL metering position to facilitate remote interrogation and data collection. It is the Interconnection Customer's responsibility to send the data that PJM and DPL require

directly to PJM. The Interconnection Customer will grant permission for PJM to send DPL the following telemetry that the Interconnection Customer sends to PJM: real time MW, MVAR, volts, amperes, generator status, and interval MWH and MVARH.

DPL'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 Analysis

The Queue Project AG1-061 was evaluated as a 109.3 MW (Capacity 65.58 MW) injection taping the Laurel to Sharptown 69 kV Line in the DPL area. Project AG1-061 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-061 was studied with a commercial probability of 100.0 %. Potential network impacts were as follows:

11.1 Generation Deliverability

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

None

11.2 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
174161004	231002	HARMONY	230.0	DP&L	231001	EDGEM R 5	230.0	PECO	1	PECO_P4_PEACH215/* \$ CHESCO \$ PECO_P4_PEACH215 \$ STBK	breaker	924.0	97.5	100.1	AC	24.7
174160906	232013	SILVER RUN	230.0	PJM	231004	RL_230	230.0	PJM	1	DPL_P4-2_DP11	breaker	678.0	96.57	100.12	AC	27.63
182778752	232013	SILVER RUN	230.0	PJM	232014	LSPWR CABLE	230.0	PJM	1	PJM500_DPL_P4_2_RED LION-HOPE AT51	breaker	1150.0	99.28	100.85	AC	27.21
182815438	232013	SILVER RUN	230.0	PJM	232014	LSPWR CABLE	230.0	PJM	1	PJM500_DPL_P4_2_RED LION-HOPE AT50	breaker	1150.0	98.74	100.28	AC	26.65
182780078	232014	LSPWR CABLE	230.0	PJM	232012	HOPE CREEK	230.0	PJM	2	PJM500_DPL_P4_2_RED LION-HOPE AT51	breaker	575.0	99.26	100.82	AC	13.6
182780520	232014	LSPWR CABLE	230.0	PJM	232012	HOPE CREEK	230.0	PJM	1	PJM500_DPL_P4_2_RED LION-HOPE AT51	breaker	575.0	99.26	100.82	AC	13.6
182816322	232014	LSPWR CABLE	230.0	PJM	232012	HOPE CREEK	230.0	PJM	1	PJM500_DPL_P4_2_RED LION-HOPE AT50	breaker	575.0	98.72	100.26	AC	13.32
182816764	232014	LSPWR CABLE	230.0	PJM	232012	HOPE CREEK	230.0	PJM	2	PJM500_DPL_P4_2_RED LION-HOPE AT50	breaker	575.0	98.72	100.26	AC	13.32
174161077	232291	ROCKAWL KN	69.0	DP&L	232271	NSALSB RY	69.0	DP&L	1	DPL_P4-2_DP55	breaker	123.0	97.85	103.31	AC	8.27
183000636	232291	ROCKAWL KN	69.0	DP&L	232271	NSALSB RY	69.0	DP&L	1	DPL_P4-2_DP56	breaker	123.0	97.26	102.5	AC	8.15

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 PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
174369393	200012	NEWFRD M	500.0	PSE&G	200028	WINDSOR	500.0	JCP &L	1	PECO_P4_PEACH215/* \$ CHESCO \$ PECO_P4_PEACH215 \$ STBK	breaker	2983.0	107.34	108.27	AC	31.26
182782288	200012	NEWFRD M	500.0	PSE&G	200028	WINDSOR	500.0	JCP &L	1	PECO_P4_PEACH205/* \$ CHESCO \$ PECO_P4_PEACH205 \$ STBK	breaker	2983.0	107.13	108.06	AC	31.26

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 LOAD NG %	POST PROJECT LOAD NG %	AC/DC	MW IMPACT
174369290	200051	ROCKSPGS	500.0	PJM	200065	PCHBTM2S	500.0	PECO	1	PJM500_PS_P2-3_NFRD5_910	breaker	2905.0	106.82	110.8	AC	55.7
174160967	200064	PCHBTM1S	500.0	BGE	200004	CNASTONE	500.0	PECO	1	TS_P4_#T7_FUR RUN 500_CB 3	breaker	3620.0	111.97	113.08	AC	45.22
182681512	200064	PCHBTM1S	500.0	BGE	200004	CNASTONE	500.0	PECO	1	TS_P4_#T5_FUR RUN 500_CB 1	breaker	3620.0	111.98	113.1	AC	45.22
182682396	200064	PCHBTM1S	500.0	BGE	200004	CNASTONE	500.0	PECO	1	TS_P4_#T6_FUR RUN 500_CB 2	breaker	3620.0	111.97	113.08	AC	45.22
165219617	213490	CHICHST2	230.0	PECO	213496	CHIREACT_53	230.0	PECO	1	PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B	bus	841.0	108.15	109.58	AC	8.77
173967241	213490	CHICHST2	230.0	PECO	213496	CHIREACT_53	230.0	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	breaker	841.0	108.15	109.58	AC	8.77
182693446	213490	CHICHST2	230.0	PECO	213496	CHIREACT_53	230.0	PECO	1	PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	breaker	841.0	108.11	109.54	AC	8.77
165219618	213496	CHIREACT_53	230.0	PECO	213972	TRAINER	230.0	PECO	1	PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B	bus	841.0	108.15	109.58	AC	8.77
173967240	213496	CHIREACT_53	230.0	PECO	213972	TRAINER	230.0	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	breaker	841.0	108.15	109.58	AC	8.77
182693004	213496	CHIREACT_53	230.0	PECO	213972	TRAINER	230.0	PECO	1	PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	breaker	841.0	108.11	109.54	AC	8.77
165219591	213559	DELCOTAP	230.0	PECO	228401	MCKLTON	230.0	AE	1	PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B	bus	725.0	125.55	126.66	AC	8.73
173784066	213559	DELCOTAP	230.0	PECO	228401	MCKLTON	230.0	AE	1	PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	breaker	725.0	125.56	126.67	AC	8.73
182483054	213559	DELCOTAP	230.0	PECO	228401	MCKLTON	230.0	AE	1	PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	breaker	725.0	125.52	126.63	AC	8.73
165219643	213973	TRAINER2	230.0	PECO	213559	DELCOTAP	230.0	PECO	1	PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B	bus	841.0	101.75	103.18	AC	8.77
174161036	213973	TRAINER2	230.0	PECO	213559	DELCOTAP	230.0	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	breaker	841.0	101.76	103.19	AC	8.77
182848146	213973	TRAINER2	230.0	PECO	213559	DELCOTAP	230.0	PECO	1	PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	breaker	841.0	101.72	103.15	AC	8.77
167808215	231000	CLAY_230	230.0	PECO	214235	LINWOOD84	230.0	DP&L	1	PECO_P1-2_220-85/* \$ DELCO \$ 220-85 \$ LC	single	804.0	112.48	113.49	AC	10.07
167808216	231000	CLAY_230	230.0	PECO	214235	LINWOOD84	230.0	DP&L	1	PECO_P1-2_220-85/* \$ DELCO \$ PECO_P1-2_220-85 \$ L	single	804.0	112.38	113.39	AC	10.06
167808226	231001	EDGE MR 5	230.0	PECO	214236	LINWOOD85	230.0	DP&L	1	PECO_P1-2_220-84	single	804.0	110.91	111.89	AC	9.75
167808227	231001	EDGE MR 5	230.0	PECO	214236	LINWOOD85	230.0	DP&L	1	PECO_P1-2_220-84/* \$ DELCO \$ PECO_P1-2_220-84 \$ L	single	804.0	110.51	111.49	AC	9.72

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 PROJECTIONS T LOADING %	POST PROJECTIONS T LOADING %	AC/DC	MW IMPACT
167808246	231001	EDGE MR 5	230.0	PECO	231000	CLAY_230	230.0	PECO	1	PECO_P1-2_220-85/* \$ DELCO \$ 220-85 \$ LC	single	804.0	111.4	112.29	AC	8.97
167808247	231001	EDGE MR 5	230.0	PECO	231000	CLAY_230	230.0	PECO	1	PECO_P1-2_220-85/* \$ DELCO \$ PECO_P1-2_220-85 \$ L	single	804.0	111.31	112.21	AC	8.95
182589134	231124	GLASGOW	138.0	DP&L	231130	CECIL138	138.0	DP&L	1	PECO_P4_PEACH215/* \$ CHESCO \$ PECO_P4_PEACH215 \$ STBK	breaker	378.0	105.71	108.04	AC	10.27
182625378	231124	GLASGOW	138.0	DP&L	231130	CECIL138	138.0	DP&L	1	PECO_P4_PEACH205/* \$ CHESCO \$ PECO_P4_PEACH205 \$ STBK	breaker	378.0	103.9	106.23	AC	10.27
182552448	232005	VIENNA	230.0	DP&L	232000	STEELE	230.0	DP&L	1	DPL_P4-2_DP3	breaker	550.0	102.29	107.93	AC	37.02
182620958	232005	VIENNA	230.0	DP&L	232000	STEELE	230.0	DP&L	1	DPL_P4-2_DP6	breaker	550.0	105.25	111.29	AC	40.36
174160888	232006	INDRIV 4	230.0	DP&L	232004	MILF_230	230.0	DP&L	1	DPL_P4-2_DP36	breaker	804.0	120.81	124.7	AC	37.27
182522834	232006	INDRIV 4	230.0	DP&L	232004	MILF_230	230.0	DP&L	1	DPL_P4-2_DPIR238	breaker	804.0	121.37	124.29	AC	27.92
174160991	232012	HOPE CREEK	230.0	PJM	200029	HOPE CRK	500.0	PJM	1	PJM500_DPL_P4_2_REDLION-HOPE AT51	breaker	1117.0	104.09	105.64	AC	27.21
174369366	232012	HOPE CREEK	230.0	PJM	200029	HOPE CRK	500.0	PJM	1	PJM500_DPL_P4_2_REDLION-HOPE AT50	breaker	1117.0	103.54	105.07	AC	26.65
182424268	232013	SILVER RUN	230.0	PJM	232014	LSPWR CABLE	230.0	PJM	1	DPL_P7_1_DBL_4NC	tower	1150.0	101.8	104.93	AC	44.51
182424710	232014	LSPWR CABLE	230.0	PJM	232012	HOPE CREEK	230.0	PJM	2	DPL_P7_1_DBL_4NC	tower	575.0	101.75	104.88	AC	22.25
182425152	232014	LSPWR CABLE	230.0	PJM	232012	HOPE CREEK	230.0	PJM	1	DPL_P7_1_DBL_4NC	tower	575.0	101.75	104.88	AC	22.25
166659844	232100	CHURCH	138.0	DP&L	232107	TOWNSEND	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	146.02	152.35	AC	22.96
166659854	232106	MIDLTNTP	138.0	DP&L	232104	MT PLSNT	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	127.4	134.13	AC	22.96
166659839	232107	TOWNSEND	138.0	DP&L	232106	MIDLTNTP	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	151.52	158.25	AC	22.96
182476866	232116	VIENN138	138.0	DP&L	232005	VIENNA	230.0	DP&L	1	DPL_P4-2_DP3	breaker	530.0	106.6	112.47	AC	37.02
182543166	232116	VIENN138	138.0	DP&L	232005	VIENNA	230.0	DP&L	1	DPL_P4-2_DP6	breaker	530.0	109.12	115.44	AC	40.36
182361062	232117	VIENNA 8	138.0	DP&L	232116	VIENN138	138.0	DP&L	1	DPL_P4-2_DP3	breaker	482.0	116.47	122.9	AC	37.02
182399074	232117	VIENNA 8	138.0	DP&L	232116	VIENN138	138.0	DP&L	1	DPL_P4-2_DP6	breaker	482.0	119.53	126.46	AC	40.36
174160809	232215	KENT	69.0	DP&L	232812	NMEREDT H	69.0	DP&L	1	DPL_P4-2_DP11	breaker	93.0	136.9	142.48	AC	6.15
174160860	232230	TRAP ALT	69.0	DP&L	232232	TRAPPETP	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	114.39	123.39	AC	16.48
174160858	232232	TRAPPETP	69.0	DP&L	232227	EASTN_69	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	114.19	123.49	AC	17.06
174160822	232233	PRESTON	69.0	DP&L	232821	TANYARD	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	128.0	137.36	AC	17.06
173967123	232234	TODD	69.0	DP&L	232233	PRESTON	69.0	DP&L	1	DPL_P4-2_DP12	breaker	93.0	124.25	139.11	AC	14.32
182178074	232234	TODD	69.0	DP&L	232233	PRESTON	69.0	DP&L	1	DPL_P4-2_DP11	breaker	93.0	241.79	259.23	AC	17.06
174160864	232241	VIENN_69	69.0	DP&L	232234	TODD	69.0	DP&L	1	DPL_P4-2_DP11	breaker	143.0	116.77	126.47	AC	14.04
182296088	232241	VIENN_69	69.0	DP&L	232838	MARDELA	69.0	DP&L	1	DPL_P4-2_DP55	breaker	64.0	134.95	145.56	AC	8.27
182301834	232241	VIENN_69	69.0	DP&L	232838	MARDELA	69.0	DP&L	1	DPL_P4-2_DP56	breaker	64.0	134.11	144.41	AC	8.15
173967126	232812	NMEREDT H	69.0	DP&L	924820	AB2-135 TAP	69.0	DP&L	1	DPL_P4-2_DP11	breaker	93.0	116.16	121.66	AC	6.15

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
174160839	232820	TALBOT	69.0	DP&L	232230	TRAP ALT	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	122.69	132.02	AC	17.06
174160832	232821	TANYARD	69.0	DP&L	232820	TALBOT	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	125.02	134.37	AC	17.06
182350454	232838	MARDELA	69.0	DP&L	232270	HEBRON	69.0	DP&L	1	DPL_P4-2_DP55	breaker	64.0	125.67	136.28	AC	8.27
182357526	232838	MARDELA	69.0	DP&L	232270	HEBRON	69.0	DP&L	1	DPL_P4-2_DP56	breaker	64.0	124.91	135.2	AC	8.15

11.4 Steady-State Voltage Requirements

To be determined

11.5 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/DC	MW IMPACT
167567673	200012	NEWFRDM	500.0	PSE&G	200028	WINDSOR	500.0	JCP&L	1	PECO_P1-2_5014/* \$ CHESCO \$ PECO_P1-2_5014 \$ L	operation	2983.0	107.12	108.05	AC	31.26
167567541	200051	ROCKSPGS	500.0	PJM	200065	PCHBTM2S	500.0	PECO	1	JC-P1-2-JCC-500-003	operation	2905.0	129.51	131.16	AC	55.31
167567630	200064	PCHBTM1S	500.0	BGE	200004	CNASTONE	500.0	PECO	1	TS_P1-2_#T6	operation	3620.0	109.22	110.4	AC	45.17
167567567	200066	PCHBTM1N	500.0	PECO	270072	FUR RUN_500	500.0	PJM	1	PECO_P1-2_5012/* \$ CHESCO \$ PECO_P1-2_5012 \$ L	operation	3609.0	108.51	110.6	AC	41.47
167567740	213489	CHICHST1	230.0	PECO	213588	EDDYSTN4	230.0	PECO	1	PECO_P1-2_220-04/* \$ DELCO \$ PECO_P1-2_220-04 \$ L	operation	1079.0	100.86	101.81	AC	11.78
167808213	231000	CLAY_230	230.0	PECO	214235	LINWOOD84	230.0	DP&L	1	PECO_P1-2_220-85/* \$ DELCO \$ 220-85 \$ LC	operation	804.0	142.93	144.74	AC	16.79
167808217	231000	CLAY_230	230.0	PECO	214235	LINWOOD84	230.0	DP&L	1	Base Case	operation	650.0	100.23	101.57	AC	10.01
167808224	231001	EDGEMR 5	230.0	PECO	214236	LINWOOD85	230.0	DP&L	1	PECO_P1-2_220-84	operation	804.0	140.37	142.12	AC	16.25

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 LOADIN G %	POST PROJE CT LOADIN G %	AC/D C	MW IMPAC T
167808244	231001	EDGEMR 5	230.0	PECO	231000	CLAY_230	230.0	PECO	1	PECO_P1-2_220-85/* \$ DELCO \$ 220-85 \$ LC	operati on	804.0	138.52	140.13	AC	14.95
167808401	231124	GLASGOW	138.0	DP&L	231130	CECIL138	138.0	DP&L	1	PECO_P1-2_5014/* \$ CHESCO \$ PECO_P1-2_5014 \$ L	operati on	378.0	103.89	106.22	AC	10.27
167808295	232000	STEELE	230.0	DP&L	231003	KEEN_230	230.0	DP&L	1	DPL_P1_2_AB 2-037 KEENEY	operati on	552.0	102.3	107.26	AC	28.15
167808192	232001	COOLSPRS	230.0	DP&L	232927	BENNETT_230	230.0	DP&L	2	DPL_P1_2_CK T 23034	operati on	678.0	138.34	143.24	AC	39.54
167808149	232002	CEDAR CK	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	CKT 23032B	operati on	678.0	144.05	149.13	AC	42.3
167808151	232002	CEDAR CK	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	Base Case	operati on	550.0	118.26	121.51	AC	30.92
167808165	232003	CARTANZA	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	Base Case	operati on	650.0	127.54	130.45	AC	22.28
182204152	232003	CARTANZA	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	CKT 23030B	operati on	790.0	142.16	146.1	AC	35.87
167808132	232004	MILF_230	230.0	DP&L	232000	STEELE	230.0	DP&L	1	CKT 23032B	operati on	550.0	145.57	148.72	AC	19.53
167808229	232004	MILF_230	230.0	DP&L	232002	CEDAR CK	230.0	DP&L	1	CKT 23032B	operati on	738.0	108.4	111.9	AC	29.5
167808271	232006	INDRIV 4	230.0	DP&L	232001	COOLSPRS	230.0	DP&L	1	DPL_P1_2_CK T 23034	operati on	800.0	126.63	129.46	AC	26.85
167808287	232006	INDRIV 4	230.0	DP&L	232004	MILF_230	230.0	DP&L	1	DPL_P1_2_CK T 23069A	operati on	804.0	118.87	122.87	AC	38.32
167567659	232012	HOPE CREEK	230.0	PJM	200029	HOPE CRK	500.0	PJM	1	PJM500_PS_P 1-2_5015	operati on	1117.0	102.53	104.0	AC	25.61
167808286	232100	CHURCH	138.0	DP&L	232107	TOWNSEND	138.0	DP&L	1	Base Case	operati on	280.0	102.43	106.37	AC	11.36
182449904	232100	CHURCH	138.0	DP&L	232107	TOWNSEND	138.0	DP&L	1	CKT 23032B	operati on	348.0	108.55	112.23	AC	13.38
167808235	232107	TOWNSEND	138.0	DP&L	232106	MIDLTNTP	138.0	DP&L	1	Base Case	operati on	273.0	115.41	119.45	AC	11.36
182379184	232107	TOWNSEND	138.0	DP&L	232106	MIDLTNTP	138.0	DP&L	1	CKT 23032B	operati on	348.0	116.69	120.37	AC	13.38
182602394	232116	VIENN138	138.0	DP&L	232005	VIENNA	230.0	DP&L	1	DPL_P1_2_CK T 23076	operati on	530.0	97.15	102.7	AC	34.96
167808336	232117	VIENNA 8	138.0	DP&L	232116	VIENN138	138.0	DP&L	1	Base Case	operati on	390.0	106.82	114.05	AC	31.75
182445926	232117	VIENNA 8	138.0	DP&L	232116	VIENN138	138.0	DP&L	1	DPL_P1_2_CK T 23076	operati on	482.0	106.05	112.13	AC	34.96
167808290	232119	NELSON	138.0	DP&L	232121	INDRV2&3	138.0	DP&L	1	DPL_P1_2_23 085 &13710	operati on	193.0	104.73	115.38	AC	21.41
167808185	232234	TODD	69.0	DP&L	232233	PRESTON	69.0	DP&L	1	DPL_P1_2_23 085 &13710	operati on	93.0	123.46	138.36	AC	14.35
167808251	232241	VIENN_69	69.0	DP&L	232838	MARDELA	69.0	DP&L	1	Base Case	operati on	64.0	100.13	110.34	AC	8.07
182300066	232241	VIENN_69	69.0	DP&L	232838	MARDELA	69.0	DP&L	1	DPL_P1_2_CK T 13780	operati on	64.0	134.13	144.75	AC	8.29
182512226	232249	LAUREL	69.0	DP&L	232247	DUP-SFRD	69.0	DP&L	1	DPL_P1_2_23 085 &13710	operati on	93.0	78.34	107.32	AC	28.93
167808513	232291	ROCKAWLK N	69.0	DP&L	232271	NSALSBR Y	69.0	DP&L	1	Base Case	operati on	105.0	93.95	100.07	AC	8.07
182988702	232291	ROCKAWLK N	69.0	DP&L	232271	NSALSBR Y	69.0	DP&L	1	DPL_P1_2_CK T 13780	operati on	123.0	97.5	102.97	AC	8.29
167808218	232838	MARDELA	69.0	DP&L	232270	HEBRON	69.0	DP&L	1	Base Case	operati on	50.0	120.61	133.69	AC	8.07
182354874	232838	MARDELA	69.0	DP&L	232270	HEBRON	69.0	DP&L	1	DPL_P1_2_CK T 13780	operati on	64.0	124.88	135.5	AC	8.29
167808202	232927	BENNETT_230	230.0	DP&L	232004	MILF_230	230.0	DP&L	2	DPL_P1_2_CK T 23034	operati on	678.0	133.46	138.36	AC	39.54

11.6 System Reinforcements

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																				
174160860	27	TRAP ALT 69.0 kV - TRAPPETP 69.0 kV Ckt 1	ProjectId: n7047 (dt6716r0004) Description: To mitigate the (DPL) Trappe Tap - Trappe Tap Alt 69 kV line (from bus 232232 to 232230) overload, it will require increasing the emergency rating of the line by rebuilding it with new poles, conductor, foundations, insulators, and OPGW. The disconnect switches will also need to be replaced. Type: FAC Total Cost: \$475,000 Time Estimate: 9-12 Months Ratings: 195.0/241.0/241.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw.	\$475,000	\$0	N7047																				
174160839	34	TALBOT 69.0 kV - TRAP ALT 69.0 kV Ckt 1	ProjectId : n7749 (dt6716r0008) Description : To mitigate the (DPL) Talbot- Trappe Tap Alt 69 kV line (from bus 232820 to 232230) overload, it will require increasing the emergency rating of the line by rebuilding it with new poles, 1590 ACSR conductor, foundations, insulators, and OPGW. The disconnect switches will also need to be replaced at both ends of the line Type : FAC Total Cost : \$4,750,000 Time Estimate : 36-48 Months Ratings : 195.0/241.0/241.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-000</td><td>39.25</td><td>69.70%</td><td>\$3,310,913</td></tr><tr><td>AG1-061</td><td>17.06</td><td>30.30%</td><td>\$1,439,087</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-000	39.25	69.70%	\$3,310,913	AG1-061	17.06	30.30%	\$1,439,087	\$4,750,000	\$1,439,087	N7749								
Queue	MW	Cost %	Cost \$																							
AG1-000	39.25	69.70%	\$3,310,913																							
AG1-061	17.06	30.30%	\$1,439,087																							
174161004	1	HARMON Y 230.0 kV - EDGEMR 5 230.0 kV Ckt 1	Note: Not a violation for PECO portion ProjectId : n7143 (dt23012r0001) Description : Rebuild 23012 Harmony - Edge Moor with new poles, conductor, foundations, insulators and OPGW Type : FAC Total Cost : \$23,000,000 Time Estimate : 36-48 Months Ratings: 916.0/1035.0/1035.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-358</td><td>5.65</td><td>12.57%</td><td>\$2,890,990</td></tr><tr><td>AF2-385</td><td>16.23</td><td>36.11%</td><td>\$8,304,561</td></tr><tr><td>AF2-387</td><td>22.12</td><td>49.21%</td><td>\$11,318,354</td></tr><tr><td>AG1-061</td><td>0.95</td><td>2.11%</td><td>\$486,096</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-358	5.65	12.57%	\$2,890,990	AF2-385	16.23	36.11%	\$8,304,561	AF2-387	22.12	49.21%	\$11,318,354	AG1-061	0.95	2.11%	\$486,096	\$23,000,000	\$486,096	N7143
Queue	MW	Cost %	Cost \$																							
AF2-358	5.65	12.57%	\$2,890,990																							
AF2-385	16.23	36.11%	\$8,304,561																							
AF2-387	22.12	49.21%	\$11,318,354																							
AG1-061	0.95	2.11%	\$486,096																							

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																
166659844	21	CHURCH 138.0 kV - TOWNSE ND 138.0 kV Ckt 1	ProjectId: n7100 (ds13833r0001) Description : To mitigate the (DP&L) CHURCH to TOWNSEND 138 kV line (from bus 232100 to bus 232107 Ckt 1) overload will require substation reinforcements at Church Substation. Type: FAC Total Cost: \$500,000 Time Estimate: 24-36 Months Ratings: 329.0/372.0/372.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw. ProjectId: n7101 (ds13833r0002) Description: To mitigate the (DP&L) CHURCH to TOWNSEND 138 kV line (from bus 232100 to bus 232107 Ckt 1) overload will require substation reinforcements (on top of ds13833r001) at Church Substation. Type: FAC Total Cost: \$200,000 Time Estimate: 24.0 Months Ratings: 381.0/445.0/445.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw. ProjectId: n7102 (ds13833r0003) Description: To mitigate the (DP&L) CHURCH to TOWNSEND 138 kV line (from bus 232100 to bus 232107 Ckt 1) overload will require substation reinforcements (on top of ds13833r001, ds13833r002) at Church Substation. Type: FAC Total Cost: \$100,000 Time Estimate: 12-18 Months Ratings: 395.0/478.0/478.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw. ProjectId : n7103 (dt13833r0001) Description : To mitigate the (DP&L) CHURCH to TOWNSEND 138 kV line (from bus 232100 to bus 232107 ckt 1) overload will require a rebuild of the 13833 Church to Townsend 138 kV Line along with substation reinforcements (on top of ds13833r001, ds13833r002, ds13833r003) at Church and Townsend Substations Type : FAC Total Cost : \$26,000,000 Time Estimate : 48-60 Months Ratings : 548.0/698.0/698.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-358</td><td>21.4</td><td>35.84%</td><td>\$9,318,372</td></tr><tr><td>AF2-385</td><td>15.35</td><td>25.71%</td><td>\$6,683,973</td></tr><tr><td>AG1-061</td><td>22.96</td><td>38.45%</td><td>\$9,997,655</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-358	21.4	35.84%	\$9,318,372	AF2-385	15.35	25.71%	\$6,683,973	AG1-061	22.96	38.45%	\$9,997,655	\$26,800,000	\$9,997,655	N7100 N7101 N7102 N7103
Queue	MW	Cost %	Cost \$																			
AF2-358	21.4	35.84%	\$9,318,372																			
AF2-385	15.35	25.71%	\$6,683,973																			
AG1-061	22.96	38.45%	\$9,997,655																			

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																								
174369393, 182782288	7	NEWFRD M 500.0 kV - WINDSOR 500.0 kV Ckt 1	ProjectId: n7838 (JC-AG1-S-0001a) Description : Replace (4) 3000 A current transformers at Windsor. Replace (1) 3000 A wave trap at Windsor. Additionally, PSEG would need to replace their section of the limiting conductor and provide estimates for their replacement. Type: FAC Total Cost: \$2,285,472 Time Estimate: 12.0 Months Ratings: 2707.0/3260.0/3260.0 Notes: The driver is unknown and will be determined in future retools. The potential cost allocation table is as follows: <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>Unknown Driver</td><td>218.95</td><td>87.51%</td><td>\$1,999,936</td></tr><tr><td>AG1-061</td><td>31.26</td><td>12.49%</td><td>\$285,536</td></tr></table> ProjectId: n7836 (r_PS_I024b_NF500) Description : Upgrade New Freedom 500kV terminal equipment to achieve a SER of 3386 MVA Type : FAC Total Cost : \$9,070,000 Time Estimate : 25.0 Months Ratings : 2906.0/3386.0/ Notes: The driver is unknown and will be determined in future retools. The potential cost allocation table is as follows: <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF1-000</td><td>218.95</td><td>87.51%</td><td>\$7,936,839</td></tr><tr><td>AG1-061</td><td>31.26</td><td>12.49%</td><td>\$1,133,161</td></tr></table>	Queue	MW	Cost %	Cost \$	Unknown Driver	218.95	87.51%	\$1,999,936	AG1-061	31.26	12.49%	\$285,536	Queue	MW	Cost %	Cost \$	AF1-000	218.95	87.51%	\$7,936,839	AG1-061	31.26	12.49%	\$1,133,161	\$11,355,472	\$1,418,697	N7836 N7838
Queue	MW	Cost %	Cost \$																											
Unknown Driver	218.95	87.51%	\$1,999,936																											
AG1-061	31.26	12.49%	\$285,536																											
Queue	MW	Cost %	Cost \$																											
AF1-000	218.95	87.51%	\$7,936,839																											
AG1-061	31.26	12.49%	\$1,133,161																											
174160906	2	SILVER RUN 230.0 kV - RL_230 230.0 kV Ckt 1	ProjectId : n7799 (dt23045r0001) Description : Rebuild 23045 Red Lion - Silver Run line utilizing (2) 1590 ACSR Lapwing conductor and upgrade stranded bus at Red Lion from 1590 ACSR to (2) 1590 ACSR Type : FAC Total Cost : \$38,500,000 Time Estimate : 48-60 Months Ratings : 1195.0/1195.0/1195.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>22.92</td><td>100.00%</td><td>\$38,500,000</td></tr></table> ProjectId : n7800 (SR003) Description : Replace terminal jumpers with double bundled 1590 ACSR (Lapwing) on Silver Run's Cedar Creek line terminal Type : FAC Total Cost : \$30,000 Time Estimate : 12.0 Months Ratings : 797.0/1052.0/1052.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>27.63</td><td>100.00%</td><td>\$30,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	22.92	100.00%	\$38,500,000	Queue	MW	Cost %	Cost \$	AG1-061	27.63	100.00%	\$30,000	\$38,530,000	\$38,530,000	N7799 N7800								
Queue	MW	Cost %	Cost \$																											
AG1-061	22.92	100.00%	\$38,500,000																											
Queue	MW	Cost %	Cost \$																											
AG1-061	27.63	100.00%	\$30,000																											

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																								
174160832	35	TANYARD 69.0 kV - TALBOT 69.0 kV Ckt 1	ProjectId : n7040 (dt6716r0003) Description : To mitigate the (DP&L) Tanyard - Talbot 69 kV line (from bus 232820 to bus 232821 Ckt 1) overload, it will require increasing the emergency rating of the Tanyard - Talbot 69 kV line by rebuilding the line. This includes installation of new poles, foundations, insulators and OPGW. Type : FAC Total Cost : \$7,499,000 Time Estimate : 36-48 Months Ratings : 164.0/186.0/186.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-194</td><td>33.08</td><td>36.09%</td><td>\$2,706,086</td></tr><tr><td>AF2-207</td><td>6.35</td><td>6.93%</td><td>\$519,457</td></tr><tr><td>AF2-358</td><td>25.74</td><td>28.08%</td><td>\$2,105,643</td></tr><tr><td>AF2-385</td><td>9.44</td><td>10.30%</td><td>\$772,233</td></tr><tr><td>AG1-061</td><td>17.06</td><td>18.61%</td><td>\$1,395,581</td></tr></table> ProjectId: n7041 (ds6716r0003) Description: To mitigate the (DP&L) Tanyard - Talbot 69 kV line (from bus 232820 to bus 232821 Ckt 1) overload, it will require increasing the emergency rating of the Tanyard - Talbot 69 kV line by replacing terminal equipment at the Tanyard and Talbot taps. Type: FAC Total Cost: \$200,000 Time Estimate: 12-18 Months Ratings: 195.0/241.0/241.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw.	Queue	MW	Cost %	Cost \$	AF2-194	33.08	36.09%	\$2,706,086	AF2-207	6.35	6.93%	\$519,457	AF2-358	25.74	28.08%	\$2,105,643	AF2-385	9.44	10.30%	\$772,233	AG1-061	17.06	18.61%	\$1,395,581	\$7,699,000	\$1,395,581	N7040 N7041
Queue	MW	Cost %	Cost \$																											
AF2-194	33.08	36.09%	\$2,706,086																											
AF2-207	6.35	6.93%	\$519,457																											
AF2-358	25.74	28.08%	\$2,105,643																											
AF2-385	9.44	10.30%	\$772,233																											
AG1-061	17.06	18.61%	\$1,395,581																											
182357526, 182350454	36	MARDELA 69.0 kV - HEBRON 69.0 kV Ckt 1	ProjectId : n7784 (dt6708r0001) Description : Rebuild the 6708 line from Vienna - Hebron (N. Salisbury to Hebron Section already completed) with new poles, conductor, foundations, insulators and OPGW Type : CON Total Cost : \$15,000,000 Time Estimate : 36-48 Months Ratings : 136.0/174.0/174.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-061</td><td>0.9</td><td>2.77%</td><td>\$415,640</td></tr><tr><td>AF2-325</td><td>0.47</td><td>1.45%</td><td>\$217,057</td></tr><tr><td>AF2-358</td><td>17.71</td><td>54.53%</td><td>\$8,178,879</td></tr><tr><td>AF2-409</td><td>5.13</td><td>15.79%</td><td>\$2,369,150</td></tr><tr><td>AG1-061</td><td>8.27</td><td>25.46%</td><td>\$3,819,273</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-061	0.9	2.77%	\$415,640	AF2-325	0.47	1.45%	\$217,057	AF2-358	17.71	54.53%	\$8,178,879	AF2-409	5.13	15.79%	\$2,369,150	AG1-061	8.27	25.46%	\$3,819,273	\$15,000,000	\$3,819,273	N7784
Queue	MW	Cost %	Cost \$																											
AF2-061	0.9	2.77%	\$415,640																											
AF2-325	0.47	1.45%	\$217,057																											
AF2-358	17.71	54.53%	\$8,178,879																											
AF2-409	5.13	15.79%	\$2,369,150																											
AG1-061	8.27	25.46%	\$3,819,273																											

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																							
174160822	29	PRESTON 69.0 kV - TANYARD 69.0 kV Ckt 1	ProjectId: (b2946) Description : PJM baseline upgrade b2946 conversion of Preston station to a Ring Bus Type : CON Total Cost : \$6,000,000 Time Estimate : 30-36 Months Ratings : 136.0/173.0/173.0 Notes : Baseline upgrades do not receive Cost Allocation bit is required for Queue projects to go into service.	\$17,100,000	\$2,047,126	B2946 N7105 N7106																							
			ProjectId : n7105 (dt6716r0001) Description : To mitigate the (DP&L) Preston - Tanyard 69 kV line (from bus 232821 to bus 232233 Ckt 1) overload, it will require increasing the emergency rating of the Preston-Tanyard 69 kV line by rebuilding the line. This includes installation of new poles, foundations, insulators and OPGW. Type : FAC Total Cost : \$11,000,000 Time Estimate : 36-48 Months Ratings : 164.0/186.0/186.0																										
			Queue				MW	Cost %	Cost \$	AF2-194	33.08	36.09%	\$3,969,456	AF2-207	6.35	6.93%	\$761,972	AF2-358	25.74	28.08%	\$3,088,688	AF2-385	9.44	10.30%	\$1,132,759	AG1-061	17.06	18.61%	\$2,047,126
			Queue				MW	Cost %	Cost \$																				
			AF2-194				33.08	36.09%	\$3,969,456																				
			AF2-207				6.35	6.93%	\$761,972																				
			AF2-358				25.74	28.08%	\$3,088,688																				
			AF2-385				9.44	10.30%	\$1,132,759																				
			AG1-061				17.06	18.61%	\$2,047,126																				
			ProjectId: n7106 (ds6716r0006) Description : To mitigate the (DP&L) Preston - Tanyard 69 kV line (from bus 232821 to bus 232233 Ckt 1) overload, it will require increasing the emergency rating of the Preston-Tanyard 69 kV line by replacing the terminal equipment at the Tanyard Tap Type : FAC Total Cost : \$100,000 Time Estimate : 9-12 Months Ratings : 195.0/241.0/241.0 Notes : Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw.																										

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																												
182778752, 182424268, 182815438, 182816322, 182425152, 182780520, 182424710, 182780078, 182816764	3	SILVER RUN 230.0 kV - LSPWR CABLE 230.0 kV Ckt 1	ProjectId : N7759 (SR001) Description : Install an additional submarine cable to each phase of the existing Silver Run to Hope Creek 230 kV line Type : FAC Total Cost : \$60,000,000 Time Estimate : 48-60 Months Ratings : 974.0/1195.0/1195.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF1-000</td><td>20.7</td><td>31.74%</td><td>\$19,046,159</td></tr><tr><td>AG1-061</td><td>44.51</td><td>68.26%</td><td>\$40,953,841</td></tr></table>	Queue	MW	Cost %	Cost \$	AF1-000	20.7	31.74%	\$19,046,159	AG1-061	44.51	68.26%	\$40,953,841	\$61,000,000	\$41,953,841	N7759 N7760																
	Queue	MW	Cost %	Cost \$																														
	AF1-000	20.7	31.74%	\$19,046,159																														
	AG1-061	44.51	68.26%	\$40,953,841																														
	4	LSPWR CABLE 230.0kV - HOPE CREEK 230.0kV Ckt 2	ProjectId : N7760 (SR002) Description : Upgrade Silver Run's Hope Creek line terminal to 5000 amp and rerate overhead line conductor to operate at a higher conductor operating temperature Type : FAC Total Cost : \$1,000,000 Time Estimate : 12-18 Months Ratings : 1364.0/1614.0/1614.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>44.51</td><td>100.00%</td><td>\$1,000,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	44.51	100.00%	\$1,000,000																							
Queue	MW	Cost %	Cost \$																															
AG1-061	44.51	100.00%	\$1,000,000																															
5	LSPWR CABLE 230.0 kV - HOPE CREEK 230.0 kV Ckt 1																																	
182522834, 174160888	19	INDRIV 4 230.0 kV - MILF_230 230.0 kV Ckt 1	ProjectId : n7104 (dt23034r0001) Description : To mitigate the (DPL) Indian River - Milford 230 kV line (from bus 232006 to 232004) overload it will require increasing the emergency rating of the line by rebuild with new poles, foundations, insulators, and OPGW. In addition terminal upgrades will be required at Milford and Indian River Type : FAC Total Cost : \$60,000,000 Time Estimate : 48-60 Months Ratings : 886.0/1089.0/1089.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-194</td><td>281.73</td><td>67.71%</td><td>\$40,624,369</td></tr><tr><td>AF2-196</td><td>17.25</td><td>4.15%</td><td>\$2,487,383</td></tr><tr><td>AF2-207</td><td>20.25</td><td>4.87%</td><td>\$2,919,971</td></tr><tr><td>AF2-358</td><td>29.46</td><td>7.08%</td><td>\$4,248,017</td></tr><tr><td>AF2-385</td><td>30.14</td><td>7.24%</td><td>\$4,346,071</td></tr><tr><td>AG1-061</td><td>37.27</td><td>8.96%</td><td>\$5,374,189</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-194	281.73	67.71%	\$40,624,369	AF2-196	17.25	4.15%	\$2,487,383	AF2-207	20.25	4.87%	\$2,919,971	AF2-358	29.46	7.08%	\$4,248,017	AF2-385	30.14	7.24%	\$4,346,071	AG1-061	37.27	8.96%	\$5,374,189	\$60,000,000	\$5,374,189	N7104
Queue	MW	Cost %	Cost \$																															
AF2-194	281.73	67.71%	\$40,624,369																															
AF2-196	17.25	4.15%	\$2,487,383																															
AF2-207	20.25	4.87%	\$2,919,971																															
AF2-358	29.46	7.08%	\$4,248,017																															
AF2-385	30.14	7.24%	\$4,346,071																															
AG1-061	37.27	8.96%	\$5,374,189																															

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																				
165219617, 182693446, 173967241	10	CHICHST2 230.0 kV - CHIREACT _53 230.0 kV Ckt 1	ProjectId : n7159 (pe023) Description : Rebuild 2 miles of 230 kV line from Chichester to Trainer with 2x1590 kcmil 54/19 ACSR Type : FAC Total Cost : \$9,900,000 Time Estimate : 36.0 Months Ratings : 731.0/885.0/984.0 <table><tr><td>Queue</td><td>MW</td><td>Cost %</td><td>Cost \$</td></tr><tr><td>AF2-194</td><td>23.66</td><td>57.74%</td><td>\$5,715,813</td></tr><tr><td>AG1-061</td><td>8.77</td><td>21.40%</td><td>\$2,118,668</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-194	23.66	57.74%	\$5,715,813	AG1-061	8.77	21.40%	\$2,118,668	\$9,990,000	\$2,208,668	N7159 N7161								
	Queue	MW	Cost %	Cost \$																						
AF2-194	23.66	57.74%	\$5,715,813																							
AG1-061	8.77	21.40%	\$2,118,668																							
11	CHIREACT _53 230.0 kV - TRAINER 230.0 kV Ckt 1	ProjectId : n7161 (pe034) Description : Replace 1 line trap at Trainer Type : FAC Total Cost : \$90,000 Time Estimate : 6.0 Months Ratings : 816.0/927.0/956.0 <table><tr><td>Queue</td><td>MW</td><td>Cost %</td><td>Cost \$</td></tr><tr><td>AG1-061</td><td>8.77</td><td>100.00%</td><td>\$90,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	8.77	100.00%	\$90,000																
Queue	MW	Cost %	Cost \$																							
AG1-061	8.77	100.00%	\$90,000																							
173967126	33	NMEREDT H 69.0 kV - AB2-135 TAP 69.0 kV Ckt 1	ProjectId : n7091 (dt6704r0002) Description : To mitigate the (DPL) New Meredith to AB2-135 Tap 69 kV line (from bus 232812 to 924820_ overload it will require increasing the emergency rating of the New Meredith to AB2-135 Tap 69 kV line by rebuilding the line with new poles foundations insulators and OPGW. Terminal equipment at New Meredith Tap will also need to be replaced Type : FAC Total Cost : \$11,000,000 Time Estimate : 36-48 Months Ratings : 136.0/174.0/174.0 <table><tr><td>Queue</td><td>MW</td><td>Cost %</td><td>Cost \$</td></tr><tr><td>AF2-194</td><td>24.97</td><td>80.24%</td><td>\$8,826,157</td></tr><tr><td>AG1-061</td><td>6.15</td><td>19.76%</td><td>\$2,173,843</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-194	24.97	80.24%	\$8,826,157	AG1-061	6.15	19.76%	\$2,173,843	\$11,000,000	\$2,173,843	N7091								
Queue	MW	Cost %	Cost \$																							
AF2-194	24.97	80.24%	\$8,826,157																							
AG1-061	6.15	19.76%	\$2,173,843																							
182693004, 173967240, 165219618	11	CHIREACT _53 230.0 kV - TRAINER 230.0 kV Ckt 1	ProjectId : n7159 (pe023) Description : Rebuild 2 miles of 230 kV line from Chichester to Trainer with 2x1590 kcmil 54/19 ACSR Type : FAC Total Cost : \$9,900,000 Time Estimate : 36.0 Months Ratings : 731.0/885.0/984.0 <table><tr><td>Queue</td><td>MW</td><td>Cost %</td><td>Cost \$</td></tr><tr><td>AF2-194</td><td>23.66</td><td>57.74%</td><td>\$5,715,813</td></tr><tr><td>AG1-061</td><td>8.77</td><td>21.40%</td><td>\$2,118,668</td></tr></table> ProjectId : n7161 (pe034) Description : Replace 1 line trap at Trainer Type : FAC Total Cost : \$90,000 Time Estimate : 6.0 Months Ratings : 816.0/927.0/956.0 <table><tr><td>Queue</td><td>MW</td><td>Cost %</td><td>Cost \$</td></tr><tr><td>AG1-061</td><td>8.77</td><td>100.00%</td><td>\$90,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-194	23.66	57.74%	\$5,715,813	AG1-061	8.77	21.40%	\$2,118,668	Queue	MW	Cost %	Cost \$	AG1-061	8.77	100.00%	\$90,000	\$9,990,000	\$2,208,668	N7159 N7161
Queue	MW	Cost %	Cost \$																							
AF2-194	23.66	57.74%	\$5,715,813																							
AG1-061	8.77	21.40%	\$2,118,668																							
Queue	MW	Cost %	Cost \$																							
AG1-061	8.77	100.00%	\$90,000																							

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																								
182483054, 165219591, 173784066	12	DELCOTA P 230.0 kV - MCKLTON 230.0 kV Ckt 1	Not a violation for PECO portion ProjectId: n7868 (ACEMickDelcorebuildr01) Description: To mitigate the (ACE)Mickleton to Delco Tap 230 kV line (from bus 228401 to bus 213559 Ckt 1) overload, it will require rebuilding 7.6 miles of 230 kV to a higher capacity. Type : FAC Total Cost : \$19,000,000 Time Estimate : 36-42 Months Ratings : 733/828/952 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>8.73</td><td>100.00%</td><td>\$19,000,000</td></tr></table> ProjectId: n7869 (ACEMickDelcostrandctdiscLr01) Description: To mitigate the (ACE)Mickleton to Delco Tap 230 kV line (from bus 228401 to bus 213559 Ckt 1) overload, it will require a 230 kV strand bus and CT at Mickleton. Type: FAC Total Cost: \$400,000 Time Estimate: 12-32 Months Ratings: 901/1045/1090 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>8.73</td><td>100.00%</td><td>\$400,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	8.73	100.00%	\$19,000,000	Queue	MW	Cost %	Cost \$	AG1-061	8.73	100.00%	\$400,000	\$19,400,000	\$19,400,000	N7868 N7869								
Queue	MW	Cost %	Cost \$																											
AG1-061	8.73	100.00%	\$19,000,000																											
Queue	MW	Cost %	Cost \$																											
AG1-061	8.73	100.00%	\$400,000																											
182296088, 182301834	32	VIENN_69 69.0 kV - MARDELA 69.0 kV Ckt 1	ProjectId : N7784 (dt6708r0001) Description : Rebuild the 6708 line from Vienna - Hebron (N. Salisbury to Hebron Section already completed) with new poles, conductor, foundations, insulators and OPGW Type : CON Total Cost : \$15,000,000 Time Estimate : 36-48 Months Ratings : 136.0/174.0/174.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-061</td><td>0.9</td><td>2.77%</td><td>\$415,640</td></tr><tr><td>AF2-325</td><td>0.47</td><td>1.45%</td><td>\$217,057</td></tr><tr><td>AF2-358</td><td>17.71</td><td>54.53%</td><td>\$8,178,879</td></tr><tr><td>AF2-409</td><td>5.13</td><td>15.79%</td><td>\$2,369,150</td></tr><tr><td>AG1-061</td><td>8.27</td><td>25.46%</td><td>\$3,819,273</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-061	0.9	2.77%	\$415,640	AF2-325	0.47	1.45%	\$217,057	AF2-358	17.71	54.53%	\$8,178,879	AF2-409	5.13	15.79%	\$2,369,150	AG1-061	8.27	25.46%	\$3,819,273	\$15,000,000	\$3,819,273	N7784
Queue	MW	Cost %	Cost \$																											
AF2-061	0.9	2.77%	\$415,640																											
AF2-325	0.47	1.45%	\$217,057																											
AF2-358	17.71	54.53%	\$8,178,879																											
AF2-409	5.13	15.79%	\$2,369,150																											
AG1-061	8.27	25.46%	\$3,819,273																											
174369290	8	ROCKSPG S 500.0 kV - PCHBTM2 S 500.0 kV Ckt 1	ProjectId: n7801 (pe041) Description: Expand Peach Bottom 500 kV station to build a new bus section. Rebuild 500 kV line between Peach Bottoms and Rock Springs with 1962 T-11 51/19 ACCR and connect the rebuilt line to the new bus section (The estimated cost is for PECO portion only, right of way/land cost not included) Type : CON Total Cost : \$75,000,000 Time Estimate : 84.0 Months Ratings : 4888.0/5040.0/5196 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>55.7</td><td>100.00%</td><td>\$75,000,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	55.7	100.00%	\$75,000,000	\$75,000,000	\$75,000,000	N7801																
Queue	MW	Cost %	Cost \$																											
AG1-061	55.7	100.00%	\$75,000,000																											

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																				
166659839	23	TOWNSE ND 138.0 kV - MIDLTNT P 138.0 kV Ckt 1	ProjectId: n7139 (ds13808r0003) Description: Upgrade terminal equipment at Townsend Substation Type: FAC Total Cost: \$300,000 Time Estimate: 12.0 Months Ratings: 390.0/482.0/482.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw. ProjectId: n7140 (dt13808r0004) Description : Rebuild the 13808-1 line from Townsend - Middletown Tap with new poles, conductor, foundations, insulators, and OPGW. Terminal equipment at Townsend would also need to be upgraded Type : FAC Total Cost : \$7,500,000 Time Estimate : 36-48 Months Ratings : 548.0/698.0/698.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-313</td><td>8.36</td><td>11.95%</td><td>\$896,098</td></tr><tr><td>AF2-358</td><td>23.3</td><td>33.30%</td><td>\$2,497,499</td></tr><tr><td>AF2-385</td><td>15.35</td><td>21.94%</td><td>\$1,645,348</td></tr><tr><td>AG1-061</td><td>22.96</td><td>32.81%</td><td>\$2,461,055</td></tr></table> ProjectId: n6407 (dt13808r0001) Description: To mitigate the (DP&L) TOWNSEND to MIDLTNTP 138 kV line (from bus 232107 to bus 232106 Ckt 1) overload, it will require increasing the emergency rating of the Townsend to Middletown Tap 138 kV line by reconductoring a small portion of the line Type: FAC Total Cost: \$100,000 Time Estimate: 9-12 Months Ratings: 329.0/372.0/372.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AE2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw.	Queue	MW	Cost %	Cost \$	AF2-313	8.36	11.95%	\$896,098	AF2-358	23.3	33.30%	\$2,497,499	AF2-385	15.35	21.94%	\$1,645,348	AG1-061	22.96	32.81%	\$2,461,055	\$7,900,000	\$2,461,055	N6407 N7139 N7140
Queue	MW	Cost %	Cost \$																							
AF2-313	8.36	11.95%	\$896,098																							
AF2-358	23.3	33.30%	\$2,497,499																							
AF2-385	15.35	21.94%	\$1,645,348																							
AG1-061	22.96	32.81%	\$2,461,055																							
182543166, 182476866	24	VIENN138 138.0 kV - VIENNA 230.0 kV Ckt 1	ProjectId: n7786 (dtx_vienna_AT21) Description : Install a 2nd 230/138kV Auto Transformer at Vienna Substation to alleviate overload on existing transformer. Upgrade not feasible due to already larger than standard transformer currently installed at Vienna. Would require expansion of Vienna Substation including a new 230kV ring bus to accommodate 2nd Auto Transformer. Type: FAC Total Cost: \$41,000,000 Time Estimate: 48-60 Months Ratings: N/A Notes: The driver is unknown and will be determined in future retools. The potential cost allocation table is as follows: <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>Unknown Driver</td><td>47.7</td><td>54.17%</td><td>\$22,208,721</td></tr><tr><td>AG1-061</td><td>40.36</td><td>45.83%</td><td>\$18,791,279</td></tr></table>	Queue	MW	Cost %	Cost \$	Unknown Driver	47.7	54.17%	\$22,208,721	AG1-061	40.36	45.83%	\$18,791,279	\$41,000,000	\$18,791,279	N7786								
Queue	MW	Cost %	Cost \$																							
Unknown Driver	47.7	54.17%	\$22,208,721																							
AG1-061	40.36	45.83%	\$18,791,279																							

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																
166659854	22	MIDLTNT P 138.0 kV - MT PLSNT 138.0 kV Ckt 1	ProjectId: n6451 (ds13808r0001) Description: Upgrade disconnect switch at Middletown Tap Type: FAC Total Cost: \$100,000 Time Estimate: 12.0 Months Ratings: 390.0/478.0/478.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw. ProjectId: n6450 (dt13808r0002) Description : Partial Reconductor of 13808 line between Mt. Pleasant and Middletown Tap Type : FAC Total Cost : \$110,000 Time Estimate : 9-12 Months Ratings : 329.0/372.0/372.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw.	\$210,000	\$0	N6450 N6451																
167808247, 167808246	16	EDGE MR 5 230.0 kV - CLAY_230 230.0 kV Ckt 1	ProjectId : N7841 (dt23015r0001) Description : To mitigate the (DP&L) Edge Moor to Claymont 230 kV line (from bus 231000 to bus 231001 ckt 1) overload, it will require increasing the emergency rating of the Edge Moor to Claymont 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, terminal equipment will need to be upgraded at Claymont and Edge Moor Substations Type : FAC Total Cost : \$23,000,000 Time Estimate : 36-48 Months Ratings : 1298.0/1603.0/1603.0 <table><tr><td>Queue</td><td>MW</td><td>Cost %</td><td>Cost \$</td></tr><tr><td>AG1-061</td><td>8.97</td><td>100.00%</td><td>\$23,000,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	8.97	100.00%	\$23,000,000	\$23,000,000	\$23,000,000	N7841								
Queue	MW	Cost %	Cost \$																			
AG1-061	8.97	100.00%	\$23,000,000																			
174160967, 182682396, 182681512	9	PCHBTM1 S 500.0 kV - CNA STON E 500.0 kV Ckt 1	ProjectId : N7835 (BGE_2021_001) Description : Reconductor Peach Bottom-Conastone 500 kV line 16.4 miles with special 3M conductor and replace terminal equipment to achieve ratings equal to 500 kV bus at Peach Bottom South Type : FAC Total Cost : \$37,000,000 Time Estimate : 24 to 36 Months Ratings : 5730.0/7074.0/7074.0 <table><tr><td>Queue</td><td>MW</td><td>Cost %</td><td>Cost \$</td></tr><tr><td>AG1-061</td><td>45.22</td><td>100.00%</td><td>\$37,000,000</td></tr></table> ProjectId: n7834 (pe043) Description : Expand Peach Bottom 500 kV station to build a new bus section. Rebuild 500 kV line between Peach Bottom and Conastone with 1962 T-11 51/19 ACCR and connect the rebuilt line to the new bus section (The estimated cost is for PECO portion only, right of way/land cost not included) Type : CON Total Cost : \$74,000,000 Time Estimate : 84.0 Months Ratings : 4888/5040/5196 <table><tr><td>Queue</td><td>MW</td><td>Cost %</td><td>Cost \$</td></tr><tr><td>AG1-061</td><td>45.22</td><td>100.00%</td><td>\$74,000,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	45.22	100.00%	\$37,000,000	Queue	MW	Cost %	Cost \$	AG1-061	45.22	100.00%	\$74,000,000	\$111,00,000	\$111,00,000	N7834 N7835
Queue	MW	Cost %	Cost \$																			
AG1-061	45.22	100.00%	\$37,000,000																			
Queue	MW	Cost %	Cost \$																			
AG1-061	45.22	100.00%	\$74,000,000																			

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																
182625378, 182589134	17	GLASGO W 138.0 kV - CECIL138 138.0 kV Ckt 1	ProjectId: n7043 (dt13810r0001) Description: To mitigate the (DPL) Glasgow to Cecil 138 kV line 13810 (from bus 231124 to bus 231130 ckt 1) overload, it will require increasing the emergency rating of the Glasgow to Cecil 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 Glasgow. Type: FAC Total Cost: \$5,000,000 Time Estimate: 36-60 Months Ratings: 380.0/445.0/445.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw.	\$5,000,000	\$0	N7043																
174160864	31	VIENN_69 69.0 kV - TODD 69.0 kV Ckt 1	ProjectId: n7095 (ds6702r0001) Description: To mitigate the (DPL) Vienna - Todd 69 kV line (from bus 232241 to 232234) it will require increasing the emergency rating of the line by upgrading the relays at both Todd and Vienna Type: FAC Total Cost: \$450,000 Time Estimate: 12-18 Months Ratings: 137.0/174.0/174.0 Notes: Per PJM cost allocation rules, this reinforcement cost is driven by previous AF2 queue. AG1-061 presently does not receive cost allocation for this upgrade. This may change with future re-tools as projects withdraw. ProjectId: n7096 (dt6702r0001) Description : To mitigate the (DPL) Vienna - Todd 69 kV line (from bus 232241 to 232234) it will require increasing the emergency rating of the line by rebuilding the line with new poles, conductor, insulators and OPGW. Terminal upgrades will also be needed at Todd Type : FAC Total Cost : \$19,000,000 Time Estimate : 36-48 Months Ratings : 145.0/186.0/186.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>6.94</td><td>100.00%</td><td>\$19,000,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	6.94	100.00%	\$19,000,000	\$19,450,000	\$19,119,410	N7095 N7096								
Queue	MW	Cost %	Cost \$																			
AG1-061	6.94	100.00%	\$19,000,000																			
174160809	26	KENT 69.0 kV - NMEREDT H 69.0 kV Ckt 1	ProjectId: n7042 (dt6704r0001) Description : Rebuild 6704-2 Line from Kent to N. Meredith Tap. Upgrade disconnect switch @ N Meredith Type : FAC Total Cost : \$7,600,000 Time Estimate : 36-48 Months Ratings : 136.0/174.0/174.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-193</td><td>24.97</td><td>44.52%</td><td>\$3,383,348</td></tr><tr><td>AF2-194</td><td>24.97</td><td>44.52%</td><td>\$3,383,348</td></tr><tr><td>AG1-061</td><td>6.15</td><td>10.96%</td><td>\$833,304</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-193	24.97	44.52%	\$3,383,348	AF2-194	24.97	44.52%	\$3,383,348	AG1-061	6.15	10.96%	\$833,304	\$7,600,000	\$833,304	N7042
Queue	MW	Cost %	Cost \$																			
AF2-193	24.97	44.52%	\$3,383,348																			
AF2-194	24.97	44.52%	\$3,383,348																			
AG1-061	6.15	10.96%	\$833,304																			
183000636, 174161077	6	ROCKAWL KN 69.0 kV - NSALSBR Y 69.0 kV Ckt 1	Transmission Owner reported Rating Increase. Correct Ratings: 136/174/200 MVA	\$0	\$0																	

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																																				
167808227, 167808226	15	EDGE MR 5 230.0 kV - LINWOOD 85 230.0 kV Ckt 1	ProjectId : n6925 (dt22085r0001) Description : To mitigate the (DPL) Edge Moor - (PECO) Linwood 230 kV line (from bus 231001 to 214236) overload it will require increasing the emergency rating of the Edge Moor - Linwood 230 kV line by rebuilding the line with new poles, foundations, insulators and OPGW Type : FAC Total Cost : \$20,000,000 Time Estimate : 36-48 Months Ratings : 828.0/924.0/924.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AE1-107</td><td>5.41</td><td>7.90%</td><td>\$1,579,101</td></tr><tr><td>AF2-193</td><td>16.93</td><td>24.71%</td><td>\$4,941,623</td></tr><tr><td>AF2-194</td><td>16.93</td><td>24.71%</td><td>\$4,941,623</td></tr><tr><td>AF2-358</td><td>8.97</td><td>13.09%</td><td>\$2,618,214</td></tr><tr><td>AF2-387</td><td>10.53</td><td>15.37%</td><td>\$3,073,555</td></tr><tr><td>AG1-061</td><td>9.75</td><td>14.23%</td><td>\$2,845,884</td></tr></table> ProjectId: (b2985) Description : PJM baseline upgrade b2985: Replace the 230 kV CB #225 at Linwood Substation (PECO) with a double circuit breaker (back to back circuit breakers in one device). The baseline project has a projected in-service date of 06/01/2022. Type: CON Total Cost: \$0 Time Estimate: 0.0 Months Ratings: 650.0/805.0/805.0 Notes: Baseline projects do not get Cost Allocated but is required for Queue projects to go into service. ProjectId : n7745 (pe024) Description : Rebuild 8.64 miles of 230 kV line from Linwood to Edgemoor with 2x1590 kcmil 54/19 ACSR Type : FAC Total Cost : \$25,080,000 Time Estimate : 36.0 Months Ratings : 816.0/964.0/1161.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>9.75</td><td>100.00%</td><td>\$25,080,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AE1-107	5.41	7.90%	\$1,579,101	AF2-193	16.93	24.71%	\$4,941,623	AF2-194	16.93	24.71%	\$4,941,623	AF2-358	8.97	13.09%	\$2,618,214	AF2-387	10.53	15.37%	\$3,073,555	AG1-061	9.75	14.23%	\$2,845,884	Queue	MW	Cost %	Cost \$	AG1-061	9.75	100.00%	\$25,080,000	\$45,080,000		B2985 N6925 N7745
Queue	MW	Cost %	Cost \$																																							
AE1-107	5.41	7.90%	\$1,579,101																																							
AF2-193	16.93	24.71%	\$4,941,623																																							
AF2-194	16.93	24.71%	\$4,941,623																																							
AF2-358	8.97	13.09%	\$2,618,214																																							
AF2-387	10.53	15.37%	\$3,073,555																																							
AG1-061	9.75	14.23%	\$2,845,884																																							
Queue	MW	Cost %	Cost \$																																							
AG1-061	9.75	100.00%	\$25,080,000																																							

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																																				
167808215, 167808216	14	CLAY_230 230.0 kV - LINWOOD 84 230.0 kV Ckt 1	ProjectId : n6926 (dt22084r0001) Description : To mitigate the (DPL) Claymont - (PECO) Linwood line (from bus 213750 to 231000) overload, it will require increasing the emergency rating of the Claymont - Linwood 230 kV line by rebuilding the line with new poles, foundations, insulators and OPGW and replacing terminal equipment at Claymont Type : FAC Total Cost : \$7,100,000 Time Estimate : 36-48 Months Ratings : 1309.0/1620.0/1620.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AE1-107</td><td>5.65</td><td>35.94%</td><td>\$2,551,845</td></tr><tr><td>AG1-061</td><td>10.07</td><td>64.06%</td><td>\$4,548,155</td></tr></table> ProjectId : n7195 (pe025) Description : Rebuild 1.55 miles of 230 kV line from Linwood to Claymont with 2x1590 kcmil 54/19 ACSR Type : FAC Total Cost : \$4,500,000 Time Estimate : 36.0 Months Ratings : 816.0/964.0/1161.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-193</td><td>64.16</td><td>38.90%</td><td>\$1,750,561</td></tr><tr><td>AF2-194</td><td>64.16</td><td>38.90%</td><td>\$1,750,561</td></tr><tr><td>AF2-358</td><td>15.33</td><td>9.29%</td><td>\$418,268</td></tr><tr><td>AF2-385</td><td>11.21</td><td>6.80%</td><td>\$305,857</td></tr><tr><td>AG1-061</td><td>10.07</td><td>6.11%</td><td>\$274,753</td></tr></table>	Queue	MW	Cost %	Cost \$	AE1-107	5.65	35.94%	\$2,551,845	AG1-061	10.07	64.06%	\$4,548,155	Queue	MW	Cost %	Cost \$	AF2-193	64.16	38.90%	\$1,750,561	AF2-194	64.16	38.90%	\$1,750,561	AF2-358	15.33	9.29%	\$418,268	AF2-385	11.21	6.80%	\$305,857	AG1-061	10.07	6.11%	\$274,753	\$11,600,000	\$4,822,908	N6926 N7195
Queue	MW	Cost %	Cost \$																																							
AE1-107	5.65	35.94%	\$2,551,845																																							
AG1-061	10.07	64.06%	\$4,548,155																																							
Queue	MW	Cost %	Cost \$																																							
AF2-193	64.16	38.90%	\$1,750,561																																							
AF2-194	64.16	38.90%	\$1,750,561																																							
AF2-358	15.33	9.29%	\$418,268																																							
AF2-385	11.21	6.80%	\$305,857																																							
AG1-061	10.07	6.11%	\$274,753																																							
174161036, 165219643, 182848146	13	TRAINER2 230.0 kV - DELCOTA P 230.0 kV Ckt 1	ProjectId : n7163 (pe022) Description : Rebuild 0.82 miles of 230 kV line from Trainer to Delco Tap with bundled 1590 kcmil 54/19 ACSR Type : FAC Total Cost : \$4,000,000 Time Estimate : 16.0 Months Ratings : 830.0/924.0/1056.0 Notes : The driver is unknown and will be determined in future retools. The potential cost allocation table is as follows: <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF1-000</td><td>14.8</td><td>62.79%</td><td>\$2,511,667</td></tr><tr><td>AG1-061</td><td>8.77</td><td>37.21%</td><td>\$1,488,333</td></tr></table>	Queue	MW	Cost %	Cost \$	AF1-000	14.8	62.79%	\$2,511,667	AG1-061	8.77	37.21%	\$1,488,333	\$4,000,000	\$1,488,333	N7163																								
Queue	MW	Cost %	Cost \$																																							
AF1-000	14.8	62.79%	\$2,511,667																																							
AG1-061	8.77	37.21%	\$1,488,333																																							

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																								
182178074, 173967123	30	TODD 69.0 kV - PRESTON 69.0 kV Ckt 1	ProjectId : n7097 (dt6716r0005) Description : To mitigate the (DP&L) Preston - Todd 69 kV line (from bus 232234 to bus 232233 Ckt 1) overload, it will require increasing the emergency rating of the Preston-Todd 69 kV line by rebuilding the line. This includes installation of new poles, conductor, foundations, insulators and OPGW. Type : FAC Total Cost : \$9,000,000 Time Estimate : 36-48 Months Ratings : 184.0/222.0/222.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-194</td><td>33.08</td><td>36.09%</td><td>\$3,247,736</td></tr><tr><td>AF2-207</td><td>6.35</td><td>6.93%</td><td>\$623,432</td></tr><tr><td>AF2-358</td><td>25.74</td><td>28.08%</td><td>\$2,527,108</td></tr><tr><td>AF2-385</td><td>9.44</td><td>10.30%</td><td>\$926,803</td></tr><tr><td>AG1-061</td><td>17.06</td><td>18.61%</td><td>\$1,674,921</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-194	33.08	36.09%	\$3,247,736	AF2-207	6.35	6.93%	\$623,432	AF2-358	25.74	28.08%	\$2,527,108	AF2-385	9.44	10.30%	\$926,803	AG1-061	17.06	18.61%	\$1,674,921	\$9,550,000	\$1,924,921	N5788 N6231 N7097 N7098 N7099
			Queue	MW	Cost %	Cost \$																								
			AF2-194	33.08	36.09%	\$3,247,736																								
			AF2-207	6.35	6.93%	\$623,432																								
			AF2-358	25.74	28.08%	\$2,527,108																								
AF2-385	9.44	10.30%	\$926,803																											
AG1-061	17.06	18.61%	\$1,674,921																											
ProjectId: n7098 (ds6716r0004) Description: To mitigate the (DP&L) Preston - Todd 69 kV line (from bus 232234 to bus 232233 Ckt 1) overload, it will require increasing the emergency rating of the Preston-Todd 69 kV line by upgrading terminal equipment at the Todd Substation Type: FAC Total Cost: \$100,000 Time Estimate: 9-12 Months Ratings: 184.0/235.0/235.0 Notes: This constraint is driven by a prior AF2 queue. Per PJM cost allocation rules, AG1-061 presently does not receive cost allocation for this upgrade. This may change as projects ahead Withdraw from Queue.																														
ProjectId: n5788 (ds6716r0001) Description : To mitigate the (DP&L) TODD to PRESTON 69 kV line (from bus 232234 to bus 232233 Ckt 1) overload will require substation reinforcements at Todd Substation. Replace 600A Disconnect Switch at Todd Type: FAC Total Cost: \$100,000 Time Estimate: 12.0 Months Ratings: 95.0/130.0/130.0 Notes: This constraint is driven by a prior AE1 queue. Per PJM cost allocation rules, AG1-061 presently does not receive cost allocation for this upgrade. This may change as projects ahead Withdraw from Queue.																														
ProjectId: n6231 (ds6716r0002) Description : To mitigate the (DP&L) TODD to PRESTON 69 kV line (from bus 232234 to bus 232233 Ckt 1) overload will require substation reinforcements at Preston Substation and Todd Substation. Type: FAC Total Cost: \$100,000 Time Estimate: 12.0 Months Ratings: 136.0/173.0/173.0 Notes: This constraint is driven by a prior queue. Per PJM cost allocation rules, AG1-061 presently does not receive cost allocation for this upgrade.																														
ProjectId : n7099 (ds6716r0005) Description : To mitigate the (DP&L) Preston - Todd 69 kV line (from bus 232234 to bus 232233 Ckt 1) overload, it will require increasing the emergency rating of the Preston-Todd 69 kV line by upgrading terminal equipment at the Todd Substation Type : FAC Total Cost : \$250,000 Time Estimate : 12-18 Months Ratings : 274.0/349.0/349.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AG1-061</td><td>17.06</td><td>100.00%</td><td>\$250,000</td></tr></table>	Queue	MW	Cost %	Cost \$	AG1-061	17.06	100.00%	\$250,000																						
Queue	MW	Cost %	Cost \$																											
AG1-061	17.06	100.00%	\$250,000																											

ID	Idx	Facility	Upgrade Description	Cost	Cost Allocated to AG1-061	Upgrade Number																
174160858	28	TRAPPETP 69.0 kV - EASTN_69 69.0 kV Ckt 1	ProjectId: n7048 (dt6716r0006) Description: Rebuild the 6716-1 Easton - Trappe Tap 69 kV with new poles, conductor, foundations, insulators, and OPGW. Terminal equipment at Easton and the line disconnect at the Trappe Tap will also need to be upgraded. Type: FAC Total Cost: \$6,500,000 Time Estimate: 36-48 Months Ratings: 228.0/279.0/279.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-358</td><td>25.74</td><td>49.27%</td><td>\$3,202,718</td></tr><tr><td>AF2-385</td><td>9.44</td><td>18.07%</td><td>\$1,174,579</td></tr><tr><td>AG1-061</td><td>17.06</td><td>32.66%</td><td>\$2,122,703</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-358	25.74	49.27%	\$3,202,718	AF2-385	9.44	18.07%	\$1,174,579	AG1-061	17.06	32.66%	\$2,122,703	\$6,500,000	\$2,122,703	N7048
Queue	MW	Cost %	Cost \$																			
AF2-358	25.74	49.27%	\$3,202,718																			
AF2-385	9.44	18.07%	\$1,174,579																			
AG1-061	17.06	32.66%	\$2,122,703																			
174369366, 174160991	20	HOPE CREEK 230.0 kV - HOPE CRK 500.0 kV Ckt 1	ProjectId: r_PS_I025a_HC230500 (n7731) Description: Upgrade Hope Creek 500/230kV terminal equipment to achieve a SER of 1748 MVA Type: FAC Total Cost: \$1,670,000 Time Estimate: 15.0 Months Ratings: 1479.0/1748.0/0.0 Notes: The driver is unknown and will be determined in future retools. The potential cost allocation table is as follows: <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>Unknown Driver</td><td>47.4</td><td>51.57%</td><td>\$861,256</td></tr><tr><td>AG1-061</td><td>44.51</td><td>48.43%</td><td>\$808,744</td></tr></table>	Queue	MW	Cost %	Cost \$	Unknown Driver	47.4	51.57%	\$861,256	AG1-061	44.51	48.43%	\$808,744	\$1,670,000	\$808,744	N7731				
Queue	MW	Cost %	Cost \$																			
Unknown Driver	47.4	51.57%	\$861,256																			
AG1-061	44.51	48.43%	\$808,744																			
182399074, 182361062	25	VIENNA 8 138.0 kV - VIENN138 138.0 kV Ckt 1	ProjectId: n7090 (dt13710r0001) Description: To mitigate the (DPL) Vienna - Vienna 8 138 kV line (from bus 232116 to 232117) overload, it will require increasing the emergency rating of the Vienna - Vienna 8 138 kV line by rebuilding the line with new poles, foundations, insulators and OPGW and replacing terminal equipment at Vienna Type: FAC Total Cost: \$1,200,000 Time Estimate: 12-18 Months Ratings: 548/698/698 Notes: This constraint is driven by a prior AF2 queue. Per PJM cost allocation rules, AG1-061 presently does not receive cost allocation for this upgrade. This may change as projects ahead Withdraw from Queue	\$1,200,000	\$0	N7090																
182552448, 182620958	18	VIENNA 230.0 kV - STEELE 230.0 kV Ckt 1	ProjectId: n7109 (dt23085r0001) Description : Rebuild Vienna - Steele 230kV line. Rebuild will include installations of new poles, foundations, insulators, conductor and OPGW Type : FAC Total Cost : \$62,500,000 Time Estimate : 48-60 Months Ratings : 650.0/804.0/804.0 <table><tr><th>Queue</th><th>MW</th><th>Cost %</th><th>Cost \$</th></tr><tr><td>AF2-358</td><td>38.97</td><td>36.04%</td><td>\$22,524,970</td></tr><tr><td>AF2-385</td><td>28.8</td><td>26.63%</td><td>\$16,646,629</td></tr><tr><td>AG1-061</td><td>40.36</td><td>37.33%</td><td>\$23,328,401</td></tr></table>	Queue	MW	Cost %	Cost \$	AF2-358	38.97	36.04%	\$22,524,970	AF2-385	28.8	26.63%	\$16,646,629	AG1-061	40.36	37.33%	\$23,328,401	\$62,500,000	\$23,328,401	N7109
Queue	MW	Cost %	Cost \$																			
AF2-358	38.97	36.04%	\$22,524,970																			
AF2-385	28.8	26.63%	\$16,646,629																			
AG1-061	40.36	37.33%	\$23,328,401																			
			TOTAL COST	\$651,874,472	\$309,973,055																	

Note: For customers with System Reinforcements listed: If your present cost allocation to a System Reinforcement indicates \$0, then please be aware that as changes to the interconnection process occur, such as prior queued projects withdrawing from the queue, reducing in size, etc, the cost responsibilities can change and a cost allocation may be assigned to your project. In addition, although your present cost allocation to a System Reinforcement is presently \$0, your project may need this system reinforcement completed to be deliverable to the PJM system. If your project comes into service prior to completion of the system reinforcement, an interim deliverability study for your project will be required.

11.7 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".

11.7.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174161004	231002	HARMONY	DP&L	231001	EDGEMR 5	PECO	1	PECO_P4_PEACH215/* \$ CHESCO \$ PECO_P4_PEACH215 \$ STBK	breaker	924.0	97.5	100.1	AC	24.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200062	SALEM G3	3.88	Adder	4.56
231903	GEN4	1.76	Adder	2.07
231904	DC1 NUG	4.57	Adder	5.38
231905	DC2 NUG	4.57	Adder	5.38
232404	W1-003 C	0.5	80 50	0.5
232405	W1-003 E	2.8	80 50	2.8
232406	W1-004 C	0.5	80 50	0.5
232407	W1-004 E	2.8	80 50	2.8
232408	W1-005 C	0.5	80 50	0.5
232409	W1-005 E	2.8	80 50	2.8
232410	W1-006 C	0.5	80 50	0.5
232411	W1-006 E	2.8	80 50	2.8
232412	X1-032 E	0.91	80 50	0.91
232416	X2-083	0.11	80 50	0.11
232417	X3-008 C	0.29	80 50	0.29
232418	X3-008 E	2.84	80 50	2.84
232423	X3-066 E	0.55	Adder	0.65
232424	Y1-079 C	0.14	80 50	0.14
232425	Y1-079 E	1.41	80 50	1.41
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.48	80 50	0.48
232428	Y3-058 C	0.21	80 50	0.21
232429	Y3-058 E	1.38	80 50	1.38
232433	Z2-076 E	0.38	Adder	0.45
232435	Z2-077 E	0.38	Adder	0.45
232851	DUP-SFR1	1.89	Adder	2.22
232902	EASTMUNI	2.61	80 50	2.61
232907	VN8	5.78	80 50	5.78
232915	OH NUG4	1.31	80 50	1.31
232916	OH NUG5	1.31	80 50	1.31
232919	VN10	0.42	80 50	0.42
232922	MR3 (Deactivation : 01/06/2021)	18.28	Adder	21.51
232926	CRISFLD1	0.37	80 50	0.37
233916	AB1-141 E	1.17	Adder	1.38
233919	AB1-142 E	1.17	Adder	1.38
233923	AA1-102 C	2.12	80 50	2.12
233931	AB2-179 C	6.44	Adder	7.58
293670	O-025 C	0.22	80 50	0.22
917082	CHERRYDALE E	2.38	Adder	2.8
918835	AA1-102 E	21.06	80 50	21.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
919831	AA2-069	80.84	Adder	95.11
923921	AB2-032 C	2.53	Adder	2.98
923922	AB2-032 E	1.19	Adder	1.4
923951	AB2-036 C	7.97	80 50	7.97
923952	AB2-036 E	13.03	80 50	13.03
923961	AB2-037 C	18.6	80 50	18.6
923962	AB2-037 E	30.39	80 50	30.39
924801	AB2-133 C O1	4.51	Adder	5.31
924802	AB2-133 E O1	5.72	Adder	6.73
924821	AB2-135 C	5.48	Adder	6.45
924822	AB2-135 E	6.25	Adder	7.35
924831	AB2-136 C	5.67	80 50	5.67
924832	AB2-136 E	6.02	80 50	6.02
924971	AB2-153 C	1.41	Adder	1.66
924972	AB2-153 E	2.31	Adder	2.72
925151	AB2-172 C	4.35	80 50	4.35
925152	AB2-172 E	7.1	80 50	7.1
925254	AB2-179 E	2.1	Adder	2.47
925261	AB2-180 C	3.17	80 50	3.17
925262	AB2-180 E	1.36	80 50	1.36
926131	AC1-091 C	1.32	Adder	1.55
926132	AC1-091 E	2.17	Adder	2.55
926141	AC1-092 C	1.32	Adder	1.55
926142	AC1-092 E	2.17	Adder	2.55
926151	AC1-093 C	1.25	Adder	1.47
926152	AC1-093 E	2.06	Adder	2.42
926161	AC1-094 C	1.06	Adder	1.25
926162	AC1-094 E	1.75	Adder	2.06
927031	AC1-190 C	8.02	80 50	8.02
927032	AC1-190 E	3.44	80 50	3.44
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.72	80 50	0.72
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.47	80 50	0.47
930201	AB1-056 C	12.18	Adder	14.33
930202	AB1-056 E	34.7	Adder	40.82
931261	AB1-176 C	0.28	Adder	0.33
931262	AB1-176 E	0.47	Adder	0.55
932161	AC2-023 C	6.01	80 50	6.01
932162	AC2-023 E	4.38	80 50	4.38
933631	AC2-185 C	2.68	Adder	3.15
933632	AC2-185 E	4.37	Adder	5.14
933641	AC2-186 C	3.52	Adder	4.14
933642	AC2-186 E	5.75	Adder	6.76
934661	AD1-097 1	-1.38	Adder	-1.62
934671	AD1-097 2	-1.38	Adder	-1.62
934681	AD1-097 3	-1.38	Adder	-1.62
934691	AD1-097 4	-0.82	Adder	-0.96
936452	AD2-059 E	0.18	80 50	0.18
936611	AD2-076 C O1	3.49	Adder	4.11
936612	AD2-076 E O1	5.7	Adder	6.71
938651	AE1-087 C	3.67	80 50	3.67
938652	AE1-087 E	0.92	80 50	0.92

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938814	AE1-107 C	4.96	Adder	5.84
938815	AE1-107 E	3.54	Adder	4.16
938895	AE1-117 C	9.1	Adder	10.71
938896	AE1-117 E	24.26	Adder	28.54
939151	AE1-145	3.84	Adder	4.52
941021	AE2-093 C	3.9	80 50	3.9
941022	AE2-093 E	6.36	80 50	6.36
941181	AE2-112 C	1.21	Adder	1.42
941182	AE2-112 E	1.98	Adder	2.33
942441	AE2-257 C	6.25	Adder	7.35
942442	AE2-257 E	16.48	Adder	19.39
943361	AF1-007 C	0.36	Adder	0.42
943362	AF1-007 E	1.02	Adder	1.2
943441	AF1-015 C	1.47	80 50	1.47
943442	AF1-015 E	2.03	80 50	2.03
943651	AF1-036 C	1.58	Adder	1.86
943652	AF1-036 E	2.18	Adder	2.56
945661	AF1-231 C	1.46	Adder	1.72
945662	AF1-231 E	2.19	Adder	2.58
945791	AF1-244 (Withdrawn : 06/07/2021)	1.81	80 50	1.81
945931	AF1-258	0.72	80 50	0.72
945941	AF1-259	0.15	Adder	0.18
957611	AF2-055 C	6.72	Adder	7.91
957612	AF2-055 E	2.88	Adder	3.39
957661	AF2-060	1.73	Adder	2.04
957671	AF2-061 O1	7.68	Adder	9.04
959021	AF2-193 C	22.52	Adder	26.49
959022	AF2-193 E	60.74	Adder	71.46
959031	AF2-194 C	22.52	Adder	26.49
959032	AF2-194 E	60.74	Adder	71.46
959051	AF2-196 C	1.7	Adder	2.0
959052	AF2-196 E	3.98	Adder	4.68
959161	AF2-207 C O1	3.87	Adder	4.55
959162	AF2-207 E O1	5.8	Adder	6.82
959581	AF2-249 C	0.14	80 50	0.14
959582	AF2-249 E	0.54	80 50	0.54
959591	AF2-250 C	0.25	80 50	0.25
959592	AF2-250 E	0.19	80 50	0.19
960221	AF2-313 C	2.39	Adder	2.81
960222	AF2-313 E	1.35	Adder	1.59
960341	AF2-325 C	0.96	80 50	0.96
960342	AF2-325 E	1.33	80 50	1.33
960671	AF2-358 C O1	13.71	80 50	13.71
960672	AF2-358 E O1	9.14	80 50	9.14
960871	AF2-378 C	0.25	80 50	0.25
960872	AF2-378 E	0.35	80 50	0.35
960881	AF2-379 C	0.37	80 50	0.37
960882	AF2-379 E	0.51	80 50	0.51
960941	AF2-385 C	9.17	Adder	10.79
960942	AF2-385 E	5.22	Adder	6.14
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	23.01	80 50	23.01

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962161	AG1-061 C O1	14.82	80 50	14.82
962162	AG1-061 E O1	9.88	80 50	9.88
962261	AG1-072	11.57	80 50	11.57
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.27	Adder	0.32
962381	AG1-087 C O1	22.21	Adder	26.13
962382	AG1-087 E O1	59.9	Adder	70.47
963001	AG1-149 (Withdrawn : 06/07/2021)	0.68	80 50	0.68
963011	AG1-150	7.68	Adder	9.04
964551	AG1-318 C	0.06	Adder	0.07
964552	AG1-318 E	0.13	Adder	0.15
964962	AG1-360 E	1.98	80 50	1.98
965321	AG1-397 C	0.8	Adder	0.94
965322	AG1-397 E	1.11	Adder	1.31
965611	AG1-429 C O1	6.77	Adder	7.96
965612	AG1-429 E O1	4.51	Adder	5.31
965821	AG1-450	5.71	80 50	5.71
965921	AG1-461 C O1	3.71	Adder	4.36
965922	AG1-461 E O1	2.0	Adder	2.35
965951	AG1-464 C O1	3.71	Adder	4.36
965952	AG1-464 E O1	5.56	Adder	6.54
966281	AG1-497 C O1	15.06	Adder	17.72
966282	AG1-497 E O1	6.45	Adder	7.59
966601	AG1-529 C	9.13	Adder	10.74
966602	AG1-529 E	4.87	Adder	5.73
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.6562	Confirmed LTF	0.6562
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.5128	Confirmed LTF	0.5128
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	1.1371	Confirmed LTF	1.1371
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.3311	Confirmed LTF	0.3311
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.2365	Confirmed LTF	0.2365
LTFEXP_CBM-N	LTFEXP_CBM-N->LTFIMP_CBM-N	0.8137	LTF/CBM	0.8137
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.3336	Confirmed LTF	0.3336
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	1.3911	Confirmed LTF	1.3911
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	3.3577	LTF/CMTX	3.3577
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.3576	Confirmed LTF	0.3576
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.3929	Confirmed LTF	0.3929
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	1.6979	Confirmed LTF	1.6979
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.3644	Confirmed LTF	0.3644
LTFEXP_VFT	LTFEXP_VFT->LTFIMP_VFT	6.6212	Confirmed LTF	6.6212

11.7.2 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
174160906	232013	SILVER RUN	PJM	231004	RL_230	PJM	1	DPL_P4-2_DP11	breaker	678.0	96.57	100.12	AC	27.63

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.86	Adder	3.36
232407	W1-004 E	2.86	Adder	3.36
232409	W1-005 E	2.86	Adder	3.36
232411	W1-006 E	2.86	Adder	3.36
232412	X1-032 E	0.92	Adder	1.08
232418	X3-008 E	1.88	Adder	2.21
232427	Y1-080 E	0.4	Adder	0.47
232429	Y3-058 E	1.33	Adder	1.56
232433	Z2-076 E	0.48	Adder	0.56
232435	Z2-077 E	0.48	Adder	0.56
232616	GEN FOOD	0.77	80 50	0.77
232851	DUP-SFR1	2.29	Adder	2.69
232899	W1-062	2.26	80 50	2.26
232901	NORTHST	2.33	80 50	2.33
232904	IR4	19.23	80 50	19.23
232920	IR10	0.75	80 50	0.75
232922	MR3 (Deactivation : 01/06/2021)	31.48	80 50	31.48
233920	W3-032A-CTG1	9.77	80 50	9.77
233921	W3-032A-STG1	5.88	80 50	5.88
917082	CHERRYDALE E	2.86	Adder	3.36
918835	AA1-102 E	21.28	Adder	25.04
919831	AA2-069	139.18	80 50	139.18
924831	AB2-136 C	4.26	Adder	5.01
924832	AB2-136 E	4.52	Adder	5.32
925151	AB2-172 C	2.88	Adder	3.39
925152	AB2-172 E	4.69	Adder	5.52
925261	AB2-180 C	3.06	Adder	3.6
925262	AB2-180 E	1.31	Adder	1.54
926131	AC1-091 C	2.24	80 50	2.24
926132	AC1-091 E	3.67	80 50	3.67
926141	AC1-092 C	2.24	80 50	2.24
926142	AC1-092 E	3.67	80 50	3.67
926151	AC1-093 C	2.12	80 50	2.12
926152	AC1-093 E	3.49	80 50	3.49
926161	AC1-094 C	1.79	80 50	1.79
926162	AC1-094 E	2.95	80 50	2.95
927031	AC1-190 C	5.43	Adder	6.39
927032	AC1-190 E	2.33	Adder	2.74
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.72	Adder	0.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.47	Adder	0.55
930201	AB1-056 C	18.32	80 50	18.32
930202	AB1-056 E	52.17	80 50	52.17
932161	AC2-023 C	5.7	Adder	6.71
932162	AC2-023 E	4.15	Adder	4.88
933631	AC2-185 C	4.53	80 50	4.53
933632	AC2-185 E	7.4	80 50	7.4
933641	AC2-186 C	4.16	Adder	4.89
933642	AC2-186 E	6.79	Adder	7.99
938651	AE1-087 C	2.42	Adder	2.85
938652	AE1-087 E	0.61	Adder	0.72
938895	AE1-117 C	13.52	80 50	13.52
938896	AE1-117 E	36.05	80 50	36.05
939151	AE1-145	4.61	Adder	5.42
942441	AE2-257 C	9.31	80 50	9.31
942442	AE2-257 E	24.53	80 50	24.53
943361	AF1-007 C	0.54	80 50	0.54
943362	AF1-007 E	1.54	80 50	1.54
945661	AF1-231 C	1.75	Adder	2.06
945662	AF1-231 E	2.63	Adder	3.09
945791	AF1-244 (Withdrawn : 06/07/2021)	1.83	Adder	2.15
945931	AF1-258	0.7	Adder	0.82
957611	AF2-055 C	8.07	Adder	9.49
957612	AF2-055 E	3.46	Adder	4.07
957661	AF2-060	2.08	Adder	2.45
957671	AF2-061 O1	9.23	Adder	10.86
959021	AF2-193 C	33.85	80 50	33.85
959022	AF2-193 E	91.31	80 50	91.31
959031	AF2-194 C	33.85	80 50	33.85
959032	AF2-194 E	91.31	80 50	91.31
959051	AF2-196 C	2.54	80 50	2.54
959052	AF2-196 E	5.92	80 50	5.92
959161	AF2-207 C O1	4.54	Adder	5.34
959162	AF2-207 E O1	6.81	Adder	8.01
959581	AF2-249 C	0.13	Adder	0.15
959582	AF2-249 E	0.54	Adder	0.64
959591	AF2-250 C	0.25	Adder	0.29
959592	AF2-250 E	0.19	Adder	0.22
960341	AF2-325 C	0.69	Adder	0.81
960342	AF2-325 E	0.95	Adder	1.12
960671	AF2-358 C O1	11.52	Adder	13.55
960672	AF2-358 E O1	7.68	Adder	9.04
960871	AF2-378 C	0.19	Adder	0.22
960872	AF2-378 E	0.26	Adder	0.31
960881	AF2-379 C	0.37	Adder	0.44
960882	AF2-379 E	0.51	Adder	0.6
960941	AF2-385 C	10.77	Adder	12.67
960942	AF2-385 E	6.13	Adder	7.21
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	22.04	Adder	25.93
962161	AG1-061 C O1	14.09	Adder	16.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962162	AG1-061 E O1	9.39	Adder	11.05
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.18	Adder	0.21
962381	AG1-087 C O1	35.18	80 50	35.18
962382	AG1-087 E O1	94.9	80 50	94.9
963001	AG1-149 (Withdrawn : 06/07/2021)	0.69	Adder	0.81
963011	AG1-150	9.23	Adder	10.86
964551	AG1-318 C	0.08	80 50	0.08
964552	AG1-318 E	0.2	80 50	0.2
964962	AG1-360 E	2.01	Adder	2.36
965321	AG1-397 C	0.95	Adder	1.12
965322	AG1-397 E	1.32	Adder	1.55
965611	AG1-429 C O1	8.13	Adder	9.56
965612	AG1-429 E O1	5.42	Adder	6.38
965821	AG1-450	4.8	Adder	5.65
965921	AG1-461 C O1	4.46	Adder	5.25
965922	AG1-461 E O1	2.4	Adder	2.82
965951	AG1-464 C O1	4.38	Adder	5.15
965952	AG1-464 E O1	6.57	Adder	7.73
966281	AG1-497 C O1	25.92	80 50	25.92
966282	AG1-497 E O1	11.11	80 50	11.11
966601	AG1-529 C	13.86	80 50	13.86
966602	AG1-529 E	7.4	80 50	7.4
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.4442	Confirmed LTF	0.4442
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.3599	Confirmed LTF	0.3599
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.7687	Confirmed LTF	0.7687
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.2273	Confirmed LTF	0.2273
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.1644	Confirmed LTF	0.1644
LTFEXP_CBM-N	LTFEXP_CBM-N->LTFIMP_CBM-N	0.8528	LTF/CBM	0.8528
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.2291	Confirmed LTF	0.2291
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.9501	Confirmed LTF	0.9501
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	2.5778	LTF/CMTX	2.5778
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.2417	Confirmed LTF	0.2417
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.2747	Confirmed LTF	0.2747
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	1.1516	Confirmed LTF	1.1516
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.2463	Confirmed LTF	0.2463
LTFEXP_VFT	LTFEXP_VFT->LTFIMP_VFT	5.8233	Confirmed LTF	5.8233

11.7.3 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
182424268	232013	SILVER RUN	PJM	232014	LSPWR CABLE	PJM	1	DPL_P7_1_DBL_4NC	tower	1150.0	101.8	104.93	AC	44.51

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	4.39	Adder	5.16
232407	W1-004 E	4.39	Adder	5.16
232409	W1-005 E	4.39	Adder	5.16
232411	W1-006 E	4.39	Adder	5.16
232412	X1-032 E	1.4	Adder	1.65
232418	X3-008 E	3.69	Adder	4.34
232423	X3-066 E	0.63	Adder	0.74
232425	Y1-079 E	1.37	Adder	1.61
232427	Y1-080 E	0.66	Adder	0.78
232429	Y3-058 E	2.09	Adder	2.46
232433	Z2-076 E	0.76	Adder	0.89
232435	Z2-077 E	0.76	Adder	0.89
232616	GEN FOOD	1.5	80 50	1.5
232813	VAUGHN	0.23	80 50	0.23
232851	DUP-SFR1	3.81	Adder	4.48
232899	W1-062	4.63	80 50	4.63
232900	DEMECSMY	4.54	80 50	4.54
232901	NORTHST	4.55	80 50	4.55
232922	MR3 (Deactivation : 01/06/2021)	61.48	80 50	61.48
233916	AB1-141 E	1.25	Adder	1.47
233919	AB1-142 E	1.25	Adder	1.47
233920	W3-032A-CTG1	19.09	80 50	19.09
233921	W3-032A-STG1	11.49	80 50	11.49
917082	CHERRYDALE E	4.39	Adder	5.16
918835	AA1-102 E	32.33	Adder	38.04
919831	AA2-069	271.82	80 50	271.82
923921	AB2-032 C	2.7	Adder	3.18
923922	AB2-032 E	1.27	Adder	1.49
923951	AB2-036 C	7.61	Adder	8.95
923952	AB2-036 E	12.45	Adder	14.65
923961	AB2-037 C	16.31	Adder	19.19
923962	AB2-037 E	26.65	Adder	31.35
924801	AB2-133 C O1	5.14	Adder	6.05
924802	AB2-133 E O1	6.52	Adder	7.67
924821	AB2-135 C	7.6	Adder	8.94
924822	AB2-135 E	8.67	Adder	10.2
924831	AB2-136 C	7.62	Adder	8.96
924832	AB2-136 E	8.08	Adder	9.51
924971	AB2-153 C	1.51	Adder	1.78
924972	AB2-153 E	2.46	Adder	2.89
925151	AB2-172 C	5.66	Adder	6.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925152	AB2-172 E	9.24	Adder	10.87
925261	AB2-180 C	4.8	Adder	5.65
925262	AB2-180 E	2.06	Adder	2.42
926131	AC1-091 C	4.71	80 50	4.71
926132	AC1-091 E	7.73	80 50	7.73
926141	AC1-092 C	4.71	80 50	4.71
926142	AC1-092 E	7.73	80 50	7.73
926151	AC1-093 C	4.46	80 50	4.46
926152	AC1-093 E	7.36	80 50	7.36
926161	AC1-094 C	3.77	80 50	3.77
926162	AC1-094 E	6.22	80 50	6.22
927031	AC1-190 C	10.49	Adder	12.34
927032	AC1-190 E	4.49	Adder	5.28
927191	AC1-213 C (Withdrawn : 05/24/2021)	1.12	Adder	1.32
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.73	Adder	0.86
930201	AB1-056 C	24.95	Adder	29.35
930202	AB1-056 E	71.06	Adder	83.6
931261	AB1-176 C	0.32	Adder	0.38
931262	AB1-176 E	0.53	Adder	0.62
932161	AC2-023 C	8.97	Adder	10.55
932162	AC2-023 E	6.53	Adder	7.68
933631	AC2-185 C	9.56	80 50	9.56
933632	AC2-185 E	15.59	80 50	15.59
933641	AC2-186 C	9.01	80 50	9.01
933642	AC2-186 E	14.7	80 50	14.7
936611	AD2-076 C O1	3.79	Adder	4.46
936612	AD2-076 E O1	6.18	Adder	7.27
938651	AE1-087 C	4.77	Adder	5.61
938652	AE1-087 E	1.19	Adder	1.4
938895	AE1-117 C	18.39	Adder	21.64
938896	AE1-117 E	49.04	Adder	57.69
939151	AE1-145	7.09	Adder	8.34
941021	AE2-093 C	3.94	Adder	4.64
941022	AE2-093 E	6.43	Adder	7.56
941181	AE2-112 C	1.31	Adder	1.54
941182	AE2-112 E	2.14	Adder	2.52
942441	AE2-257 C	12.67	Adder	14.91
942442	AE2-257 E	33.4	Adder	39.29
943361	AF1-007 C	0.74	Adder	0.87
943362	AF1-007 E	2.09	Adder	2.46
943441	AF1-015 C	1.48	Adder	1.74
943442	AF1-015 E	2.05	Adder	2.41
943651	AF1-036 C	1.71	Adder	2.01
943652	AF1-036 E	2.36	Adder	2.78
945661	AF1-231 C	2.69	Adder	3.16
945662	AF1-231 E	4.04	Adder	4.75
945791	AF1-244 (Withdrawn : 06/07/2021)	2.78	Adder	3.27
945931	AF1-258	1.1	Adder	1.29
945941	AF1-259	0.17	Adder	0.2
957611	AF2-055 C	12.4	Adder	14.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957612	AF2-055 E	5.31	Adder	6.25
957661	AF2-060	3.19	Adder	3.75
957671	AF2-061 O1	14.18	Adder	16.68
959021	AF2-193 C	46.11	Adder	54.25
959022	AF2-193 E	124.37	Adder	146.32
959031	AF2-194 C	46.11	Adder	54.25
959032	AF2-194 E	124.37	Adder	146.32
959051	AF2-196 C	3.45	Adder	4.06
959052	AF2-196 E	8.06	Adder	9.48
959161	AF2-207 C O1	7.1	Adder	8.35
959162	AF2-207 E O1	10.65	Adder	12.53
959581	AF2-249 C	0.21	Adder	0.25
959582	AF2-249 E	0.84	Adder	0.99
959591	AF2-250 C	0.39	Adder	0.46
959592	AF2-250 E	0.3	Adder	0.35
960221	AF2-313 C	2.72	Adder	3.2
960222	AF2-313 E	1.54	Adder	1.81
960341	AF2-325 C	1.28	Adder	1.51
960342	AF2-325 E	1.76	Adder	2.07
960671	AF2-358 C O1	18.99	Adder	22.34
960672	AF2-358 E O1	12.66	Adder	14.89
960871	AF2-378 C	0.34	Adder	0.4
960872	AF2-378 E	0.47	Adder	0.55
960881	AF2-379 C	0.57	Adder	0.67
960882	AF2-379 E	0.78	Adder	0.92
960941	AF2-385 C	16.84	Adder	19.81
960942	AF2-385 E	9.58	Adder	11.27
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	31.18	Adder	36.68
962161	AG1-061 C O1	22.7	Adder	26.71
962162	AG1-061 E O1	15.13	Adder	17.8
962261	AG1-072	11.33	Adder	13.33
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.48	Adder	0.56
962381	AG1-087 C O1	58.97	80 50	58.97
962382	AG1-087 E O1	159.07	80 50	159.07
963001	AG1-149 (Withdrawn : 06/07/2021)	1.04	Adder	1.22
963011	AG1-150	14.18	Adder	16.68
964551	AG1-318 C	0.11	Adder	0.13
964552	AG1-318 E	0.27	Adder	0.32
964962	AG1-360 E	3.05	Adder	3.59
965321	AG1-397 C	1.5	Adder	1.76
965322	AG1-397 E	2.07	Adder	2.44
965611	AG1-429 C O1	12.49	Adder	14.69
965612	AG1-429 E O1	8.32	Adder	9.79
965821	AG1-450	7.91	Adder	9.31
965921	AG1-461 C O1	7.21	Adder	8.48
965922	AG1-461 E O1	3.88	Adder	4.56
965951	AG1-464 C O1	9.48	80 50	9.48
965952	AG1-464 E O1	14.22	80 50	14.22
966281	AG1-497 C O1	50.63	80 50	50.63
966282	AG1-497 E O1	21.7	80 50	21.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966601	AG1-529 C	23.58	80 50	23.58
966602	AG1-529 E	12.59	80 50	12.59
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.2882	Confirmed LTF	0.2882
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.1956	Confirmed LTF	0.1956
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.5016	Confirmed LTF	0.5016
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.138	Confirmed LTF	0.138
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0939	Confirmed LTF	0.0939
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.1388	Confirmed LTF	0.1388
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.5913	Confirmed LTF	0.5913
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	1.5247	LTF/CMTX NF	1.5247
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.1578	Confirmed LTF	0.1578
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.1523	Confirmed LTF	0.1523
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.002	Confirmed LTF	0.002
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.531	Confirmed LTF	0.531
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	8.508	LTF/CMTX NF	8.508
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.7403	Confirmed LTF	0.7403
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.1609	Confirmed LTF	0.1609

11.7.4 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
182424710	232014	LSPWR CABLE	PJM	232012	HOPE CREEK	PJM	2	DPL_P7_1_DBL_4NC	tower	575.0	101.75	104.88	AC	22.25

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.19	Adder	2.58
232407	W1-004 E	2.19	Adder	2.58
232409	W1-005 E	2.19	Adder	2.58
232411	W1-006 E	2.19	Adder	2.58
232412	X1-032 E	0.7	Adder	0.82
232418	X3-008 E	1.85	Adder	2.18
232423	X3-066 E	0.31	Adder	0.36
232425	Y1-079 E	0.68	Adder	0.8
232427	Y1-080 E	0.33	Adder	0.39
232429	Y3-058 E	1.05	Adder	1.24
232433	Z2-076 E	0.38	Adder	0.45
232435	Z2-077 E	0.38	Adder	0.45
232616	GEN FOOD	0.75	80 50	0.75
232813	VAUGHN	0.11	80 50	0.11
232851	DUP-SFR1	1.9	Adder	2.24
232899	W1-062	2.32	80 50	2.32
232900	DEMECSMY	2.27	80 50	2.27
232901	NORTHST	2.27	80 50	2.27
232922	MR3 (Deactivation : 01/06/2021)	30.74	80 50	30.74
233916	AB1-141 E	0.62	Adder	0.73
233919	AB1-142 E	0.62	Adder	0.73
233920	W3-032A-CTG1	9.55	80 50	9.55
233921	W3-032A-STG1	5.75	80 50	5.75
917082	CHERRYDALE E	2.2	Adder	2.59
918835	AA1-102 E	16.17	Adder	19.02
919831	AA2-069	135.91	80 50	135.91
923921	AB2-032 C	1.35	Adder	1.59
923922	AB2-032 E	0.63	Adder	0.74
923951	AB2-036 C	3.8	Adder	4.47
923952	AB2-036 E	6.22	Adder	7.32
923961	AB2-037 C	8.16	Adder	9.6
923962	AB2-037 E	13.32	Adder	15.67
924801	AB2-133 C O1	2.57	Adder	3.02
924802	AB2-133 E O1	3.26	Adder	3.84
924821	AB2-135 C	3.8	Adder	4.47
924822	AB2-135 E	4.34	Adder	5.11
924831	AB2-136 C	3.81	Adder	4.48
924832	AB2-136 E	4.04	Adder	4.75
924971	AB2-153 C	0.75	Adder	0.88
924972	AB2-153 E	1.23	Adder	1.45
925151	AB2-172 C	2.83	Adder	3.33

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925152	AB2-172 E	4.62	Adder	5.44
925261	AB2-180 C	2.4	Adder	2.82
925262	AB2-180 E	1.03	Adder	1.21
926131	AC1-091 C	2.36	80 50	2.36
926132	AC1-091 E	3.87	80 50	3.87
926141	AC1-092 C	2.36	80 50	2.36
926142	AC1-092 E	3.87	80 50	3.87
926151	AC1-093 C	2.23	80 50	2.23
926152	AC1-093 E	3.68	80 50	3.68
926161	AC1-094 C	1.89	80 50	1.89
926162	AC1-094 E	3.11	80 50	3.11
927031	AC1-190 C	5.24	Adder	6.16
927032	AC1-190 E	2.25	Adder	2.65
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.56	Adder	0.66
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.37	Adder	0.44
930201	AB1-056 C	12.48	Adder	14.68
930202	AB1-056 E	35.53	Adder	41.8
931261	AB1-176 C	0.16	Adder	0.19
931262	AB1-176 E	0.27	Adder	0.32
932161	AC2-023 C	4.48	Adder	5.27
932162	AC2-023 E	3.27	Adder	3.85
933631	AC2-185 C	4.78	80 50	4.78
933632	AC2-185 E	7.8	80 50	7.8
933641	AC2-186 C	4.5	80 50	4.5
933642	AC2-186 E	7.35	80 50	7.35
936611	AD2-076 C O1	1.89	Adder	2.22
936612	AD2-076 E O1	3.09	Adder	3.64
938651	AE1-087 C	2.38	Adder	2.8
938652	AE1-087 E	0.6	Adder	0.71
938895	AE1-117 C	9.2	Adder	10.82
938896	AE1-117 E	24.52	Adder	28.85
939151	AE1-145	3.55	Adder	4.18
941021	AE2-093 C	1.97	Adder	2.32
941022	AE2-093 E	3.21	Adder	3.78
941181	AE2-112 C	0.66	Adder	0.78
941182	AE2-112 E	1.07	Adder	1.26
942441	AE2-257 C	6.33	Adder	7.45
942442	AE2-257 E	16.7	Adder	19.65
943361	AF1-007 C	0.37	Adder	0.44
943362	AF1-007 E	1.05	Adder	1.24
943441	AF1-015 C	0.74	Adder	0.87
943442	AF1-015 E	1.02	Adder	1.2
943651	AF1-036 C	0.85	Adder	1.0
943652	AF1-036 E	1.18	Adder	1.39
945661	AF1-231 C	1.35	Adder	1.59
945662	AF1-231 E	2.02	Adder	2.38
945791	AF1-244 (Withdrawn : 06/07/2021)	1.39	Adder	1.64
945931	AF1-258	0.55	Adder	0.65
945941	AF1-259	0.09	Adder	0.11
957611	AF2-055 C	6.2	Adder	7.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957612	AF2-055 E	2.66	Adder	3.13
957661	AF2-060	1.6	Adder	1.88
957671	AF2-061 O1	7.09	Adder	8.34
959021	AF2-193 C	23.05	Adder	27.12
959022	AF2-193 E	62.18	Adder	73.15
959031	AF2-194 C	23.05	Adder	27.12
959032	AF2-194 E	62.18	Adder	73.15
959051	AF2-196 C	1.73	Adder	2.04
959052	AF2-196 E	4.03	Adder	4.74
959161	AF2-207 C O1	3.55	Adder	4.18
959162	AF2-207 E O1	5.33	Adder	6.27
959581	AF2-249 C	0.11	Adder	0.13
959582	AF2-249 E	0.42	Adder	0.49
959591	AF2-250 C	0.19	Adder	0.22
959592	AF2-250 E	0.15	Adder	0.18
960221	AF2-313 C	1.36	Adder	1.6
960222	AF2-313 E	0.77	Adder	0.91
960341	AF2-325 C	0.64	Adder	0.75
960342	AF2-325 E	0.88	Adder	1.04
960671	AF2-358 C O1	9.5	Adder	11.18
960672	AF2-358 E O1	6.33	Adder	7.45
960871	AF2-378 C	0.17	Adder	0.2
960872	AF2-378 E	0.24	Adder	0.28
960881	AF2-379 C	0.28	Adder	0.33
960882	AF2-379 E	0.39	Adder	0.46
960941	AF2-385 C	8.42	Adder	9.91
960942	AF2-385 E	4.79	Adder	5.64
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	15.59	Adder	18.34
962161	AG1-061 C O1	11.35	Adder	13.35
962162	AG1-061 E O1	7.57	Adder	8.91
962261	AG1-072	5.67	Adder	6.67
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.24	Adder	0.28
962381	AG1-087 C O1	29.49	80 50	29.49
962382	AG1-087 E O1	79.54	80 50	79.54
963001	AG1-149 (Withdrawn : 06/07/2021)	0.52	Adder	0.61
963011	AG1-150	7.09	Adder	8.34
964551	AG1-318 C	0.06	Adder	0.07
964552	AG1-318 E	0.13	Adder	0.15
964962	AG1-360 E	1.53	Adder	1.8
965321	AG1-397 C	0.75	Adder	0.88
965322	AG1-397 E	1.03	Adder	1.21
965611	AG1-429 C O1	6.24	Adder	7.34
965612	AG1-429 E O1	4.16	Adder	4.89
965821	AG1-450	3.96	Adder	4.66
965921	AG1-461 C O1	3.61	Adder	4.25
965922	AG1-461 E O1	1.94	Adder	2.28
965951	AG1-464 C O1	4.74	80 50	4.74
965952	AG1-464 E O1	7.11	80 50	7.11
966281	AG1-497 C O1	25.31	80 50	25.31
966282	AG1-497 E O1	10.85	80 50	10.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966601	AG1-529 C	11.79	80 50	11.79
966602	AG1-529 E	6.29	80 50	6.29
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.1441	Confirmed LTF	0.1441
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0978	Confirmed LTF	0.0978
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.2508	Confirmed LTF	0.2508
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.069	Confirmed LTF	0.069
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.047	Confirmed LTF	0.047
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0694	Confirmed LTF	0.0694
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.2956	Confirmed LTF	0.2956
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.7624	LTF/CMTX NF	0.7624
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0789	Confirmed LTF	0.0789
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.0761	Confirmed LTF	0.0761
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.001	Confirmed LTF	0.001
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.2655	Confirmed LTF	0.2655
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	4.254	LTF/CMTX NF	4.254
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.3701	Confirmed LTF	0.3701
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0804	Confirmed LTF	0.0804

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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
182425152	232014	LSPWR CABLE	PJM	232012	HOPE CREEK	PJM	1	DPL_P7_1_DBL_4NC	tower	575.0	101.75	104.88	AC	22.25

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.19	Adder	2.58
232407	W1-004 E	2.19	Adder	2.58
232409	W1-005 E	2.19	Adder	2.58
232411	W1-006 E	2.19	Adder	2.58
232412	X1-032 E	0.7	Adder	0.82
232418	X3-008 E	1.85	Adder	2.18
232423	X3-066 E	0.31	Adder	0.36
232425	Y1-079 E	0.68	Adder	0.8
232427	Y1-080 E	0.33	Adder	0.39
232429	Y3-058 E	1.05	Adder	1.24
232433	Z2-076 E	0.38	Adder	0.45
232435	Z2-077 E	0.38	Adder	0.45
232616	GEN FOOD	0.75	80 50	0.75
232813	VAUGHN	0.11	80 50	0.11
232851	DUP-SFR1	1.9	Adder	2.24
232899	W1-062	2.32	80 50	2.32
232900	DEMECSMY	2.27	80 50	2.27
232901	NORTHST	2.27	80 50	2.27
232922	MR3 (Deactivation : 01/06/2021)	30.74	80 50	30.74
233916	AB1-141 E	0.62	Adder	0.73
233919	AB1-142 E	0.62	Adder	0.73
233920	W3-032A-CTG1	9.55	80 50	9.55
233921	W3-032A-STG1	5.75	80 50	5.75
917082	CHERRYDALE E	2.2	Adder	2.59
918835	AA1-102 E	16.17	Adder	19.02
919831	AA2-069	135.91	80 50	135.91
923921	AB2-032 C	1.35	Adder	1.59
923922	AB2-032 E	0.63	Adder	0.74
923951	AB2-036 C	3.8	Adder	4.47
923952	AB2-036 E	6.22	Adder	7.32
923961	AB2-037 C	8.16	Adder	9.6
923962	AB2-037 E	13.32	Adder	15.67
924801	AB2-133 C O1	2.57	Adder	3.02
924802	AB2-133 E O1	3.26	Adder	3.84
924821	AB2-135 C	3.8	Adder	4.47
924822	AB2-135 E	4.34	Adder	5.11
924831	AB2-136 C	3.81	Adder	4.48
924832	AB2-136 E	4.04	Adder	4.75
924971	AB2-153 C	0.75	Adder	0.88
924972	AB2-153 E	1.23	Adder	1.45
925151	AB2-172 C	2.83	Adder	3.33

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925152	AB2-172 E	4.62	Adder	5.44
925261	AB2-180 C	2.4	Adder	2.82
925262	AB2-180 E	1.03	Adder	1.21
926131	AC1-091 C	2.36	80 50	2.36
926132	AC1-091 E	3.87	80 50	3.87
926141	AC1-092 C	2.36	80 50	2.36
926142	AC1-092 E	3.87	80 50	3.87
926151	AC1-093 C	2.23	80 50	2.23
926152	AC1-093 E	3.68	80 50	3.68
926161	AC1-094 C	1.89	80 50	1.89
926162	AC1-094 E	3.11	80 50	3.11
927031	AC1-190 C	5.24	Adder	6.16
927032	AC1-190 E	2.25	Adder	2.65
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.56	Adder	0.66
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.37	Adder	0.44
930201	AB1-056 C	12.48	Adder	14.68
930202	AB1-056 E	35.53	Adder	41.8
931261	AB1-176 C	0.16	Adder	0.19
931262	AB1-176 E	0.27	Adder	0.32
932161	AC2-023 C	4.48	Adder	5.27
932162	AC2-023 E	3.27	Adder	3.85
933631	AC2-185 C	4.78	80 50	4.78
933632	AC2-185 E	7.8	80 50	7.8
933641	AC2-186 C	4.5	80 50	4.5
933642	AC2-186 E	7.35	80 50	7.35
936611	AD2-076 C O1	1.89	Adder	2.22
936612	AD2-076 E O1	3.09	Adder	3.64
938651	AE1-087 C	2.38	Adder	2.8
938652	AE1-087 E	0.6	Adder	0.71
938895	AE1-117 C	9.2	Adder	10.82
938896	AE1-117 E	24.52	Adder	28.85
939151	AE1-145	3.55	Adder	4.18
941021	AE2-093 C	1.97	Adder	2.32
941022	AE2-093 E	3.21	Adder	3.78
941181	AE2-112 C	0.66	Adder	0.78
941182	AE2-112 E	1.07	Adder	1.26
942441	AE2-257 C	6.33	Adder	7.45
942442	AE2-257 E	16.7	Adder	19.65
943361	AF1-007 C	0.37	Adder	0.44
943362	AF1-007 E	1.05	Adder	1.24
943441	AF1-015 C	0.74	Adder	0.87
943442	AF1-015 E	1.02	Adder	1.2
943651	AF1-036 C	0.85	Adder	1.0
943652	AF1-036 E	1.18	Adder	1.39
945661	AF1-231 C	1.35	Adder	1.59
945662	AF1-231 E	2.02	Adder	2.38
945791	AF1-244 (Withdrawn : 06/07/2021)	1.39	Adder	1.64
945931	AF1-258	0.55	Adder	0.65
945941	AF1-259	0.09	Adder	0.11
957611	AF2-055 C	6.2	Adder	7.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957612	AF2-055 E	2.66	Adder	3.13
957661	AF2-060	1.6	Adder	1.88
957671	AF2-061 O1	7.09	Adder	8.34
959021	AF2-193 C	23.05	Adder	27.12
959022	AF2-193 E	62.18	Adder	73.15
959031	AF2-194 C	23.05	Adder	27.12
959032	AF2-194 E	62.18	Adder	73.15
959051	AF2-196 C	1.73	Adder	2.04
959052	AF2-196 E	4.03	Adder	4.74
959161	AF2-207 C O1	3.55	Adder	4.18
959162	AF2-207 E O1	5.33	Adder	6.27
959581	AF2-249 C	0.11	Adder	0.13
959582	AF2-249 E	0.42	Adder	0.49
959591	AF2-250 C	0.19	Adder	0.22
959592	AF2-250 E	0.15	Adder	0.18
960221	AF2-313 C	1.36	Adder	1.6
960222	AF2-313 E	0.77	Adder	0.91
960341	AF2-325 C	0.64	Adder	0.75
960342	AF2-325 E	0.88	Adder	1.04
960671	AF2-358 C O1	9.5	Adder	11.18
960672	AF2-358 E O1	6.33	Adder	7.45
960871	AF2-378 C	0.17	Adder	0.2
960872	AF2-378 E	0.24	Adder	0.28
960881	AF2-379 C	0.28	Adder	0.33
960882	AF2-379 E	0.39	Adder	0.46
960941	AF2-385 C	8.42	Adder	9.91
960942	AF2-385 E	4.79	Adder	5.64
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	15.59	Adder	18.34
962161	AG1-061 C O1	11.35	Adder	13.35
962162	AG1-061 E O1	7.57	Adder	8.91
962261	AG1-072	5.67	Adder	6.67
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.24	Adder	0.28
962381	AG1-087 C O1	29.49	80 50	29.49
962382	AG1-087 E O1	79.54	80 50	79.54
963001	AG1-149 (Withdrawn : 06/07/2021)	0.52	Adder	0.61
963011	AG1-150	7.09	Adder	8.34
964551	AG1-318 C	0.06	Adder	0.07
964552	AG1-318 E	0.13	Adder	0.15
964962	AG1-360 E	1.53	Adder	1.8
965321	AG1-397 C	0.75	Adder	0.88
965322	AG1-397 E	1.03	Adder	1.21
965611	AG1-429 C O1	6.24	Adder	7.34
965612	AG1-429 E O1	4.16	Adder	4.89
965821	AG1-450	3.96	Adder	4.66
965921	AG1-461 C O1	3.61	Adder	4.25
965922	AG1-461 E O1	1.94	Adder	2.28
965951	AG1-464 C O1	4.74	80 50	4.74
965952	AG1-464 E O1	7.11	80 50	7.11
966281	AG1-497 C O1	25.31	80 50	25.31
966282	AG1-497 E O1	10.85	80 50	10.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966601	AG1-529 C	11.79	80 50	11.79
966602	AG1-529 E	6.29	80 50	6.29
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.1441	Confirmed LTF	0.1441
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0978	Confirmed LTF	0.0978
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.2508	Confirmed LTF	0.2508
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.069	Confirmed LTF	0.069
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.047	Confirmed LTF	0.047
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0694	Confirmed LTF	0.0694
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.2956	Confirmed LTF	0.2956
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.7624	LTF/CMTX NF	0.7624
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0789	Confirmed LTF	0.0789
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.0761	Confirmed LTF	0.0761
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.001	Confirmed LTF	0.001
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.2655	Confirmed LTF	0.2655
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	4.254	LTF/CMTX NF	4.254
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.3701	Confirmed LTF	0.3701
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0804	Confirmed LTF	0.0804

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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
174161077	232291	ROCKAWLKN	DP&L	232271	NSALSBRV	DP&L	1	DPL_P4-2_DP55	breaker	123.0	97.85	103.31	AC	8.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232417	X3-008 C	0.19	80 50	0.19
232418	X3-008 E	1.85	80 50	1.85
232426	Y1-080 FULL	0.04	80 50	0.04
232427	Y1-080 E	0.38	80 50	0.38
232428	Y3-058 C	0.61	80 50	0.61
232429	Y3-058 E	4.0	80 50	4.0
232919	VN10	0.35	80 50	0.35
924831	AB2-136 C	4.13	80 50	4.13
924832	AB2-136 E	4.38	80 50	4.38
925151	AB2-172 C	2.83	80 50	2.83
925152	AB2-172 E	4.62	80 50	4.62
925261	AB2-180 C	9.18	80 50	9.18
925262	AB2-180 E	3.93	80 50	3.93
927031	AC1-190 C	5.32	80 50	5.32
927032	AC1-190 E	2.28	80 50	2.28
932161	AC2-023 C	14.98	80 50	14.98
932162	AC2-023 E	10.91	80 50	10.91
938651	AE1-087 C	2.38	80 50	2.38
938652	AE1-087 E	0.6	80 50	0.6
939152	AE1-145 BAT	1.94	Adder	2.28
945663	AF1-231 BAT	1.82	Adder	2.14
945792	AF1-244 BAT (Withdrawn : 06/07/2021)	0.77	Adder	0.91
945931	AF1-258	2.1	80 50	2.1
957613	AF2-055 BAT	2.89	Adder	3.4
957662	AF2-060 BAT	0.87	Adder	1.02
957672	AF2-061 BAT	3.88	Adder	4.56
959163	AF2-207 BAT	4.14	Adder	4.87
959583	AF2-249 BAT	0.39	80 50	0.39
960341	AF2-325 C	0.67	80 50	0.67
960342	AF2-325 E	0.93	80 50	0.93
960671	AF2-358 C O1	11.06	80 50	11.06
960672	AF2-358 E O1	7.37	80 50	7.37
960871	AF2-378 C	0.18	80 50	0.18
960872	AF2-378 E	0.25	80 50	0.25
960881	AF2-379 C	-0.2	Adder	-0.24
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	4.46	Adder	5.25
962161	AG1-061 C O1	4.22	Adder	4.96
962162	AG1-061 E O1	2.81	Adder	3.31
963002	AG1-149 BAT (Withdrawn : 06/07/2021)	0.29	Adder	0.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963012	AG1-150 BAT	3.88	Adder	4.56
965821	AG1-450	4.61	80 50	4.61
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.0118	Confirmed LTF	0.0118
LTFEXP_CBM-N	LTFEXP_CBM-N->LTFIMP_CBM-N	0.022	LTF/CBM	0.022
LTFEXP_CBM-S1	LTFEXP_CBM-S1->LTFIMP_CBM-S1	0.0098	LTF/CBM	0.0098
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	0.2693	LTF/CBM	0.2693
LTFEXP_CBM-W1	LTFEXP_CBM-W1->LTFIMP_CBM-W1	0.3586	LTF/CBM	0.3586
LTFEXP_CBM-W2	LTFEXP_CBM-W2->LTFIMP_CBM-W2	0.2298	LTF/CBM	0.2298
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.0176	Confirmed LTF	0.0176
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	0.0371	LTF/CMTX	0.0371
LTFEXP_LAGN	LTFEXP_LAGN->LTFIMP_LAGN	0.0449	Confirmed LTF	0.0449
LTFEXP_LGEE	LTFEXP_LGEE->LTFIMP_LGEE	0.0161	Confirmed LTF	0.0161
LTFEXP_MEC	LTFEXP_MEC->LTFIMP_MEC	0.0407	Confirmed LTF	0.0407
LTFEXP_SIGE	LTFEXP_SIGE->LTFIMP_SIGE	0.0027	Confirmed LTF	0.0027
LTFEXP_TVA	LTFEXP_TVA->LTFIMP_TVA	0.0359	Confirmed LTF	0.0359
LTFEXP_VFT	LTFEXP_VFT->LTFIMP_VFT	0.1089	Confirmed LTF	0.1089
LTFEXP_WEC	LTFEXP_WEC->LTFIMP_WEC	0.0081	Confirmed LTF	0.0081

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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
182782288	200012	NEWFRDM	PSE&G	200028	WINDSOR	JCP&L	1	PECO_P4_PEACH205/* \$ CHESCO \$ PECO_P4_PEACH205 \$ STBK	breaker	2983.0	107.13	108.06	AC	31.26

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200036	SALEM-G1 (Deactivation : 01/10/2020)	52.55	80 50	52.55
200037	SALEM-G2 (Deactivation : 01/04/2020)	52.25	80 50	52.25
200039	HOPE CG1 (Deactivation : 01/10/2019)	54.0	80 50	54.0
200052	ROCKSP 1	6.62	80 50	6.62
200053	ROCKSP 2	6.58	80 50	6.58
200054	ROCKSP 3	6.68	80 50	6.68
200055	ROCKSP 4	6.68	80 50	6.68
200062	SALEM G3	13.62	80 50	13.62
200203	Y1-065-STG	23.05	80 50	23.05
200204	Y1-065-CTG1	13.34	80 50	13.34
200205	Y1-065-CTG2	13.34	80 50	13.34
218661	EHAMPSOLAR E	0.25	Adder	0.29
219137	THOSOLAR C (Deactivation : 01/06/2015)	0.09	Adder	0.11
219138	THOSOLAR E	0.14	Adder	0.16
219259	KINSLEYDEP E	0.43	Adder	0.51
219273	CLEANLIGHT E	0.25	Adder	0.29
219292	REEVESSO E	0.09	Adder	0.11
219624	KINSLEYBEA E	0.35	Adder	0.41
219687	LUMSOLAR_N E	0.29	Adder	0.34
219726	BAT.STORG E	0.14	Adder	0.16
227801	ONTC&DCT	7.17	Adder	8.44
227842	MARINGEN	1.45	Adder	1.71
227881	GRENWCHG	0.3	Adder	0.35
227928	V4-067E	0.3	Adder	0.35
228102	BLE#2 ST (Deactivation : 30/04/2019)	29.81	Adder	35.07
228251	CARLLS#4	0.99	Adder	1.16
228261	V4-054E	1.29	Adder	1.52
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.34	Adder	0.4
228357	V2-046E	2.39	Adder	2.81
228712	V2-041E	0.53	Adder	0.62
228721	V2-035E	0.07	Adder	0.08
231903	GEN4	2.53	Adder	2.98
231904	DC1 NUG	6.55	Adder	7.71
231905	DC2 NUG	6.55	Adder	7.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	3.02	Adder	3.55
232407	W1-004 E	3.02	Adder	3.55
232409	W1-005 E	3.02	Adder	3.55
232411	W1-006 E	3.02	Adder	3.55
232412	X1-032 E	0.97	Adder	1.14
232418	X3-008 E	2.98	Adder	3.51
232423	X3-066 E	0.67	Adder	0.79
232425	Y1-079 E	1.44	Adder	1.69
232427	Y1-080 E	0.51	Adder	0.6
232429	Y3-058 E	1.48	Adder	1.74
232433	Z2-076 E	0.49	Adder	0.58
232435	Z2-077 E	0.49	Adder	0.58
232851	DUP-SFR1	2.45	Adder	2.88
232901	NORTHST	2.24	80 50	2.24
232922	MR3 (Deactivation : 01/06/2021)	25.71	Adder	30.25
233916	AB1-141 E	1.44	Adder	1.69
233919	AB1-142 E	1.44	Adder	1.69
233920	W3-032A-CTG1	9.39	80 50	9.39
233921	W3-032A-STG1	5.65	80 50	5.65
233931	AB2-179 C	8.19	Adder	9.64
902092	W1-130E	1.13	Adder	1.33
902432	W2-030 E	1.13	Adder	1.33
910862	OWENSCORIN E	0.24	Adder	0.28
917082	CHERRYDALE E	3.02	Adder	3.55
918835	AA1-102 E	22.64	Adder	26.64
919831	AA2-069	113.68	Adder	133.74
923921	AB2-032 C	3.11	Adder	3.66
923922	AB2-032 E	1.46	Adder	1.72
923951	AB2-036 C	8.14	Adder	9.58
923952	AB2-036 E	13.32	Adder	15.67
923961	AB2-037 C	18.21	Adder	21.42
923962	AB2-037 E	29.75	Adder	35.0
924051	AB2-049 C	0.24	Adder	0.28
924052	AB2-049 E	0.4	Adder	0.47
924531	AB2-102 C	49.5	Adder	58.24
924532	AB2-102 E	1.1	Adder	1.29
924801	AB2-133 C O1	5.62	Adder	6.61
924802	AB2-133 E O1	7.13	Adder	8.39
924821	AB2-135 C	6.94	Adder	8.16
924822	AB2-135 E	7.91	Adder	9.31
924831	AB2-136 C	5.97	Adder	7.02
924832	AB2-136 E	6.33	Adder	7.45
924971	AB2-153 C	1.74	Adder	2.05
924972	AB2-153 E	2.83	Adder	3.33
925151	AB2-172 C	4.56	Adder	5.36
925152	AB2-172 E	7.44	Adder	8.75
925254	AB2-179 E	2.67	Adder	3.14
925261	AB2-180 C	3.4	Adder	4.0
925262	AB2-180 E	1.46	Adder	1.72
926131	AC1-091 C	2.23	80 50	2.23
926132	AC1-091 E	3.66	80 50	3.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926141	AC1-092 C	2.23	80 50	2.23
926142	AC1-092 E	3.66	80 50	3.66
926151	AC1-093 C	2.11	80 50	2.11
926152	AC1-093 E	3.48	80 50	3.48
926161	AC1-094 C	1.78	80 50	1.78
926162	AC1-094 E	2.94	80 50	2.94
927031	AC1-190 C	8.41	Adder	9.89
927032	AC1-190 E	3.6	Adder	4.24
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.78	Adder	0.92
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.51	Adder	0.6
930002	AB1-001 E	0.22	Adder	0.26
930201	AB1-056 C	15.81	Adder	18.6
930202	AB1-056 E	45.02	Adder	52.96
930722	AB1-116 E	0.16	Adder	0.19
930732	AB1-119 E	0.16	Adder	0.19
931261	AB1-176 C	0.35	Adder	0.41
931262	AB1-176 E	0.57	Adder	0.67
932161	AC2-023 C	6.43	Adder	7.56
932162	AC2-023 E	4.69	Adder	5.52
932361	AC2-050 C O1	0.65	Adder	0.76
932362	AC2-050 E O1	1.06	Adder	1.25
933631	AC2-185 C	4.52	80 50	4.52
933632	AC2-185 E	7.38	80 50	7.38
933641	AC2-186 C	4.66	Adder	5.48
933642	AC2-186 E	7.6	Adder	8.94
933962	AD1-019 E	1.41	Adder	1.66
936452	AD2-059 E	0.16	Adder	0.19
936501	AD2-065 C	0.22	Adder	0.26
936502	AD2-065 E	0.31	Adder	0.36
936611	AD2-076 C O1	4.27	Adder	5.02
936612	AD2-076 E O1	6.97	Adder	8.2
937011	AD2-135 C	0.13	Adder	0.15
937012	AD2-135 E	0.23	Adder	0.27
938421	AE1-061 C	0.55	Adder	0.65
938422	AE1-061 E	0.55	Adder	0.65
938431	AE1-062 C	2.1	Adder	2.47
938651	AE1-087 C	3.84	Adder	4.52
938652	AE1-087 E	0.96	Adder	1.13
938781	AE1-104 C O1	27.63	Adder	32.51
938782	AE1-104 E O1	70.68	Adder	83.15
938814	AE1-107 C	6.67	Adder	7.85
938815	AE1-107 E	4.76	Adder	5.6
938871	AE1-115 C	1.98	Adder	2.33
938872	AE1-115 E	1.98	Adder	2.33
938895	AE1-117 C	11.77	Adder	13.85
938896	AE1-117 E	31.39	Adder	36.93
939151	AE1-145	4.88	Adder	5.74
939301	AE1-161 C	4.02	Adder	4.73
939302	AE1-161 E	6.03	Adder	7.09
939501	AE1-179 C O1	7.39	Adder	8.69
939502	AE1-179 E O1	5.21	Adder	6.13

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939821	AE1-218 C O1	0.16	Adder	0.19
939822	AE1-218 E O1	0.25	Adder	0.29
939931	AE1-229 C O1	17.97	Adder	21.14
939932	AE1-229 E O1	12.18	Adder	14.33
940001	AE1-240 C O1	6.12	Adder	7.2
940002	AE1-240 E O1	4.37	Adder	5.14
940361	AE2-020 C	19.42	Adder	22.85
940362	AE2-020 E	90.93	Adder	106.98
940371	AE2-021 C	19.42	Adder	22.85
940372	AE2-021 E	90.93	Adder	106.98
940381	AE2-022 C	11.33	Adder	13.33
940382	AE2-022 E	53.04	Adder	62.4
941021	AE2-093 C	3.95	Adder	4.65
941022	AE2-093 E	6.44	Adder	7.58
941181	AE2-112 C	1.48	Adder	1.74
941182	AE2-112 E	2.42	Adder	2.85
942101	AE2-222 C	15.65	Adder	18.41
942102	AE2-222 E	40.05	Adder	47.12
942381	AE2-251 C	61.53	Adder	72.39
942382	AE2-251 E	157.43	Adder	185.21
942441	AE2-257 C	8.09	Adder	9.52
942442	AE2-257 E	21.34	Adder	25.11
943071	AE2-334 C	5.47	Adder	6.44
943072	AE2-334 E	3.65	Adder	4.29
943361	AF1-007 C	0.47	Adder	0.55
943362	AF1-007 E	1.33	Adder	1.56
943441	AF1-015 C	1.49	Adder	1.75
943442	AF1-015 E	2.06	Adder	2.42
943651	AF1-036 C	1.93	Adder	2.27
943652	AF1-036 E	2.66	Adder	3.13
943732	AF1-041 E	0.44	Adder	0.52
944951	AF1-160 C	2.1	Adder	2.47
945431	AF1-208 C O1	5.52	Adder	6.49
945432	AF1-208 E O1	3.68	Adder	4.33
945661	AF1-231 C	1.85	Adder	2.18
945662	AF1-231 E	2.78	Adder	3.27
945731	AF1-238 C O1	10.84	Adder	12.75
945732	AF1-238 E O1	16.26	Adder	19.13
945741	AF1-239 C	2.55	Adder	3.0
945742	AF1-239 E	3.83	Adder	4.51
945791	AF1-244 (Withdrawn : 06/07/2021)	1.95	Adder	2.29
945931	AF1-258	0.78	Adder	0.92
945941	AF1-259	0.18	Adder	0.21
945971	AF1-262	0.18	Adder	0.21
945991	AF1-264	0.18	Adder	0.21
957221	AF2-016 C	22.52	Adder	26.49
957222	AF2-016 E	33.78	Adder	39.74
957251	AF2-019 C	1.65	Adder	1.94
957252	AF2-019 E	2.47	Adder	2.91
957261	AF2-020 C	1.66	Adder	1.95
957262	AF2-020 E	2.49	Adder	2.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957291	AF2-023 C	3.36	Adder	3.95
957292	AF2-023 E	5.05	Adder	5.94
957301	AF2-024 C	1.65	Adder	1.94
957302	AF2-024 E	2.48	Adder	2.92
957311	AF2-025 C	1.49	Adder	1.75
957312	AF2-025 E	2.23	Adder	2.62
957611	AF2-055 C	8.53	Adder	10.04
957612	AF2-055 E	3.66	Adder	4.31
957661	AF2-060	2.19	Adder	2.58
957671	AF2-061 O1	9.75	Adder	11.47
959021	AF2-193 C	29.21	Adder	34.36
959022	AF2-193 E	78.8	Adder	92.71
959031	AF2-194 C	29.21	Adder	34.36
959032	AF2-194 E	78.8	Adder	92.71
959051	AF2-196 C	2.21	Adder	2.6
959052	AF2-196 E	5.15	Adder	6.06
959161	AF2-207 C O1	4.91	Adder	5.78
959162	AF2-207 E O1	7.37	Adder	8.67
959581	AF2-249 C	0.15	Adder	0.18
959582	AF2-249 E	0.58	Adder	0.68
959591	AF2-250 C	0.27	Adder	0.32
959592	AF2-250 E	0.21	Adder	0.25
960221	AF2-313 C	2.93	Adder	3.45
960222	AF2-313 E	1.66	Adder	1.95
960341	AF2-325 C	1.01	Adder	1.19
960342	AF2-325 E	1.4	Adder	1.65
960671	AF2-358 C O1	14.49	Adder	17.05
960672	AF2-358 E O1	9.66	Adder	11.36
960871	AF2-378 C	0.27	Adder	0.32
960872	AF2-378 E	0.37	Adder	0.44
960881	AF2-379 C	0.4	Adder	0.47
960882	AF2-379 E	0.55	Adder	0.65
960941	AF2-385 C	11.64	Adder	13.69
960942	AF2-385 E	6.62	Adder	7.79
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	24.16	Adder	28.42
961621	AG1-001 C	2.47	Adder	2.91
961622	AG1-001 E	4.03	Adder	4.74
962161	AG1-061 C O1	15.94	Adder	18.75
962162	AG1-061 E O1	10.63	Adder	12.51
962261	AG1-072	11.75	Adder	13.82
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.36	Adder	0.42
962381	AG1-087 C O1	29.43	Adder	34.62
962382	AG1-087 E O1	79.38	Adder	93.39
962611	AG1-110	4.2	Adder	4.94
962801	AG1-129 C O1	7.56	Adder	8.89
962802	AG1-129 E O1	5.04	Adder	5.93
963001	AG1-149 (Withdrawn : 06/07/2021)	0.73	Adder	0.86
963011	AG1-150	9.75	Adder	11.47
964001	AG1-254 C	5.0	Adder	5.88
964002	AG1-254 E	2.51	Adder	2.95

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964011	AG1-255 C	7.33	Adder	8.62
964012	AG1-255 E	3.66	Adder	4.31
964371	AG1-299 C	0.39	Adder	0.46
964372	AG1-299 E	0.26	Adder	0.31
964381	AG1-300 C	0.65	Adder	0.76
964382	AG1-300 E	0.43	Adder	0.51
964551	AG1-318 C	0.07	Adder	0.08
964552	AG1-318 E	0.17	Adder	0.2
964962	AG1-360 E	2.13	Adder	2.51
965321	AG1-397 C	1.02	Adder	1.2
965322	AG1-397 E	1.41	Adder	1.66
965611	AG1-429 C O1	8.59	Adder	10.11
965612	AG1-429 E O1	5.73	Adder	6.74
965821	AG1-450	6.04	Adder	7.11
965921	AG1-461 C O1	4.77	Adder	5.61
965922	AG1-461 E O1	2.57	Adder	3.02
965951	AG1-464 C O1	4.91	Adder	5.78
965952	AG1-464 E O1	7.36	Adder	8.66
966071	AG1-476	5.25	Adder	6.18
966281	AG1-497 C O1	21.17	Adder	24.91
966282	AG1-497 E O1	9.07	Adder	10.67
966301	AG1-499 C	1.49	Adder	1.75
966302	AG1-499 E	0.99	Adder	1.16
966601	AG1-529 C	12.05	Adder	14.18
966602	AG1-529 E	6.43	Adder	7.56
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	1.8582	Confirmed LTF	1.8582
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	1.2919	Confirmed LTF	1.2919
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	3.2321	Confirmed LTF	3.2321
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.8977	Confirmed LTF	0.8977
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.6158	Confirmed LTF	0.6158
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.9032	Confirmed LTF	0.9032
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	3.8328	Confirmed LTF	3.8328
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	7.1277	LTF/CMTX NF	7.1277
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	1.0167	Confirmed LTF	1.0167
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	1.0027	Confirmed LTF	1.0027
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.0101	Confirmed LTF	0.0101
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	3.2129	Confirmed LTF	3.2129
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	49.626	LTF/CMTX NF	49.626
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	4.7789	Confirmed LTF	4.7789
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	1.0364	Confirmed LTF	1.0364

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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
174369290	200051	ROCKSPGS	PJM	200065	PCHBTM2S	PECO	1	PJM500_PS_P2-3_NFRD5_910	breaker	2905.0	106.82	110.8	AC	55.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200052	ROCKSP 1	17.79	80 50	17.79
200053	ROCKSP 2	17.68	80 50	17.68
200054	ROCKSP 3	17.95	80 50	17.95
200055	ROCKSP 4	17.95	80 50	17.95
200062	SALEM G3	14.91	Adder	17.54
200203	Y1-065-STG	61.97	80 50	61.97
200204	Y1-065-CTG1	35.85	80 50	35.85
200205	Y1-065-CTG2	35.85	80 50	35.85
227801	ONTC&DCT	9.69	Adder	11.4
227842	MARINGEN	1.96	Adder	2.31
227928	V4-067E	0.4	Adder	0.47
228102	BLE#2 ST (Deactivation : 30/04/2019)	39.25	Adder	46.18
228251	CARLLS#4	1.27	Adder	1.49
228261	V4-054E	1.64	Adder	1.93
228343	QUINTN#1 (Deactivation : 26/04/2020)	0.44	Adder	0.52
228357	V2-046E	3.07	Adder	3.61
228712	V2-041E	0.68	Adder	0.8
228721	V2-035E	0.09	Adder	0.11
231903	GEN4	4.62	Adder	5.44
231904	DC1 NUG	11.97	Adder	14.08
231905	DC2 NUG	11.97	Adder	14.08
231911	HR5	10.91	80 50	10.91
231912	HR6	10.91	80 50	10.91
231913	HR7	10.91	80 50	10.91
231914	HR8	16.59	80 50	16.59
232405	W1-003 E	5.38	Adder	6.33
232407	W1-004 E	5.38	Adder	6.33
232409	W1-005 E	5.38	Adder	6.33
232411	W1-006 E	5.38	Adder	6.33
232412	X1-032 E	1.73	Adder	2.04
232418	X3-008 E	5.35	Adder	6.29
232423	X3-066 E	1.22	Adder	1.44
232425	Y1-079 E	2.62	Adder	3.08
232427	Y1-080 E	0.91	Adder	1.07
232429	Y3-058 E	2.64	Adder	3.11
232433	Z2-076 E	0.87	Adder	1.02
232435	Z2-077 E	0.87	Adder	1.02
232616	GEN FOOD	1.28	80 50	1.28
232851	DUP-SFR1	4.33	Adder	5.09
232901	NORTHST	3.87	80 50	3.87

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232922	MR3 (Deactivation : 01/06/2021)	44.46	Adder	52.31
233916	AB1-141 E	2.62	Adder	3.08
233919	AB1-142 E	2.62	Adder	3.08
233920	W3-032A-CTG1	16.24	80 50	16.24
233921	W3-032A-STG1	9.78	80 50	9.78
233931	AB2-179 C	15.0	Adder	17.65
902092	W1-130E	1.44	Adder	1.69
902432	W2-030 E	1.51	Adder	1.78
917082	CHERRYDALE E	5.38	Adder	6.33
918835	AA1-102 E	40.33	Adder	47.45
919831	AA2-069	196.57	Adder	231.26
923921	AB2-032 C	5.65	Adder	6.65
923922	AB2-032 E	2.66	Adder	3.13
923951	AB2-036 C	14.8	Adder	17.41
923952	AB2-036 E	24.22	Adder	28.49
923961	AB2-037 C	33.31	Adder	39.19
923962	AB2-037 E	54.42	Adder	64.02
924051	AB2-049 C	0.29	Adder	0.34
924052	AB2-049 E	0.47	Adder	0.55
924531	AB2-102 C	62.95	Adder	74.06
924532	AB2-102 E	1.4	Adder	1.65
924801	AB2-133 C O1	10.19	Adder	11.99
924802	AB2-133 E O1	12.93	Adder	15.21
924821	AB2-135 C	12.49	Adder	14.69
924822	AB2-135 E	14.25	Adder	16.76
924831	AB2-136 C	10.71	Adder	12.6
924832	AB2-136 E	11.36	Adder	13.36
924971	AB2-153 C	3.16	Adder	3.72
924972	AB2-153 E	5.15	Adder	6.06
925151	AB2-172 C	8.2	Adder	9.65
925152	AB2-172 E	13.38	Adder	15.74
925254	AB2-179 E	4.89	Adder	5.75
925261	AB2-180 C	6.07	Adder	7.14
925262	AB2-180 E	2.6	Adder	3.06
926131	AC1-091 C	3.26	Adder	3.84
926132	AC1-091 E	5.35	Adder	6.29
926141	AC1-092 C	3.26	Adder	3.84
926142	AC1-092 E	5.35	Adder	6.29
926151	AC1-093 C	3.09	Adder	3.64
926152	AC1-093 E	5.09	Adder	5.99
926161	AC1-094 C	2.61	Adder	3.07
926162	AC1-094 E	4.31	Adder	5.07
927031	AC1-190 C	15.1	Adder	17.76
927032	AC1-190 E	6.47	Adder	7.61
927191	AC1-213 C (Withdrawn : 05/24/2021)	1.39	Adder	1.64
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.91	Adder	1.07
930201	AB1-056 C	27.96	Adder	32.89
930202	AB1-056 E	79.62	Adder	93.67
930722	AB1-116 E	0.2	Adder	0.24
930732	AB1-119 E	0.19	Adder	0.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
931261	AB1-176 C	0.63	Adder	0.74
931262	AB1-176 E	1.04	Adder	1.22
932161	AC2-023 C	11.48	Adder	13.51
932162	AC2-023 E	8.36	Adder	9.84
933631	AC2-185 C	6.62	Adder	7.79
933632	AC2-185 E	10.79	Adder	12.69
933641	AC2-186 C	8.21	Adder	9.66
933642	AC2-186 E	13.4	Adder	15.76
933962	AD1-019 E	1.91	Adder	2.25
936452	AD2-059 E	0.3	Adder	0.35
936501	AD2-065 C	0.27	Adder	0.32
936502	AD2-065 E	0.37	Adder	0.44
936611	AD2-076 C O1	7.77	Adder	9.14
936612	AD2-076 E O1	12.68	Adder	14.92
937011	AD2-135 C	0.16	Adder	0.19
937012	AD2-135 E	0.27	Adder	0.32
938421	AE1-061 C	0.69	Adder	0.81
938422	AE1-061 E	0.69	Adder	0.81
938431	AE1-062 C	2.51	Adder	2.95
938651	AE1-087 C	6.9	Adder	8.12
938652	AE1-087 E	1.73	Adder	2.04
938781	AE1-104 C O1	36.38	Adder	42.8
938782	AE1-104 E O1	93.07	Adder	109.49
938814	AE1-107 C	12.26	Adder	14.42
938815	AE1-107 E	8.74	Adder	10.28
938871	AE1-115 C	2.56	Adder	3.01
938872	AE1-115 E	2.56	Adder	3.01
938895	AE1-117 C	20.83	Adder	24.51
938896	AE1-117 E	55.55	Adder	65.35
939151	AE1-145	8.67	Adder	10.2
939301	AE1-161 C	5.05	Adder	5.94
939302	AE1-161 E	7.57	Adder	8.91
939501	AE1-179 C O1	9.38	Adder	11.04
939502	AE1-179 E O1	6.62	Adder	7.79
939821	AE1-218 C O1	0.2	Adder	0.24
939822	AE1-218 E O1	0.3	Adder	0.35
939931	AE1-229 C O1	22.91	Adder	26.95
939932	AE1-229 E O1	15.52	Adder	18.26
940001	AE1-240 C O1	7.77	Adder	9.14
940002	AE1-240 E O1	5.55	Adder	6.53
940361	AE2-020 C	26.48	Adder	31.15
940362	AE2-020 E	123.98	Adder	145.86
940371	AE2-021 C	26.48	Adder	31.15
940372	AE2-021 E	123.98	Adder	145.86
940381	AE2-022 C	15.45	Adder	18.18
940382	AE2-022 E	72.32	Adder	85.08
941021	AE2-093 C	7.18	Adder	8.45
941022	AE2-093 E	11.71	Adder	13.78
941181	AE2-112 C	2.7	Adder	3.18
941182	AE2-112 E	4.4	Adder	5.18
942101	AE2-222 C	21.15	Adder	24.88
942102	AE2-222 E	54.12	Adder	63.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942381	AE2-251 C	83.89	Adder	98.69
942382	AE2-251 E	214.64	Adder	252.52
942441	AE2-257 C	14.32	Adder	16.85
942442	AE2-257 E	37.76	Adder	44.42
943071	AE2-334 C	6.67	Adder	7.85
943072	AE2-334 E	4.45	Adder	5.24
943361	AF1-007 C	0.82	Adder	0.96
943362	AF1-007 E	2.34	Adder	2.75
943441	AF1-015 C	2.7	Adder	3.18
943442	AF1-015 E	3.73	Adder	4.39
943651	AF1-036 C	3.51	Adder	4.13
943652	AF1-036 E	4.84	Adder	5.69
943732	AF1-041 E	0.6	Adder	0.71
944951	AF1-160 C	2.51	Adder	2.95
945431	AF1-208 C O1	7.06	Adder	8.31
945432	AF1-208 E O1	4.7	Adder	5.53
945661	AF1-231 C	3.3	Adder	3.88
945662	AF1-231 E	4.94	Adder	5.81
945731	AF1-238 C O1	13.72	Adder	16.14
945732	AF1-238 E O1	20.58	Adder	24.21
945741	AF1-239 C	3.23	Adder	3.8
945742	AF1-239 E	4.84	Adder	5.69
945791	AF1-244 (Withdrawn : 06/07/2021)	3.47	Adder	4.08
945931	AF1-258	1.39	Adder	1.64
945941	AF1-259	0.33	Adder	0.39
945971	AF1-262	0.23	Adder	0.27
957221	AF2-016 C	30.25	Adder	35.59
957222	AF2-016 E	45.37	Adder	53.38
957251	AF2-019 C	2.14	Adder	2.52
957252	AF2-019 E	3.21	Adder	3.78
957261	AF2-020 C	2.11	Adder	2.48
957262	AF2-020 E	3.17	Adder	3.73
957291	AF2-023 C	4.35	Adder	5.12
957292	AF2-023 E	6.52	Adder	7.67
957311	AF2-025 C	2.01	Adder	2.36
957312	AF2-025 E	3.01	Adder	3.54
957611	AF2-055 C	15.18	Adder	17.86
957612	AF2-055 E	6.51	Adder	7.66
957661	AF2-060	3.9	Adder	4.59
957671	AF2-061 O1	17.35	Adder	20.41
959021	AF2-193 C	51.66	Adder	60.78
959022	AF2-193 E	139.35	Adder	163.94
959031	AF2-194 C	51.66	Adder	60.78
959032	AF2-194 E	139.35	Adder	163.94
959051	AF2-196 C	3.91	Adder	4.6
959052	AF2-196 E	9.11	Adder	10.72
959161	AF2-207 C O1	8.74	Adder	10.28
959162	AF2-207 E O1	13.11	Adder	15.42
959581	AF2-249 C	0.26	Adder	0.31
959582	AF2-249 E	1.04	Adder	1.22
959591	AF2-250 C	0.48	Adder	0.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959592	AF2-250 E	0.37	Adder	0.44
960221	AF2-313 C	5.32	Adder	6.26
960222	AF2-313 E	3.01	Adder	3.54
960341	AF2-325 C	1.81	Adder	2.13
960342	AF2-325 E	2.5	Adder	2.94
960671	AF2-358 C O1	25.95	Adder	30.53
960672	AF2-358 E O1	17.3	Adder	20.35
960871	AF2-378 C	0.48	Adder	0.56
960872	AF2-378 E	0.67	Adder	0.79
960881	AF2-379 C	0.71	Adder	0.84
960882	AF2-379 E	0.98	Adder	1.15
960941	AF2-385 C	20.72	Adder	24.38
960942	AF2-385 E	11.79	Adder	13.87
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	43.33	Adder	50.98
961621	AG1-001 C	3.14	Adder	3.69
961622	AG1-001 E	5.13	Adder	6.04
962161	AG1-061 C O1	28.41	Adder	33.42
962162	AG1-061 E O1	18.94	Adder	22.28
962261	AG1-072	21.37	Adder	25.14
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.63	Adder	0.74
962381	AG1-087 C O1	51.73	Adder	60.86
962382	AG1-087 E O1	139.53	Adder	164.15
962611	AG1-110	5.02	Adder	5.91
962801	AG1-129 C O1	9.6	Adder	11.29
962802	AG1-129 E O1	6.4	Adder	7.53
963001	AG1-149 (Withdrawn : 06/07/2021)	1.3	Adder	1.53
963011	AG1-150	17.35	Adder	20.41
964001	AG1-254 C	6.44	Adder	7.58
964002	AG1-254 E	3.23	Adder	3.8
964011	AG1-255 C	9.45	Adder	11.12
964012	AG1-255 E	4.71	Adder	5.54
964371	AG1-299 C	0.49	Adder	0.58
964372	AG1-299 E	0.33	Adder	0.39
964381	AG1-300 C	0.82	Adder	0.96
964382	AG1-300 E	0.55	Adder	0.65
964551	AG1-318 C	0.13	Adder	0.15
964552	AG1-318 E	0.3	Adder	0.35
964962	AG1-360 E	3.79	Adder	4.46
965321	AG1-397 C	1.82	Adder	2.14
965322	AG1-397 E	2.51	Adder	2.95
965611	AG1-429 C O1	15.29	Adder	17.99
965612	AG1-429 E O1	10.19	Adder	11.99
965821	AG1-450	10.81	Adder	12.72
965921	AG1-461 C O1	8.45	Adder	9.94
965922	AG1-461 E O1	4.55	Adder	5.35
965951	AG1-464 C O1	8.64	Adder	10.16
965952	AG1-464 E O1	12.96	Adder	15.25
966281	AG1-497 C O1	36.61	Adder	43.07
966282	AG1-497 E O1	15.69	Adder	18.46
966301	AG1-499 C	1.85	Adder	2.18

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966302	AG1-499 E	1.23	Adder	1.45
966601	AG1-529 C	21.22	Adder	24.96
966602	AG1-529 E	11.32	Adder	13.32
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	5.2047	Confirmed LTF	5.2047
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	4.1804	Confirmed LTF	4.1804
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	9.0097	Confirmed LTF	9.0097
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	2.6549	Confirmed LTF	2.6549
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	1.9141	Confirmed LTF	1.9141
LTFEXP_CBM-N	LTFEXP_CBM-N->LTFIMP_CBM-N	7.6601	LTF/CBM	7.6601
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	2.6757	Confirmed LTF	2.6757
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	11.1086	Confirmed LTF	11.1086
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	23.4573	LTF/CMTX	23.4573
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	2.8331	Confirmed LTF	2.8331
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	3.1944	Confirmed LTF	3.1944
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	13.4873	Confirmed LTF	13.4873
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	2.8873	Confirmed LTF	2.8873
LTFEXP_VFT	LTFEXP_VFT->LTFIMP_VFT	51.5444	Confirmed LTF	51.5444

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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
182682396	200064	PCHBTM1S	BGE	200004	CNASTONE	PECO	1	TS_P4_#T6_FUR RUN 500_CB 2	breaker	3620.0	111.97	113.08	AC	45.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200034	PCHBTM 2	117.8	80 50	117.8
200035	PCHBTM 3	118.96	80 50	118.96
200052	ROCKSP 1	11.56	80 50	11.56
200053	ROCKSP 2	11.49	80 50	11.49
200054	ROCKSP 3	11.66	80 50	11.66
200055	ROCKSP 4	11.66	80 50	11.66
200062	SALEM G3	12.48	Adder	14.68
200192	DELTA CT1	11.46	80 50	11.46
200193	DELTA CT2	11.46	80 50	11.46
200194	DELTA CT3	11.46	80 50	11.46
200195	DELTA ST	17.7	80 50	17.7
200200	DELTA2 CT1	20.54	80 50	20.54
200201	DELTA2 CT2	20.54	80 50	20.54
200202	DELTA2 ST	35.04	80 50	35.04
200203	Y1-065-STG	40.26	80 50	40.26
200204	Y1-065-CTG1	23.29	80 50	23.29
200205	Y1-065-CTG2	23.29	80 50	23.29
213792	MDYRN1-2	22.2	80 50	22.2
213793	MDYRN3-4	22.28	80 50	22.28
213794	MDYRN5-6	22.22	80 50	22.22
213795	MDYRN7-8	22.3	80 50	22.3
231903	GEN4	3.83	Adder	4.51
231904	DC1 NUG	9.92	Adder	11.67
231905	DC2 NUG	9.92	Adder	11.67
231911	HR5	8.66	80 50	8.66
231912	HR6	8.66	80 50	8.66
231913	HR7	8.66	80 50	8.66
231914	HR8	13.16	80 50	13.16
232405	W1-003 E	4.36	Adder	5.13
232407	W1-004 E	4.36	Adder	5.13
232409	W1-005 E	4.36	Adder	5.13
232411	W1-006 E	4.36	Adder	5.13
232412	X1-032 E	1.41	Adder	1.66
232418	X3-008 E	4.36	Adder	5.13
232423	X3-066 E	1.01	Adder	1.19
232425	Y1-079 E	2.16	Adder	2.54
232427	Y1-080 E	0.74	Adder	0.87
232429	Y3-058 E	2.15	Adder	2.53
232433	Z2-076 E	0.71	Adder	0.84
232435	Z2-077 E	0.71	Adder	0.84
232851	DUP-SFR1	3.51	Adder	4.13

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232922	MR3 (Deactivation : 01/06/2021)	35.86	Adder	42.19
233916	AB1-141 E	2.18	Adder	2.56
233919	AB1-142 E	2.18	Adder	2.56
233931	AB2-179 C	12.8	Adder	15.06
917082	CHERRYDALE E	4.36	Adder	5.13
918835	AA1-102 E	32.72	Adder	38.49
919831	AA2-069	158.55	Adder	186.53
923921	AB2-032 C	4.7	Adder	5.53
923922	AB2-032 E	2.21	Adder	2.6
923951	AB2-036 C	12.17	Adder	14.32
923952	AB2-036 E	19.92	Adder	23.44
923961	AB2-037 C	31.87	80 50	31.87
923962	AB2-037 E	52.06	80 50	52.06
924801	AB2-133 C O1	8.48	Adder	9.98
924802	AB2-133 E O1	10.75	Adder	12.65
924821	AB2-135 C	10.34	Adder	12.16
924822	AB2-135 E	11.79	Adder	13.87
924831	AB2-136 C	8.72	Adder	10.26
924832	AB2-136 E	9.24	Adder	10.87
924971	AB2-153 C	2.62	Adder	3.08
924972	AB2-153 E	4.28	Adder	5.04
925151	AB2-172 C	6.67	Adder	7.85
925152	AB2-172 E	10.89	Adder	12.81
925254	AB2-179 E	4.18	Adder	4.92
925261	AB2-180 C	4.92	Adder	5.79
925262	AB2-180 E	2.11	Adder	2.48
926131	AC1-091 C	2.63	Adder	3.09
926132	AC1-091 E	4.32	Adder	5.08
926141	AC1-092 C	2.63	Adder	3.09
926142	AC1-092 E	4.32	Adder	5.08
926151	AC1-093 C	2.49	Adder	2.93
926152	AC1-093 E	4.11	Adder	4.84
926161	AC1-094 C	2.11	Adder	2.48
926162	AC1-094 E	3.48	Adder	4.09
927031	AC1-190 C	12.3	Adder	14.47
927032	AC1-190 E	5.27	Adder	6.2
927191	AC1-213 C (Withdrawn : 05/24/2021)	1.13	Adder	1.33
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.74	Adder	0.87
930201	AB1-056 C	22.65	Adder	26.65
930202	AB1-056 E	64.51	Adder	75.89
931261	AB1-176 C	0.52	Adder	0.61
931262	AB1-176 E	0.86	Adder	1.01
932161	AC2-023 C	9.32	Adder	10.96
932162	AC2-023 E	6.79	Adder	7.99
933631	AC2-185 C	5.34	Adder	6.28
933632	AC2-185 E	8.71	Adder	10.25
933641	AC2-186 C	6.66	Adder	7.84
933642	AC2-186 E	10.87	Adder	12.79
936452	AD2-059 E	0.26	Adder	0.31
936611	AD2-076 C O1	6.44	Adder	7.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936612	AD2-076 E O1	10.51	Adder	12.36
938651	AE1-087 C	5.62	Adder	6.61
938652	AE1-087 E	1.41	Adder	1.66
938814	AE1-107 C	10.47	Adder	12.32
938815	AE1-107 E	7.46	Adder	8.78
938895	AE1-117 C	16.88	Adder	19.86
938896	AE1-117 E	45.02	Adder	52.96
939151	AE1-145	7.04	Adder	8.28
941021	AE2-093 C	5.87	Adder	6.91
941022	AE2-093 E	9.57	Adder	11.26
941181	AE2-112 C	2.24	Adder	2.64
941182	AE2-112 E	3.65	Adder	4.29
942441	AE2-257 C	11.61	Adder	13.66
942442	AE2-257 E	30.6	Adder	36.0
943361	AF1-007 C	0.67	Adder	0.79
943362	AF1-007 E	1.9	Adder	2.24
943441	AF1-015 C	2.21	Adder	2.6
943442	AF1-015 E	3.05	Adder	3.59
943651	AF1-036 C	2.91	Adder	3.42
943652	AF1-036 E	4.01	Adder	4.72
945661	AF1-231 C	2.67	Adder	3.14
945662	AF1-231 E	4.01	Adder	4.72
945791	AF1-244 (Withdrawn : 06/07/2021)	2.81	Adder	3.31
945931	AF1-258	1.13	Adder	1.33
945941	AF1-259	0.28	Adder	0.33
957611	AF2-055 C	12.31	Adder	14.48
957612	AF2-055 E	5.28	Adder	6.21
957661	AF2-060	3.17	Adder	3.73
957671	AF2-061 O1	14.07	Adder	16.55
959021	AF2-193 C	41.86	Adder	49.25
959022	AF2-193 E	112.91	Adder	132.84
959031	AF2-194 C	41.86	Adder	49.25
959032	AF2-194 E	112.91	Adder	132.84
959051	AF2-196 C	3.17	Adder	3.73
959052	AF2-196 E	7.39	Adder	8.69
959161	AF2-207 C O1	7.09	Adder	8.34
959162	AF2-207 E O1	10.64	Adder	12.52
959581	AF2-249 C	0.21	Adder	0.25
959582	AF2-249 E	0.84	Adder	0.99
959591	AF2-250 C	0.39	Adder	0.46
959592	AF2-250 E	0.3	Adder	0.35
960221	AF2-313 C	4.4	Adder	5.18
960222	AF2-313 E	2.49	Adder	2.93
960341	AF2-325 C	1.48	Adder	1.74
960342	AF2-325 E	2.04	Adder	2.4
960671	AF2-358 C O1	21.1	Adder	24.82
960672	AF2-358 E O1	14.07	Adder	16.55
960871	AF2-378 C	0.39	Adder	0.46
960872	AF2-378 E	0.54	Adder	0.64
960881	AF2-379 C	0.58	Adder	0.68
960882	AF2-379 E	0.8	Adder	0.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960941	AF2-385 C	16.81	Adder	19.78
960942	AF2-385 E	9.57	Adder	11.26
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	35.2	Adder	41.41
962161	AG1-061 C O1	23.06	Adder	27.13
962162	AG1-061 E O1	15.37	Adder	18.08
962261	AG1-072	17.5	Adder	20.59
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.52	Adder	0.61
962381	AG1-087 C O1	41.86	Adder	49.25
962382	AG1-087 E O1	112.91	Adder	132.84
963001	AG1-149 (Withdrawn : 06/07/2021)	1.06	Adder	1.25
963011	AG1-150	14.07	Adder	16.55
964551	AG1-318 C	0.11	Adder	0.13
964552	AG1-318 E	0.25	Adder	0.29
964962	AG1-360 E	3.08	Adder	3.62
965321	AG1-397 C	1.47	Adder	1.73
965322	AG1-397 E	2.03	Adder	2.39
965611	AG1-429 C O1	12.41	Adder	14.6
965612	AG1-429 E O1	8.27	Adder	9.73
965821	AG1-450	8.79	Adder	10.34
965921	AG1-461 C O1	6.86	Adder	8.07
965922	AG1-461 E O1	3.69	Adder	4.34
965951	AG1-464 C O1	7.02	Adder	8.26
965952	AG1-464 E O1	10.52	Adder	12.38
966281	AG1-497 C O1	29.53	Adder	34.74
966282	AG1-497 E O1	12.66	Adder	14.89
966601	AG1-529 C	17.19	Adder	20.22
966602	AG1-529 E	9.17	Adder	10.79
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	10.6397	Confirmed LTF	10.6397
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	9.3993	Confirmed LTF	9.3993
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	18.35	Confirmed LTF	18.35
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	5.6403	Confirmed LTF	5.6403
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	4.2004	Confirmed LTF	4.2004
LTFEXP_CBM-N	LTFEXP_CBM-N->LTFIMP_CBM-N	29.9188	LTF/CBM	29.9188
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	5.6908	Confirmed LTF	5.6908
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	23.2745	Confirmed LTF	23.2745
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	66.5871	LTF/CMTX	66.5871
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	5.7689	Confirmed LTF	5.7689
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	7.1165	Confirmed LTF	7.1165
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	27.7261	Confirmed LTF	27.7261

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	5.8778	Confirmed LTF	5.8778
LTFEXP_VFT	LTFEXP_VFT->LTFIMP_VFT	171.6445	Confirmed LTF	171.6445

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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
182693446	213490	CHICHST2	PECO	213496	CHIREACT_53	PECO	1	PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	breaker	841.0	108.11	109.54	AC	8.77

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
213888	PHLISCT1	10.73	80 50	10.73
213889	PHLISCT2	10.73	80 50	10.73
213890	PHLISCT3	10.78	80 50	10.78
213893	PHLISST1	15.82	80 50	15.82
219137	THOSOLAR C (Deactivation : 01/06/2015)	-0.05	Adder	-0.06
219727	Z1-082 BAT	0.07	Adder	0.08
227881	GRENWCHG	-0.15	Adder	-0.18
228343	QUINTN#1 (Deactivation : 26/04/2020)	-0.11	Adder	-0.13
231505	HR4	8.88	80 50	8.88
231900	EM5	21.56	80 50	21.56
231903	GEN4	0.93	Adder	1.09
231904	DC1 NUG	2.41	Adder	2.84
231905	DC2 NUG	2.41	Adder	2.84
231909	HR2	4.21	80 50	4.21
231916	EM3	2.9	80 50	2.9
232405	W1-003 E	0.84	Adder	0.99
232407	W1-004 E	0.84	Adder	0.99
232409	W1-005 E	0.84	Adder	0.99
232411	W1-006 E	0.84	Adder	0.99
232412	X1-032 E	0.27	Adder	0.32
232418	X3-008 E	0.88	Adder	1.04
232423	X3-066 E	0.23	Adder	0.27
232425	Y1-079 E	0.47	Adder	0.55
232427	Y1-080 E	0.15	Adder	0.18
232429	Y3-058 E	0.42	Adder	0.49
232433	Z2-076 E	0.13	Adder	0.15
232435	Z2-077 E	0.13	Adder	0.15
232851	DUP-SFR1	0.66	Adder	0.78
232922	MR3 (Deactivation : 01/06/2021)	5.91	Adder	6.95
233916	AB1-141 E	0.49	Adder	0.58
233919	AB1-142 E	0.49	Adder	0.58
233931	AB2-179 C	3.23	Adder	3.8
917082	CHERRYDALE E	0.84	Adder	0.99
918835	AA1-102 E	6.33	Adder	7.45
919831	AA2-069	26.11	Adder	30.72
923921	AB2-032 C	1.07	Adder	1.26
923922	AB2-032 E	0.5	Adder	0.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923951	AB2-036 C	2.68	Adder	3.15
923952	AB2-036 E	4.38	Adder	5.15
923961	AB2-037 C	5.85	Adder	6.88
923962	AB2-037 E	9.55	Adder	11.24
924801	AB2-133 C O1	1.92	Adder	2.26
924802	AB2-133 E O1	2.43	Adder	2.86
924821	AB2-135 C	2.24	Adder	2.64
924822	AB2-135 E	2.56	Adder	3.01
924831	AB2-136 C	1.75	Adder	2.06
924832	AB2-136 E	1.86	Adder	2.19
924971	AB2-153 C	0.6	Adder	0.71
924972	AB2-153 E	0.97	Adder	1.14
925151	AB2-172 C	1.35	Adder	1.59
925152	AB2-172 E	2.21	Adder	2.6
925254	AB2-179 E	1.05	Adder	1.24
925261	AB2-180 C	0.96	Adder	1.13
925262	AB2-180 E	0.41	Adder	0.48
925391	AC1-010 C	-0.39	Adder	-0.46
926131	AC1-091 C	0.42	Adder	0.49
926132	AC1-091 E	0.7	Adder	0.82
926141	AC1-092 C	0.42	Adder	0.49
926142	AC1-092 E	0.7	Adder	0.82
926151	AC1-093 C	0.4	Adder	0.47
926152	AC1-093 E	0.66	Adder	0.78
926161	AC1-094 C	0.34	Adder	0.4
926162	AC1-094 E	0.56	Adder	0.66
927031	AC1-190 C	2.49	Adder	2.93
927032	AC1-190 E	1.07	Adder	1.26
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.22	Adder	0.26
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.14	Adder	0.16
930201	AB1-056 C	4.23	Adder	4.98
930202	AB1-056 E	12.03	Adder	14.15
930722	AB1-116 E	-0.04	Adder	-0.05
931261	AB1-176 C	0.12	Adder	0.14
931262	AB1-176 E	0.19	Adder	0.22
932161	AC2-023 C	1.82	Adder	2.14
932162	AC2-023 E	1.33	Adder	1.56
933631	AC2-185 C	0.86	Adder	1.01
933632	AC2-185 E	1.4	Adder	1.65
933641	AC2-186 C	1.23	Adder	1.45
933642	AC2-186 E	2.01	Adder	2.36
934661	AD1-097 1	3.48	80 50	3.48
934671	AD1-097 2	3.48	80 50	3.48
934681	AD1-097 3	3.49	80 50	3.49
934691	AD1-097 4	2.07	80 50	2.07
936452	AD2-059 E	0.09	Adder	0.11
936611	AD2-076 C O1	1.45	Adder	1.71
936612	AD2-076 E O1	2.37	Adder	2.79
938423	AE1-061 BAT	0.36	Adder	0.42
938651	AE1-087 C	1.14	Adder	1.34
938652	AE1-087 E	0.29	Adder	0.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938814	AE1-107 C	2.71	Adder	3.19
938815	AE1-107 E	1.94	Adder	2.28
938873	AE1-115 BAT	1.63	Adder	1.92
938895	AE1-117 C	3.16	Adder	3.72
938896	AE1-117 E	8.43	Adder	9.92
939151	AE1-145	1.35	Adder	1.59
939303	AE1-161 BAT	3.49	Adder	4.11
939821	AE1-218 C O1	-0.05	Adder	-0.06
941021	AE2-093 C	1.26	Adder	1.48
941022	AE2-093 E	2.05	Adder	2.41
941181	AE2-112 C	0.5	Adder	0.59
941182	AE2-112 E	0.82	Adder	0.96
942441	AE2-257 C	2.17	Adder	2.55
942442	AE2-257 E	5.73	Adder	6.74
943361	AF1-007 C	0.12	Adder	0.14
943362	AF1-007 E	0.35	Adder	0.41
943441	AF1-015 C	0.47	Adder	0.55
943442	AF1-015 E	0.65	Adder	0.76
943651	AF1-036 C	0.66	Adder	0.78
943652	AF1-036 E	0.91	Adder	1.07
945661	AF1-231 C	0.51	Adder	0.6
945662	AF1-231 E	0.77	Adder	0.91
945791	AF1-244 (Withdrawn : 06/07/2021)	0.54	Adder	0.64
945931	AF1-258	0.22	Adder	0.26
945941	AF1-259	0.06	Adder	0.07
945991	AF1-264	-0.08	Adder	-0.09
957263	AF2-020 BAT	1.32	Adder	1.55
957293	AF2-023 BAT	3.46	Adder	4.07
957303	AF2-024 BAT	2.56	Adder	3.01
957611	AF2-055 C	2.37	Adder	2.79
957612	AF2-055 E	1.01	Adder	1.19
957661	AF2-060	0.61	Adder	0.72
957671	AF2-061 O1	2.71	Adder	3.19
959021	AF2-193 C	7.81	Adder	9.19
959022	AF2-193 E	21.06	Adder	24.78
959031	AF2-194 C	7.81	Adder	9.19
959032	AF2-194 E	21.06	Adder	24.78
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.38	Adder	1.62
959161	AF2-207 C O1	1.37	Adder	1.61
959162	AF2-207 E O1	2.05	Adder	2.41
959581	AF2-249 C	0.04	Adder	0.05
959582	AF2-249 E	0.16	Adder	0.19
959591	AF2-250 C	0.07	Adder	0.08
959592	AF2-250 E	0.06	Adder	0.07
960221	AF2-313 C	0.98	Adder	1.15
960222	AF2-313 E	0.56	Adder	0.66
960341	AF2-325 C	0.3	Adder	0.35
960342	AF2-325 E	0.41	Adder	0.48
960671	AF2-358 C O1	4.2	Adder	4.94
960672	AF2-358 E O1	2.8	Adder	3.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960871	AF2-378 C	0.08	Adder	0.09
960872	AF2-378 E	0.11	Adder	0.13
960881	AF2-379 C	0.11	Adder	0.13
960882	AF2-379 E	0.15	Adder	0.18
960941	AF2-385 C	3.24	Adder	3.81
960942	AF2-385 E	1.84	Adder	2.16
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	7.03	Adder	8.27
962161	AG1-061 C O1	4.47	Adder	5.26
962162	AG1-061 E O1	2.98	Adder	3.51
962261	AG1-072	3.8	Adder	4.47
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.11	Adder	0.13
962381	AG1-087 C O1	7.56	Adder	8.89
962382	AG1-087 E O1	20.39	Adder	23.99
963001	AG1-149 (Withdrawn : 06/07/2021)	0.2	Adder	0.24
963011	AG1-150	2.71	Adder	3.19
964003	AG1-254 BAT	1.53	Adder	1.8
964013	AG1-255 BAT	2.15	Adder	2.53
964083	AG1-263 BAT	1.52	Adder	1.79
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06
964962	AG1-360 E	0.59	Adder	0.69
965321	AG1-397 C	0.28	Adder	0.33
965322	AG1-397 E	0.39	Adder	0.46
965611	AG1-429 C O1	2.39	Adder	2.81
965612	AG1-429 E O1	1.59	Adder	1.87
965821	AG1-450	1.75	Adder	2.06
965921	AG1-461 C O1	1.3	Adder	1.53
965922	AG1-461 E O1	0.7	Adder	0.82
965951	AG1-464 C O1	1.3	Adder	1.53
965952	AG1-464 E O1	1.94	Adder	2.28
966281	AG1-497 C O1	4.86	Adder	5.72
966282	AG1-497 E O1	2.08	Adder	2.45
966601	AG1-529 C	3.14	Adder	3.69
966602	AG1-529 E	1.68	Adder	1.98
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.0286	Confirmed LTF	0.0286
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.008	Confirmed LTF	0.008
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.018	Confirmed LTF	0.018
LTFEXP_CBM-S1	LTFEXP_CBM-S1->LTFIMP_CBM-S1	0.0026	LTF/CBM	0.0026
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	0.4933	LTF/CBM	0.4933
LTFEXP_CBM-W2	LTFEXP_CBM-W2->LTFIMP_CBM-W2	0.012	LTF/CBM	0.012
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.0434	Confirmed LTF	0.0434
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	2.7818	LTF/CMTX NF	2.7818

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0058	Confirmed LTF	0.0058
LTFEXP_LAGN	LTFEXP_LAGN->LTFIMP_LAGN	0.0158	Confirmed LTF	0.0158
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.0054	Confirmed LTF	0.0054
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.9023	Confirmed LTF	0.9023
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	15.6668	LTF/CMTX NF	15.6668
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.0109	Confirmed LTF	0.0109
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.006	Confirmed LTF	0.006
LTFEXP_TVA	LTFEXP_TVA->LTFIMP_TVA	0.0149	Confirmed LTF	0.0149

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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
182693004	213496	CHIREACT_53	PECO	213972	TRAINER	PECO	1	PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	breaker	841.0	108.11	109.54	AC	8.77

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
213888	PHLISCT1	10.73	80 50	10.73
213889	PHLISCT2	10.73	80 50	10.73
213890	PHLISCT3	10.78	80 50	10.78
213893	PHLISST1	15.82	80 50	15.82
219137	THOSOLAR C (Deactivation : 01/06/2015)	-0.05	Adder	-0.06
219727	Z1-082 BAT	0.07	Adder	0.08
227881	GRENWCHG	-0.15	Adder	-0.18
228343	QUINTN#1 (Deactivation : 26/04/2020)	-0.11	Adder	-0.13
231505	HR4	8.88	80 50	8.88
231900	EM5	21.56	80 50	21.56
231903	GEN4	0.93	Adder	1.09
231904	DC1 NUG	2.41	Adder	2.84
231905	DC2 NUG	2.41	Adder	2.84
231909	HR2	4.21	80 50	4.21
231916	EM3	2.9	80 50	2.9
232405	W1-003 E	0.84	Adder	0.99
232407	W1-004 E	0.84	Adder	0.99
232409	W1-005 E	0.84	Adder	0.99
232411	W1-006 E	0.84	Adder	0.99
232412	X1-032 E	0.27	Adder	0.32
232418	X3-008 E	0.88	Adder	1.04
232423	X3-066 E	0.23	Adder	0.27
232425	Y1-079 E	0.47	Adder	0.55
232427	Y1-080 E	0.15	Adder	0.18
232429	Y3-058 E	0.42	Adder	0.49
232433	Z2-076 E	0.13	Adder	0.15
232435	Z2-077 E	0.13	Adder	0.15
232851	DUP-SFR1	0.66	Adder	0.78
232922	MR3 (Deactivation : 01/06/2021)	5.91	Adder	6.95
233916	AB1-141 E	0.49	Adder	0.58
233919	AB1-142 E	0.49	Adder	0.58
233931	AB2-179 C	3.23	Adder	3.8
917082	CHERRYDALE E	0.84	Adder	0.99
918835	AA1-102 E	6.33	Adder	7.45
919831	AA2-069	26.11	Adder	30.72
923921	AB2-032 C	1.07	Adder	1.26
923922	AB2-032 E	0.5	Adder	0.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923951	AB2-036 C	2.68	Adder	3.15
923952	AB2-036 E	4.38	Adder	5.15
923961	AB2-037 C	5.85	Adder	6.88
923962	AB2-037 E	9.55	Adder	11.24
924801	AB2-133 C O1	1.92	Adder	2.26
924802	AB2-133 E O1	2.43	Adder	2.86
924821	AB2-135 C	2.24	Adder	2.64
924822	AB2-135 E	2.56	Adder	3.01
924831	AB2-136 C	1.75	Adder	2.06
924832	AB2-136 E	1.86	Adder	2.19
924971	AB2-153 C	0.6	Adder	0.71
924972	AB2-153 E	0.97	Adder	1.14
925151	AB2-172 C	1.35	Adder	1.59
925152	AB2-172 E	2.21	Adder	2.6
925254	AB2-179 E	1.05	Adder	1.24
925261	AB2-180 C	0.96	Adder	1.13
925262	AB2-180 E	0.41	Adder	0.48
925391	AC1-010 C	-0.39	Adder	-0.46
926131	AC1-091 C	0.42	Adder	0.49
926132	AC1-091 E	0.7	Adder	0.82
926141	AC1-092 C	0.42	Adder	0.49
926142	AC1-092 E	0.7	Adder	0.82
926151	AC1-093 C	0.4	Adder	0.47
926152	AC1-093 E	0.66	Adder	0.78
926161	AC1-094 C	0.34	Adder	0.4
926162	AC1-094 E	0.56	Adder	0.66
927031	AC1-190 C	2.49	Adder	2.93
927032	AC1-190 E	1.07	Adder	1.26
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.22	Adder	0.26
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.14	Adder	0.16
930201	AB1-056 C	4.23	Adder	4.98
930202	AB1-056 E	12.03	Adder	14.15
930722	AB1-116 E	-0.04	Adder	-0.05
931261	AB1-176 C	0.12	Adder	0.14
931262	AB1-176 E	0.19	Adder	0.22
932161	AC2-023 C	1.82	Adder	2.14
932162	AC2-023 E	1.33	Adder	1.56
933631	AC2-185 C	0.86	Adder	1.01
933632	AC2-185 E	1.4	Adder	1.65
933641	AC2-186 C	1.23	Adder	1.45
933642	AC2-186 E	2.01	Adder	2.36
934661	AD1-097 1	3.48	80 50	3.48
934671	AD1-097 2	3.48	80 50	3.48
934681	AD1-097 3	3.49	80 50	3.49
934691	AD1-097 4	2.07	80 50	2.07
936452	AD2-059 E	0.09	Adder	0.11
936611	AD2-076 C O1	1.45	Adder	1.71
936612	AD2-076 E O1	2.37	Adder	2.79
938423	AE1-061 BAT	0.36	Adder	0.42
938651	AE1-087 C	1.14	Adder	1.34
938652	AE1-087 E	0.29	Adder	0.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938814	AE1-107 C	2.71	Adder	3.19
938815	AE1-107 E	1.94	Adder	2.28
938873	AE1-115 BAT	1.63	Adder	1.92
938895	AE1-117 C	3.16	Adder	3.72
938896	AE1-117 E	8.43	Adder	9.92
939151	AE1-145	1.35	Adder	1.59
939303	AE1-161 BAT	3.49	Adder	4.11
939821	AE1-218 C O1	-0.05	Adder	-0.06
941021	AE2-093 C	1.26	Adder	1.48
941022	AE2-093 E	2.05	Adder	2.41
941181	AE2-112 C	0.5	Adder	0.59
941182	AE2-112 E	0.82	Adder	0.96
942441	AE2-257 C	2.17	Adder	2.55
942442	AE2-257 E	5.73	Adder	6.74
943361	AF1-007 C	0.12	Adder	0.14
943362	AF1-007 E	0.35	Adder	0.41
943441	AF1-015 C	0.47	Adder	0.55
943442	AF1-015 E	0.65	Adder	0.76
943651	AF1-036 C	0.66	Adder	0.78
943652	AF1-036 E	0.91	Adder	1.07
945661	AF1-231 C	0.51	Adder	0.6
945662	AF1-231 E	0.77	Adder	0.91
945791	AF1-244 (Withdrawn : 06/07/2021)	0.54	Adder	0.64
945931	AF1-258	0.22	Adder	0.26
945941	AF1-259	0.06	Adder	0.07
945991	AF1-264	-0.08	Adder	-0.09
957263	AF2-020 BAT	1.32	Adder	1.55
957293	AF2-023 BAT	3.46	Adder	4.07
957303	AF2-024 BAT	2.56	Adder	3.01
957611	AF2-055 C	2.37	Adder	2.79
957612	AF2-055 E	1.01	Adder	1.19
957661	AF2-060	0.61	Adder	0.72
957671	AF2-061 O1	2.71	Adder	3.19
959021	AF2-193 C	7.81	Adder	9.19
959022	AF2-193 E	21.06	Adder	24.78
959031	AF2-194 C	7.81	Adder	9.19
959032	AF2-194 E	21.06	Adder	24.78
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.38	Adder	1.62
959161	AF2-207 C O1	1.37	Adder	1.61
959162	AF2-207 E O1	2.05	Adder	2.41
959581	AF2-249 C	0.04	Adder	0.05
959582	AF2-249 E	0.16	Adder	0.19
959591	AF2-250 C	0.07	Adder	0.08
959592	AF2-250 E	0.06	Adder	0.07
960221	AF2-313 C	0.98	Adder	1.15
960222	AF2-313 E	0.56	Adder	0.66
960341	AF2-325 C	0.3	Adder	0.35
960342	AF2-325 E	0.41	Adder	0.48
960671	AF2-358 C O1	4.2	Adder	4.94
960672	AF2-358 E O1	2.8	Adder	3.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960871	AF2-378 C	0.08	Adder	0.09
960872	AF2-378 E	0.11	Adder	0.13
960881	AF2-379 C	0.11	Adder	0.13
960882	AF2-379 E	0.15	Adder	0.18
960941	AF2-385 C	3.24	Adder	3.81
960942	AF2-385 E	1.84	Adder	2.16
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	7.03	Adder	8.27
962161	AG1-061 C O1	4.47	Adder	5.26
962162	AG1-061 E O1	2.98	Adder	3.51
962261	AG1-072	3.8	Adder	4.47
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.11	Adder	0.13
962381	AG1-087 C O1	7.56	Adder	8.89
962382	AG1-087 E O1	20.39	Adder	23.99
963001	AG1-149 (Withdrawn : 06/07/2021)	0.2	Adder	0.24
963011	AG1-150	2.71	Adder	3.19
964003	AG1-254 BAT	1.53	Adder	1.8
964013	AG1-255 BAT	2.15	Adder	2.53
964083	AG1-263 BAT	1.52	Adder	1.79
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06
964962	AG1-360 E	0.59	Adder	0.69
965321	AG1-397 C	0.28	Adder	0.33
965322	AG1-397 E	0.39	Adder	0.46
965611	AG1-429 C O1	2.39	Adder	2.81
965612	AG1-429 E O1	1.59	Adder	1.87
965821	AG1-450	1.75	Adder	2.06
965921	AG1-461 C O1	1.3	Adder	1.53
965922	AG1-461 E O1	0.7	Adder	0.82
965951	AG1-464 C O1	1.3	Adder	1.53
965952	AG1-464 E O1	1.94	Adder	2.28
966281	AG1-497 C O1	4.86	Adder	5.72
966282	AG1-497 E O1	2.08	Adder	2.45
966601	AG1-529 C	3.14	Adder	3.69
966602	AG1-529 E	1.68	Adder	1.98
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.0286	Confirmed LTF	0.0286
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.008	Confirmed LTF	0.008
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.018	Confirmed LTF	0.018
LTFEXP_CBM-S1	LTFEXP_CBM-S1->LTFIMP_CBM-S1	0.0026	LTF/CBM	0.0026
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	0.4933	LTF/CBM	0.4933
LTFEXP_CBM-W2	LTFEXP_CBM-W2->LTFIMP_CBM-W2	0.012	LTF/CBM	0.012
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.0434	Confirmed LTF	0.0434
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	2.7818	LTF/CMTX NF	2.7818

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0058	Confirmed LTF	0.0058
LTFEXP_LAGN	LTFEXP_LAGN->LTFIMP_LAGN	0.0158	Confirmed LTF	0.0158
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.0054	Confirmed LTF	0.0054
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.9023	Confirmed LTF	0.9023
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	15.6668	LTF/CMTX NF	15.6668
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.0109	Confirmed LTF	0.0109
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.006	Confirmed LTF	0.006
LTFEXP_TVA	LTFEXP_TVA->LTFIMP_TVA	0.0149	Confirmed LTF	0.0149

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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
182483054	213559	DELCOTAP	PECO	228401	MCKLTON	AE	1	PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	breaker	725.0	125.52	126.63	AC	8.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
213400	COVANTA DELA	8.81	80 50	8.81
213888	PHLISCT1	10.72	80 50	10.72
213889	PHLISCT2	10.72	80 50	10.72
213890	PHLISCT3	10.77	80 50	10.77
213893	PHLISST1	15.8	80 50	15.8
219137	THOSOLAR C (Deactivation : 01/06/2015)	-0.05	Adder	-0.06
219727	Z1-082 BAT	0.07	Adder	0.08
227881	GRENWCHG	-0.15	Adder	-0.18
228343	QUINTN#1 (Deactivation : 26/04/2020)	-0.11	Adder	-0.13
231505	HR4	8.87	80 50	8.87
231900	EM5	21.53	80 50	21.53
231903	GEN4	0.93	Adder	1.09
231904	DC1 NUG	2.4	Adder	2.82
231905	DC2 NUG	2.4	Adder	2.82
231909	HR2	4.2	80 50	4.2
232405	W1-003 E	0.84	Adder	0.99
232407	W1-004 E	0.84	Adder	0.99
232409	W1-005 E	0.84	Adder	0.99
232411	W1-006 E	0.84	Adder	0.99
232412	X1-032 E	0.27	Adder	0.32
232418	X3-008 E	0.88	Adder	1.04
232423	X3-066 E	0.22	Adder	0.26
232425	Y1-079 E	0.47	Adder	0.55
232427	Y1-080 E	0.15	Adder	0.18
232429	Y3-058 E	0.42	Adder	0.49
232433	Z2-076 E	0.13	Adder	0.15
232435	Z2-077 E	0.13	Adder	0.15
232851	DUP-SFR1	0.66	Adder	0.78
233916	AB1-141 E	0.49	Adder	0.58
233919	AB1-142 E	0.49	Adder	0.58
233931	AB2-179 C	3.22	Adder	3.79
917082	CHERRYDALE E	0.83	Adder	0.98
918835	AA1-102 E	6.3	Adder	7.41
923921	AB2-032 C	1.06	Adder	1.25
923922	AB2-032 E	0.5	Adder	0.59
923951	AB2-036 C	2.66	Adder	3.13
923952	AB2-036 E	4.36	Adder	5.13
923961	AB2-037 C	5.82	Adder	6.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923962	AB2-037 E	9.51	Adder	11.19
924801	AB2-133 C O1	1.91	Adder	2.25
924802	AB2-133 E O1	2.42	Adder	2.85
924821	AB2-135 C	2.23	Adder	2.62
924822	AB2-135 E	2.55	Adder	3.0
924831	AB2-136 C	1.74	Adder	2.05
924832	AB2-136 E	1.85	Adder	2.18
924971	AB2-153 C	0.59	Adder	0.69
924972	AB2-153 E	0.97	Adder	1.14
925151	AB2-172 C	1.35	Adder	1.59
925152	AB2-172 E	2.2	Adder	2.59
925254	AB2-179 E	1.05	Adder	1.24
925261	AB2-180 C	0.95	Adder	1.12
925262	AB2-180 E	0.41	Adder	0.48
925391	AC1-010 C	-0.39	Adder	-0.46
927031	AC1-190 C	2.48	Adder	2.92
927032	AC1-190 E	1.06	Adder	1.25
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.22	Adder	0.26
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.14	Adder	0.16
930201	AB1-056 C	4.2	Adder	4.94
930202	AB1-056 E	11.97	Adder	14.08
931261	AB1-176 C	0.12	Adder	0.14
931262	AB1-176 E	0.19	Adder	0.22
932161	AC2-023 C	1.81	Adder	2.13
932162	AC2-023 E	1.32	Adder	1.55
933641	AC2-186 C	1.23	Adder	1.45
933642	AC2-186 E	2.0	Adder	2.35
934661	AD1-097 1	3.47	80 50	3.47
934671	AD1-097 2	3.47	80 50	3.47
934681	AD1-097 3	3.49	80 50	3.49
934691	AD1-097 4	2.07	80 50	2.07
936452	AD2-059 E	0.09	Adder	0.11
936611	AD2-076 C O1	1.45	Adder	1.71
936612	AD2-076 E O1	2.36	Adder	2.78
938651	AE1-087 C	1.13	Adder	1.33
938652	AE1-087 E	0.28	Adder	0.33
938814	AE1-107 C	2.7	Adder	3.18
938815	AE1-107 E	1.93	Adder	2.27
938873	AE1-115 BAT	1.63	Adder	1.92
938895	AE1-117 C	3.15	Adder	3.71
938896	AE1-117 E	8.39	Adder	9.87
939151	AE1-145	1.35	Adder	1.59
939303	AE1-161 BAT	3.51	Adder	4.13
939821	AE1-218 C O1	-0.05	Adder	-0.06
941021	AE2-093 C	1.25	Adder	1.47
941022	AE2-093 E	2.04	Adder	2.4
941181	AE2-112 C	0.5	Adder	0.59
941182	AE2-112 E	0.82	Adder	0.96
942441	AE2-257 C	2.16	Adder	2.54
942442	AE2-257 E	5.7	Adder	6.71
943361	AF1-007 C	0.12	Adder	0.14

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943362	AF1-007 E	0.35	Adder	0.41
943441	AF1-015 C	0.47	Adder	0.55
943442	AF1-015 E	0.65	Adder	0.76
943651	AF1-036 C	0.65	Adder	0.76
943652	AF1-036 E	0.9	Adder	1.06
945661	AF1-231 C	0.51	Adder	0.6
945662	AF1-231 E	0.77	Adder	0.91
945791	AF1-244 (Withdrawn : 06/07/2021)	0.54	Adder	0.64
945931	AF1-258	0.22	Adder	0.26
945941	AF1-259	0.06	Adder	0.07
945991	AF1-264	-0.08	Adder	-0.09
957293	AF2-023 BAT	3.47	Adder	4.08
957303	AF2-024 BAT	2.57	Adder	3.02
957611	AF2-055 C	2.36	Adder	2.78
957612	AF2-055 E	1.01	Adder	1.19
957661	AF2-060	0.61	Adder	0.72
957671	AF2-061 O1	2.69	Adder	3.16
959021	AF2-193 C	7.77	Adder	9.14
959022	AF2-193 E	20.96	Adder	24.66
959031	AF2-194 C	7.77	Adder	9.14
959032	AF2-194 E	20.96	Adder	24.66
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.38	Adder	1.62
959161	AF2-207 C O1	1.36	Adder	1.6
959162	AF2-207 E O1	2.04	Adder	2.4
959581	AF2-249 C	0.04	Adder	0.05
959582	AF2-249 E	0.16	Adder	0.19
959591	AF2-250 C	0.07	Adder	0.08
959592	AF2-250 E	0.06	Adder	0.07
960221	AF2-313 C	0.98	Adder	1.15
960222	AF2-313 E	0.55	Adder	0.65
960341	AF2-325 C	0.3	Adder	0.35
960342	AF2-325 E	0.41	Adder	0.48
960671	AF2-358 C O1	4.18	Adder	4.92
960672	AF2-358 E O1	2.79	Adder	3.28
960871	AF2-378 C	0.08	Adder	0.09
960872	AF2-378 E	0.11	Adder	0.13
960881	AF2-379 C	0.11	Adder	0.13
960882	AF2-379 E	0.15	Adder	0.18
960941	AF2-385 C	3.22	Adder	3.79
960942	AF2-385 E	1.84	Adder	2.16
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	6.99	Adder	8.22
962161	AG1-061 C O1	4.45	Adder	5.24
962162	AG1-061 E O1	2.97	Adder	3.49
962261	AG1-072	3.78	Adder	4.45
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.11	Adder	0.13
962381	AG1-087 C O1	7.52	Adder	8.85
962382	AG1-087 E O1	20.28	Adder	23.86
963001	AG1-149 (Withdrawn : 06/07/2021)	0.2	Adder	0.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963011	AG1-150	2.69	Adder	3.16
964003	AG1-254 BAT	1.54	Adder	1.81
964013	AG1-255 BAT	2.16	Adder	2.54
964083	AG1-263 BAT	1.52	Adder	1.79
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06
964962	AG1-360 E	0.59	Adder	0.69
965321	AG1-397 C	0.28	Adder	0.33
965322	AG1-397 E	0.39	Adder	0.46
965611	AG1-429 C O1	2.37	Adder	2.79
965612	AG1-429 E O1	1.58	Adder	1.86
965821	AG1-450	1.74	Adder	2.05
965921	AG1-461 C O1	1.29	Adder	1.52
965922	AG1-461 E O1	0.7	Adder	0.82
965951	AG1-464 C O1	1.29	Adder	1.52
965952	AG1-464 E O1	1.93	Adder	2.27
966601	AG1-529 C	3.13	Adder	3.68
966602	AG1-529 E	1.67	Adder	1.96
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.0108	Confirmed LTF	0.0108
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0472	Confirmed LTF	0.0472
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.086	Confirmed LTF	0.086
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.01	Confirmed LTF	0.01
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	0.0846	LTF/CBM	0.0846
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0096	Confirmed LTF	0.0096
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.0633	Confirmed LTF	0.0633
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.0167	Confirmed LTF	0.0167
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	2.8229	LTF/CMTX NF	2.8229
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0272	Confirmed LTF	0.0272
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.0054	Confirmed LTF	0.0054
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.9239	Confirmed LTF	0.9239
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	15.9303	LTF/CMTX NF	15.9303
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.112	Confirmed LTF	0.112
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0277	Confirmed LTF	0.0277

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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
182848146	213973	TRAINER2	PECO	213559	DELCOTAP	PECO	1	PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	breaker	841.0	101.72	103.15	AC	8.77

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
213888	PHLISCT1	10.73	80 50	10.73
213889	PHLISCT2	10.73	80 50	10.73
213890	PHLISCT3	10.78	80 50	10.78
213893	PHLISST1	15.82	80 50	15.82
219137	THOSOLAR C (Deactivation : 01/06/2015)	-0.05	Adder	-0.06
219727	Z1-082 BAT	0.07	Adder	0.08
227881	GRENWCHG	-0.15	Adder	-0.18
228343	QUINTN#1 (Deactivation : 26/04/2020)	-0.11	Adder	-0.13
231505	HR4	8.88	80 50	8.88
231900	EM5	21.56	80 50	21.56
231903	GEN4	0.93	Adder	1.09
231904	DC1 NUG	2.41	Adder	2.84
231905	DC2 NUG	2.41	Adder	2.84
231909	HR2	4.21	80 50	4.21
231916	EM3	2.9	80 50	2.9
232405	W1-003 E	0.84	Adder	0.99
232407	W1-004 E	0.84	Adder	0.99
232409	W1-005 E	0.84	Adder	0.99
232411	W1-006 E	0.84	Adder	0.99
232412	X1-032 E	0.27	Adder	0.32
232418	X3-008 E	0.88	Adder	1.04
232423	X3-066 E	0.23	Adder	0.27
232425	Y1-079 E	0.47	Adder	0.55
232427	Y1-080 E	0.15	Adder	0.18
232429	Y3-058 E	0.42	Adder	0.49
232433	Z2-076 E	0.13	Adder	0.15
232435	Z2-077 E	0.13	Adder	0.15
232851	DUP-SFR1	0.66	Adder	0.78
232922	MR3 (Deactivation : 01/06/2021)	5.91	Adder	6.95
233916	AB1-141 E	0.49	Adder	0.58
233919	AB1-142 E	0.49	Adder	0.58
233931	AB2-179 C	3.23	Adder	3.8
917082	CHERRYDALE E	0.84	Adder	0.99
918835	AA1-102 E	6.33	Adder	7.45
919831	AA2-069	26.11	Adder	30.72
923921	AB2-032 C	1.07	Adder	1.26
923922	AB2-032 E	0.5	Adder	0.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923951	AB2-036 C	2.68	Adder	3.15
923952	AB2-036 E	4.38	Adder	5.15
923961	AB2-037 C	5.85	Adder	6.88
923962	AB2-037 E	9.55	Adder	11.24
924801	AB2-133 C O1	1.92	Adder	2.26
924802	AB2-133 E O1	2.43	Adder	2.86
924821	AB2-135 C	2.24	Adder	2.64
924822	AB2-135 E	2.56	Adder	3.01
924831	AB2-136 C	1.75	Adder	2.06
924832	AB2-136 E	1.86	Adder	2.19
924971	AB2-153 C	0.6	Adder	0.71
924972	AB2-153 E	0.97	Adder	1.14
925151	AB2-172 C	1.35	Adder	1.59
925152	AB2-172 E	2.21	Adder	2.6
925254	AB2-179 E	1.05	Adder	1.24
925261	AB2-180 C	0.96	Adder	1.13
925262	AB2-180 E	0.41	Adder	0.48
925391	AC1-010 C	-0.39	Adder	-0.46
926131	AC1-091 C	0.42	Adder	0.49
926132	AC1-091 E	0.7	Adder	0.82
926141	AC1-092 C	0.42	Adder	0.49
926142	AC1-092 E	0.7	Adder	0.82
926151	AC1-093 C	0.4	Adder	0.47
926152	AC1-093 E	0.66	Adder	0.78
926161	AC1-094 C	0.34	Adder	0.4
926162	AC1-094 E	0.56	Adder	0.66
927031	AC1-190 C	2.49	Adder	2.93
927032	AC1-190 E	1.07	Adder	1.26
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.22	Adder	0.26
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.14	Adder	0.16
930201	AB1-056 C	4.23	Adder	4.98
930202	AB1-056 E	12.03	Adder	14.15
930722	AB1-116 E	-0.04	Adder	-0.05
931261	AB1-176 C	0.12	Adder	0.14
931262	AB1-176 E	0.19	Adder	0.22
932161	AC2-023 C	1.82	Adder	2.14
932162	AC2-023 E	1.33	Adder	1.56
933631	AC2-185 C	0.86	Adder	1.01
933632	AC2-185 E	1.4	Adder	1.65
933641	AC2-186 C	1.23	Adder	1.45
933642	AC2-186 E	2.01	Adder	2.36
934661	AD1-097 1	3.48	80 50	3.48
934671	AD1-097 2	3.48	80 50	3.48
934681	AD1-097 3	3.49	80 50	3.49
934691	AD1-097 4	2.07	80 50	2.07
936452	AD2-059 E	0.09	Adder	0.11
936611	AD2-076 C O1	1.45	Adder	1.71
936612	AD2-076 E O1	2.37	Adder	2.79
938423	AE1-061 BAT	0.36	Adder	0.42
938651	AE1-087 C	1.14	Adder	1.34
938652	AE1-087 E	0.29	Adder	0.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938814	AE1-107 C	2.71	Adder	3.19
938815	AE1-107 E	1.94	Adder	2.28
938873	AE1-115 BAT	1.63	Adder	1.92
938895	AE1-117 C	3.16	Adder	3.72
938896	AE1-117 E	8.43	Adder	9.92
939151	AE1-145	1.35	Adder	1.59
939303	AE1-161 BAT	3.49	Adder	4.11
939821	AE1-218 C O1	-0.05	Adder	-0.06
941021	AE2-093 C	1.26	Adder	1.48
941022	AE2-093 E	2.05	Adder	2.41
941181	AE2-112 C	0.5	Adder	0.59
941182	AE2-112 E	0.82	Adder	0.96
942441	AE2-257 C	2.17	Adder	2.55
942442	AE2-257 E	5.73	Adder	6.74
943361	AF1-007 C	0.12	Adder	0.14
943362	AF1-007 E	0.35	Adder	0.41
943441	AF1-015 C	0.47	Adder	0.55
943442	AF1-015 E	0.65	Adder	0.76
943651	AF1-036 C	0.66	Adder	0.78
943652	AF1-036 E	0.91	Adder	1.07
945661	AF1-231 C	0.51	Adder	0.6
945662	AF1-231 E	0.77	Adder	0.91
945791	AF1-244 (Withdrawn : 06/07/2021)	0.54	Adder	0.64
945931	AF1-258	0.22	Adder	0.26
945941	AF1-259	0.06	Adder	0.07
945991	AF1-264	-0.08	Adder	-0.09
957263	AF2-020 BAT	1.32	Adder	1.55
957293	AF2-023 BAT	3.46	Adder	4.07
957303	AF2-024 BAT	2.56	Adder	3.01
957611	AF2-055 C	2.37	Adder	2.79
957612	AF2-055 E	1.01	Adder	1.19
957661	AF2-060	0.61	Adder	0.72
957671	AF2-061 O1	2.71	Adder	3.19
959021	AF2-193 C	7.81	Adder	9.19
959022	AF2-193 E	21.06	Adder	24.78
959031	AF2-194 C	7.81	Adder	9.19
959032	AF2-194 E	21.06	Adder	24.78
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.38	Adder	1.62
959161	AF2-207 C O1	1.37	Adder	1.61
959162	AF2-207 E O1	2.05	Adder	2.41
959581	AF2-249 C	0.04	Adder	0.05
959582	AF2-249 E	0.16	Adder	0.19
959591	AF2-250 C	0.07	Adder	0.08
959592	AF2-250 E	0.06	Adder	0.07
960221	AF2-313 C	0.98	Adder	1.15
960222	AF2-313 E	0.56	Adder	0.66
960341	AF2-325 C	0.3	Adder	0.35
960342	AF2-325 E	0.41	Adder	0.48
960671	AF2-358 C O1	4.2	Adder	4.94
960672	AF2-358 E O1	2.8	Adder	3.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960871	AF2-378 C	0.08	Adder	0.09
960872	AF2-378 E	0.11	Adder	0.13
960881	AF2-379 C	0.11	Adder	0.13
960882	AF2-379 E	0.15	Adder	0.18
960941	AF2-385 C	3.24	Adder	3.81
960942	AF2-385 E	1.84	Adder	2.16
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	7.03	Adder	8.27
962161	AG1-061 C O1	4.47	Adder	5.26
962162	AG1-061 E O1	2.98	Adder	3.51
962261	AG1-072	3.8	Adder	4.47
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.11	Adder	0.13
962381	AG1-087 C O1	7.56	Adder	8.89
962382	AG1-087 E O1	20.39	Adder	23.99
963001	AG1-149 (Withdrawn : 06/07/2021)	0.2	Adder	0.24
963011	AG1-150	2.71	Adder	3.19
964003	AG1-254 BAT	1.53	Adder	1.8
964013	AG1-255 BAT	2.15	Adder	2.53
964083	AG1-263 BAT	1.52	Adder	1.79
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06
964962	AG1-360 E	0.59	Adder	0.69
965321	AG1-397 C	0.28	Adder	0.33
965322	AG1-397 E	0.39	Adder	0.46
965611	AG1-429 C O1	2.39	Adder	2.81
965612	AG1-429 E O1	1.59	Adder	1.87
965821	AG1-450	1.75	Adder	2.06
965921	AG1-461 C O1	1.3	Adder	1.53
965922	AG1-461 E O1	0.7	Adder	0.82
965951	AG1-464 C O1	1.3	Adder	1.53
965952	AG1-464 E O1	1.94	Adder	2.28
966281	AG1-497 C O1	4.86	Adder	5.72
966282	AG1-497 E O1	2.08	Adder	2.45
966601	AG1-529 C	3.14	Adder	3.69
966602	AG1-529 E	1.68	Adder	1.98
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.0286	Confirmed LTF	0.0286
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.008	Confirmed LTF	0.008
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.018	Confirmed LTF	0.018
LTFEXP_CBM-S1	LTFEXP_CBM-S1->LTFIMP_CBM-S1	0.0026	LTF/CBM	0.0026
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	0.4933	LTF/CBM	0.4933
LTFEXP_CBM-W2	LTFEXP_CBM-W2->LTFIMP_CBM-W2	0.012	LTF/CBM	0.012
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.0434	Confirmed LTF	0.0434
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	2.7818	LTF/CMTX NF	2.7818

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0058	Confirmed LTF	0.0058
LTFEXP_LAGN	LTFEXP_LAGN->LTFIMP_LAGN	0.0158	Confirmed LTF	0.0158
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.0054	Confirmed LTF	0.0054
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.9023	Confirmed LTF	0.9023
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	15.6668	LTF/CMTX NF	15.6668
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.0109	Confirmed LTF	0.0109
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.006	Confirmed LTF	0.006
LTFEXP_TVA	LTFEXP_TVA->LTFIMP_TVA	0.0149	Confirmed LTF	0.0149

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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
167808216	231000	CLAY_230	PECO	214235	LINWOOD84	DP&L	1	PECO_P1-2_220-85/* \$ DELCO \$ PECO_P1-2_220-85 \$ L	single	804.0	112.38	113.39	AC	10.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
231131	BLOOM ENRGY	0.74	80 50	0.74
231505	HR4	15.04	80 50	15.04
231900	EM5	36.53	80 50	36.53
231901	EM4	10.27	80 50	10.27
231902	DC CT7	1.72	80 50	1.72
231903	GEN4	2.02	80 50	2.02
231904	DC1 NUG	5.23	80 50	5.23
231905	DC2 NUG	5.23	80 50	5.23
231906	DC3 NUG	2.15	80 50	2.15
231907	DC10	0.54	80 50	0.54
231908	HR1	7.38	80 50	7.38
231909	HR2	7.52	80 50	7.52
231910	HR3	7.38	80 50	7.38
231915	DC CT6	1.66	80 50	1.66
231916	EM3	5.17	80 50	5.17
231917	EM10	0.85	80 50	0.85
231918	WEST 1	0.9	80 50	0.9
231919	CHRIST1	1.23	80 50	1.23
231920	CHRIST2	1.23	80 50	1.23
232416	X2-083	0.11	80 50	0.11
232417	X3-008 C	0.2	80 50	0.2
232422	X3-066 C	0.06	80 50	0.06
232424	Y1-079 C	0.1	80 50	0.1
232426	Y1-080 FULL	0.03	80 50	0.03
232902	EASTMUNI	1.87	80 50	1.87
232907	VN8	3.94	80 50	3.94
232922	MR3 (Deactivation : 01/06/2021)	11.76	Adder	13.84
233915	AB1-141 C	0.38	80 50	0.38
233918	AB1-142 C	0.38	80 50	0.38
233931	AB2-179 C	6.82	80 50	6.82
919831	AA2-069	51.99	Adder	61.16
923921	AB2-032 C	2.31	80 50	2.31
923951	AB2-036 C	5.84	80 50	5.84
923961	AB2-037 C	12.85	80 50	12.85
924801	AB2-133 C O1	4.15	80 50	4.15
924821	AB2-135 C	4.9	80 50	4.9
924831	AB2-136 C	3.91	80 50	3.91
924971	AB2-153 C	1.29	80 50	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925151	AB2-172 C	3.01	80 50	3.01
925261	AB2-180 C	1.83	Adder	2.15
926131	AC1-091 C	0.85	Adder	1.0
926141	AC1-092 C	0.85	Adder	1.0
926151	AC1-093 C	0.8	Adder	0.94
926161	AC1-094 C	0.68	Adder	0.8
927031	AC1-190 C	5.54	80 50	5.54
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.42	Adder	0.49
930201	AB1-056 C	8.15	Adder	9.59
931261	AB1-176 C	0.25	80 50	0.25
932161	AC2-023 C	3.47	Adder	4.08
933631	AC2-185 C	1.72	Adder	2.02
933641	AC2-186 C	2.38	Adder	2.8
934661	AD1-097 1	-2.33	Adder	-2.74
934671	AD1-097 2	-2.33	Adder	-2.74
934681	AD1-097 3	-2.34	Adder	-2.75
934691	AD1-097 4	-1.38	Adder	-1.62
936611	AD2-076 C O1	3.15	80 50	3.15
938651	AE1-087 C	2.54	80 50	2.54
938814	AE1-107 C	5.73	80 50	5.73
938896	AE1-117 E	16.26	Adder	19.13
939151	AE1-145	2.59	Adder	3.05
941021	AE2-093 C	2.76	80 50	2.76
941181	AE2-112 C	1.09	80 50	1.09
942441	AE2-257 C	4.19	Adder	4.93
943361	AF1-007 C	0.24	Adder	0.28
943441	AF1-015 C	1.04	80 50	1.04
943651	AF1-036 C	1.42	80 50	1.42
945661	AF1-231 C	0.99	Adder	1.16
945791	AF1-244 (Withdrawn : 06/07/2021)	1.04	Adder	1.22
945931	AF1-258	0.42	Adder	0.49
945941	AF1-259	0.13	80 50	0.13
957611	AF2-055 C	4.54	Adder	5.34
957661	AF2-060	1.17	Adder	1.38
957671	AF2-061 O1	5.18	Adder	6.09
959021	AF2-193 C	15.07	Adder	17.73
959031	AF2-194 C	15.07	Adder	17.73
959051	AF2-196 C	1.14	Adder	1.34
959161	AF2-207 C O1	2.62	Adder	3.08
959581	AF2-249 C	0.08	Adder	0.09
959591	AF2-250 C	0.14	Adder	0.16
960221	AF2-313 C	2.13	80 50	2.13
960341	AF2-325 C	0.66	80 50	0.66
960671	AF2-358 C O1	9.39	80 50	9.39
960871	AF2-378 C	0.18	80 50	0.18
960881	AF2-379 C	0.21	Adder	0.25
960941	AF2-385 C	6.21	Adder	7.31
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	15.71	80 50	15.71
962161	AG1-061 C O1	8.55	Adder	10.06
962261	AG1-072	8.32	80 50	8.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962381	AG1-087 C O1	14.7	Adder	17.29
963001	AG1-149 (Withdrawn : 06/07/2021)	0.39	Adder	0.46
963011	AG1-150	5.18	Adder	6.09
964551	AG1-318 C	0.04	Adder	0.05
965321	AG1-397 C	0.54	Adder	0.64
965611	AG1-429 C O1	4.57	Adder	5.38
965821	AG1-450	3.33	Adder	3.92
965921	AG1-461 C O1	2.5	Adder	2.94
965951	AG1-464 C O1	2.51	Adder	2.95
966281	AG1-497 C O1	9.68	Adder	11.39
966601	AG1-529 C	6.09	Adder	7.16
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.0869	Confirmed LTF	0.0869
LTFEXP_CBM-S1	LTFEXP_CBM-S1->LTFIMP_CBM-S1	0.0451	LTF/CBM	0.0451
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	1.7821	LTF/CBM	1.7821
LTFEXP_CBM-W1	LTFEXP_CBM-W1->LTFIMP_CBM-W1	1.1982	LTF/CBM	1.1982
LTFEXP_CBM-W2	LTFEXP_CBM-W2->LTFIMP_CBM-W2	0.9985	LTF/CBM	0.9985
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.1309	Confirmed LTF	0.1309
LTFEXP_LAGN	LTFEXP_LAGN->LTFIMP_LAGN	0.2124	Confirmed LTF	0.2124
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.0069	Confirmed LTF	0.0069
LTFEXP_LGEE	LTFEXP_LGEE->LTFIMP_LGEE	0.0611	Confirmed LTF	0.0611
LTFEXP_MEC	LTFEXP_MEC->LTFIMP_MEC	0.1568	Confirmed LTF	0.1568
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.9716	Confirmed LTF	0.9716
LTFEXP_SIGE	LTFEXP_SIGE->LTFIMP_SIGE	0.0103	Confirmed LTF	0.0103
LTFEXP_TVA	LTFEXP_TVA->LTFIMP_TVA	0.1729	Confirmed LTF	0.1729
LTFEXP_WEC	LTFEXP_WEC->LTFIMP_WEC	0.0289	Confirmed LTF	0.0289

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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
167808227	231001	EDGE MR 5	PECO	214236	LINWOOD85	DP&L	1	PECO_P1-2_220-84/* \$ DELCO \$ PECO_P1-2_220-84 \$ L	single	804.0	110.51	111.49	AC	9.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
231131	BLOOM ENRGY	0.71	80 50	0.71
231505	HR4	14.85	80 50	14.85
231900	EM5	36.07	80 50	36.07
231901	EM4	9.64	80 50	9.64
231902	DC CT7	1.64	80 50	1.64
231903	GEN4	1.93	80 50	1.93
231904	DC1 NUG	5.0	80 50	5.0
231905	DC2 NUG	5.0	80 50	5.0
231906	DC3 NUG	2.05	80 50	2.05
231907	DC10	0.51	80 50	0.51
231908	HR1	6.93	80 50	6.93
231909	HR2	6.78	80 50	6.78
231910	HR3	6.93	80 50	6.93
231915	DC CT6	1.58	80 50	1.58
231916	EM3	4.66	80 50	4.66
231917	EM10	0.77	80 50	0.77
231918	WEST 1	0.83	80 50	0.83
231919	CHRIST1	1.16	80 50	1.16
231920	CHRIST2	1.16	80 50	1.16
232416	X2-083	0.11	80 50	0.11
232417	X3-008 C	0.19	80 50	0.19
232422	X3-066 C	0.06	80 50	0.06
232424	Y1-079 C	0.1	80 50	0.1
232426	Y1-080 FULL	0.03	80 50	0.03
232902	EASTMUNI	1.8	80 50	1.8
232907	VN8	3.81	80 50	3.81
232922	MR3 (Deactivation : 01/06/2021)	11.36	Adder	13.36
233915	AB1-141 C	0.36	80 50	0.36
233918	AB1-142 C	0.36	80 50	0.36
233931	AB2-179 C	6.53	80 50	6.53
919831	AA2-069	50.23	Adder	59.09
923921	AB2-032 C	2.22	80 50	2.22
923951	AB2-036 C	5.64	80 50	5.64
923961	AB2-037 C	12.43	80 50	12.43
924801	AB2-133 C O1	4.0	80 50	4.0
924821	AB2-135 C	4.72	80 50	4.72
924831	AB2-136 C	3.78	80 50	3.78
924971	AB2-153 C	1.24	80 50	1.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925151	AB2-172 C	2.91	80 50	2.91
925261	AB2-180 C	1.77	Adder	2.08
926131	AC1-091 C	0.82	Adder	0.96
926141	AC1-092 C	0.82	Adder	0.96
926151	AC1-093 C	0.78	Adder	0.92
926161	AC1-094 C	0.66	Adder	0.78
927031	AC1-190 C	5.36	80 50	5.36
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.4	Adder	0.47
930201	AB1-056 C	7.88	Adder	9.27
931261	AB1-176 C	0.24	80 50	0.24
932161	AC2-023 C	3.36	Adder	3.95
933631	AC2-185 C	1.66	Adder	1.95
933641	AC2-186 C	2.3	Adder	2.71
934661	AD1-097 1	-2.28	Adder	-2.68
934671	AD1-097 2	-2.28	Adder	-2.68
934681	AD1-097 3	-2.26	Adder	-2.66
934691	AD1-097 4	-1.34	Adder	-1.58
936611	AD2-076 C O1	3.04	80 50	3.04
938651	AE1-087 C	2.45	80 50	2.45
938814	AE1-107 C	5.48	80 50	5.48
938896	AE1-117 E	15.71	Adder	18.48
939151	AE1-145	2.5	Adder	2.94
941021	AE2-093 C	2.67	80 50	2.67
941181	AE2-112 C	1.05	80 50	1.05
942441	AE2-257 C	4.05	Adder	4.76
943361	AF1-007 C	0.23	Adder	0.27
943441	AF1-015 C	1.01	80 50	1.01
943651	AF1-036 C	1.37	80 50	1.37
945661	AF1-231 C	0.95	Adder	1.12
945791	AF1-244 (Withdrawn : 06/07/2021)	1.01	Adder	1.19
945931	AF1-258	0.4	Adder	0.47
945941	AF1-259	0.13	80 50	0.13
957611	AF2-055 C	4.39	Adder	5.16
957661	AF2-060	1.13	Adder	1.33
957671	AF2-061 O1	5.01	Adder	5.89
959021	AF2-193 C	14.56	Adder	17.13
959031	AF2-194 C	14.56	Adder	17.13
959051	AF2-196 C	1.1	Adder	1.29
959161	AF2-207 C O1	2.53	Adder	2.98
959581	AF2-249 C	0.08	Adder	0.09
959591	AF2-250 C	0.14	Adder	0.16
960221	AF2-313 C	2.06	80 50	2.06
960341	AF2-325 C	0.64	80 50	0.64
960671	AF2-358 C O1	9.08	80 50	9.08
960871	AF2-378 C	0.17	80 50	0.17
960881	AF2-379 C	0.21	Adder	0.25
960941	AF2-385 C	6.0	Adder	7.06
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	15.18	80 50	15.18
962161	AG1-061 C O1	8.26	Adder	9.72
962261	AG1-072	8.03	80 50	8.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962381	AG1-087 C O1	14.21	Adder	16.72
963001	AG1-149 (Withdrawn : 06/07/2021)	0.38	Adder	0.45
963011	AG1-150	5.01	Adder	5.89
964551	AG1-318 C	0.04	Adder	0.05
965321	AG1-397 C	0.52	Adder	0.61
965611	AG1-429 C O1	4.42	Adder	5.2
965821	AG1-450	3.21	Adder	3.78
965921	AG1-461 C O1	2.42	Adder	2.85
965951	AG1-464 C O1	2.42	Adder	2.85
966281	AG1-497 C O1	9.36	Adder	11.01
966601	AG1-529 C	5.89	Adder	6.93
LTFEXP_AA2-074	LTFEXP_AA2-074- >LTFIMP_AA2-074	0.0854	Confirmed LTF	0.0854
LTFEXP_CBM-S1	LTFEXP_CBM-S1- >LTFIMP_CBM-S1	0.0448	LTF/CBM	0.0448
LTFEXP_CBM-S2	LTFEXP_CBM-S2- >LTFIMP_CBM-S2	1.7543	LTF/CBM	1.7543
LTFEXP_CBM-W1	LTFEXP_CBM-W1- >LTFIMP_CBM-W1	1.2015	LTF/CBM	1.2015
LTFEXP_CBM-W2	LTFEXP_CBM-W2- >LTFIMP_CBM-W2	0.9928	LTF/CBM	0.9928
LTFEXP_CPLE	LTFEXP_CPLE- >LTFIMP_CPLE	0.1286	Confirmed LTF	0.1286
LTFEXP_LAGN	LTFEXP_LAGN- >LTFIMP_LAGN	0.2107	Confirmed LTF	0.2107
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019- >LTFIMP_LGE-0012019	0.0067	Confirmed LTF	0.0067
LTFEXP_LGEE	LTFEXP_LGEE- >LTFIMP_LGEE	0.061	Confirmed LTF	0.061
LTFEXP_MEC	LTFEXP_MEC- >LTFIMP_MEC	0.1565	Confirmed LTF	0.1565
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.9374	Confirmed LTF	0.9374
LTFEXP_SIGE	LTFEXP_SIGE- >LTFIMP_SIGE	0.0103	Confirmed LTF	0.0103
LTFEXP_TVA	LTFEXP_TVA- >LTFIMP_TVA	0.1714	Confirmed LTF	0.1714
LTFEXP_WEC	LTFEXP_WEC- >LTFIMP_WEC	0.0289	Confirmed LTF	0.0289

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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
167808247	231001	EDGE MR 5	PECO	231000	CLAY_230	PECO	1	PECO_P1-2_220-85/* \$ DELCO \$ PECO_P1-2_220-85 \$ L	single	804.0	111.31	112.21	AC	8.95

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
231131	BLOOM ENRGY	0.62	80 50	0.62
231505	HR4	15.02	80 50	15.02
231900	EM5	36.48	80 50	36.48
231901	EM4	7.71	80 50	7.71
231902	DC CT7	1.44	80 50	1.44
231903	GEN4	1.69	80 50	1.69
231904	DC1 NUG	4.37	80 50	4.37
231905	DC2 NUG	4.37	80 50	4.37
231906	DC3 NUG	1.8	80 50	1.8
231907	DC10	0.45	80 50	0.45
231908	HR1	5.54	80 50	5.54
231909	HR2	4.21	80 50	4.21
231910	HR3	5.54	80 50	5.54
231915	DC CT6	1.38	80 50	1.38
231916	EM3	2.9	80 50	2.9
231917	EM10	0.48	80 50	0.48
231918	WEST 1	0.6	80 50	0.6
231919	CHRIST1	0.94	80 50	0.94
231920	CHRIST2	0.93	80 50	0.93
232416	X2-083	0.09	80 50	0.09
232417	X3-008 C	0.18	80 50	0.18
232422	X3-066 C	0.06	80 50	0.06
232424	Y1-079 C	0.09	80 50	0.09
232426	Y1-080 FULL	0.03	80 50	0.03
232902	EASTMUNI	1.65	80 50	1.65
232907	VN8	3.51	80 50	3.51
232922	MR3 (Deactivation : 01/06/2021)	10.46	Adder	12.31
233915	AB1-141 C	0.33	80 50	0.33
233918	AB1-142 C	0.33	80 50	0.33
233931	AB2-179 C	5.79	80 50	5.79
919831	AA2-069	46.24	Adder	54.4
923921	AB2-032 C	2.01	80 50	2.01
923951	AB2-036 C	5.15	80 50	5.15
923961	AB2-037 C	11.5	80 50	11.5
924801	AB2-133 C O1	3.61	80 50	3.61
924821	AB2-135 C	4.27	80 50	4.27
924831	AB2-136 C	3.48	80 50	3.48
924971	AB2-153 C	1.13	80 50	1.13

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925151	AB2-172 C	2.68	80 50	2.68
925261	AB2-180 C	1.63	Adder	1.92
926131	AC1-091 C	0.75	Adder	0.88
926141	AC1-092 C	0.75	Adder	0.88
926151	AC1-093 C	0.71	Adder	0.84
926161	AC1-094 C	0.6	Adder	0.71
927031	AC1-190 C	4.93	80 50	4.93
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.37	Adder	0.44
930201	AB1-056 C	7.26	Adder	8.54
931261	AB1-176 C	0.22	80 50	0.22
932161	AC2-023 C	3.09	Adder	3.64
933631	AC2-185 C	1.53	Adder	1.8
933641	AC2-186 C	2.11	Adder	2.48
934661	AD1-097 1	-2.08	Adder	-2.45
934671	AD1-097 2	-2.08	Adder	-2.45
934681	AD1-097 3	-2.08	Adder	-2.45
934691	AD1-097 4	-1.23	Adder	-1.45
936611	AD2-076 C O1	2.75	80 50	2.75
938651	AE1-087 C	2.26	80 50	2.26
938814	AE1-107 C	4.79	80 50	4.79
938896	AE1-117 E	14.48	Adder	17.04
939151	AE1-145	2.31	Adder	2.72
941021	AE2-093 C	2.45	80 50	2.45
941181	AE2-112 C	0.96	80 50	0.96
942441	AE2-257 C	3.73	Adder	4.39
943361	AF1-007 C	0.21	Adder	0.25
943441	AF1-015 C	0.92	80 50	0.92
943651	AF1-036 C	1.24	80 50	1.24
945661	AF1-231 C	0.88	Adder	1.04
945791	AF1-244 (Withdrawn : 06/07/2021)	0.93	Adder	1.09
945931	AF1-258	0.37	Adder	0.44
945941	AF1-259	0.12	80 50	0.12
957611	AF2-055 C	4.04	Adder	4.75
957661	AF2-060	1.04	Adder	1.22
957671	AF2-061 O1	4.62	Adder	5.44
959021	AF2-193 C	13.42	Adder	15.79
959031	AF2-194 C	13.42	Adder	15.79
959051	AF2-196 C	1.02	Adder	1.2
959161	AF2-207 C O1	2.33	Adder	2.74
959581	AF2-249 C	0.07	Adder	0.08
959591	AF2-250 C	0.13	Adder	0.15
960221	AF2-313 C	1.87	80 50	1.87
960341	AF2-325 C	0.59	80 50	0.59
960671	AF2-358 C O1	8.36	80 50	8.36
960871	AF2-378 C	0.16	80 50	0.16
960881	AF2-379 C	0.19	Adder	0.22
960941	AF2-385 C	5.53	Adder	6.51
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	14.0	80 50	14.0
962161	AG1-061 C O1	7.61	Adder	8.95
962261	AG1-072	7.37	80 50	7.37

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962381	AG1-087 C O1	13.09	Adder	15.4
963001	AG1-149 (Withdrawn : 06/07/2021)	0.35	Adder	0.41
963011	AG1-150	4.62	Adder	5.44
964551	AG1-318 C	0.03	Adder	0.04
965321	AG1-397 C	0.48	Adder	0.56
965611	AG1-429 C O1	4.07	Adder	4.79
965821	AG1-450	2.96	Adder	3.48
965921	AG1-461 C O1	2.23	Adder	2.62
965951	AG1-464 C O1	2.22	Adder	2.61
966281	AG1-497 C O1	8.61	Adder	10.13
966601	AG1-529 C	5.42	Adder	6.38
LTFEXP_AA2-074	LTFEXP_AA2-074- >LTFIMP_AA2-074	0.083	Confirmed LTF	0.083
LTFEXP_CBM-S1	LTFEXP_CBM-S1- >LTFIMP_CBM-S1	0.0449	LTF/CBM	0.0449
LTFEXP_CBM-S2	LTFEXP_CBM-S2- >LTFIMP_CBM-S2	1.7154	LTF/CBM	1.7154
LTFEXP_CBM-W1	LTFEXP_CBM-W1- >LTFIMP_CBM-W1	1.2412	LTF/CBM	1.2412
LTFEXP_CBM-W2	LTFEXP_CBM-W2- >LTFIMP_CBM-W2	1.0003	LTF/CBM	1.0003
LTFEXP_CPLE	LTFEXP_CPLE- >LTFIMP_CPLE	0.125	Confirmed LTF	0.125
LTFEXP_LAGN	LTFEXP_LAGN- >LTFIMP_LAGN	0.2108	Confirmed LTF	0.2108
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019- >LTFIMP_LGE-0012019	0.0062	Confirmed LTF	0.0062
LTFEXP_LGEE	LTFEXP_LGEE- >LTFIMP_LGEE	0.0622	Confirmed LTF	0.0622
LTFEXP_MEC	LTFEXP_MEC- >LTFIMP_MEC	0.1594	Confirmed LTF	0.1594
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.86	Confirmed LTF	0.86
LTFEXP_SIGE	LTFEXP_SIGE- >LTFIMP_SIGE	0.0105	Confirmed LTF	0.0105
LTFEXP_TVA	LTFEXP_TVA- >LTFIMP_TVA	0.1713	Confirmed LTF	0.1713
LTFEXP_WEC	LTFEXP_WEC- >LTFIMP_WEC	0.0296	Confirmed LTF	0.0296

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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
182589134	231124	GLASGOW	DP&L	231130	CECIL138	DP&L	1	PECO_P4_PEACH215/* \$ CHESCO \$ PECO_P4_PEACH215 \$ STBK	breaker	378.0	105.71	108.04	AC	10.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200062	SALEM G3	1.72	Adder	2.02
213554	DALEVILLE	-0.31	Adder	-0.36
231131	BLOOM ENRGY	0.41	80 50	0.41
231902	DC CT7	1.01	80 50	1.01
231903	GEN4	1.19	80 50	1.19
231904	DC1 NUG	3.08	80 50	3.08
231905	DC2 NUG	3.08	80 50	3.08
231906	DC3 NUG	1.26	80 50	1.26
231907	DC10	0.32	80 50	0.32
231915	DC CT6	0.97	80 50	0.97
232405	W1-003 E	0.98	Adder	1.15
232407	W1-004 E	0.98	Adder	1.15
232409	W1-005 E	0.98	Adder	1.15
232411	W1-006 E	0.98	Adder	1.15
232412	X1-032 E	0.32	Adder	0.38
232416	X2-083	0.05	80 50	0.05
232418	X3-008 E	1.03	Adder	1.21
232422	X3-066 C	0.05	80 50	0.05
232423	X3-066 E	0.35	80 50	0.35
232424	Y1-079 C	0.07	80 50	0.07
232425	Y1-079 E	0.7	80 50	0.7
232427	Y1-080 E	0.17	Adder	0.2
232429	Y3-058 E	0.49	Adder	0.58
232433	Z2-076 E	0.16	Adder	0.19
232435	Z2-077 E	0.16	Adder	0.19
232851	DUP-SFR1	0.79	Adder	0.93
232902	EASTMUNI	1.19	80 50	1.19
232922	MR3 (Deactivation : 01/06/2021)	7.38	Adder	8.68
233915	AB1-141 C	0.28	80 50	0.28
233916	AB1-141 E	0.79	80 50	0.79
233918	AB1-142 C	0.28	80 50	0.28
233919	AB1-142 E	0.79	80 50	0.79
233931	AB2-179 C	6.07	80 50	6.07
917082	CHERRYDALE E	0.98	Adder	1.15
918835	AA1-102 E	7.36	Adder	8.66
919831	AA2-069	32.61	Adder	38.36
923921	AB2-032 C	1.7	80 50	1.7
923922	AB2-032 E	0.8	80 50	0.8
923951	AB2-036 C	3.89	80 50	3.89
923952	AB2-036 E	6.36	80 50	6.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923961	AB2-037 C	6.26	Adder	7.36
923962	AB2-037 E	10.22	Adder	12.02
924801	AB2-133 C O1	3.12	80 50	3.12
924802	AB2-133 E O1	3.96	80 50	3.96
924821	AB2-135 C	3.59	80 50	3.59
924822	AB2-135 E	4.1	80 50	4.1
924831	AB2-136 C	2.04	Adder	2.4
924832	AB2-136 E	2.16	Adder	2.54
924971	AB2-153 C	0.95	80 50	0.95
924972	AB2-153 E	1.55	80 50	1.55
925151	AB2-172 C	1.58	Adder	1.86
925152	AB2-172 E	2.58	Adder	3.04
925254	AB2-179 E	1.98	80 50	1.98
925261	AB2-180 C	1.12	Adder	1.32
925262	AB2-180 E	0.48	Adder	0.56
926131	AC1-091 C	0.54	Adder	0.64
926132	AC1-091 E	0.89	Adder	1.05
926141	AC1-092 C	0.54	Adder	0.64
926142	AC1-092 E	0.89	Adder	1.05
926151	AC1-093 C	0.52	Adder	0.61
926152	AC1-093 E	0.85	Adder	1.0
926161	AC1-094 C	0.44	Adder	0.52
926162	AC1-094 E	0.72	Adder	0.85
927031	AC1-190 C	2.91	Adder	3.42
927032	AC1-190 E	1.25	Adder	1.47
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.25	Adder	0.29
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.17	Adder	0.2
930201	AB1-056 C	5.0	Adder	5.88
930202	AB1-056 E	14.23	Adder	16.74
931261	AB1-176 C	0.18	80 50	0.18
931262	AB1-176 E	0.3	80 50	0.3
932161	AC2-023 C	2.12	Adder	2.49
932162	AC2-023 E	1.54	Adder	1.81
933631	AC2-185 C	1.1	Adder	1.29
933632	AC2-185 E	1.8	Adder	2.12
933641	AC2-186 C	1.52	Adder	1.79
933642	AC2-186 E	2.48	Adder	2.92
936452	AD2-059 E	0.1	80 50	0.1
936611	AD2-076 C O1	2.27	80 50	2.27
936612	AD2-076 E O1	3.71	80 50	3.71
938651	AE1-087 C	1.33	Adder	1.56
938652	AE1-087 E	0.33	Adder	0.39
938814	AE1-107 C	4.81	80 50	4.81
938815	AE1-107 E	3.43	80 50	3.43
938895	AE1-117 C	3.74	Adder	4.4
938896	AE1-117 E	9.96	Adder	11.72
939151	AE1-145	1.58	Adder	1.86
941021	AE2-093 C	1.47	Adder	1.73
941022	AE2-093 E	2.39	Adder	2.81
941181	AE2-112 C	0.79	80 50	0.79
941182	AE2-112 E	1.29	80 50	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942441	AE2-257 C	2.57	Adder	3.02
942442	AE2-257 E	6.77	Adder	7.96
943361	AF1-007 C	0.15	Adder	0.18
943362	AF1-007 E	0.42	Adder	0.49
943441	AF1-015 C	0.55	Adder	0.65
943442	AF1-015 E	0.76	Adder	0.89
943651	AF1-036 C	1.03	80 50	1.03
943652	AF1-036 E	1.42	80 50	1.42
945661	AF1-231 C	0.6	Adder	0.71
945662	AF1-231 E	0.9	Adder	1.06
945791	AF1-244 (Withdrawn : 06/07/2021)	0.63	Adder	0.74
945931	AF1-258	0.26	Adder	0.31
945941	AF1-259	0.1	80 50	0.1
957611	AF2-055 C	2.76	Adder	3.25
957612	AF2-055 E	1.18	Adder	1.39
957661	AF2-060	0.71	Adder	0.84
957671	AF2-061 O1	3.16	Adder	3.72
959021	AF2-193 C	9.23	Adder	10.86
959022	AF2-193 E	24.91	Adder	29.31
959031	AF2-194 C	9.23	Adder	10.86
959032	AF2-194 E	24.91	Adder	29.31
959051	AF2-196 C	0.7	Adder	0.82
959052	AF2-196 E	1.63	Adder	1.92
959161	AF2-207 C O1	1.6	Adder	1.88
959162	AF2-207 E O1	2.4	Adder	2.82
959173	AF2-208 BAT	20.12	80 50	20.12
959581	AF2-249 C	0.05	Adder	0.06
959582	AF2-249 E	0.19	Adder	0.22
959591	AF2-250 C	0.09	Adder	0.11
959592	AF2-250 E	0.07	Adder	0.08
960221	AF2-313 C	1.53	80 50	1.53
960222	AF2-313 E	0.86	80 50	0.86
960341	AF2-325 C	0.35	Adder	0.41
960342	AF2-325 E	0.48	Adder	0.56
960671	AF2-358 C O1	4.88	Adder	5.74
960672	AF2-358 E O1	3.25	Adder	3.82
960871	AF2-378 C	0.09	Adder	0.11
960872	AF2-378 E	0.13	Adder	0.15
960881	AF2-379 C	0.13	Adder	0.15
960882	AF2-379 E	0.18	Adder	0.21
960941	AF2-385 C	3.79	Adder	4.46
960942	AF2-385 E	2.16	Adder	2.54
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	8.05	Adder	9.47
962161	AG1-061 C O1	5.24	Adder	6.16
962162	AG1-061 E O1	3.49	Adder	4.11
962261	AG1-072	5.32	80 50	5.32
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.17	80 50	0.17
962381	AG1-087 C O1	9.05	Adder	10.65
962382	AG1-087 E O1	24.42	Adder	28.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963001	AG1-149 (Withdrawn : 06/07/2021)	0.24	Adder	0.28
963011	AG1-150	3.16	Adder	3.72
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06
964962	AG1-360 E	0.69	Adder	0.81
965321	AG1-397 C	0.33	Adder	0.39
965322	AG1-397 E	0.46	Adder	0.54
965611	AG1-429 C O1	2.78	Adder	3.27
965612	AG1-429 E O1	1.86	Adder	2.19
965821	AG1-450	2.03	Adder	2.39
965921	AG1-461 C O1	1.54	Adder	1.81
965922	AG1-461 E O1	0.83	Adder	0.98
965951	AG1-464 C O1	1.6	Adder	1.88
965952	AG1-464 E O1	2.4	Adder	2.82
966281	AG1-497 C O1	6.07	Adder	7.14
966282	AG1-497 E O1	2.6	Adder	3.06
966601	AG1-529 C	3.79	Adder	4.46
966602	AG1-529 E	2.02	Adder	2.38
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.6199	Confirmed LTF	0.6199
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.52	Confirmed LTF	0.52
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	1.0711	Confirmed LTF	1.0711
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.3216	Confirmed LTF	0.3216
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.2353	Confirmed LTF	0.2353
LTFEXP_CBM-N	LTFEXP_CBM-N->LTFIMP_CBM-N	1.3397	LTF/CBM	1.3397
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.3243	Confirmed LTF	0.3243
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	1.3374	Confirmed LTF	1.3374
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	3.8129	LTF/CMTX	3.8129
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.3368	Confirmed LTF	0.3368
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.3956	Confirmed LTF	0.3956
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	1.6101	Confirmed LTF	1.6101
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.3432	Confirmed LTF	0.3432
LTFEXP_VFT	LTFEXP_VFT->LTFIMP_VFT	8.8439	Confirmed LTF	8.8439

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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
182620958	232005	VIENNA	DP&L	232000	STEELE	DP&L	1	DPL_P4-2_DP6	breaker	550.0	105.25	111.29	AC	40.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.86	80 50	0.86
232405	W1-003 E	4.86	80 50	4.86
232406	W1-004 C	0.86	80 50	0.86
232407	W1-004 E	4.86	80 50	4.86
232408	W1-005 C	0.86	80 50	0.86
232409	W1-005 E	4.86	80 50	4.86
232410	W1-006 C	0.86	80 50	0.86
232411	W1-006 E	4.86	80 50	4.86
232412	X1-032 E	1.64	80 50	1.64
232418	X3-008 E	3.11	Adder	3.66
232427	Y1-080 E	0.69	Adder	0.81
232428	Y3-058 C	0.37	80 50	0.37
232429	Y3-058 E	2.4	80 50	2.4
232433	Z2-076 E	0.53	Adder	0.62
232435	Z2-077 E	0.53	Adder	0.62
232851	DUP-SFR1	2.49	Adder	2.93
232907	VN8	13.59	80 50	13.59
232912	OH NUG1	2.28	80 50	2.28
232914	OH NUG3	2.28	80 50	2.28
232915	OH NUG4	2.28	80 50	2.28
232916	OH NUG5	2.28	80 50	2.28
232919	VN10	0.77	80 50	0.77
232926	CRISFLD1	0.68	80 50	0.68
233923	AA1-102 C	3.86	80 50	3.86
917082	CHERRYDALE E	4.12	Adder	4.85
918835	AA1-102 E	38.42	80 50	38.42
924831	AB2-136 C	7.27	Adder	8.55
924832	AB2-136 E	7.7	Adder	9.06
925151	AB2-172 C	4.77	Adder	5.61
925152	AB2-172 E	7.78	Adder	9.15
925261	AB2-180 C	5.51	80 50	5.51
925262	AB2-180 E	2.36	80 50	2.36
927031	AC1-190 C	9.04	Adder	10.64
927032	AC1-190 E	3.88	Adder	4.56
927191	AC1-213 C (Withdrawn : 05/24/2021)	1.05	Adder	1.24
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.69	Adder	0.81
930201	AB1-056 C	15.6	Adder	18.35
930202	AB1-056 E	44.42	Adder	52.26
932161	AC2-023 C	10.53	80 50	10.53
932162	AC2-023 E	7.67	80 50	7.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933641	AC2-186 C	3.16	Adder	3.72
933642	AC2-186 E	5.16	Adder	6.07
938651	AE1-087 C	4.01	Adder	4.72
938652	AE1-087 E	1.0	Adder	1.18
938895	AE1-117 C	12.16	Adder	14.31
938896	AE1-117 E	32.44	Adder	38.16
939151	AE1-145	6.62	Adder	7.79
942441	AE2-257 C	8.29	Adder	9.75
942442	AE2-257 E	21.87	Adder	25.73
943361	AF1-007 C	0.46	Adder	0.54
943362	AF1-007 E	1.31	Adder	1.54
945661	AF1-231 C	2.53	Adder	2.98
945662	AF1-231 E	3.79	Adder	4.46
945791	AF1-244 (Withdrawn : 06/07/2021)	3.3	80 50	3.3
945931	AF1-258	1.26	80 50	1.26
957611	AF2-055 C	11.63	Adder	13.68
957612	AF2-055 E	4.98	Adder	5.86
957661	AF2-060	2.98	Adder	3.51
957671	AF2-061 O1	13.24	Adder	15.58
959021	AF2-193 C	28.82	Adder	33.91
959022	AF2-193 E	77.75	Adder	91.47
959031	AF2-194 C	28.82	Adder	33.91
959032	AF2-194 E	77.75	Adder	91.47
959051	AF2-196 C	2.26	Adder	2.66
959052	AF2-196 E	5.28	Adder	6.21
959161	AF2-207 C O1	6.58	Adder	7.74
959162	AF2-207 E O1	9.87	Adder	11.61
959581	AF2-249 C	0.2	Adder	0.24
959582	AF2-249 E	0.79	Adder	0.93
959591	AF2-250 C	0.36	Adder	0.42
959592	AF2-250 E	0.28	Adder	0.33
960341	AF2-325 C	1.17	Adder	1.38
960342	AF2-325 E	1.61	Adder	1.89
960671	AF2-358 C O1	23.64	80 50	23.64
960672	AF2-358 E O1	15.76	80 50	15.76
960871	AF2-378 C	0.32	Adder	0.38
960872	AF2-378 E	0.44	Adder	0.52
960881	AF2-379 C	0.68	80 50	0.68
960882	AF2-379 E	0.93	80 50	0.93
960941	AF2-385 C	15.61	Adder	18.36
960942	AF2-385 E	8.88	Adder	10.45
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	54.13	80 50	54.13
962161	AG1-061 C O1	20.58	Adder	24.21
962162	AG1-061 E O1	13.72	Adder	16.14
963001	AG1-149 (Withdrawn : 06/07/2021)	1.24	80 50	1.24
963011	AG1-150	13.24	Adder	15.58
964551	AG1-318 C	0.08	Adder	0.09
964552	AG1-318 E	0.18	Adder	0.21
964962	AG1-360 E	3.58	80 50	3.58
965321	AG1-397 C	1.3	Adder	1.53

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965322	AG1-397 E	1.8	Adder	2.12
965611	AG1-429 C O1	11.72	Adder	13.79
965612	AG1-429 E O1	7.81	Adder	9.19
965821	AG1-450	9.85	80 50	9.85
965921	AG1-461 C O1	5.38	Adder	6.33
965922	AG1-461 E O1	2.89	Adder	3.4
965951	AG1-464 C O1	3.33	Adder	3.92
965952	AG1-464 E O1	5.0	Adder	5.88
966601	AG1-529 C	9.18	Adder	10.8
966602	AG1-529 E	4.9	Adder	5.76
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.2501	Confirmed LTF	0.2501
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.1895	Confirmed LTF	0.1895
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.4338	Confirmed LTF	0.4338
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.1247	Confirmed LTF	0.1247
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0881	Confirmed LTF	0.0881
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.1256	Confirmed LTF	0.1256
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.5262	Confirmed LTF	0.5262
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.1432	LTF/CMTX NF	0.1432
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.1364	Confirmed LTF	0.1364
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.1457	Confirmed LTF	0.1457
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.1032	Confirmed LTF	0.1032
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	1.0553	LTF/CMTX NF	1.0553
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.646	Confirmed LTF	0.646
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.1391	Confirmed LTF	0.1391

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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
182522834	232006	INDRIV 4	DP&L	232004	MILF_230	DP&L	1	DPL_P4-2_DPIR238	breaker	804.0	121.37	124.29	AC	27.92

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	4.53	Adder	5.33
232407	W1-004 E	4.53	Adder	5.33
232409	W1-005 E	4.53	Adder	5.33
232411	W1-006 E	4.53	Adder	5.33
232412	X1-032 E	1.39	Adder	1.64
232418	X3-008 E	2.14	Adder	2.52
232427	Y1-080 E	0.43	Adder	0.51
232429	Y3-058 E	1.75	Adder	2.06
232432	Z2-076 C	0.31	80 50	0.31
232433	Z2-076 E	0.95	80 50	0.95
232434	Z2-077 C	0.31	80 50	0.31
232435	Z2-077 E	0.95	80 50	0.95
232851	DUP-SFR1	1.96	Adder	2.31
232904	IR4	40.45	80 50	40.45
232905	BAYVIEW1	0.88	80 50	0.88
232914	OH NUG3	2.51	80 50	2.51
232920	IR10	1.18	80 50	1.18
232921	TASLEY2G	1.67	80 50	1.67
917081	CHERRYDALE C	0.54	80 50	0.54
917082	CHERRYDALE E	5.34	80 50	5.34
918835	AA1-102 E	31.81	Adder	37.42
924831	AB2-136 C	4.74	Adder	5.58
924832	AB2-136 E	5.03	Adder	5.92
925151	AB2-172 C	3.27	Adder	3.85
925152	AB2-172 E	5.34	Adder	6.28
925261	AB2-180 C	4.01	Adder	4.72
925262	AB2-180 E	1.72	Adder	2.02
927031	AC1-190 C	6.15	Adder	7.24
927032	AC1-190 E	2.63	Adder	3.09
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.98	Adder	1.15
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.64	Adder	0.75
930201	AB1-056 C	38.54	80 50	38.54
930202	AB1-056 E	109.75	80 50	109.75
932161	AC2-023 C	7.23	Adder	8.51
932162	AC2-023 E	5.27	Adder	6.2
938651	AE1-087 C	2.76	Adder	3.25
938652	AE1-087 E	0.69	Adder	0.81
938895	AE1-117 C	23.08	80 50	23.08
938896	AE1-117 E	61.55	80 50	61.55
939151	AE1-145	8.65	80 50	8.65

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942441	AE2-257 C	14.62	80 50	14.62
942442	AE2-257 E	38.54	80 50	38.54
943361	AF1-007 C	1.14	80 50	1.14
943362	AF1-007 E	3.23	80 50	3.23
945661	AF1-231 C	2.78	Adder	3.27
945662	AF1-231 E	4.18	Adder	4.92
945791	AF1-244 (Withdrawn : 06/07/2021)	2.74	Adder	3.22
945931	AF1-258	0.92	Adder	1.08
957611	AF2-055 C	15.08	80 50	15.08
957612	AF2-055 E	6.46	80 50	6.46
957661	AF2-060	3.89	80 50	3.89
957671	AF2-061 O1	17.3	80 50	17.3
959021	AF2-193 C	71.21	80 50	71.21
959022	AF2-193 E	192.09	80 50	192.09
959031	AF2-194 C	71.21	80 50	71.21
959032	AF2-194 E	192.09	80 50	192.09
959051	AF2-196 C	3.99	80 50	3.99
959052	AF2-196 E	9.3	80 50	9.3
959161	AF2-207 C O1	5.48	Adder	6.45
959162	AF2-207 E O1	8.22	Adder	9.67
959581	AF2-249 C	0.17	Adder	0.2
959582	AF2-249 E	0.68	Adder	0.8
959591	AF2-250 C	0.31	Adder	0.36
959592	AF2-250 E	0.24	Adder	0.28
960341	AF2-325 C	0.77	Adder	0.91
960342	AF2-325 E	1.07	Adder	1.26
960671	AF2-358 C O1	12.59	Adder	14.81
960672	AF2-358 E O1	8.4	Adder	9.88
960871	AF2-378 C	0.21	Adder	0.25
960872	AF2-378 E	0.29	Adder	0.34
960881	AF2-379 C	0.53	Adder	0.62
960882	AF2-379 E	0.73	Adder	0.86
960941	AF2-385 C	13.0	Adder	15.29
960942	AF2-385 E	7.4	Adder	8.71
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	21.77	Adder	25.61
962161	AG1-061 C O1	14.24	Adder	16.75
962162	AG1-061 E O1	9.49	Adder	11.16
963001	AG1-149 (Withdrawn : 06/07/2021)	1.03	Adder	1.21
963011	AG1-150	17.3	80 50	17.3
964551	AG1-318 C	0.15	80 50	0.15
964552	AG1-318 E	0.34	80 50	0.34
964962	AG1-360 E	3.03	Adder	3.56
965321	AG1-397 C	1.39	Adder	1.64
965322	AG1-397 E	1.92	Adder	2.26
965611	AG1-429 C O1	15.2	80 50	15.2
965612	AG1-429 E O1	10.13	80 50	10.13
965821	AG1-450	5.25	Adder	6.18
965921	AG1-461 C O1	3.91	Adder	4.6
965922	AG1-461 E O1	2.11	Adder	2.48

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.269	Confirmed LTF	0.269
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.2011	Confirmed LTF	0.2011
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.4668	Confirmed LTF	0.4668
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.1335	Confirmed LTF	0.1335
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0939	Confirmed LTF	0.0939
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.1344	Confirmed LTF	0.1344
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.5642	Confirmed LTF	0.5642
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.3189	LTF/CMTX NF	0.3189
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.1468	Confirmed LTF	0.1468
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.1548	Confirmed LTF	0.1548
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.1594	Confirmed LTF	0.1594
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	2.0006	LTF/CMTX NF	2.0006
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.6944	Confirmed LTF	0.6944
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.1496	Confirmed LTF	0.1496

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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
174369366	232012	HOPE CREEK	PJM	200029	HOPE CRK	PJM	1	PJM500_DPL_P4_2_RED LION- HOPE AT50	breaker	1117.0	103.54	105.07	AC	26.65

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
200062	SALEM G3	-7.87	Adder	-9.26
227842	MARINGEN	-0.92	Adder	-1.08
228343	QUINTN#1 (Deactivation : 26/04/2020)	-0.19	Adder	-0.22
231903	GEN4	1.73	Adder	2.04
231904	DC1 NUG	4.49	Adder	5.28
231905	DC2 NUG	4.49	Adder	5.28
232405	W1-003 E	2.59	Adder	3.05
232407	W1-004 E	2.59	Adder	3.05
232409	W1-005 E	2.59	Adder	3.05
232411	W1-006 E	2.59	Adder	3.05
232412	X1-032 E	0.83	Adder	0.98
232418	X3-008 E	2.42	Adder	2.85
232423	X3-066 E	0.5	Adder	0.59
232425	Y1-079 E	1.09	Adder	1.28
232427	Y1-080 E	0.42	Adder	0.49
232429	Y3-058 E	1.26	Adder	1.48
232433	Z2-076 E	0.43	Adder	0.51
232435	Z2-077 E	0.43	Adder	0.51
232616	GEN FOOD	0.73	80 50	0.73
232813	VAUGHN	0.13	80 50	0.13
232851	DUP-SFR1	2.16	Adder	2.54
232899	W1-062	2.29	80 50	2.29
232900	DEMECSMY	2.25	80 50	2.25
232901	NORTHST	2.21	80 50	2.21
232922	MR3 (Deactivation : 01/06/2021)	29.81	80 50	29.81
233916	AB1-141 E	1.06	Adder	1.25
233919	AB1-142 E	1.06	Adder	1.25
233920	W3-032A-CTG1	9.26	80 50	9.26
233921	W3-032A-STG1	5.57	80 50	5.57
233931	AB2-179 C	5.55	Adder	6.53
917082	CHERRYDALE E	2.6	Adder	3.06
918835	AA1-102 E	19.31	Adder	22.72
919831	AA2-069	131.81	80 50	131.81
923921	AB2-032 C	2.29	Adder	2.69
923922	AB2-032 E	1.08	Adder	1.27
923951	AB2-036 C	6.09	Adder	7.16
923952	AB2-036 E	9.96	Adder	11.72
923961	AB2-037 C	13.39	Adder	15.75
923962	AB2-037 E	21.88	Adder	25.74
924051	AB2-049 C	-0.13	Adder	-0.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924801	AB2-133 C O1	4.2	Adder	4.94
924802	AB2-133 E O1	5.33	Adder	6.27
924821	AB2-135 C	5.46	Adder	6.42
924822	AB2-135 E	6.22	Adder	7.32
924831	AB2-136 C	4.9	Adder	5.76
924832	AB2-136 E	5.19	Adder	6.11
924971	AB2-153 C	1.28	Adder	1.51
924972	AB2-153 E	2.09	Adder	2.46
925151	AB2-172 C	3.71	Adder	4.36
925152	AB2-172 E	6.05	Adder	7.12
925254	AB2-179 E	1.81	Adder	2.13
925261	AB2-180 C	2.89	Adder	3.4
925262	AB2-180 E	1.24	Adder	1.46
926131	AC1-091 C	2.24	80 50	2.24
926132	AC1-091 E	3.67	80 50	3.67
926141	AC1-092 C	2.24	80 50	2.24
926142	AC1-092 E	3.67	80 50	3.67
926151	AC1-093 C	2.12	80 50	2.12
926152	AC1-093 E	3.49	80 50	3.49
926161	AC1-094 C	1.79	80 50	1.79
926162	AC1-094 E	2.96	80 50	2.96
927031	AC1-190 C	6.85	Adder	8.06
927032	AC1-190 E	2.93	Adder	3.45
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.67	Adder	0.79
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.44	Adder	0.52
930201	AB1-056 C	14.01	Adder	16.48
930202	AB1-056 E	39.89	Adder	46.93
930722	AB1-116 E	-0.09	Adder	-0.11
930732	AB1-119 E	-0.08	Adder	-0.09
931261	AB1-176 C	0.26	Adder	0.31
931262	AB1-176 E	0.43	Adder	0.51
932161	AC2-023 C	5.44	Adder	6.4
932162	AC2-023 E	3.96	Adder	4.66
933631	AC2-185 C	4.54	80 50	4.54
933632	AC2-185 E	7.4	80 50	7.4
933641	AC2-186 C	4.94	80 50	4.94
933642	AC2-186 E	8.06	80 50	8.06
936452	AD2-059 E	0.09	Adder	0.11
936501	AD2-065 C	-0.12	Adder	-0.14
936611	AD2-076 C O1	3.17	Adder	3.73
936612	AD2-076 E O1	5.16	Adder	6.07
938423	AE1-061 BAT	0.73	Adder	0.86
938433	AE1-062 BAT	2.63	Adder	3.09
938651	AE1-087 C	3.12	Adder	3.67
938652	AE1-087 E	0.78	Adder	0.92
938814	AE1-107 C	4.36	Adder	5.13
938815	AE1-107 E	3.11	Adder	3.66
938873	AE1-115 BAT	2.56	Adder	3.01
938895	AE1-117 C	10.39	Adder	12.22
938896	AE1-117 E	27.7	Adder	32.59
939151	AE1-145	4.19	Adder	4.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939303	AE1-161 BAT	6.49	Adder	7.64
939821	AE1-218 C O1	-0.09	Adder	-0.11
941021	AE2-093 C	3.0	Adder	3.53
941022	AE2-093 E	4.9	Adder	5.76
941181	AE2-112 C	1.1	Adder	1.29
941182	AE2-112 E	1.79	Adder	2.11
942441	AE2-257 C	7.15	Adder	8.41
942442	AE2-257 E	18.85	Adder	22.18
943361	AF1-007 C	0.41	Adder	0.48
943362	AF1-007 E	1.17	Adder	1.38
943441	AF1-015 C	1.13	Adder	1.33
943442	AF1-015 E	1.56	Adder	1.84
943651	AF1-036 C	1.43	Adder	1.68
943652	AF1-036 E	1.97	Adder	2.32
944953	AF1-160 BAT	2.63	Adder	3.09
945661	AF1-231 C	1.59	Adder	1.87
945662	AF1-231 E	2.39	Adder	2.81
945733	AF1-238 BAT	18.37	Adder	21.61
945743	AF1-239 BAT	4.32	Adder	5.08
945791	AF1-244 (Withdrawn : 06/07/2021)	1.66	Adder	1.95
945931	AF1-258	0.66	Adder	0.78
945941	AF1-259	0.14	Adder	0.16
957223	AF2-016 BAT	41.86	Adder	49.25
957253	AF2-019 BAT	5.89	Adder	6.93
957263	AF2-020 BAT	2.77	Adder	3.26
957293	AF2-023 BAT	5.45	Adder	6.41
957313	AF2-025 BAT	2.78	Adder	3.27
957611	AF2-055 C	7.32	Adder	8.61
957612	AF2-055 E	3.14	Adder	3.69
957661	AF2-060	1.88	Adder	2.21
957671	AF2-061 O1	8.38	Adder	9.86
959021	AF2-193 C	25.88	Adder	30.45
959022	AF2-193 E	69.82	Adder	82.14
959031	AF2-194 C	25.88	Adder	30.45
959032	AF2-194 E	69.82	Adder	82.14
959051	AF2-196 C	1.95	Adder	2.29
959052	AF2-196 E	4.55	Adder	5.35
959161	AF2-207 C O1	4.21	Adder	4.95
959162	AF2-207 E O1	6.31	Adder	7.42
959581	AF2-249 C	0.13	Adder	0.15
959582	AF2-249 E	0.5	Adder	0.59
959591	AF2-250 C	0.23	Adder	0.27
959592	AF2-250 E	0.18	Adder	0.21
960221	AF2-313 C	2.2	Adder	2.59
960222	AF2-313 E	1.24	Adder	1.46
960341	AF2-325 C	0.83	Adder	0.98
960342	AF2-325 E	1.14	Adder	1.34
960671	AF2-358 C O1	11.99	Adder	14.11
960672	AF2-358 E O1	8.0	Adder	9.41
960871	AF2-378 C	0.22	Adder	0.26
960872	AF2-378 E	0.3	Adder	0.35

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960881	AF2-379 C	0.34	Adder	0.4
960882	AF2-379 E	0.47	Adder	0.55
960941	AF2-385 C	9.98	Adder	11.74
960942	AF2-385 E	5.68	Adder	6.68
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	19.88	Adder	23.39
962161	AG1-061 C O1	13.59	Adder	15.99
962162	AG1-061 E O1	9.06	Adder	10.66
962261	AG1-072	8.85	Adder	10.41
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.3	Adder	0.35
962381	AG1-087 C O1	31.62	80 50	31.62
962382	AG1-087 E O1	85.3	80 50	85.3
962612	AG1-110 BAT	5.27	Adder	6.2
963001	AG1-149 (Withdrawn : 06/07/2021)	0.62	Adder	0.73
963011	AG1-150	8.38	Adder	9.86
964003	AG1-254 BAT	2.42	Adder	2.85
964013	AG1-255 BAT	3.58	Adder	4.21
964551	AG1-318 C	0.06	Adder	0.07
964552	AG1-318 E	0.15	Adder	0.18
964962	AG1-360 E	1.82	Adder	2.14
965321	AG1-397 C	0.88	Adder	1.04
965322	AG1-397 E	1.21	Adder	1.42
965611	AG1-429 C O1	7.38	Adder	8.68
965612	AG1-429 E O1	4.92	Adder	5.79
965821	AG1-450	5.0	Adder	5.88
965921	AG1-461 C O1	4.16	Adder	4.89
965922	AG1-461 E O1	2.24	Adder	2.64
965951	AG1-464 C O1	5.2	80 50	5.2
965952	AG1-464 E O1	7.8	80 50	7.8
966281	AG1-497 C O1	24.55	80 50	24.55
966282	AG1-497 E O1	10.52	80 50	10.52
966601	AG1-529 C	12.83	80 50	12.83
966602	AG1-529 E	6.85	80 50	6.85
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.5104	Confirmed LTF	0.5104
LTFEXP_CBM-S1	LTFEXP_CBM-S1->LTFIMP_CBM-S1	0.3696	LTF/CBM	0.3696
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	11.2689	LTF/CBM	11.2689
LTFEXP_CBM-W1	LTFEXP_CBM-W1->LTFIMP_CBM-W1	12.6796	LTF/CBM	12.6796
LTFEXP_CBM-W2	LTFEXP_CBM-W2->LTFIMP_CBM-W2	8.5811	LTF/CBM	8.5811
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.7663	Confirmed LTF	0.7663
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	7.4292	LTF/CMTX NF	7.4292
LTFEXP_LAGN	LTFEXP_LAGN->LTFIMP_LAGN	1.7117	Confirmed LTF	1.7117
LTFEXP_LGE-0012019	LTFEXP_LGE-0012019->LTFIMP_LGE-0012019	0.0142	Confirmed LTF	0.0142

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_LGEE	LTFEXP_LGEE->LTFIMP_LGEE	0.5834	Confirmed LTF	0.5834
LTFEXP_MEC	LTFEXP_MEC->LTFIMP_MEC	1.4802	Confirmed LTF	1.4802
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	2.1031	Confirmed LTF	2.1031
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	39.6279	LTF/CMTX NF	39.6279
LTFEXP_SIGE	LTFEXP_SIGE->LTFIMP_SIGE	0.0977	Confirmed LTF	0.0977
LTFEXP_TVA	LTFEXP_TVA->LTFIMP_TVA	1.3754	Confirmed LTF	1.3754
LTFEXP_WEC	LTFEXP_WEC->LTFIMP_WEC	0.2889	Confirmed LTF	0.2889

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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
166659844	232100	CHURCH	DP&L	232107	TOWNSEND	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	146.02	152.35	AC	22.96

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.12	Adder	2.49
232407	W1-004 E	2.12	Adder	2.49
232409	W1-005 E	2.12	Adder	2.49
232411	W1-006 E	2.12	Adder	2.49
232412	X1-032 E	0.69	Adder	0.81
232417	X3-008 C	0.31	80 50	0.31
232418	X3-008 E	3.1	80 50	3.1
232422	X3-066 C	0.16	80 50	0.16
232423	X3-066 E	1.23	80 50	1.23
232424	Y1-079 C	0.23	80 50	0.23
232425	Y1-079 E	2.3	80 50	2.3
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.49	80 50	0.49
232428	Y3-058 C	0.2	80 50	0.2
232429	Y3-058 E	1.28	80 50	1.28
232433	Z2-076 E	0.32	Adder	0.38
232435	Z2-077 E	0.32	Adder	0.38
232813	VAUGHN	0.11	80 50	0.11
232851	DUP-SFR1	1.63	Adder	1.92
232902	EASTMUNI	3.52	80 50	3.52
232907	VN8	5.63	80 50	5.63
232910	NRG_G1	1.73	80 50	1.73
232911	NRG_G2	1.73	80 50	1.73
232919	VN10	0.42	80 50	0.42
232922	MR3 (Deactivation : 01/06/2021)	9.05	Adder	10.65
232926	CRISFLD1	0.34	80 50	0.34
233915	AB1-141 C	1.02	80 50	1.02
233916	AB1-141 E	2.9	80 50	2.9
233918	AB1-142 C	1.02	80 50	1.02
233919	AB1-142 E	2.9	80 50	2.9
233923	AA1-102 C	1.91	80 50	1.91
233931	AB2-179 C	-9.25	Adder	-10.88
293670	O-025 C	0.2	80 50	0.2
917082	CHERRYDALE E	2.11	Adder	2.48
918835	AA1-102 E	19.0	80 50	19.0
919831	AA2-069	40.0	Adder	47.06
923921	AB2-032 C	6.27	80 50	6.27
923922	AB2-032 E	2.95	80 50	2.95
923951	AB2-036 C	12.66	80 50	12.66
923952	AB2-036 E	20.72	80 50	20.72
924801	AB2-133 C O1	11.54	80 50	11.54
924802	AB2-133 E O1	14.64	80 50	14.64

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924821	AB2-135 C	12.3	80 50	12.3
924822	AB2-135 E	14.03	80 50	14.03
924831	AB2-136 C	5.96	80 50	5.96
924832	AB2-136 E	6.32	80 50	6.32
924971	AB2-153 C	3.5	80 50	3.5
924972	AB2-153 E	5.72	80 50	5.72
925151	AB2-172 C	4.76	80 50	4.76
925152	AB2-172 E	7.76	80 50	7.76
925261	AB2-180 C	2.94	80 50	2.94
925262	AB2-180 E	1.26	80 50	1.26
926131	AC1-091 C	0.64	Adder	0.75
926132	AC1-091 E	1.05	Adder	1.24
926141	AC1-092 C	0.64	Adder	0.75
926142	AC1-092 E	1.05	Adder	1.24
926151	AC1-093 C	0.61	Adder	0.72
926152	AC1-093 E	1.0	Adder	1.18
926161	AC1-094 C	0.51	Adder	0.6
926162	AC1-094 E	0.85	Adder	1.0
927031	AC1-190 C	8.7	80 50	8.7
927032	AC1-190 E	3.73	80 50	3.73
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.66	80 50	0.66
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.43	80 50	0.43
930201	AB1-056 C	9.9	Adder	11.65
930202	AB1-056 E	28.18	Adder	33.15
931261	AB1-176 C	0.64	80 50	0.64
931262	AB1-176 E	1.05	80 50	1.05
932161	AC2-023 C	5.64	80 50	5.64
932162	AC2-023 E	4.11	80 50	4.11
933631	AC2-185 C	1.3	Adder	1.53
933632	AC2-185 E	2.12	Adder	2.49
933641	AC2-186 C	3.14	Adder	3.69
933642	AC2-186 E	5.12	Adder	6.02
936611	AD2-076 C O1	8.17	80 50	8.17
936612	AD2-076 E O1	13.33	80 50	13.33
938651	AE1-087 C	4.0	80 50	4.0
938652	AE1-087 E	1.0	80 50	1.0
938895	AE1-117 C	7.5	Adder	8.82
938896	AE1-117 E	20.01	Adder	23.54
939151	AE1-145	3.41	Adder	4.01
941021	AE2-093 C	5.06	80 50	5.06
941022	AE2-093 E	8.25	80 50	8.25
941181	AE2-112 C	2.83	80 50	2.83
941182	AE2-112 E	4.63	80 50	4.63
942441	AE2-257 C	5.15	Adder	6.06
942442	AE2-257 E	13.57	Adder	15.96
943361	AF1-007 C	0.29	Adder	0.34
943362	AF1-007 E	0.83	Adder	0.98
943441	AF1-015 C	1.91	80 50	1.91
943442	AF1-015 E	2.63	80 50	2.63
943651	AF1-036 C	3.69	80 50	3.69
943652	AF1-036 E	5.09	80 50	5.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945661	AF1-231 C	1.3	Adder	1.53
945662	AF1-231 E	1.94	Adder	2.28
945791	AF1-244 (Withdrawn : 06/07/2021)	1.63	80 50	1.63
945931	AF1-258	0.67	80 50	0.67
945941	AF1-259	0.34	80 50	0.34
957611	AF2-055 C	5.97	Adder	7.02
957612	AF2-055 E	2.56	Adder	3.01
957661	AF2-060	1.53	Adder	1.8
957671	AF2-061 O1	6.81	Adder	8.01
959021	AF2-193 C	18.29	Adder	21.52
959022	AF2-193 E	49.33	Adder	58.04
959031	AF2-194 C	18.29	Adder	21.52
959032	AF2-194 E	49.33	Adder	58.04
959051	AF2-196 C	1.4	Adder	1.65
959052	AF2-196 E	3.27	Adder	3.85
959161	AF2-207 C O1	3.49	Adder	4.11
959162	AF2-207 E O1	6.16	80 50	6.16
959581	AF2-249 C	0.12	80 50	0.12
959582	AF2-249 E	0.49	80 50	0.49
959591	AF2-250 C	0.22	80 50	0.22
959592	AF2-250 E	0.17	80 50	0.17
960221	AF2-313 C	5.36	80 50	5.36
960222	AF2-313 E	3.04	80 50	3.04
960341	AF2-325 C	1.02	80 50	1.02
960342	AF2-325 E	1.41	80 50	1.41
960671	AF2-358 C O1	13.81	80 50	13.81
960672	AF2-358 E O1	9.21	80 50	9.21
960871	AF2-378 C	0.27	80 50	0.27
960872	AF2-378 E	0.37	80 50	0.37
960881	AF2-379 C	0.34	80 50	0.34
960882	AF2-379 E	0.47	80 50	0.47
960941	AF2-385 C	9.74	80 50	9.74
960942	AF2-385 E	5.54	80 50	5.54
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	22.45	80 50	22.45
962161	AG1-061 C O1	13.78	80 50	13.78
962162	AG1-061 E O1	9.19	80 50	9.19
962261	AG1-072	16.33	80 50	16.33
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.49	80 50	0.49
962381	AG1-087 C O1	16.12	Adder	18.96
962382	AG1-087 E O1	43.48	Adder	51.15
963001	AG1-149 (Withdrawn : 06/07/2021)	0.61	80 50	0.61
963011	AG1-150	6.81	Adder	8.01
964551	AG1-318 C	0.05	Adder	0.06
964552	AG1-318 E	0.11	Adder	0.13
964962	AG1-360 E	1.51	Adder	1.78
965321	AG1-397 C	0.71	Adder	0.84
965322	AG1-397 E	0.98	Adder	1.15
965611	AG1-429 C O1	6.01	Adder	7.07
965612	AG1-429 E O1	4.01	Adder	4.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965821	AG1-450	5.75	80 50	5.75
965921	AG1-461 C O1	3.23	Adder	3.8
965922	AG1-461 E O1	1.74	Adder	2.05
965951	AG1-464 C O1	3.3	Adder	3.88
965952	AG1-464 E O1	4.96	Adder	5.84
966281	AG1-497 C O1	7.45	Adder	8.76
966282	AG1-497 E O1	3.19	Adder	3.75
966601	AG1-529 C	7.19	Adder	8.46
966602	AG1-529 E	3.84	Adder	4.52
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.1833	Confirmed LTF	0.1833
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.1408	Confirmed LTF	0.1408
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.3178	Confirmed LTF	0.3178
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0919	Confirmed LTF	0.0919
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0652	Confirmed LTF	0.0652
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0925	Confirmed LTF	0.0925
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.3869	Confirmed LTF	0.3869
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0366	LTF/CMTX NF	0.0366
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.1	Confirmed LTF	0.1
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.1081	Confirmed LTF	0.1081
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0577	Confirmed LTF	0.0577
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.4445	LTF/CMTX NF	0.4445
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.4739	Confirmed LTF	0.4739
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.1019	Confirmed LTF	0.1019

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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
166659854	232106	MIDLTNTP	DP&L	232104	MT PLSNT	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	127.4	134.13	AC	22.96

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.12	Adder	2.49
232407	W1-004 E	2.12	Adder	2.49
232409	W1-005 E	2.12	Adder	2.49
232411	W1-006 E	2.12	Adder	2.49
232412	X1-032 E	0.69	Adder	0.81
232417	X3-008 C	0.31	80 50	0.31
232418	X3-008 E	3.1	80 50	3.1
232422	X3-066 C	0.16	80 50	0.16
232423	X3-066 E	1.23	80 50	1.23
232424	Y1-079 C	0.23	80 50	0.23
232425	Y1-079 E	2.3	80 50	2.3
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.49	80 50	0.49
232428	Y3-058 C	0.2	80 50	0.2
232429	Y3-058 E	1.28	80 50	1.28
232433	Z2-076 E	0.32	Adder	0.38
232435	Z2-077 E	0.32	Adder	0.38
232813	VAUGHN	0.11	80 50	0.11
232851	DUP-SFR1	1.63	Adder	1.92
232902	EASTMUNI	3.52	80 50	3.52
232907	VN8	5.63	80 50	5.63
232910	NRG_G1	1.73	80 50	1.73
232911	NRG_G2	1.73	80 50	1.73
232919	VN10	0.42	80 50	0.42
232922	MR3 (Deactivation : 01/06/2021)	9.05	Adder	10.65
232926	CRISFLD1	0.34	80 50	0.34
233915	AB1-141 C	1.02	80 50	1.02
233916	AB1-141 E	2.9	80 50	2.9
233918	AB1-142 C	1.02	80 50	1.02
233919	AB1-142 E	2.9	80 50	2.9
233923	AA1-102 C	1.91	80 50	1.91
233931	AB2-179 C	27.12	80 50	27.12
293670	O-025 C	0.2	80 50	0.2
917082	CHERRYDALE E	2.11	Adder	2.48
918835	AA1-102 E	19.0	80 50	19.0
919831	AA2-069	40.0	Adder	47.06
923921	AB2-032 C	6.27	80 50	6.27
923922	AB2-032 E	2.95	80 50	2.95
923951	AB2-036 C	12.66	80 50	12.66
923952	AB2-036 E	20.72	80 50	20.72
924801	AB2-133 C O1	11.54	80 50	11.54

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924802	AB2-133 E O1	14.64	80 50	14.64
924821	AB2-135 C	12.3	80 50	12.3
924822	AB2-135 E	14.03	80 50	14.03
924831	AB2-136 C	5.96	80 50	5.96
924832	AB2-136 E	6.32	80 50	6.32
924971	AB2-153 C	3.5	80 50	3.5
924972	AB2-153 E	5.72	80 50	5.72
925151	AB2-172 C	4.76	80 50	4.76
925152	AB2-172 E	7.76	80 50	7.76
925254	AB2-179 E	8.85	80 50	8.85
925261	AB2-180 C	2.94	80 50	2.94
925262	AB2-180 E	1.26	80 50	1.26
926131	AC1-091 C	0.64	Adder	0.75
926132	AC1-091 E	1.05	Adder	1.24
926141	AC1-092 C	0.64	Adder	0.75
926142	AC1-092 E	1.05	Adder	1.24
926151	AC1-093 C	0.61	Adder	0.72
926152	AC1-093 E	1.0	Adder	1.18
926161	AC1-094 C	0.51	Adder	0.6
926162	AC1-094 E	0.85	Adder	1.0
927031	AC1-190 C	8.7	80 50	8.7
927032	AC1-190 E	3.73	80 50	3.73
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.66	80 50	0.66
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.43	80 50	0.43
930201	AB1-056 C	9.9	Adder	11.65
930202	AB1-056 E	28.18	Adder	33.15
931261	AB1-176 C	0.64	80 50	0.64
931262	AB1-176 E	1.05	80 50	1.05
932161	AC2-023 C	5.64	80 50	5.64
932162	AC2-023 E	4.11	80 50	4.11
933631	AC2-185 C	1.3	Adder	1.53
933632	AC2-185 E	2.12	Adder	2.49
933641	AC2-186 C	3.14	Adder	3.69
933642	AC2-186 E	5.12	Adder	6.02
936611	AD2-076 C O1	8.17	80 50	8.17
936612	AD2-076 E O1	13.33	80 50	13.33
938651	AE1-087 C	4.0	80 50	4.0
938652	AE1-087 E	1.0	80 50	1.0
938895	AE1-117 C	7.5	Adder	8.82
938896	AE1-117 E	20.01	Adder	23.54
939151	AE1-145	3.41	Adder	4.01
941021	AE2-093 C	5.06	80 50	5.06
941022	AE2-093 E	8.25	80 50	8.25
941181	AE2-112 C	2.83	80 50	2.83
941182	AE2-112 E	4.63	80 50	4.63
942441	AE2-257 C	5.15	Adder	6.06
942442	AE2-257 E	13.57	Adder	15.96
943361	AF1-007 C	0.29	Adder	0.34
943362	AF1-007 E	0.83	Adder	0.98
943441	AF1-015 C	1.91	80 50	1.91
943442	AF1-015 E	2.63	80 50	2.63

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943651	AF1-036 C	3.69	80 50	3.69
943652	AF1-036 E	5.09	80 50	5.09
945661	AF1-231 C	1.3	Adder	1.53
945662	AF1-231 E	1.94	Adder	2.28
945791	AF1-244 (Withdrawn : 06/07/2021)	1.63	80 50	1.63
945931	AF1-258	0.67	80 50	0.67
945941	AF1-259	0.34	80 50	0.34
957611	AF2-055 C	5.97	Adder	7.02
957612	AF2-055 E	2.56	Adder	3.01
957661	AF2-060	1.53	Adder	1.8
957671	AF2-061 O1	6.81	Adder	8.01
959021	AF2-193 C	18.29	Adder	21.52
959022	AF2-193 E	49.33	Adder	58.04
959031	AF2-194 C	18.29	Adder	21.52
959032	AF2-194 E	49.33	Adder	58.04
959051	AF2-196 C	1.4	Adder	1.65
959052	AF2-196 E	3.27	Adder	3.85
959161	AF2-207 C O1	3.49	Adder	4.11
959162	AF2-207 E O1	6.16	80 50	6.16
959581	AF2-249 C	0.12	80 50	0.12
959582	AF2-249 E	0.49	80 50	0.49
959591	AF2-250 C	0.22	80 50	0.22
959592	AF2-250 E	0.17	80 50	0.17
960221	AF2-313 C	5.36	80 50	5.36
960222	AF2-313 E	3.04	80 50	3.04
960341	AF2-325 C	1.02	80 50	1.02
960342	AF2-325 E	1.41	80 50	1.41
960671	AF2-358 C O1	13.81	80 50	13.81
960672	AF2-358 E O1	9.21	80 50	9.21
960871	AF2-378 C	0.27	80 50	0.27
960872	AF2-378 E	0.37	80 50	0.37
960881	AF2-379 C	0.34	80 50	0.34
960882	AF2-379 E	0.47	80 50	0.47
960941	AF2-385 C	9.74	80 50	9.74
960942	AF2-385 E	5.54	80 50	5.54
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	22.45	80 50	22.45
962161	AG1-061 C O1	13.78	80 50	13.78
962162	AG1-061 E O1	9.19	80 50	9.19
962261	AG1-072	16.33	80 50	16.33
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.49	80 50	0.49
962381	AG1-087 C O1	16.12	Adder	18.96
962382	AG1-087 E O1	43.48	Adder	51.15
963001	AG1-149 (Withdrawn : 06/07/2021)	0.61	80 50	0.61
963011	AG1-150	6.81	Adder	8.01
964551	AG1-318 C	0.05	Adder	0.06
964552	AG1-318 E	0.11	Adder	0.13
964962	AG1-360 E	1.51	Adder	1.78
965321	AG1-397 C	0.71	Adder	0.84
965322	AG1-397 E	0.98	Adder	1.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965611	AG1-429 C O1	6.01	Adder	7.07
965612	AG1-429 E O1	4.01	Adder	4.72
965821	AG1-450	5.75	80 50	5.75
965921	AG1-461 C O1	3.23	Adder	3.8
965922	AG1-461 E O1	1.74	Adder	2.05
965951	AG1-464 C O1	3.3	Adder	3.88
965952	AG1-464 E O1	4.96	Adder	5.84
966281	AG1-497 C O1	7.45	Adder	8.76
966282	AG1-497 E O1	3.19	Adder	3.75
966601	AG1-529 C	7.19	Adder	8.46
966602	AG1-529 E	3.84	Adder	4.52
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.1833	Confirmed LTF	0.1833
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.1408	Confirmed LTF	0.1408
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.3178	Confirmed LTF	0.3178
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0919	Confirmed LTF	0.0919
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0652	Confirmed LTF	0.0652
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0925	Confirmed LTF	0.0925
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.3869	Confirmed LTF	0.3869
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0366	LTF/CMTX NF	0.0366
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.1	Confirmed LTF	0.1
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.1081	Confirmed LTF	0.1081
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0577	Confirmed LTF	0.0577
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.4445	LTF/CMTX NF	0.4445
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.4739	Confirmed LTF	0.4739
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.1019	Confirmed LTF	0.1019

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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
166659839	232107	TOWNSEND	DP&L	232106	MIDLTNT P	DP&L	1	DPL_P7_1_DBL_1NCB_FS A	tower	348.0	151.52	158.25	AC	22.96

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.12	Adder	2.49
232407	W1-004 E	2.12	Adder	2.49
232409	W1-005 E	2.12	Adder	2.49
232411	W1-006 E	2.12	Adder	2.49
232412	X1-032 E	0.69	Adder	0.81
232417	X3-008 C	0.31	80 50	0.31
232418	X3-008 E	3.1	80 50	3.1
232422	X3-066 C	0.16	80 50	0.16
232423	X3-066 E	1.23	80 50	1.23
232424	Y1-079 C	0.23	80 50	0.23
232425	Y1-079 E	2.3	80 50	2.3
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.49	80 50	0.49
232428	Y3-058 C	0.2	80 50	0.2
232429	Y3-058 E	1.28	80 50	1.28
232433	Z2-076 E	0.32	Adder	0.38
232435	Z2-077 E	0.32	Adder	0.38
232813	VAUGHN	0.11	80 50	0.11
232851	DUP-SFR1	1.63	Adder	1.92
232902	EASTMUNI	3.52	80 50	3.52
232907	VN8	5.63	80 50	5.63
232910	NRG_G1	1.73	80 50	1.73
232911	NRG_G2	1.73	80 50	1.73
232919	VN10	0.42	80 50	0.42
232922	MR3 (Deactivation : 01/06/2021)	9.05	Adder	10.65
232926	CRISFLD1	0.34	80 50	0.34
233915	AB1-141 C	1.02	80 50	1.02
233916	AB1-141 E	2.9	80 50	2.9
233918	AB1-142 C	1.02	80 50	1.02
233919	AB1-142 E	2.9	80 50	2.9
233923	AA1-102 C	1.91	80 50	1.91
233931	AB2-179 C	27.12	80 50	27.12
293670	O-025 C	0.2	80 50	0.2
917082	CHERRYDALE E	2.11	Adder	2.48
918835	AA1-102 E	19.0	80 50	19.0
919831	AA2-069	40.0	Adder	47.06
923921	AB2-032 C	6.27	80 50	6.27
923922	AB2-032 E	2.95	80 50	2.95
923951	AB2-036 C	12.66	80 50	12.66
923952	AB2-036 E	20.72	80 50	20.72
924801	AB2-133 C O1	11.54	80 50	11.54

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924802	AB2-133 E O1	14.64	80 50	14.64
924821	AB2-135 C	12.3	80 50	12.3
924822	AB2-135 E	14.03	80 50	14.03
924831	AB2-136 C	5.96	80 50	5.96
924832	AB2-136 E	6.32	80 50	6.32
924971	AB2-153 C	3.5	80 50	3.5
924972	AB2-153 E	5.72	80 50	5.72
925151	AB2-172 C	4.76	80 50	4.76
925152	AB2-172 E	7.76	80 50	7.76
925254	AB2-179 E	8.85	80 50	8.85
925261	AB2-180 C	2.94	80 50	2.94
925262	AB2-180 E	1.26	80 50	1.26
926131	AC1-091 C	0.64	Adder	0.75
926132	AC1-091 E	1.05	Adder	1.24
926141	AC1-092 C	0.64	Adder	0.75
926142	AC1-092 E	1.05	Adder	1.24
926151	AC1-093 C	0.61	Adder	0.72
926152	AC1-093 E	1.0	Adder	1.18
926161	AC1-094 C	0.51	Adder	0.6
926162	AC1-094 E	0.85	Adder	1.0
927031	AC1-190 C	8.7	80 50	8.7
927032	AC1-190 E	3.73	80 50	3.73
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.66	80 50	0.66
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.43	80 50	0.43
930201	AB1-056 C	9.9	Adder	11.65
930202	AB1-056 E	28.18	Adder	33.15
931261	AB1-176 C	0.64	80 50	0.64
931262	AB1-176 E	1.05	80 50	1.05
932161	AC2-023 C	5.64	80 50	5.64
932162	AC2-023 E	4.11	80 50	4.11
933631	AC2-185 C	1.3	Adder	1.53
933632	AC2-185 E	2.12	Adder	2.49
933641	AC2-186 C	3.14	Adder	3.69
933642	AC2-186 E	5.12	Adder	6.02
936611	AD2-076 C O1	8.17	80 50	8.17
936612	AD2-076 E O1	13.33	80 50	13.33
938651	AE1-087 C	4.0	80 50	4.0
938652	AE1-087 E	1.0	80 50	1.0
938895	AE1-117 C	7.5	Adder	8.82
938896	AE1-117 E	20.01	Adder	23.54
939151	AE1-145	3.41	Adder	4.01
941021	AE2-093 C	5.06	80 50	5.06
941022	AE2-093 E	8.25	80 50	8.25
941181	AE2-112 C	2.83	80 50	2.83
941182	AE2-112 E	4.63	80 50	4.63
942441	AE2-257 C	5.15	Adder	6.06
942442	AE2-257 E	13.57	Adder	15.96
943361	AF1-007 C	0.29	Adder	0.34
943362	AF1-007 E	0.83	Adder	0.98
943441	AF1-015 C	1.91	80 50	1.91
943442	AF1-015 E	2.63	80 50	2.63

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943651	AF1-036 C	3.69	80 50	3.69
943652	AF1-036 E	5.09	80 50	5.09
945661	AF1-231 C	1.3	Adder	1.53
945662	AF1-231 E	1.94	Adder	2.28
945791	AF1-244 (Withdrawn : 06/07/2021)	1.63	80 50	1.63
945931	AF1-258	0.67	80 50	0.67
945941	AF1-259	0.34	80 50	0.34
957611	AF2-055 C	5.97	Adder	7.02
957612	AF2-055 E	2.56	Adder	3.01
957661	AF2-060	1.53	Adder	1.8
957671	AF2-061 O1	6.81	Adder	8.01
959021	AF2-193 C	18.29	Adder	21.52
959022	AF2-193 E	49.33	Adder	58.04
959031	AF2-194 C	18.29	Adder	21.52
959032	AF2-194 E	49.33	Adder	58.04
959051	AF2-196 C	1.4	Adder	1.65
959052	AF2-196 E	3.27	Adder	3.85
959161	AF2-207 C O1	3.49	Adder	4.11
959162	AF2-207 E O1	6.16	80 50	6.16
959581	AF2-249 C	0.12	80 50	0.12
959582	AF2-249 E	0.49	80 50	0.49
959591	AF2-250 C	0.22	80 50	0.22
959592	AF2-250 E	0.17	80 50	0.17
960221	AF2-313 C	5.36	80 50	5.36
960222	AF2-313 E	3.04	80 50	3.04
960341	AF2-325 C	1.02	80 50	1.02
960342	AF2-325 E	1.41	80 50	1.41
960671	AF2-358 C O1	13.81	80 50	13.81
960672	AF2-358 E O1	9.21	80 50	9.21
960871	AF2-378 C	0.27	80 50	0.27
960872	AF2-378 E	0.37	80 50	0.37
960881	AF2-379 C	0.34	80 50	0.34
960882	AF2-379 E	0.47	80 50	0.47
960941	AF2-385 C	9.74	80 50	9.74
960942	AF2-385 E	5.54	80 50	5.54
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	22.45	80 50	22.45
962161	AG1-061 C O1	13.78	80 50	13.78
962162	AG1-061 E O1	9.19	80 50	9.19
962261	AG1-072	16.33	80 50	16.33
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.49	80 50	0.49
962381	AG1-087 C O1	16.12	Adder	18.96
962382	AG1-087 E O1	43.48	Adder	51.15
963001	AG1-149 (Withdrawn : 06/07/2021)	0.61	80 50	0.61
963011	AG1-150	6.81	Adder	8.01
964551	AG1-318 C	0.05	Adder	0.06
964552	AG1-318 E	0.11	Adder	0.13
964962	AG1-360 E	1.51	Adder	1.78
965321	AG1-397 C	0.71	Adder	0.84
965322	AG1-397 E	0.98	Adder	1.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965611	AG1-429 C O1	6.01	Adder	7.07
965612	AG1-429 E O1	4.01	Adder	4.72
965821	AG1-450	5.75	80 50	5.75
965921	AG1-461 C O1	3.23	Adder	3.8
965922	AG1-461 E O1	1.74	Adder	2.05
965951	AG1-464 C O1	3.3	Adder	3.88
965952	AG1-464 E O1	4.96	Adder	5.84
966281	AG1-497 C O1	7.45	Adder	8.76
966282	AG1-497 E O1	3.19	Adder	3.75
966601	AG1-529 C	7.19	Adder	8.46
966602	AG1-529 E	3.84	Adder	4.52
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.1833	Confirmed LTF	0.1833
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.1408	Confirmed LTF	0.1408
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.3178	Confirmed LTF	0.3178
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0919	Confirmed LTF	0.0919
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0652	Confirmed LTF	0.0652
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0925	Confirmed LTF	0.0925
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.3869	Confirmed LTF	0.3869
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0366	LTF/CMTX NF	0.0366
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.1	Confirmed LTF	0.1
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.1081	Confirmed LTF	0.1081
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0577	Confirmed LTF	0.0577
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.4445	LTF/CMTX NF	0.4445
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.4739	Confirmed LTF	0.4739
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.1019	Confirmed LTF	0.1019

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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
182543166	232116	VIENN138	DP&L	232005	VIENNA	DP&L	1	DPL_P4-2_DP6	breaker	530.0	109.12	115.44	AC	40.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.86	80 50	0.86
232405	W1-003 E	4.86	80 50	4.86
232406	W1-004 C	0.86	80 50	0.86
232407	W1-004 E	4.86	80 50	4.86
232408	W1-005 C	0.86	80 50	0.86
232409	W1-005 E	4.86	80 50	4.86
232410	W1-006 C	0.86	80 50	0.86
232411	W1-006 E	4.86	80 50	4.86
232412	X1-032 E	1.64	80 50	1.64
232418	X3-008 E	3.11	Adder	3.66
232427	Y1-080 E	0.69	Adder	0.81
232428	Y3-058 C	0.37	80 50	0.37
232429	Y3-058 E	2.4	80 50	2.4
232433	Z2-076 E	0.53	Adder	0.62
232435	Z2-077 E	0.53	Adder	0.62
232851	DUP-SFR1	2.49	Adder	2.93
232907	VN8	13.59	80 50	13.59
232912	OH NUG1	2.28	80 50	2.28
232914	OH NUG3	2.28	80 50	2.28
232915	OH NUG4	2.28	80 50	2.28
232916	OH NUG5	2.28	80 50	2.28
232919	VN10	0.77	80 50	0.77
232926	CRISFLD1	0.68	80 50	0.68
233923	AA1-102 C	3.86	80 50	3.86
917082	CHERRYDALE E	4.12	Adder	4.85
918835	AA1-102 E	38.42	80 50	38.42
924831	AB2-136 C	7.27	Adder	8.55
924832	AB2-136 E	7.7	Adder	9.06
925151	AB2-172 C	4.77	Adder	5.61
925152	AB2-172 E	7.78	Adder	9.15
925261	AB2-180 C	5.51	80 50	5.51
925262	AB2-180 E	2.36	80 50	2.36
927031	AC1-190 C	9.04	Adder	10.64
927032	AC1-190 E	3.88	Adder	4.56
927191	AC1-213 C (Withdrawn : 05/24/2021)	1.05	Adder	1.24
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.69	Adder	0.81
930201	AB1-056 C	15.6	Adder	18.35
930202	AB1-056 E	44.42	Adder	52.26
932161	AC2-023 C	10.53	80 50	10.53
932162	AC2-023 E	7.67	80 50	7.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933641	AC2-186 C	3.16	Adder	3.72
933642	AC2-186 E	5.16	Adder	6.07
938651	AE1-087 C	4.01	Adder	4.72
938652	AE1-087 E	1.0	Adder	1.18
938895	AE1-117 C	12.16	Adder	14.31
938896	AE1-117 E	32.44	Adder	38.16
939151	AE1-145	6.62	Adder	7.79
942441	AE2-257 C	8.29	Adder	9.75
942442	AE2-257 E	21.87	Adder	25.73
943361	AF1-007 C	0.46	Adder	0.54
943362	AF1-007 E	1.31	Adder	1.54
945661	AF1-231 C	2.53	Adder	2.98
945662	AF1-231 E	3.79	Adder	4.46
945791	AF1-244 (Withdrawn : 06/07/2021)	3.3	80 50	3.3
945931	AF1-258	1.26	80 50	1.26
957611	AF2-055 C	11.63	Adder	13.68
957612	AF2-055 E	4.98	Adder	5.86
957661	AF2-060	2.98	Adder	3.51
957671	AF2-061 O1	13.24	Adder	15.58
959021	AF2-193 C	28.82	Adder	33.91
959022	AF2-193 E	77.75	Adder	91.47
959031	AF2-194 C	28.82	Adder	33.91
959032	AF2-194 E	77.75	Adder	91.47
959051	AF2-196 C	2.26	Adder	2.66
959052	AF2-196 E	5.28	Adder	6.21
959161	AF2-207 C O1	6.58	Adder	7.74
959162	AF2-207 E O1	9.87	Adder	11.61
959581	AF2-249 C	0.2	Adder	0.24
959582	AF2-249 E	0.79	Adder	0.93
959591	AF2-250 C	0.36	Adder	0.42
959592	AF2-250 E	0.28	Adder	0.33
960341	AF2-325 C	1.17	Adder	1.38
960342	AF2-325 E	1.61	Adder	1.89
960671	AF2-358 C O1	23.64	80 50	23.64
960672	AF2-358 E O1	15.76	80 50	15.76
960871	AF2-378 C	0.32	Adder	0.38
960872	AF2-378 E	0.44	Adder	0.52
960881	AF2-379 C	0.68	80 50	0.68
960882	AF2-379 E	0.93	80 50	0.93
960941	AF2-385 C	15.61	Adder	18.36
960942	AF2-385 E	8.88	Adder	10.45
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	54.13	80 50	54.13
962161	AG1-061 C O1	20.58	Adder	24.21
962162	AG1-061 E O1	13.72	Adder	16.14
963001	AG1-149 (Withdrawn : 06/07/2021)	1.24	80 50	1.24
963011	AG1-150	13.24	Adder	15.58
964551	AG1-318 C	0.08	Adder	0.09
964552	AG1-318 E	0.18	Adder	0.21
964962	AG1-360 E	3.58	80 50	3.58
965321	AG1-397 C	1.3	Adder	1.53

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965322	AG1-397 E	1.8	Adder	2.12
965611	AG1-429 C O1	11.72	Adder	13.79
965612	AG1-429 E O1	7.81	Adder	9.19
965821	AG1-450	9.85	80 50	9.85
965921	AG1-461 C O1	5.38	Adder	6.33
965922	AG1-461 E O1	2.89	Adder	3.4
965951	AG1-464 C O1	3.33	Adder	3.92
965952	AG1-464 E O1	5.0	Adder	5.88
966601	AG1-529 C	9.18	Adder	10.8
966602	AG1-529 E	4.9	Adder	5.76
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.2501	Confirmed LTF	0.2501
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.1895	Confirmed LTF	0.1895
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.4338	Confirmed LTF	0.4338
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.1247	Confirmed LTF	0.1247
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0881	Confirmed LTF	0.0881
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.1256	Confirmed LTF	0.1256
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.5262	Confirmed LTF	0.5262
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.1432	LTF/CMTX NF	0.1432
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.1364	Confirmed LTF	0.1364
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.1457	Confirmed LTF	0.1457
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.1032	Confirmed LTF	0.1032
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	1.0553	LTF/CMTX NF	1.0553
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.646	Confirmed LTF	0.646
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.1391	Confirmed LTF	0.1391

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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
182399074	232117	VIENNA 8	DP&L	232116	VIENN138	DP&L	1	DPL_P4-2_DP6	breaker	482.0	119.53	126.46	AC	40.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.86	80 50	0.86
232405	W1-003 E	4.86	80 50	4.86
232406	W1-004 C	0.86	80 50	0.86
232407	W1-004 E	4.86	80 50	4.86
232408	W1-005 C	0.86	80 50	0.86
232409	W1-005 E	4.86	80 50	4.86
232410	W1-006 C	0.86	80 50	0.86
232411	W1-006 E	4.86	80 50	4.86
232412	X1-032 E	1.64	80 50	1.64
232418	X3-008 E	3.11	Adder	3.66
232427	Y1-080 E	0.69	Adder	0.81
232428	Y3-058 C	0.37	80 50	0.37
232429	Y3-058 E	2.4	80 50	2.4
232433	Z2-076 E	0.53	Adder	0.62
232435	Z2-077 E	0.53	Adder	0.62
232851	DUP-SFR1	2.49	Adder	2.93
232907	VN8	13.59	80 50	13.59
232912	OH NUG1	2.28	80 50	2.28
232914	OH NUG3	2.28	80 50	2.28
232915	OH NUG4	2.28	80 50	2.28
232916	OH NUG5	2.28	80 50	2.28
232919	VN10	0.77	80 50	0.77
232926	CRISFLD1	0.68	80 50	0.68
233923	AA1-102 C	3.86	80 50	3.86
917082	CHERRYDALE E	4.12	Adder	4.85
918835	AA1-102 E	38.42	80 50	38.42
924831	AB2-136 C	7.27	Adder	8.55
924832	AB2-136 E	7.7	Adder	9.06
925151	AB2-172 C	4.77	Adder	5.61
925152	AB2-172 E	7.78	Adder	9.15
925261	AB2-180 C	5.51	80 50	5.51
925262	AB2-180 E	2.36	80 50	2.36
927031	AC1-190 C	9.04	Adder	10.64
927032	AC1-190 E	3.88	Adder	4.56
927191	AC1-213 C (Withdrawn : 05/24/2021)	1.05	Adder	1.24
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.69	Adder	0.81
930201	AB1-056 C	15.6	Adder	18.35
930202	AB1-056 E	44.42	Adder	52.26
932161	AC2-023 C	10.53	80 50	10.53
932162	AC2-023 E	7.67	80 50	7.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933641	AC2-186 C	3.16	Adder	3.72
933642	AC2-186 E	5.16	Adder	6.07
938651	AE1-087 C	4.01	Adder	4.72
938652	AE1-087 E	1.0	Adder	1.18
938895	AE1-117 C	12.16	Adder	14.31
938896	AE1-117 E	32.44	Adder	38.16
939151	AE1-145	6.62	Adder	7.79
942441	AE2-257 C	8.29	Adder	9.75
942442	AE2-257 E	21.87	Adder	25.73
943361	AF1-007 C	0.46	Adder	0.54
943362	AF1-007 E	1.31	Adder	1.54
945661	AF1-231 C	2.53	Adder	2.98
945662	AF1-231 E	3.79	Adder	4.46
945791	AF1-244 (Withdrawn : 06/07/2021)	3.3	80 50	3.3
945931	AF1-258	1.26	80 50	1.26
957611	AF2-055 C	11.63	Adder	13.68
957612	AF2-055 E	4.98	Adder	5.86
957661	AF2-060	2.98	Adder	3.51
957671	AF2-061 O1	13.24	Adder	15.58
959021	AF2-193 C	28.82	Adder	33.91
959022	AF2-193 E	77.75	Adder	91.47
959031	AF2-194 C	28.82	Adder	33.91
959032	AF2-194 E	77.75	Adder	91.47
959051	AF2-196 C	2.26	Adder	2.66
959052	AF2-196 E	5.28	Adder	6.21
959161	AF2-207 C O1	6.58	Adder	7.74
959162	AF2-207 E O1	9.87	Adder	11.61
959581	AF2-249 C	0.2	Adder	0.24
959582	AF2-249 E	0.79	Adder	0.93
959591	AF2-250 C	0.36	Adder	0.42
959592	AF2-250 E	0.28	Adder	0.33
960341	AF2-325 C	1.17	Adder	1.38
960342	AF2-325 E	1.61	Adder	1.89
960671	AF2-358 C O1	23.64	80 50	23.64
960672	AF2-358 E O1	15.76	80 50	15.76
960871	AF2-378 C	0.32	Adder	0.38
960872	AF2-378 E	0.44	Adder	0.52
960881	AF2-379 C	0.68	80 50	0.68
960882	AF2-379 E	0.93	80 50	0.93
960941	AF2-385 C	15.61	Adder	18.36
960942	AF2-385 E	8.88	Adder	10.45
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	54.13	80 50	54.13
962161	AG1-061 C O1	20.58	Adder	24.21
962162	AG1-061 E O1	13.72	Adder	16.14
963001	AG1-149 (Withdrawn : 06/07/2021)	1.24	80 50	1.24
963011	AG1-150	13.24	Adder	15.58
964551	AG1-318 C	0.08	Adder	0.09
964552	AG1-318 E	0.18	Adder	0.21
964962	AG1-360 E	3.58	80 50	3.58
965321	AG1-397 C	1.3	Adder	1.53

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965322	AG1-397 E	1.8	Adder	2.12
965611	AG1-429 C O1	11.72	Adder	13.79
965612	AG1-429 E O1	7.81	Adder	9.19
965821	AG1-450	9.85	80 50	9.85
965921	AG1-461 C O1	5.38	Adder	6.33
965922	AG1-461 E O1	2.89	Adder	3.4
965951	AG1-464 C O1	3.33	Adder	3.92
965952	AG1-464 E O1	5.0	Adder	5.88
966601	AG1-529 C	9.18	Adder	10.8
966602	AG1-529 E	4.9	Adder	5.76
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.2501	Confirmed LTF	0.2501
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.1895	Confirmed LTF	0.1895
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.4338	Confirmed LTF	0.4338
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.1247	Confirmed LTF	0.1247
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0881	Confirmed LTF	0.0881
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.1256	Confirmed LTF	0.1256
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.5262	Confirmed LTF	0.5262
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.1432	LTF/CMTX NF	0.1432
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.1364	Confirmed LTF	0.1364
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.1457	Confirmed LTF	0.1457
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.1032	Confirmed LTF	0.1032
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	1.0553	LTF/CMTX NF	1.0553
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.646	Confirmed LTF	0.646
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.1391	Confirmed LTF	0.1391

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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
174160809	232215	KENT	DP&L	232812	NMEREDTH	DP&L	1	DPL_P4-2_DP11	breaker	93.0	136.9	142.48	AC	6.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	0.58	Adder	0.68
232407	W1-004 E	0.58	Adder	0.68
232409	W1-005 E	0.58	Adder	0.68
232411	W1-006 E	0.58	Adder	0.68
232412	X1-032 E	0.19	Adder	0.22
232429	Y3-058 E	0.27	Adder	0.32
232433	Z2-076 E	0.1	Adder	0.12
232435	Z2-077 E	0.1	Adder	0.12
232813	VAUGHN	0.12	80 50	0.12
232851	DUP-SFR1	0.67	Adder	0.79
232899	W1-062	0.89	80 50	0.89
232900	DEMECSMY	0.87	80 50	0.87
232910	NRG_G1	2.19	80 50	2.19
232911	NRG_G2	2.19	80 50	2.19
233931	AB2-179 C	-2.09	Adder	-2.46
917082	CHERRYDALE E	0.58	Adder	0.68
918835	AA1-102 E	4.31	Adder	5.07
923921	AB2-032 C	-1.17	Adder	-1.38
924971	AB2-153 C	-0.65	Adder	-0.76
925261	AB2-180 C	0.62	Adder	0.73
925262	AB2-180 E	0.27	Adder	0.32
926131	AC1-091 C	0.45	Adder	0.53
926132	AC1-091 E	0.74	Adder	0.87
926141	AC1-092 C	0.45	Adder	0.53
926142	AC1-092 E	0.74	Adder	0.87
926151	AC1-093 C	0.42	Adder	0.49
926152	AC1-093 E	0.7	Adder	0.82
926161	AC1-094 C	0.36	Adder	0.42
926162	AC1-094 E	0.59	Adder	0.69
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.15	Adder	0.18
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.1	Adder	0.12
930201	AB1-056 C	3.13	Adder	3.68
930202	AB1-056 E	8.91	Adder	10.48
932161	AC2-023 C	1.14	Adder	1.34
932162	AC2-023 E	0.83	Adder	0.98
933631	AC2-185 C	0.91	Adder	1.07
933632	AC2-185 E	1.48	Adder	1.74
933641	AC2-186 C	2.85	80 50	2.85
933642	AC2-186 E	4.64	80 50	4.64
938895	AE1-117 C	2.4	Adder	2.82

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938896	AE1-117 E	6.39	Adder	7.52
939151	AE1-145	0.93	Adder	1.09
942441	AE2-257 C	1.64	Adder	1.93
942442	AE2-257 E	4.34	Adder	5.11
943361	AF1-007 C	0.09	Adder	0.11
943362	AF1-007 E	0.26	Adder	0.31
945661	AF1-231 C	0.35	Adder	0.41
945662	AF1-231 E	0.53	Adder	0.62
945791	AF1-244 (Withdrawn : 06/07/2021)	0.37	Adder	0.44
945931	AF1-258	0.14	Adder	0.16
945941	AF1-259	-0.08	Adder	-0.09
957611	AF2-055 C	1.63	Adder	1.92
957612	AF2-055 E	0.7	Adder	0.82
957661	AF2-060	0.42	Adder	0.49
957671	AF2-061 O1	1.87	Adder	2.2
959021	AF2-193 C	5.78	Adder	6.8
959022	AF2-193 E	15.59	Adder	18.34
959031	AF2-194 C	5.78	Adder	6.8
959032	AF2-194 E	15.59	Adder	18.34
959051	AF2-196 C	0.45	Adder	0.53
959052	AF2-196 E	1.05	Adder	1.24
959161	AF2-207 C O1	1.0	Adder	1.18
959162	AF2-207 E O1	1.5	Adder	1.76
959581	AF2-249 C	0.03	Adder	0.04
959582	AF2-249 E	0.12	Adder	0.14
959591	AF2-250 C	0.05	Adder	0.06
959592	AF2-250 E	0.04	Adder	0.05
960881	AF2-379 C	0.08	Adder	0.09
960882	AF2-379 E	0.1	Adder	0.12
960941	AF2-385 C	2.37	Adder	2.79
960942	AF2-385 E	1.35	Adder	1.59
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	4.42	Adder	5.2
962161	AG1-061 C O1	3.14	Adder	3.69
962162	AG1-061 E O1	2.09	Adder	2.46
962262	AG1-072 BAT	3.0	Adder	3.53
962381	AG1-087 C O1	5.16	Adder	6.07
962382	AG1-087 E O1	13.93	Adder	16.39
963001	AG1-149 (Withdrawn : 06/07/2021)	0.14	Adder	0.16
963011	AG1-150	1.87	Adder	2.2
964551	AG1-318 C	0.01	Adder	0.01
964552	AG1-318 E	0.03	Adder	0.04
964962	AG1-360 E	0.41	Adder	0.48
965321	AG1-397 C	0.2	Adder	0.24
965322	AG1-397 E	0.27	Adder	0.32
965611	AG1-429 C O1	1.65	Adder	1.94
965612	AG1-429 E O1	1.1	Adder	1.29
965921	AG1-461 C O1	1.05	Adder	1.24
965922	AG1-461 E O1	0.57	Adder	0.67
965951	AG1-464 C O1	3.0	80 50	3.0
965952	AG1-464 E O1	4.49	80 50	4.49

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966601	AG1-529 C	3.3	Adder	3.88
966602	AG1-529 E	1.76	Adder	2.07
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0627	Confirmed LTF	0.0627
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0483	Confirmed LTF	0.0483
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.1086	Confirmed LTF	0.1086
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0314	Confirmed LTF	0.0314
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0223	Confirmed LTF	0.0223
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0317	Confirmed LTF	0.0317
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1323	Confirmed LTF	0.1323
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	0.0079	LTF/CMTX	0.0079
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0342	Confirmed LTF	0.0342
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.037	Confirmed LTF	0.037
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0147	Confirmed LTF	0.0147
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.0636	LTF/CMTX NF	0.0636
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.162	Confirmed LTF	0.162
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0348	Confirmed LTF	0.0348

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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
174160860	232230	TRAP ALT	DP&L	232232	TRAPPETP	DP&L	1	DPL_P4-2_DP11	breaker	173.0	114.39	123.39	AC	16.48

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.23	80 50	0.23
232405	W1-003 E	1.31	80 50	1.31
232406	W1-004 C	0.23	80 50	0.23
232407	W1-004 E	1.31	80 50	1.31
232408	W1-005 C	0.23	80 50	0.23
232409	W1-005 E	1.31	80 50	1.31
232410	W1-006 C	0.23	80 50	0.23
232411	W1-006 E	1.31	80 50	1.31
232412	X1-032 E	0.44	80 50	0.44
232417	X3-008 C	0.47	80 50	0.47
232418	X3-008 E	4.64	80 50	4.64
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.52	80 50	0.52
232428	Y3-058 C	0.13	80 50	0.13
232429	Y3-058 E	0.87	80 50	0.87
232433	Z2-076 E	0.14	Adder	0.16
232435	Z2-077 E	0.14	Adder	0.16
232851	DUP-SFR1	0.76	Adder	0.89
232905	BAYVIEW1	0.22	80 50	0.22
232907	VN8	3.47	80 50	3.47
232912	OH NUG1	0.61	80 50	0.61
232919	VN10	0.38	80 50	0.38
232921	TASLEY2G	0.41	80 50	0.41
232926	CRISFLD1	0.18	80 50	0.18
233923	AA1-102 C	1.04	80 50	1.04
293670	O-025 C	0.12	80 50	0.12
917081	CHERRYDALE C	0.13	80 50	0.13
917082	CHERRYDALE E	1.31	80 50	1.31
918835	AA1-102 E	10.34	80 50	10.34
924831	AB2-136 C	7.55	80 50	7.55
924832	AB2-136 E	8.0	80 50	8.0
925151	AB2-172 C	7.11	80 50	7.11
925152	AB2-172 E	11.61	80 50	11.61
925261	AB2-180 C	2.01	80 50	2.01
925262	AB2-180 E	0.86	80 50	0.86
927031	AC1-190 C	12.67	80 50	12.67
927032	AC1-190 E	5.43	80 50	5.43
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.4	80 50	0.4
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.26	80 50	0.26
930201	AB1-056 C	3.85	Adder	4.53

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	10.96	Adder	12.89
932161	AC2-023 C	4.12	80 50	4.12
932162	AC2-023 E	3.0	80 50	3.0
938651	AE1-087 C	5.99	80 50	5.99
938652	AE1-087 E	1.5	80 50	1.5
938895	AE1-117 C	3.09	Adder	3.64
938896	AE1-117 E	8.24	Adder	9.69
939151	AE1-145	1.79	Adder	2.11
942441	AE2-257 C	2.1	Adder	2.47
942442	AE2-257 E	5.55	Adder	6.53
943361	AF1-007 C	0.11	Adder	0.13
943362	AF1-007 E	0.32	Adder	0.38
945661	AF1-231 C	0.68	Adder	0.8
945662	AF1-231 E	1.02	Adder	1.2
945791	AF1-244 (Withdrawn : 06/07/2021)	0.89	80 50	0.89
945931	AF1-258	0.46	80 50	0.46
957611	AF2-055 C	3.69	80 50	3.69
957612	AF2-055 E	1.58	80 50	1.58
957661	AF2-060	0.81	Adder	0.95
957671	AF2-061 O1	3.58	Adder	4.21
959021	AF2-193 C	7.11	Adder	8.36
959022	AF2-193 E	19.19	Adder	22.58
959031	AF2-194 C	7.11	Adder	8.36
959032	AF2-194 E	19.19	Adder	22.58
959051	AF2-196 C	0.57	Adder	0.67
959052	AF2-196 E	1.34	Adder	1.58
959161	AF2-207 C O1	2.37	80 50	2.37
959162	AF2-207 E O1	3.56	80 50	3.56
959581	AF2-249 C	0.07	80 50	0.07
959582	AF2-249 E	0.29	80 50	0.29
959591	AF2-250 C	0.13	80 50	0.13
959592	AF2-250 E	0.1	80 50	0.1
960341	AF2-325 C	1.38	80 50	1.38
960342	AF2-325 E	1.91	80 50	1.91
960671	AF2-358 C O1	14.06	80 50	14.06
960672	AF2-358 E O1	9.37	80 50	9.37
960871	AF2-378 C	0.35	80 50	0.35
960872	AF2-378 E	0.49	80 50	0.49
960881	AF2-379 C	0.19	80 50	0.19
960882	AF2-379 E	0.27	80 50	0.27
960941	AF2-385 C	5.63	80 50	5.63
960942	AF2-385 E	3.2	80 50	3.2
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	13.84	80 50	13.84
962161	AG1-061 C O1	9.89	80 50	9.89
962162	AG1-061 E O1	6.59	80 50	6.59
962262	AG1-072 BAT	2.66	Adder	3.13
963001	AG1-149 (Withdrawn : 06/07/2021)	0.33	80 50	0.33
963011	AG1-150	3.58	Adder	4.21
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964962	AG1-360 E	0.96	80 50	0.96
965321	AG1-397 C	0.48	80 50	0.48
965322	AG1-397 E	0.66	80 50	0.66
965611	AG1-429 C O1	3.72	80 50	3.72
965612	AG1-429 E O1	2.48	80 50	2.48
965821	AG1-450	5.86	80 50	5.86
965921	AG1-461 C O1	1.7	Adder	2.0
965922	AG1-461 E O1	0.92	Adder	1.08
966601	AG1-529 C	2.14	Adder	2.52
966602	AG1-529 E	1.14	Adder	1.34
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0662	Confirmed LTF	0.0662
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0504	Confirmed LTF	0.0504
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.1147	Confirmed LTF	0.1147
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0331	Confirmed LTF	0.0331
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0234	Confirmed LTF	0.0234
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0333	Confirmed LTF	0.0333
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1394	Confirmed LTF	0.1394
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0252	LTF/CMTX NF	0.0252
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0361	Confirmed LTF	0.0361
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.0387	Confirmed LTF	0.0387
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0237	Confirmed LTF	0.0237
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.2138	LTF/CMTX NF	0.2138
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.1709	Confirmed LTF	0.1709
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0368	Confirmed LTF	0.0368

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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
174160858	232232	TRAPPETP	DP&L	232227	EASTN_69	DP&L	1	DPL_P4-2_DP11	breaker	173.0	114.19	123.49	AC	17.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.24	80 50	0.24
232405	W1-003 E	1.36	80 50	1.36
232406	W1-004 C	0.24	80 50	0.24
232407	W1-004 E	1.36	80 50	1.36
232408	W1-005 C	0.24	80 50	0.24
232409	W1-005 E	1.36	80 50	1.36
232410	W1-006 C	0.24	80 50	0.24
232411	W1-006 E	1.36	80 50	1.36
232412	X1-032 E	0.46	80 50	0.46
232417	X3-008 C	0.48	80 50	0.48
232418	X3-008 E	4.81	80 50	4.81
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.53	80 50	0.53
232428	Y3-058 C	0.14	80 50	0.14
232429	Y3-058 E	0.91	80 50	0.91
232433	Z2-076 E	0.15	Adder	0.18
232435	Z2-077 E	0.15	Adder	0.18
232851	DUP-SFR1	0.78	Adder	0.92
232905	BAYVIEW1	0.22	80 50	0.22
232907	VN8	3.6	80 50	3.6
232912	OH NUG1	0.64	80 50	0.64
232919	VN10	0.39	80 50	0.39
232921	TASLEY2G	0.42	80 50	0.42
232926	CRISFLD1	0.19	80 50	0.19
233923	AA1-102 C	1.08	80 50	1.08
293670	O-025 C	0.13	80 50	0.13
917081	CHERRYDALE C	0.14	80 50	0.14
917082	CHERRYDALE E	1.36	80 50	1.36
918835	AA1-102 E	10.7	80 50	10.7
924831	AB2-136 C	7.81	80 50	7.81
924832	AB2-136 E	8.29	80 50	8.29
925151	AB2-172 C	7.37	80 50	7.37
925152	AB2-172 E	12.02	80 50	12.02
925261	AB2-180 C	2.08	80 50	2.08
925262	AB2-180 E	0.89	80 50	0.89
927031	AC1-190 C	13.12	80 50	13.12
927032	AC1-190 E	5.62	80 50	5.62
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.41	80 50	0.41
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.27	80 50	0.27
930201	AB1-056 C	3.99	Adder	4.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	11.35	Adder	13.35
932161	AC2-023 C	4.26	80 50	4.26
932162	AC2-023 E	3.11	80 50	3.11
938651	AE1-087 C	6.2	80 50	6.2
938652	AE1-087 E	1.55	80 50	1.55
938895	AE1-117 C	3.2	Adder	3.76
938896	AE1-117 E	8.53	Adder	10.04
939151	AE1-145	1.85	Adder	2.18
942441	AE2-257 C	2.18	Adder	2.56
942442	AE2-257 E	5.74	Adder	6.75
943361	AF1-007 C	0.12	Adder	0.14
943362	AF1-007 E	0.33	Adder	0.39
945661	AF1-231 C	0.71	Adder	0.84
945662	AF1-231 E	1.06	Adder	1.25
945791	AF1-244 (Withdrawn : 06/07/2021)	0.92	80 50	0.92
945931	AF1-258	0.48	80 50	0.48
957611	AF2-055 C	3.83	80 50	3.83
957612	AF2-055 E	1.64	80 50	1.64
957661	AF2-060	0.83	Adder	0.98
957671	AF2-061 O1	3.71	Adder	4.36
959021	AF2-193 C	7.36	Adder	8.66
959022	AF2-193 E	19.86	Adder	23.36
959031	AF2-194 C	7.36	Adder	8.66
959032	AF2-194 E	19.86	Adder	23.36
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.39	Adder	1.64
959161	AF2-207 C O1	2.46	80 50	2.46
959162	AF2-207 E O1	3.69	80 50	3.69
959581	AF2-249 C	0.07	80 50	0.07
959582	AF2-249 E	0.3	80 50	0.3
959591	AF2-250 C	0.14	80 50	0.14
959592	AF2-250 E	0.11	80 50	0.11
960341	AF2-325 C	1.43	80 50	1.43
960342	AF2-325 E	1.98	80 50	1.98
960671	AF2-358 C O1	14.56	80 50	14.56
960672	AF2-358 E O1	9.71	80 50	9.71
960871	AF2-378 C	0.36	80 50	0.36
960872	AF2-378 E	0.5	80 50	0.5
960881	AF2-379 C	0.2	80 50	0.2
960882	AF2-379 E	0.28	80 50	0.28
960941	AF2-385 C	5.83	80 50	5.83
960942	AF2-385 E	3.32	80 50	3.32
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	14.33	80 50	14.33
962161	AG1-061 C O1	10.24	80 50	10.24
962162	AG1-061 E O1	6.82	80 50	6.82
962262	AG1-072 BAT	2.76	Adder	3.25
963001	AG1-149 (Withdrawn : 06/07/2021)	0.35	80 50	0.35
963011	AG1-150	3.71	Adder	4.36
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964962	AG1-360 E	1.0	80 50	1.0
965321	AG1-397 C	0.49	80 50	0.49
965322	AG1-397 E	0.68	80 50	0.68
965611	AG1-429 C O1	3.85	80 50	3.85
965612	AG1-429 E O1	2.57	80 50	2.57
965821	AG1-450	6.07	80 50	6.07
965921	AG1-461 C O1	1.76	Adder	2.07
965922	AG1-461 E O1	0.95	Adder	1.12
966601	AG1-529 C	2.21	Adder	2.6
966602	AG1-529 E	1.18	Adder	1.39
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0685	Confirmed LTF	0.0685
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0522	Confirmed LTF	0.0522
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.1188	Confirmed LTF	0.1188
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0342	Confirmed LTF	0.0342
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0242	Confirmed LTF	0.0242
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0345	Confirmed LTF	0.0345
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1443	Confirmed LTF	0.1443
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0261	LTF/CMTX NF	0.0261
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0374	Confirmed LTF	0.0374
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.0401	Confirmed LTF	0.0401
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0245	Confirmed LTF	0.0245
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.2213	LTF/CMTX NF	0.2213
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.177	Confirmed LTF	0.177
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0381	Confirmed LTF	0.0381

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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
174160822	232233	PRESTON	DP&L	232821	TANYARD	DP&L	1	DPL_P4-2_DP11	breaker	173.0	128.0	137.36	AC	17.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.24	80 50	0.24
232405	W1-003 E	1.36	80 50	1.36
232406	W1-004 C	0.24	80 50	0.24
232407	W1-004 E	1.36	80 50	1.36
232408	W1-005 C	0.24	80 50	0.24
232409	W1-005 E	1.36	80 50	1.36
232410	W1-006 C	0.24	80 50	0.24
232411	W1-006 E	1.36	80 50	1.36
232412	X1-032 E	0.46	80 50	0.46
232417	X3-008 C	0.48	80 50	0.48
232418	X3-008 E	4.81	80 50	4.81
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.53	80 50	0.53
232428	Y3-058 C	0.14	80 50	0.14
232429	Y3-058 E	0.91	80 50	0.91
232433	Z2-076 E	0.15	Adder	0.18
232435	Z2-077 E	0.15	Adder	0.18
232851	DUP-SFR1	0.78	Adder	0.92
232905	BAYVIEW1	0.22	80 50	0.22
232907	VN8	3.6	80 50	3.6
232914	OH NUG3	0.64	80 50	0.64
232919	VN10	0.39	80 50	0.39
232921	TASLEY2G	0.42	80 50	0.42
232926	CRISFLD1	0.19	80 50	0.19
233923	AA1-102 C	1.08	80 50	1.08
293670	O-025 C	0.13	80 50	0.13
917081	CHERRYDALE C	0.14	80 50	0.14
917082	CHERRYDALE E	1.36	80 50	1.36
918835	AA1-102 E	10.7	80 50	10.7
924831	AB2-136 C	7.81	80 50	7.81
924832	AB2-136 E	8.29	80 50	8.29
925151	AB2-172 C	7.37	80 50	7.37
925152	AB2-172 E	12.02	80 50	12.02
925261	AB2-180 C	2.08	80 50	2.08
925262	AB2-180 E	0.89	80 50	0.89
927031	AC1-190 C	13.12	80 50	13.12
927032	AC1-190 E	5.62	80 50	5.62
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.41	80 50	0.41
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.27	80 50	0.27
930201	AB1-056 C	3.99	Adder	4.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	11.35	Adder	13.35
932161	AC2-023 C	4.26	80 50	4.26
932162	AC2-023 E	3.11	80 50	3.11
938651	AE1-087 C	6.2	80 50	6.2
938652	AE1-087 E	1.55	80 50	1.55
938895	AE1-117 C	3.2	Adder	3.76
938896	AE1-117 E	8.53	Adder	10.04
939151	AE1-145	1.85	Adder	2.18
942441	AE2-257 C	2.18	Adder	2.56
942442	AE2-257 E	5.74	Adder	6.75
943361	AF1-007 C	0.12	Adder	0.14
943362	AF1-007 E	0.33	Adder	0.39
945661	AF1-231 C	0.71	Adder	0.84
945662	AF1-231 E	1.06	Adder	1.25
945791	AF1-244 (Withdrawn : 06/07/2021)	0.92	80 50	0.92
945931	AF1-258	0.48	80 50	0.48
957611	AF2-055 C	3.83	80 50	3.83
957612	AF2-055 E	1.64	80 50	1.64
957661	AF2-060	0.83	Adder	0.98
957671	AF2-061 O1	3.71	Adder	4.36
959021	AF2-193 C	7.36	Adder	8.66
959022	AF2-193 E	19.86	Adder	23.36
959031	AF2-194 C	7.36	Adder	8.66
959032	AF2-194 E	19.86	Adder	23.36
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.39	Adder	1.64
959161	AF2-207 C O1	2.46	80 50	2.46
959162	AF2-207 E O1	3.69	80 50	3.69
959581	AF2-249 C	0.07	80 50	0.07
959582	AF2-249 E	0.3	80 50	0.3
959591	AF2-250 C	0.14	80 50	0.14
959592	AF2-250 E	0.11	80 50	0.11
960341	AF2-325 C	1.43	80 50	1.43
960342	AF2-325 E	1.98	80 50	1.98
960671	AF2-358 C O1	14.56	80 50	14.56
960672	AF2-358 E O1	9.71	80 50	9.71
960871	AF2-378 C	0.36	80 50	0.36
960872	AF2-378 E	0.5	80 50	0.5
960881	AF2-379 C	0.2	80 50	0.2
960882	AF2-379 E	0.28	80 50	0.28
960941	AF2-385 C	5.83	80 50	5.83
960942	AF2-385 E	3.32	80 50	3.32
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	14.33	80 50	14.33
962161	AG1-061 C O1	10.24	80 50	10.24
962162	AG1-061 E O1	6.82	80 50	6.82
962262	AG1-072 BAT	2.76	Adder	3.25
963001	AG1-149 (Withdrawn : 06/07/2021)	0.35	80 50	0.35
963011	AG1-150	3.71	Adder	4.36
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964962	AG1-360 E	1.0	80 50	1.0
965321	AG1-397 C	0.49	80 50	0.49
965322	AG1-397 E	0.68	80 50	0.68
965611	AG1-429 C O1	3.85	80 50	3.85
965612	AG1-429 E O1	2.57	80 50	2.57
965821	AG1-450	6.07	80 50	6.07
965921	AG1-461 C O1	1.76	Adder	2.07
965922	AG1-461 E O1	0.95	Adder	1.12
966601	AG1-529 C	2.21	Adder	2.6
966602	AG1-529 E	1.18	Adder	1.39
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0685	Confirmed LTF	0.0685
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0522	Confirmed LTF	0.0522
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.1188	Confirmed LTF	0.1188
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0342	Confirmed LTF	0.0342
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0242	Confirmed LTF	0.0242
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0345	Confirmed LTF	0.0345
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1443	Confirmed LTF	0.1443
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0261	LTF/CMTX NF	0.0261
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0374	Confirmed LTF	0.0374
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.0401	Confirmed LTF	0.0401
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0245	Confirmed LTF	0.0245
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.2213	LTF/CMTX NF	0.2213
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.177	Confirmed LTF	0.177
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0381	Confirmed LTF	0.0381

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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
182178074	232234	TODD	DP&L	232233	PRESTON	DP&L	1	DPL_P4-2_DP11	breaker	93.0	241.79	259.23	AC	17.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.24	80 50	0.24
232405	W1-003 E	1.36	80 50	1.36
232406	W1-004 C	0.24	80 50	0.24
232407	W1-004 E	1.36	80 50	1.36
232408	W1-005 C	0.24	80 50	0.24
232409	W1-005 E	1.36	80 50	1.36
232410	W1-006 C	0.24	80 50	0.24
232411	W1-006 E	1.36	80 50	1.36
232412	X1-032 E	0.46	80 50	0.46
232417	X3-008 C	0.48	80 50	0.48
232418	X3-008 E	4.81	80 50	4.81
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.53	80 50	0.53
232428	Y3-058 C	0.14	80 50	0.14
232429	Y3-058 E	0.91	80 50	0.91
232433	Z2-076 E	0.15	Adder	0.18
232435	Z2-077 E	0.15	Adder	0.18
232851	DUP-SFR1	0.78	Adder	0.92
232905	BAYVIEW1	0.22	80 50	0.22
232907	VN8	3.6	80 50	3.6
232912	OH NUG1	0.64	80 50	0.64
232919	VN10	0.39	80 50	0.39
232921	TASLEY2G	0.42	80 50	0.42
232926	CRISFLD1	0.19	80 50	0.19
233923	AA1-102 C	1.08	80 50	1.08
293670	O-025 C	0.13	80 50	0.13
917081	CHERRYDALE C	0.14	80 50	0.14
917082	CHERRYDALE E	1.36	80 50	1.36
918835	AA1-102 E	10.7	80 50	10.7
924831	AB2-136 C	7.81	80 50	7.81
924832	AB2-136 E	8.29	80 50	8.29
925151	AB2-172 C	7.37	80 50	7.37
925152	AB2-172 E	12.02	80 50	12.02
925261	AB2-180 C	2.08	80 50	2.08
925262	AB2-180 E	0.89	80 50	0.89
927031	AC1-190 C	13.12	80 50	13.12
927032	AC1-190 E	5.62	80 50	5.62
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.41	80 50	0.41
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.27	80 50	0.27
930201	AB1-056 C	3.99	Adder	4.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	11.35	Adder	13.35
932161	AC2-023 C	4.26	80 50	4.26
932162	AC2-023 E	3.11	80 50	3.11
938651	AE1-087 C	6.2	80 50	6.2
938652	AE1-087 E	1.55	80 50	1.55
938895	AE1-117 C	3.2	Adder	3.76
938896	AE1-117 E	8.53	Adder	10.04
939151	AE1-145	1.85	Adder	2.18
942441	AE2-257 C	2.18	Adder	2.56
942442	AE2-257 E	5.74	Adder	6.75
943361	AF1-007 C	0.12	Adder	0.14
943362	AF1-007 E	0.33	Adder	0.39
945661	AF1-231 C	0.71	Adder	0.84
945662	AF1-231 E	1.06	Adder	1.25
945791	AF1-244 (Withdrawn : 06/07/2021)	0.92	80 50	0.92
945931	AF1-258	0.48	80 50	0.48
957611	AF2-055 C	3.83	80 50	3.83
957612	AF2-055 E	1.64	80 50	1.64
957661	AF2-060	0.83	Adder	0.98
957671	AF2-061 O1	3.71	Adder	4.36
959021	AF2-193 C	7.36	Adder	8.66
959022	AF2-193 E	19.86	Adder	23.36
959031	AF2-194 C	7.36	Adder	8.66
959032	AF2-194 E	19.86	Adder	23.36
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.39	Adder	1.64
959161	AF2-207 C O1	2.46	80 50	2.46
959162	AF2-207 E O1	3.69	80 50	3.69
959581	AF2-249 C	0.07	80 50	0.07
959582	AF2-249 E	0.3	80 50	0.3
959591	AF2-250 C	0.14	80 50	0.14
959592	AF2-250 E	0.11	80 50	0.11
960341	AF2-325 C	1.43	80 50	1.43
960342	AF2-325 E	1.98	80 50	1.98
960671	AF2-358 C O1	14.56	80 50	14.56
960672	AF2-358 E O1	9.71	80 50	9.71
960871	AF2-378 C	0.36	80 50	0.36
960872	AF2-378 E	0.5	80 50	0.5
960881	AF2-379 C	0.2	80 50	0.2
960882	AF2-379 E	0.28	80 50	0.28
960941	AF2-385 C	5.83	80 50	5.83
960942	AF2-385 E	3.32	80 50	3.32
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	14.33	80 50	14.33
962161	AG1-061 C O1	10.24	80 50	10.24
962162	AG1-061 E O1	6.82	80 50	6.82
962262	AG1-072 BAT	2.76	Adder	3.25
963001	AG1-149 (Withdrawn : 06/07/2021)	0.35	80 50	0.35
963011	AG1-150	3.71	Adder	4.36
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964962	AG1-360 E	1.0	80 50	1.0
965321	AG1-397 C	0.49	80 50	0.49
965322	AG1-397 E	0.68	80 50	0.68
965611	AG1-429 C O1	3.85	80 50	3.85
965612	AG1-429 E O1	2.57	80 50	2.57
965821	AG1-450	6.07	80 50	6.07
965921	AG1-461 C O1	1.76	Adder	2.07
965922	AG1-461 E O1	0.95	Adder	1.12
966601	AG1-529 C	2.21	Adder	2.6
966602	AG1-529 E	1.18	Adder	1.39
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0685	Confirmed LTF	0.0685
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0522	Confirmed LTF	0.0522
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.1188	Confirmed LTF	0.1188
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0342	Confirmed LTF	0.0342
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0242	Confirmed LTF	0.0242
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0345	Confirmed LTF	0.0345
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1443	Confirmed LTF	0.1443
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0261	LTF/CMTX NF	0.0261
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0374	Confirmed LTF	0.0374
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.0401	Confirmed LTF	0.0401
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0245	Confirmed LTF	0.0245
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.2213	LTF/CMTX NF	0.2213
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.177	Confirmed LTF	0.177
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0381	Confirmed LTF	0.0381

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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
174160864	232241	VIENN_69	DP&L	232234	TODD	DP&L	1	DPL_P4-2_DP11	breaker	143.0	116.77	126.47	AC	14.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	0.95	Adder	1.12
232407	W1-004 E	0.95	Adder	1.12
232409	W1-005 E	0.95	Adder	1.12
232411	W1-006 E	0.95	Adder	1.12
232412	X1-032 E	0.32	Adder	0.38
232428	Y3-058 C	0.11	80 50	0.11
232429	Y3-058 E	0.75	80 50	0.75
232433	Z2-076 E	0.12	Adder	0.14
232435	Z2-077 E	0.12	Adder	0.14
232851	DUP-SFR1	0.64	Adder	0.75
232907	VN8	2.96	80 50	2.96
232919	VN10	0.32	80 50	0.32
293670	O-025 C	0.11	80 50	0.11
917082	CHERRYDALE E	0.95	Adder	1.12
918835	AA1-102 E	7.49	Adder	8.81
925151	AB2-172 C	-8.14	Adder	-9.58
925261	AB2-180 C	1.71	80 50	1.71
925262	AB2-180 E	0.73	80 50	0.73
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.34	80 50	0.34
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.22	80 50	0.22
930201	AB1-056 C	3.28	Adder	3.86
930202	AB1-056 E	9.34	Adder	10.99
932161	AC2-023 C	3.51	80 50	3.51
932162	AC2-023 E	2.56	80 50	2.56
938651	AE1-087 C	-6.85	Adder	-8.06
938653	AE1-087 BAT	10.07	80 50	10.07
938895	AE1-117 C	2.63	Adder	3.09
938896	AE1-117 E	7.03	Adder	8.27
939151	AE1-145	1.52	Adder	1.79
942441	AE2-257 C	1.79	Adder	2.11
942442	AE2-257 E	4.73	Adder	5.56
943361	AF1-007 C	0.1	Adder	0.12
943362	AF1-007 E	0.28	Adder	0.33
945661	AF1-231 C	0.58	Adder	0.68
945662	AF1-231 E	0.87	Adder	1.02
945791	AF1-244 (Withdrawn : 06/07/2021)	0.64	Adder	0.75
945931	AF1-258	0.39	80 50	0.39
957611	AF2-055 C	2.68	Adder	3.15
957612	AF2-055 E	1.15	Adder	1.35

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957661	AF2-060	0.69	Adder	0.81
957671	AF2-061 O1	3.05	Adder	3.59
959021	AF2-193 C	6.06	Adder	7.13
959022	AF2-193 E	16.35	Adder	19.24
959031	AF2-194 C	6.06	Adder	7.13
959032	AF2-194 E	16.35	Adder	19.24
959051	AF2-196 C	0.49	Adder	0.58
959052	AF2-196 E	1.14	Adder	1.34
959161	AF2-207 C O1	2.02	80 50	2.02
959162	AF2-207 E O1	3.03	80 50	3.03
959581	AF2-249 C	0.06	80 50	0.06
959582	AF2-249 E	0.25	80 50	0.25
959591	AF2-250 C	0.11	80 50	0.11
959592	AF2-250 E	0.09	80 50	0.09
960671	AF2-358 C O1	2.97	Adder	3.49
960672	AF2-358 E O1	1.98	Adder	2.33
960881	AF2-379 C	0.16	80 50	0.16
960882	AF2-379 E	0.23	80 50	0.23
960941	AF2-385 C	4.8	80 50	4.8
960942	AF2-385 E	2.73	80 50	2.73
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	11.79	80 50	11.79
962161	AG1-061 C O1	8.42	80 50	8.42
962162	AG1-061 E O1	5.62	80 50	5.62
963001	AG1-149 (Withdrawn : 06/07/2021)	0.24	Adder	0.28
963011	AG1-150	3.05	Adder	3.59
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.04	Adder	0.05
964962	AG1-360 E	0.7	Adder	0.82
965321	AG1-397 C	0.34	Adder	0.4
965322	AG1-397 E	0.48	Adder	0.56
965611	AG1-429 C O1	2.7	Adder	3.18
965612	AG1-429 E O1	1.8	Adder	2.12
965821	AG1-450	1.24	Adder	1.46
965921	AG1-461 C O1	1.45	Adder	1.71
965922	AG1-461 E O1	0.78	Adder	0.92
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.053	Confirmed LTF	0.053
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0404	Confirmed LTF	0.0404
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.0918	Confirmed LTF	0.0918
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0265	Confirmed LTF	0.0265
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0187	Confirmed LTF	0.0187
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0267	Confirmed LTF	0.0267
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1116	Confirmed LTF	0.1116
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0179	LTF/CMTX NF	0.0179

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0289	Confirmed LTF	0.0289
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.031	Confirmed LTF	0.031
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0183	Confirmed LTF	0.0183
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.1592	LTF/CMTX NF	0.1592
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.1369	Confirmed LTF	0.1369
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0294	Confirmed LTF	0.0294

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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
182296088	232241	VIENN_69	DP&L	232838	MARDELA	DP&L	1	DPL_P4-2_DP55	breaker	64.0	134.95	145.56	AC	8.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232417	X3-008 C	0.19	80 50	0.19
232418	X3-008 E	1.85	80 50	1.85
232426	Y1-080 FULL	0.04	80 50	0.04
232427	Y1-080 E	0.38	80 50	0.38
232919	VN10	0.35	80 50	0.35
924831	AB2-136 C	4.13	80 50	4.13
924832	AB2-136 E	4.38	80 50	4.38
925151	AB2-172 C	2.83	80 50	2.83
925152	AB2-172 E	4.62	80 50	4.62
925261	AB2-180 C	-4.1	Adder	-4.82
927031	AC1-190 C	5.32	80 50	5.32
927032	AC1-190 E	2.28	80 50	2.28
938651	AE1-087 C	2.38	80 50	2.38
938652	AE1-087 E	0.6	80 50	0.6
939152	AE1-145 BAT	1.94	Adder	2.28
945663	AF1-231 BAT	1.82	Adder	2.14
945792	AF1-244 BAT (Withdrawn : 06/07/2021)	0.76	Adder	0.89
945931	AF1-258	-0.94	Adder	-1.11
957613	AF2-055 BAT	2.88	Adder	3.39
957662	AF2-060 BAT	0.87	Adder	1.02
957672	AF2-061 BAT	3.88	Adder	4.56
959163	AF2-207 BAT	4.14	Adder	4.87
959583	AF2-249 BAT	0.39	80 50	0.39
960341	AF2-325 C	0.67	80 50	0.67
960342	AF2-325 E	0.93	80 50	0.93
960671	AF2-358 C O1	11.06	80 50	11.06
960672	AF2-358 E O1	7.37	80 50	7.37
960871	AF2-378 C	0.18	80 50	0.18
960872	AF2-378 E	0.25	80 50	0.25
960881	AF2-379 C	-0.2	Adder	-0.24
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	4.47	Adder	5.26
962161	AG1-061 C O1	4.22	Adder	4.96
962162	AG1-061 E O1	2.81	Adder	3.31
963002	AG1-149 BAT (Withdrawn : 06/07/2021)	0.29	Adder	0.34
963012	AG1-150 BAT	3.88	Adder	4.56
965821	AG1-450	4.61	80 50	4.61
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.0131	Confirmed LTF	0.0131
LTFEXP_CBM-N	LTFEXP_CBM-N->LTFIMP_CBM-N	0.0255	LTF/CBM	0.0255

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_CBM-S1	LTFEXP_CBM-S1->LTFIMP_CBM-S1	0.0109	LTF/CBM	0.0109
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	0.3004	LTF/CBM	0.3004
LTFEXP_CBM-W1	LTFEXP_CBM-W1->LTFIMP_CBM-W1	0.4003	LTF/CBM	0.4003
LTFEXP_CBM-W2	LTFEXP_CBM-W2->LTFIMP_CBM-W2	0.2564	LTF/CBM	0.2564
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.0197	Confirmed LTF	0.0197
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	0.0442	LTF/CMTX	0.0442
LTFEXP_LAGN	LTFEXP_LAGN->LTFIMP_LAGN	0.0501	Confirmed LTF	0.0501
LTFEXP_LGEE	LTFEXP_LGEE->LTFIMP_LGEE	0.018	Confirmed LTF	0.018
LTFEXP_MEC	LTFEXP_MEC->LTFIMP_MEC	0.0454	Confirmed LTF	0.0454
LTFEXP_SIGE	LTFEXP_SIGE->LTFIMP_SIGE	0.003	Confirmed LTF	0.003
LTFEXP_TVA	LTFEXP_TVA->LTFIMP_TVA	0.0401	Confirmed LTF	0.0401
LTFEXP_VFT	LTFEXP_VFT->LTFIMP_VFT	0.1281	Confirmed LTF	0.1281
LTFEXP_WEC	LTFEXP_WEC->LTFIMP_WEC	0.009	Confirmed LTF	0.009

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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
173967126	232812	NMEREDTH	DP&L	924820	AB2-135 TAP	DP&L	1	DPL_P4-2_DP11	breaker	93.0	116.16	121.66	AC	6.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	0.58	Adder	0.68
232407	W1-004 E	0.58	Adder	0.68
232409	W1-005 E	0.58	Adder	0.68
232411	W1-006 E	0.58	Adder	0.68
232412	X1-032 E	0.19	Adder	0.22
232429	Y3-058 E	0.27	Adder	0.32
232433	Z2-076 E	0.1	Adder	0.12
232435	Z2-077 E	0.1	Adder	0.12
232813	VAUGHN	0.12	80 50	0.12
232851	DUP-SFR1	0.67	Adder	0.79
232899	W1-062	0.89	80 50	0.89
232900	DEMECSMY	0.87	80 50	0.87
232910	NRG_G1	2.19	80 50	2.19
232911	NRG_G2	2.19	80 50	2.19
233931	AB2-179 C	-2.09	Adder	-2.46
917082	CHERRYDALE E	0.58	Adder	0.68
918835	AA1-102 E	4.31	Adder	5.07
923921	AB2-032 C	-1.17	Adder	-1.38
924971	AB2-153 C	-0.65	Adder	-0.76
925261	AB2-180 C	0.62	Adder	0.73
925262	AB2-180 E	0.27	Adder	0.32
926131	AC1-091 C	0.45	Adder	0.53
926132	AC1-091 E	0.74	Adder	0.87
926141	AC1-092 C	0.45	Adder	0.53
926142	AC1-092 E	0.74	Adder	0.87
926151	AC1-093 C	0.42	Adder	0.49
926152	AC1-093 E	0.7	Adder	0.82
926161	AC1-094 C	0.36	Adder	0.42
926162	AC1-094 E	0.59	Adder	0.69
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.15	Adder	0.18
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.1	Adder	0.12
930201	AB1-056 C	3.13	Adder	3.68
930202	AB1-056 E	8.91	Adder	10.48
932161	AC2-023 C	1.14	Adder	1.34
932162	AC2-023 E	0.83	Adder	0.98
933631	AC2-185 C	0.91	Adder	1.07
933632	AC2-185 E	1.48	Adder	1.74
933641	AC2-186 C	2.85	80 50	2.85
933642	AC2-186 E	4.64	80 50	4.64
938895	AE1-117 C	2.4	Adder	2.82

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938896	AE1-117 E	6.39	Adder	7.52
939151	AE1-145	0.93	Adder	1.09
942441	AE2-257 C	1.64	Adder	1.93
942442	AE2-257 E	4.34	Adder	5.11
943361	AF1-007 C	0.09	Adder	0.11
943362	AF1-007 E	0.26	Adder	0.31
945661	AF1-231 C	0.35	Adder	0.41
945662	AF1-231 E	0.53	Adder	0.62
945791	AF1-244 (Withdrawn : 06/07/2021)	0.37	Adder	0.44
945931	AF1-258	0.14	Adder	0.16
945941	AF1-259	-0.08	Adder	-0.09
957611	AF2-055 C	1.63	Adder	1.92
957612	AF2-055 E	0.7	Adder	0.82
957661	AF2-060	0.42	Adder	0.49
957671	AF2-061 O1	1.87	Adder	2.2
959021	AF2-193 C	5.78	Adder	6.8
959022	AF2-193 E	15.59	Adder	18.34
959031	AF2-194 C	5.78	Adder	6.8
959032	AF2-194 E	15.59	Adder	18.34
959051	AF2-196 C	0.45	Adder	0.53
959052	AF2-196 E	1.05	Adder	1.24
959161	AF2-207 C O1	1.0	Adder	1.18
959162	AF2-207 E O1	1.5	Adder	1.76
959581	AF2-249 C	0.03	Adder	0.04
959582	AF2-249 E	0.12	Adder	0.14
959591	AF2-250 C	0.05	Adder	0.06
959592	AF2-250 E	0.04	Adder	0.05
960881	AF2-379 C	0.08	Adder	0.09
960882	AF2-379 E	0.1	Adder	0.12
960941	AF2-385 C	2.37	Adder	2.79
960942	AF2-385 E	1.35	Adder	1.59
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	4.42	Adder	5.2
962161	AG1-061 C O1	3.14	Adder	3.69
962162	AG1-061 E O1	2.09	Adder	2.46
962262	AG1-072 BAT	3.0	Adder	3.53
962302	AG1-079 E (Withdrawn : 08/03/2021)	0.75	80 50	0.75
962381	AG1-087 C O1	5.16	Adder	6.07
962382	AG1-087 E O1	13.93	Adder	16.39
963001	AG1-149 (Withdrawn : 06/07/2021)	0.14	Adder	0.16
963011	AG1-150	1.87	Adder	2.2
964551	AG1-318 C	0.01	Adder	0.01
964552	AG1-318 E	0.03	Adder	0.04
964962	AG1-360 E	0.41	Adder	0.48
965321	AG1-397 C	0.2	Adder	0.24
965322	AG1-397 E	0.27	Adder	0.32
965611	AG1-429 C O1	1.65	Adder	1.94
965612	AG1-429 E O1	1.1	Adder	1.29
965921	AG1-461 C O1	1.05	Adder	1.24
965922	AG1-461 E O1	0.57	Adder	0.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965951	AG1-464 C O1	3.0	80 50	3.0
965952	AG1-464 E O1	4.49	80 50	4.49
966601	AG1-529 C	3.3	Adder	3.88
966602	AG1-529 E	1.76	Adder	2.07
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0627	Confirmed LTF	0.0627
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0483	Confirmed LTF	0.0483
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.1086	Confirmed LTF	0.1086
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0314	Confirmed LTF	0.0314
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0223	Confirmed LTF	0.0223
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0317	Confirmed LTF	0.0317
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1323	Confirmed LTF	0.1323
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	0.0079	LTF/CMTX	0.0079
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0342	Confirmed LTF	0.0342
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.037	Confirmed LTF	0.037
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0147	Confirmed LTF	0.0147
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.0636	LTF/CMTX NF	0.0636
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.162	Confirmed LTF	0.162
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0348	Confirmed LTF	0.0348

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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
174160839	232820	TALBOT	DP&L	232230	TRAP ALT	DP&L	1	DPL_P4-2_DP11	breaker	173.0	122.69	132.02	AC	17.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.24	80 50	0.24
232405	W1-003 E	1.36	80 50	1.36
232406	W1-004 C	0.24	80 50	0.24
232407	W1-004 E	1.36	80 50	1.36
232408	W1-005 C	0.24	80 50	0.24
232409	W1-005 E	1.36	80 50	1.36
232410	W1-006 C	0.24	80 50	0.24
232411	W1-006 E	1.36	80 50	1.36
232412	X1-032 E	0.46	80 50	0.46
232417	X3-008 C	0.48	80 50	0.48
232418	X3-008 E	4.81	80 50	4.81
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.53	80 50	0.53
232428	Y3-058 C	0.14	80 50	0.14
232429	Y3-058 E	0.91	80 50	0.91
232433	Z2-076 E	0.15	Adder	0.18
232435	Z2-077 E	0.15	Adder	0.18
232851	DUP-SFR1	0.78	Adder	0.92
232905	BAYVIEW1	0.22	80 50	0.22
232907	VN8	3.6	80 50	3.6
232915	OH NUG4	0.64	80 50	0.64
232919	VN10	0.39	80 50	0.39
232921	TASLEY2G	0.42	80 50	0.42
232926	CRISFLD1	0.19	80 50	0.19
233923	AA1-102 C	1.08	80 50	1.08
293670	O-025 C	0.13	80 50	0.13
917081	CHERRYDALE C	0.14	80 50	0.14
917082	CHERRYDALE E	1.36	80 50	1.36
918835	AA1-102 E	10.7	80 50	10.7
924831	AB2-136 C	7.81	80 50	7.81
924832	AB2-136 E	8.29	80 50	8.29
925151	AB2-172 C	7.37	80 50	7.37
925152	AB2-172 E	12.02	80 50	12.02
925261	AB2-180 C	2.08	80 50	2.08
925262	AB2-180 E	0.89	80 50	0.89
927031	AC1-190 C	13.12	80 50	13.12
927032	AC1-190 E	5.62	80 50	5.62
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.41	80 50	0.41
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.27	80 50	0.27
930201	AB1-056 C	3.99	Adder	4.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	11.35	Adder	13.35
932161	AC2-023 C	4.26	80 50	4.26
932162	AC2-023 E	3.11	80 50	3.11
938651	AE1-087 C	6.2	80 50	6.2
938652	AE1-087 E	1.55	80 50	1.55
938895	AE1-117 C	3.2	Adder	3.76
938896	AE1-117 E	8.53	Adder	10.04
939151	AE1-145	1.85	Adder	2.18
942441	AE2-257 C	2.18	Adder	2.56
942442	AE2-257 E	5.74	Adder	6.75
943361	AF1-007 C	0.12	Adder	0.14
943362	AF1-007 E	0.33	Adder	0.39
945661	AF1-231 C	0.71	Adder	0.84
945662	AF1-231 E	1.06	Adder	1.25
945791	AF1-244 (Withdrawn : 06/07/2021)	0.92	80 50	0.92
945931	AF1-258	0.48	80 50	0.48
957611	AF2-055 C	3.83	80 50	3.83
957612	AF2-055 E	1.64	80 50	1.64
957661	AF2-060	0.83	Adder	0.98
957671	AF2-061 O1	3.71	Adder	4.36
959021	AF2-193 C	7.36	Adder	8.66
959022	AF2-193 E	19.86	Adder	23.36
959031	AF2-194 C	7.36	Adder	8.66
959032	AF2-194 E	19.86	Adder	23.36
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.39	Adder	1.64
959161	AF2-207 C O1	2.46	80 50	2.46
959162	AF2-207 E O1	3.69	80 50	3.69
959581	AF2-249 C	0.07	80 50	0.07
959582	AF2-249 E	0.3	80 50	0.3
959591	AF2-250 C	0.14	80 50	0.14
959592	AF2-250 E	0.11	80 50	0.11
960341	AF2-325 C	1.43	80 50	1.43
960342	AF2-325 E	1.98	80 50	1.98
960671	AF2-358 C O1	14.56	80 50	14.56
960672	AF2-358 E O1	9.71	80 50	9.71
960871	AF2-378 C	0.36	80 50	0.36
960872	AF2-378 E	0.5	80 50	0.5
960881	AF2-379 C	0.2	80 50	0.2
960882	AF2-379 E	0.28	80 50	0.28
960941	AF2-385 C	5.83	80 50	5.83
960942	AF2-385 E	3.32	80 50	3.32
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	14.33	80 50	14.33
962161	AG1-061 C O1	10.24	80 50	10.24
962162	AG1-061 E O1	6.82	80 50	6.82
962262	AG1-072 BAT	2.76	Adder	3.25
963001	AG1-149 (Withdrawn : 06/07/2021)	0.35	80 50	0.35
963011	AG1-150	3.71	Adder	4.36
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964962	AG1-360 E	1.0	80 50	1.0
965321	AG1-397 C	0.49	80 50	0.49
965322	AG1-397 E	0.68	80 50	0.68
965611	AG1-429 C O1	3.85	80 50	3.85
965612	AG1-429 E O1	2.57	80 50	2.57
965821	AG1-450	6.07	80 50	6.07
965921	AG1-461 C O1	1.76	Adder	2.07
965922	AG1-461 E O1	0.95	Adder	1.12
966601	AG1-529 C	2.21	Adder	2.6
966602	AG1-529 E	1.18	Adder	1.39
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0685	Confirmed LTF	0.0685
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0522	Confirmed LTF	0.0522
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.1188	Confirmed LTF	0.1188
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0342	Confirmed LTF	0.0342
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0242	Confirmed LTF	0.0242
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0345	Confirmed LTF	0.0345
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1443	Confirmed LTF	0.1443
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0261	LTF/CMTX NF	0.0261
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0374	Confirmed LTF	0.0374
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.0401	Confirmed LTF	0.0401
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0245	Confirmed LTF	0.0245
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.2213	LTF/CMTX NF	0.2213
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.177	Confirmed LTF	0.177
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0381	Confirmed LTF	0.0381

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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
174160832	232821	TANYARD	DP&L	232820	TALBOT	DP&L	1	DPL_P4-2_DP11	breaker	173.0	125.02	134.37	AC	17.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.24	80 50	0.24
232405	W1-003 E	1.36	80 50	1.36
232406	W1-004 C	0.24	80 50	0.24
232407	W1-004 E	1.36	80 50	1.36
232408	W1-005 C	0.24	80 50	0.24
232409	W1-005 E	1.36	80 50	1.36
232410	W1-006 C	0.24	80 50	0.24
232411	W1-006 E	1.36	80 50	1.36
232412	X1-032 E	0.46	80 50	0.46
232417	X3-008 C	0.48	80 50	0.48
232418	X3-008 E	4.81	80 50	4.81
232426	Y1-080 FULL	0.05	80 50	0.05
232427	Y1-080 E	0.53	80 50	0.53
232428	Y3-058 C	0.14	80 50	0.14
232429	Y3-058 E	0.91	80 50	0.91
232433	Z2-076 E	0.15	Adder	0.18
232435	Z2-077 E	0.15	Adder	0.18
232851	DUP-SFR1	0.78	Adder	0.92
232905	BAYVIEW1	0.22	80 50	0.22
232907	VN8	3.6	80 50	3.6
232916	OH NUG5	0.64	80 50	0.64
232919	VN10	0.39	80 50	0.39
232921	TASLEY2G	0.42	80 50	0.42
232926	CRISFLD1	0.19	80 50	0.19
233923	AA1-102 C	1.08	80 50	1.08
293670	O-025 C	0.13	80 50	0.13
917081	CHERRYDALE C	0.14	80 50	0.14
917082	CHERRYDALE E	1.36	80 50	1.36
918835	AA1-102 E	10.7	80 50	10.7
924831	AB2-136 C	7.81	80 50	7.81
924832	AB2-136 E	8.29	80 50	8.29
925151	AB2-172 C	7.37	80 50	7.37
925152	AB2-172 E	12.02	80 50	12.02
925261	AB2-180 C	2.08	80 50	2.08
925262	AB2-180 E	0.89	80 50	0.89
927031	AC1-190 C	13.12	80 50	13.12
927032	AC1-190 E	5.62	80 50	5.62
927191	AC1-213 C (Withdrawn : 05/24/2021)	0.41	80 50	0.41
927192	AC1-213 E (Withdrawn : 05/24/2021)	0.27	80 50	0.27
930201	AB1-056 C	3.99	Adder	4.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	11.35	Adder	13.35
932161	AC2-023 C	4.26	80 50	4.26
932162	AC2-023 E	3.11	80 50	3.11
938651	AE1-087 C	6.2	80 50	6.2
938652	AE1-087 E	1.55	80 50	1.55
938895	AE1-117 C	3.2	Adder	3.76
938896	AE1-117 E	8.53	Adder	10.04
939151	AE1-145	1.85	Adder	2.18
942441	AE2-257 C	2.18	Adder	2.56
942442	AE2-257 E	5.74	Adder	6.75
943361	AF1-007 C	0.12	Adder	0.14
943362	AF1-007 E	0.33	Adder	0.39
945661	AF1-231 C	0.71	Adder	0.84
945662	AF1-231 E	1.06	Adder	1.25
945791	AF1-244 (Withdrawn : 06/07/2021)	0.92	80 50	0.92
945931	AF1-258	0.48	80 50	0.48
957611	AF2-055 C	3.83	80 50	3.83
957612	AF2-055 E	1.64	80 50	1.64
957661	AF2-060	0.83	Adder	0.98
957671	AF2-061 O1	3.71	Adder	4.36
959021	AF2-193 C	7.36	Adder	8.66
959022	AF2-193 E	19.86	Adder	23.36
959031	AF2-194 C	7.36	Adder	8.66
959032	AF2-194 E	19.86	Adder	23.36
959051	AF2-196 C	0.59	Adder	0.69
959052	AF2-196 E	1.39	Adder	1.64
959161	AF2-207 C O1	2.46	80 50	2.46
959162	AF2-207 E O1	3.69	80 50	3.69
959581	AF2-249 C	0.07	80 50	0.07
959582	AF2-249 E	0.3	80 50	0.3
959591	AF2-250 C	0.14	80 50	0.14
959592	AF2-250 E	0.11	80 50	0.11
960341	AF2-325 C	1.43	80 50	1.43
960342	AF2-325 E	1.98	80 50	1.98
960671	AF2-358 C O1	14.56	80 50	14.56
960672	AF2-358 E O1	9.71	80 50	9.71
960871	AF2-378 C	0.36	80 50	0.36
960872	AF2-378 E	0.5	80 50	0.5
960881	AF2-379 C	0.2	80 50	0.2
960882	AF2-379 E	0.28	80 50	0.28
960941	AF2-385 C	5.83	80 50	5.83
960942	AF2-385 E	3.32	80 50	3.32
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	14.33	80 50	14.33
962161	AG1-061 C O1	10.24	80 50	10.24
962162	AG1-061 E O1	6.82	80 50	6.82
962262	AG1-072 BAT	2.76	Adder	3.25
963001	AG1-149 (Withdrawn : 06/07/2021)	0.35	80 50	0.35
963011	AG1-150	3.71	Adder	4.36
964551	AG1-318 C	0.02	Adder	0.02
964552	AG1-318 E	0.05	Adder	0.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964962	AG1-360 E	1.0	80 50	1.0
965321	AG1-397 C	0.49	80 50	0.49
965322	AG1-397 E	0.68	80 50	0.68
965611	AG1-429 C O1	3.85	80 50	3.85
965612	AG1-429 E O1	2.57	80 50	2.57
965821	AG1-450	6.07	80 50	6.07
965921	AG1-461 C O1	1.76	Adder	2.07
965922	AG1-461 E O1	0.95	Adder	1.12
966601	AG1-529 C	2.21	Adder	2.6
966602	AG1-529 E	1.18	Adder	1.39
LTFEXP_AC1-056	LTFEXP_AC1-056->LTFIMP_AC1-056	0.0685	Confirmed LTF	0.0685
LTFEXP_AC1-131	LTFEXP_AC1-131->LTFIMP_AC1-131	0.0522	Confirmed LTF	0.0522
LTFEXP_BlueG	LTFEXP_BlueG->LTFIMP_BlueG	0.1188	Confirmed LTF	0.1188
LTFEXP_CALDERWOOD	LTFEXP_CALDERWOOD->LTFIMP_CALDERWOOD	0.0342	Confirmed LTF	0.0342
LTFEXP_CATAWBA	LTFEXP_CATAWBA->LTFIMP_CATAWBA	0.0242	Confirmed LTF	0.0242
LTFEXP_CHEOAH	LTFEXP_CHEOAH->LTFIMP_CHEOAH	0.0345	Confirmed LTF	0.0345
LTFEXP_COTTONWOOD	LTFEXP_COTTONWOOD->LTFIMP_COTTONWOOD	0.1443	Confirmed LTF	0.1443
LTFEXP_G-007	LTFEXP_G-007->LTFIMP_G-007	0.0261	LTF/CMTX NF	0.0261
LTFEXP_GIBSON	LTFEXP_GIBSON->LTFIMP_GIBSON	0.0374	Confirmed LTF	0.0374
LTFEXP_HAMLET	LTFEXP_HAMLET->LTFIMP_HAMLET	0.0401	Confirmed LTF	0.0401
LTFEXP_NY	LTFEXP_NY->LTFIMP_NY	0.0245	Confirmed LTF	0.0245
LTFEXP_O-066	LTFEXP_O-066->LTFIMP_O-066	0.2213	LTF/CMTX NF	0.2213
LTFEXP_PRAIRIE	LTFEXP_PRAIRIE->LTFIMP_PRAIRIE	0.177	Confirmed LTF	0.177
LTFEXP_TRIMBLE	LTFEXP_TRIMBLE->LTFIMP_TRIMBLE	0.0381	Confirmed LTF	0.0381

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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
182350454	232838	MARDELA	DP&L	232270	HEBRON	DP&L	1	DPL_P4-2_DP55	breaker	64.0	125.67	136.28	AC	8.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232417	X3-008 C	0.19	80 50	0.19
232418	X3-008 E	1.85	80 50	1.85
232426	Y1-080 FULL	0.04	80 50	0.04
232427	Y1-080 E	0.38	80 50	0.38
232919	VN10	0.35	80 50	0.35
924831	AB2-136 C	4.13	80 50	4.13
924832	AB2-136 E	4.38	80 50	4.38
925151	AB2-172 C	2.83	80 50	2.83
925152	AB2-172 E	4.62	80 50	4.62
925261	AB2-180 C	-4.1	Adder	-4.82
927031	AC1-190 C	5.32	80 50	5.32
927032	AC1-190 E	2.28	80 50	2.28
938651	AE1-087 C	2.38	80 50	2.38
938652	AE1-087 E	0.6	80 50	0.6
939152	AE1-145 BAT	1.94	Adder	2.28
945663	AF1-231 BAT	1.82	Adder	2.14
945792	AF1-244 BAT (Withdrawn : 06/07/2021)	0.76	Adder	0.89
945931	AF1-258	-0.94	Adder	-1.11
957613	AF2-055 BAT	2.88	Adder	3.39
957662	AF2-060 BAT	0.87	Adder	1.02
957672	AF2-061 BAT	3.88	Adder	4.56
959163	AF2-207 BAT	4.14	Adder	4.87
959583	AF2-249 BAT	0.39	80 50	0.39
960341	AF2-325 C	0.67	80 50	0.67
960342	AF2-325 E	0.93	80 50	0.93
960671	AF2-358 C O1	11.06	80 50	11.06
960672	AF2-358 E O1	7.37	80 50	7.37
960871	AF2-378 C	0.18	80 50	0.18
960872	AF2-378 E	0.25	80 50	0.25
960881	AF2-379 C	-0.2	Adder	-0.24
961181	AF2-409 O1 (Withdrawn : 07/06/2021)	4.47	Adder	5.26
962161	AG1-061 C O1	4.22	Adder	4.96
962162	AG1-061 E O1	2.81	Adder	3.31
963002	AG1-149 BAT (Withdrawn : 06/07/2021)	0.29	Adder	0.34
963012	AG1-150 BAT	3.88	Adder	4.56
965821	AG1-450	4.61	80 50	4.61
LTFEXP_AA2-074	LTFEXP_AA2-074->LTFIMP_AA2-074	0.0131	Confirmed LTF	0.0131
LTFEXP_CBM-N	LTFEXP_CBM-N->LTFIMP_CBM-N	0.0255	LTF/CBM	0.0255

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LTFEXP_CBM-S1	LTFEXP_CBM-S1->LTFIMP_CBM-S1	0.0109	LTF/CBM	0.0109
LTFEXP_CBM-S2	LTFEXP_CBM-S2->LTFIMP_CBM-S2	0.3004	LTF/CBM	0.3004
LTFEXP_CBM-W1	LTFEXP_CBM-W1->LTFIMP_CBM-W1	0.4003	LTF/CBM	0.4003
LTFEXP_CBM-W2	LTFEXP_CBM-W2->LTFIMP_CBM-W2	0.2564	LTF/CBM	0.2564
LTFEXP_CPLE	LTFEXP_CPLE->LTFIMP_CPLE	0.0197	Confirmed LTF	0.0197
LTFEXP_G-007A	LTFEXP_G-007A->LTFIMP_G-007A	0.0442	LTF/CMTX	0.0442
LTFEXP_LAGN	LTFEXP_LAGN->LTFIMP_LAGN	0.0501	Confirmed LTF	0.0501
LTFEXP_LGEE	LTFEXP_LGEE->LTFIMP_LGEE	0.018	Confirmed LTF	0.018
LTFEXP_MEC	LTFEXP_MEC->LTFIMP_MEC	0.0454	Confirmed LTF	0.0454
LTFEXP_SIGE	LTFEXP_SIGE->LTFIMP_SIGE	0.003	Confirmed LTF	0.003
LTFEXP_TVA	LTFEXP_TVA->LTFIMP_TVA	0.0401	Confirmed LTF	0.0401
LTFEXP_VFT	LTFEXP_VFT->LTFIMP_VFT	0.1281	Confirmed LTF	0.1281
LTFEXP_WEC	LTFEXP_WEC->LTFIMP_WEC	0.009	Confirmed LTF	0.009

11.8 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
AA1-102	Kings Creek-Loretto 138kV	Partially in Service - Under Construction
AA2-069	Cartanza 230kV	Engineering and Procurement
AA2-074	CPLP-PJM	Confirmed
AB1-001	Absecon 12 kV	In Service
AB1-056	Indian River 230kV I	Engineering and Procurement
AB1-116	Egg Harbor Road 12kV	In Service
AB1-119	Tansboro Road 12kV	In Service
AB1-141	Church-Wye Mills 138 kV I	Engineering and Procurement
AB1-142	Church-Wye Mills 138 kV II	Engineering and Procurement
AB1-176	Price 25kV II	Engineering and Procurement
AB2-032	Church-Wye Mills 138 kV	Engineering and Procurement
AB2-036	Church - Oil City 138kV	Engineering and Procurement
AB2-037	Keeney-Steele 230kV	Active
AB2-049	Gloucester Township 12kV	Engineering and Procurement
AB2-102	Cumberland 230kV	Active
AB2-133	Chestertown-Church 69kV	Engineering and Procurement
AB2-135	Church-Kent 69kV	Engineering and Procurement
AB2-136	Cambridge-West Cambridge 69kV	Engineering and Procurement
AB2-153	Church-Wye Mills 138 kV	Engineering and Procurement
AB2-172	Todd 69kV	Engineering and Procurement
AB2-179	Townsend 138kV	Engineering and Procurement
AB2-180	Rockawalkin 69kV	Engineering and Procurement
AC1-010	Gloucester 26kV	Engineering and Procurement
AC1-056	PJM-AMIL	Confirmed
AC1-091	Cedar Creek 138kV I	Engineering and Procurement
AC1-092	Cedar Creek 138kV II	Engineering and Procurement
AC1-093	Cedar Creek 138kV III	Engineering and Procurement
AC1-094	Cedar Creek 138kV IV	Engineering and Procurement
AC1-131	PJM-CPLP	Confirmed
AC1-190	East New Market 69kV	Active
AC1-213	North Salisbury 25kV	Withdrawn
AC2-023	Hebron 69kV	Active
AC2-050	Tabernacle 12kV	Active
AC2-185	Cedar Creek 138kV II	Engineering and Procurement
AC2-186	Harrington 25kV	Engineering and Procurement
AD1-019	Ontario 23 kV	Active
AD1-097	Linwood 230 kV II	In Service
AD2-059	Chapel Street 138 kV	Active
AD2-065	Atco 12 kV	Engineering and Procurement

Queue Number	Project Name	Status
AD2-076	Carville 138 kV	Engineering and Procurement
AD2-135	Williamstown 12kV	Active
AE1-061	Minotola 12 kV	Active
AE1-062	Silver Lake 69 kV	Active
AE1-087	Todd 69 kV	Engineering and Procurement
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
AE1-145	Wallops Island 69 kV	Active
AE1-161	Landis 138 kV	Active
AE1-179	South Millville-Newport 69 kV	Active
AE1-218	Glassboro 12 kV	Engineering and Procurement
AE1-229	Deepwater-Upper Pittsgrove 138 kV	Active
AE1-240	Carlls Corner-Sherman Avenue 69 kV	Active
AE2-020	Cardiff 230 kV I	Active
AE2-021	Cardiff 230 kV II	Active
AE2-022	Cardiff 230 kV III	Active
AE2-093	Easton-Steele 138 kV	Active
AE2-112	Carville 138 kV II	Active
AE2-222	Higbee 69 kV	Active
AE2-251	Cardiff 230 kV	Active
AE2-257	Cedar Neck 69 kV	Active
AE2-334	Clayton-Williamstown 69 kV	Active
AF1-007	Indian River 230 kV I	Active
AF1-015	Easton-Steele 138 kV II	Active
AF1-036	Carville 138 kV III	Active
AF1-041	Absecon 12.47 kV	In Service
AF1-160	Silver Lake 69 kV	Active
AF1-208	Quinton-Roadstown 69 kV	Active
AF1-231	New Church 138 kV	Active
AF1-238	Sherman Ave. 69 kV	Active
AF1-239	Sherman Ave-Vineland 69 kV	Active
AF1-244	Kingston 12 kV	Withdrawn
AF1-258	Rockawalkin 69 kV	Partially in Service - Under Construction
AF1-259	Price 25 kV	In Service
AF1-262	Upper Pittsgrove 12 kV	Active
AF1-264	Runnemede 13 kV	Partially in Service - Under Construction
AF2-016	Lewis 138 kV	Active
AF2-019	Middle 69 kV	Active
AF2-020	Carl's Corner 69 kV	Active
AF2-023	Churchtown 69 kV	Active
AF2-024	Mickleton 69 kV	Active
AF2-025	Missouri Ave 69 kV	Active
AF2-055	Plaintation Creek 69 kV	Active
AF2-060	Wattsville 12 kV	Active
AF2-061	Wattsville 69kV	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
AF2-207	Nelson 69 kV	Active
AF2-208	Colora 230 kV	Active

Queue Number	Project Name	Status
AF2-249	Edgewood 12 kV II	Active
AF2-250	Edgewood 12 kV III	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	Engineering and Procurement
AF2-379	Princess Anne 25 kV	Engineering and Procurement
AF2-385	Nelson 69 kV	Active
AF2-409	Vienna 138 kV	Withdrawn
AG1-001	US Silica-Unimin 69 kV	Active
AG1-061	Laurel-Sharptown 69 kV	Active
AG1-072	Hillsboro-Steele 138 kV II	Active
AG1-079	New Meredith 69 kV	Withdrawn
AG1-087	Milford-Cartanza 230 kV	Active
AG1-110	Silver Lake 69 kV	Active
AG1-129	US Silica - Unimin 69 kV	Active
AG1-149	Kingston 12 kV II	Withdrawn
AG1-150	Wattsville 69 kV II	Active
AG1-254	Salem-Woodstown 69 kV	Active
AG1-255	Churchtown-Orchard 230 kV	Active
AG1-263	Gloucester 230 kV	Active
AG1-299	U.S. Silica 12.47 kV	Active
AG1-300	U.S Silica II 12.47 kV	Active
AG1-318	Ocean Bay 12 kV	Engineering and Procurement
AG1-360	Costen 25 kV	Active
AG1-397	Walston 12 kV	Active
AG1-429	Tasley - Oak Hall 69 kV	Active
AG1-450	Airey-Vienna 69 kV II	Active
AG1-461	Mumford 69 kV	Active
AG1-464	Harrington 69 kV	Active
AG1-476	Mickelton 230 kV II	Active
AG1-497	Cartanza 230 kV	Active
AG1-499	Henry Harris 69 kV	Active
AG1-529	Farmview 138 kV	Active
V2-035	Pittsgrove	In Service
V2-041	Clayville 12kV	In Service
V2-046	Pilesgrove Township 12kV	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
W1-062	Clayton 138kV	In Service
W1-130	Vine Road 12kV	In Service
W2-030	Egg Harbor Township	In Service
W3-032A	Cartanza 230kV	In Service
X1-032	Costen 25kV	In Service
X2-083	Newark 12kV	In Service
X3-008	Todd 69kV	Partially in Service - Under Construction
X3-066	Church Hill 69kV	In Service
Y1-065	Rock Springs 500kV	In Service

Queue Number	Project Name	Status
Y1-079	Wye Mills 69kV	In Service
Y1-080	Dorchester 12kV	In Service
Y3-058	Rockawalkin 69kV	In Service
Z1-082	Lawnside 13kV	In Service
Z2-076	Worcester South 25kV	In Service
Z2-077	Worcester North 25kV	In Service

11.9 Contingency Descriptions

Contingency Name	Contingency Definition
TS_P4_#T5_FUR RUN 500_CB 1	CONTINGENCY 'TS_P4_#T5_FUR RUN 500_CB 1' OPEN BRANCH FROM BUS 270072 TO BUS 270073 CKT 1 /*FUR RUN 500/230 KV TRANSFORMER #1 OPEN BRANCH FROM BUS 270072 TO BUS 270073 CKT 2 /*FUR RUN 500/230 KV TRANSFORMER #2 OPEN BRANCH FROM BUS 270072 TO BUS 200066 CKT 1 /*FUR RUN - PEACH BOTTOM 500 END
DPL_P4-2_DP6	CONTINGENCY 'DPL_P4-2_DP6' /*MILFORD BUS BREAKER TO STEELE DISCONNECT BRANCH FROM BUS 232000 TO BUS 232004 CKT 1 /*MILFORD STEELE 230 230 /* DISCONNECT BRANCH FROM BUS 232003 TO BUS 232004 CKT 1 /*CARTANZA MILFORD 230 230 DISCONNECT BRANCH FROM BUS 962380 TO BUS 232004 CKT 1 /*AG1-087 TAP MILFORD 230 230 END
DPL_P4-2_DP3	CONTINGENCY 'DPL_P4-2_DP3' /*MILFORD BUS BREAKER TO STEELE DISCONNECT BRANCH FROM BUS 232004 TO BUS 232000 CKT 1 /*MILFORD STEELE 230 230 DISCONNECT BRANCH FROM BUS 232006 TO BUS 232004 CKT 1 /*MILFORD INDIAN RIVER 230 230 END
DPL_P1_2_23085 &13710	CONTINGENCY 'DPL_P1_2_23085 &13710' DISCONNECT BUS 232005 /STEELE - VIENNA 230 & VIENNA AT20 DISCONNECT BUS 232116 /VIENNA XFMR - VIENNA 138 END
TS_P1-2_#T6	CONTINGENCY 'TS_P1-2_#T6' OPEN BRANCH FROM BUS 200066 TO BUS 270072 CKT 1 / 200066 PCHBTM1N 500 270072 FUR RUN_500 500 1 END
DPL_P4-2_DP56	CONTINGENCY 'DPL_P4-2_DP56' /*LORETTO BUS BREAKER DISCONNECT BRANCH FROM BUS 232127 TO BUS 232117 CKT 1 /*LORETTO VIENNA 138 1380 DISCONNECT BRANCH FROM BUS 232127 TO BUS 232128 CKT 1 /*LORETTO PINEY GROVE 138 138 END

Contingency Name	Contingency Definition
DPL_P4-2_DP55	CONTINGENCY 'DPL_P4-2_DP55' /*LORETTO BUS BREAKER DISCONNECT BRANCH FROM BUS 232117 TO BUS 232127 CKT 1 /*VIENNA LORETTO 138 138 DISCONNECT BRANCH FROM BUS 232129 TO BUS 232127 CKT 1 /*LORETTO KINGS CREEK 138 138 END
PECO_P1-2_220-04/* \$ DELCO \$ PECO_P1-2_220-04 \$ L	
JC-P1-2-JCC-500-003	CONTINGENCY 'JC-P1-2-JCC-500-003' /* NEWFRDM - WINDSOR 500.00 LINE DISCONNECT BRANCH FROM BUS 200012 TO BUS 200028 CKT 1 /* NEWFRDM - WINDSOR 500.00 LINE END
DPL_P1_2_CKT 23069A	CONTINGENCY 'DPL_P1_2_CKT 23069A' OPEN LINE FROM BUS 232001 TO BUS 232927 CIRCUIT 2 /COOL SPRING - BENNETT 230 END
TS_P4_#T7_FUR RUN 500_CB 3	CONTINGENCY 'TS_P4_#T7_FUR RUN 500_CB 3' OPEN BRANCH FROM BUS 270072 TO BUS 200066 CKT 1 /*FUR RUN - PEACH BOTTOM 500 OPEN BRANCH FROM BUS 270072 TO BUS 200016 CKT 1 /*FUR RUN - 3MILEI 500 END
PECO_P1-2_220-85/* \$ DELCO \$ 220-85 \$ LC	
DPL_P4-2_DP11	CONTINGENCY 'DPL_P4-2_DP11' /*STEELE BUS BREAKER TO MILFORD DISCONNECT BRANCH FROM BUS 232004 TO BUS 232000 CKT 1 /*MILFORD STEELE 230 230 DISCONNECT BRANCH FROM BUS 232000 TO BUS 232005 CKT 1 /*STEELE VIENNA 230 230 END
DPL_P4-2_DP36	CONTINGENCY 'DPL_P4-2_DP36' /*COOL SPRINGS BUS BREAKER TO IR 2 DISCONNECT BRANCH FROM BUS 232001 TO BUS 232006 CKT 1 /*COOL SPRINGS INDRIV 4 230 230 OPEN LINE FROM BUS 232001 TO BUS 232927 CIRCUIT 2 /COOL SPRING - BENNETT 230 END
PECO_P1-2_220-85/* \$ DELCO \$ PECO_P1-2_220-85 \$ L	

Contingency Name	Contingency Definition
DPL_P7_1_DBL_4NC	CONTINGENCY 'DPL_P7_1_DBL_4NC' /* RED LION-SILVER RUN 230;RED LION-SILVER RUN 230 OPEN LINE FROM BUS 231004 TO BUS 232013 CKT 1 OPEN LINE FROM BUS 231004 TO BUS 232013 CKT 2 END
DPL_P1_2_AB2-037 KEENEY	CONTINGENCY 'DPL_P1_2_AB2-037 KEENEY' OPEN LINE FROM BUS 923960 TO BUS 231003 CIRCUIT 2 END
PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B	
DPL_P7_1_DBL_1NCB_FSA	CONTINGENCY 'DPL_P7_1_DBL_1NCB_FSA' /* #1 & #2 KEENEY-STEELE 230 OPEN LINE FROM BUS 231003 TO BUS 232000 CKT 1 OPEN LINE FROM BUS 231003 TO BUS 923960 CKT 2 OPEN LINE FROM BUS 232000 TO BUS 923960 CKT 2 DISCONNECT BUS 923961 DISCONNECT BUS 923962 END
DPL_P1_2_CKT 13780	CONTINGENCY 'DPL_P1_2_CKT 13780' OPEN LINE FROM BUS 232127 TO BUS 232117 CIRCUIT 1 /LORETTO - VIENNA 138 END
PECO_P4_PEACH205/* \$ CHESCO \$ PECO_P4_PEACH205 \$ STBK	
PECO_P1-2_5014/* \$ CHESCO \$ PECO_P1-2_5014 \$ L	
PJM500_PS_P1-2_5015	CONTINGENCY 'PJM500_PS_P1-2_5015' /* HOPE CREEK TO RED LION TRIP LINE FROM BUS 200027 TO BUS 200029 CKT 1 /* HOPE CREEK TO RED LION END
CKT 23030B	CONTINGENCY 'CKT 23030B' OPEN LINE FROM BUS 232002 TO BUS 232013 CIRCUIT 1 /CEDAR CREEK - SILVER RUN 230 END
TS_P4_#T6_FUR RUN 500_CB 2	CONTINGENCY 'TS_P4_#T6_FUR RUN 500_CB 2' OPEN BRANCH FROM BUS 270072 TO BUS 270073 CKT 1 /*FUR RUN 500/230 KV TRANSFORMER #1 OPEN BRANCH FROM BUS 270072 TO BUS 270073 CKT 2 /*FUR RUN 500/230 KV TRANSFORMER #2 OPEN BRANCH FROM BUS 270072 TO BUS 200016 CKT 1 /*FUR RUN - 3MILEI 500 END
PECO_P1-2_5012/* \$ CHESCO \$ PECO_P1-2_5012 \$ L	

Contingency Name	Contingency Definition
CKT 23032B	CONTINGENCY 'CKT 23032B' OPEN LINE FROM BUS 232013 TO BUS 232003 CIRCUIT 1 /SILVER RUN - CARTANZA 230 END
PECO_P1-2_220-84/* \$ DELCO \$ PECO_P1-2_220-84 \$ L	
DPL_P4-2_DP12	CONTINGENCY 'DPL_P4-2_DP12' /*STEELE BUS BREAKER TO VIENNA DISCONNECT BRANCH FROM BUS 232000 TO BUS 232103 CKT 2 /*STEELE STEELE 230 138 AT21 DISCONNECT BRANCH FROM BUS 232000 TO BUS 232005 CKT 1 /*STEELE VIENNA 230 230 END
PECO_P4_CHICH435/* \$ DELCO \$ PECO_P4_CHICH435 \$ STBK	
PJM500_PS_P2-3_NFRD5_910	CONTINGENCY 'PJM500_PS_P2-3_NFRD5_910' DISCONNECT BRANCH FROM BUS 200012 TO BUS 219100 CKT 4 /* NEW FREEDOM 500- 4 TRIP LINE FROM BUS 200012 TO BUS 200028 CKT 1 /* 5038 NEW FREEDOM TO EAST WINDSOR END
PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	
Base Case	
DPL_P1_2_CKT 23034	CONTINGENCY 'DPL_P1_2_CKT 23034' OPEN LINE FROM BUS 232006 TO BUS 232004 CIRCUIT 1 /INDIAN RIVER - MILFORD 230 END
PECO_P4_PEACH215/* \$ CHESCO \$ PECO_P4_PEACH215 \$ STBK	
DPL_P1_2_CKT 23076	CONTINGENCY 'DPL_P1_2_CKT 23076' OPEN LINE FROM BUS 232004 TO BUS 232000 CIRCUIT 1 /MILFORD - STEELE 230 END
PECO_P1-2_220-84	CONTINGENCY 'PECO_P1-2_220-84' /* \$ DELCO \$ 220-84 \$ LB TRIP BRANCH FROM BUS 214235 TO BUS 231000 CKT 1 /* LINWOOD 230.00 CLAY_230 230.00 \$ DELCO \$ 220-84 \$ L END

Contingency Name	Contingency Definition
DPL_P4-2_DPIR238	CONTINGENCY 'DPL_P4-2_DPIR238' /*INDIAN RIVER BUS BREAKER 238 DISCONNECT BRANCH FROM BUS 232001 TO BUS 232006 CKT 1 /*COOL SPRINGS INDRIV 4 230 230 DISCONNECT BRANCH FROM BUS 232121 TO BUS 232139 CKT 1 /*IR 230 138 AT 20 DISCONNECT BRANCH FROM BUS 232139 TO BUS 232006 CKT 1 /*IR IRAT20 230 230 END
PJM500_DPL_P4_2_REDLION-HOPE AT51	CONTINGENCY 'PJM500_DPL_P4_2_REDLION-HOPE AT51' /* RED LION CB 505 OPEN LINE FROM BUS 200027 TO BUS 200029 CIRCUIT 1 /RED LION - HOPE CREEK OPEN LINE FROM BUS 200027 TO BUS 231004 CIRCUIT 2 /RED LION AT51 500/230 END
PJM500_DPL_P4_2_REDLION-HOPE AT50	CONTINGENCY 'PJM500_DPL_P4_2_REDLION-HOPE AT50' /* RED LION CB 503 OPEN LINE FROM BUS 200027 TO BUS 200029 CIRCUIT 1 /RED LION - HOPE CREEK OPEN LINE FROM BUS 200027 TO BUS 231004 CIRCUIT 1 /RED LION AT50 500/230 END

12 Light Load Analysis

Light Load study not required for AG1-061

13 Short Circuit Analysis

The following Breakers are overdutied:

None

13.1 System Reinforcements - Short Circuit

None

14 Stability and Reactive Power

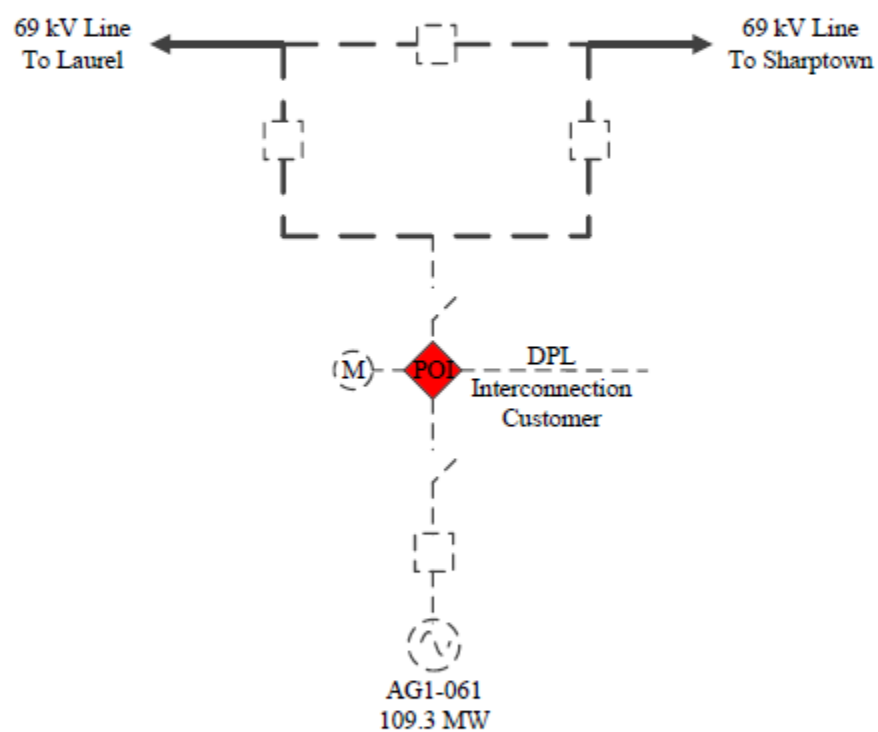
To be determined in the Facilities Study Phase.

15 Affected Systems

None

16 Attachment 1: One Line Diagram

AG1-061 Laurel – Sharptown 69kV



An Interconnection Customer circuit breaker will be required no more than 500 feet from the DPL substation.

 Point of Interconnection