



**Generation Interconnection
Feasibility Study Report
for
Queue Project AG1-461
LAUREL – MUMFORD 69 KV
19.5 MW Capacity / 30 MW Energy**

January 2021

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1 Introduction

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

2 Preface

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

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

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

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

3 General

The Interconnection Customer (IC), has proposed a Solar generating facility located in Sussex County, Delaware. The installed facilities will have a total capability of 30 MW with 19.5 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is December 31, 2023. This study does not imply a TO commitment to this in-service date.

Queue Number	AG1-461
Project Name	MUMFORD 69 KV
State	Delaware
County	Sussex
Transmission Owner	DPL
MFO	30
MWE	30
MWC	19.5
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

AG1-461 will interconnect with the DPL system via a terminal position at a new 3-breaker ring bus to be constructed on the Laurel – Mumford 69kV line.

5 Cost Summary

The AG1-461 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$7,197,000
Total System Network Upgrade Costs	\$178,733,315
Total Costs	\$185,930,315

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

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

6 Transmission Owner Scope of Work

Scope of work for this project includes cutting a new 3-breaker ring bus into the Laurel – Mumford 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: \$7,197,000

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

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.

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

Description	Total Cost
Total Physical Interconnection Costs	\$7,197,000

7 Schedule

Design, procurement and construction of the necessary work scope of this project will take approximately 36-48 months from the date of execution of an ISA.

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:

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

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/>

Metering requirements are as follows:

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 - Load Flow Analysis - Primary POI

The Queue Project AG1-461 was evaluated as a 30.0 MW (Capacity 19.5 MW) injection tapping the 69 kV Mumford - Laurel line in the DPL area. Project AG1-461 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-461 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

11.1 Generation Deliverability

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
168006883	232249	LAUREL	69.0	DP&L	232247	DUP-SFRD	69.0	DP&L	1	DPL_P1_2_CKT 6722	single	93.0	95.54	103.95	DC	7.83

11.2 Multiple Facility Contingency

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

None

11.3 Contribution to Previously Identified Overloads

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
165121960	232003	CARTANZA	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	DPL_P7_1_DBL_1NCB_FSA	tower	790.0	179.31	179.88	DC	10.17
165122015	232012	HOPE CREEK	230.0	PJM	200029	HOPE CRK	500.0	PSE&G	1	DPL_P7_1_DBL_4NC	tower	1117.0	137.39	137.91	DC	13.03
166827284	232100	CHURCH	138.0	DP&L	232107	TOWNSE ND	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	195.42	196.15	DC	5.86
166827294	232106	MIDLTNT P	138.0	DP&L	232104	MT PLSNT	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	175.7	176.43	DC	5.86
166827279	232107	TOWNSE ND	138.0	DP&L	232106	MIDLTNT P	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	201.16	201.89	DC	5.86

11.4 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
168007015	232000	STEELE	230.0	DP&L	231003	KEEN_230	230.0	DP&L	1	DPL_P1_2_AB 2-037 KEENEY	operation	552.0	137.02	137.6	DC	7.21
168007177	232000	STEELE	230.0	DP&L	923960	AB2-037 TAP	230.0	DP&L	2	DPL_P1_2_CKT 23001	operation	727.0	112.16	112.69	DC	8.59

ID	FROM BUS#	FROM BUS	KV	FROM BUS AREA	TO BUS#	TO BUS	KV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
168006912	232001	COOLSPRS	230.0	DP&L	232927	BENNETT_230	230.0	DP&L	2	DPL_P1_2_CKT23034	operation	678.0	165.82	166.68	DC	13.36
168006914	232001	COOLSPRS	230.0	DP&L	232927	BENNETT_230	230.0	DP&L	2	Base Case	operation	550.0	113.69	115.25	DC	8.87
168006869	232002	CEDAR CK	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	CKT 23032B	operation	678.0	176.6	177.32	DC	12.44
168006871	232002	CEDAR CK	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	Base Case	operation	550.0	138.86	139.12	DC	9.1
168006884	232003	CARTANZA	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	DPL_P1_2_CKT23031	operation	790.0	166.84	167.34	DC	8.83
168006885	232003	CARTANZA	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	Base Case	operation	650.0	165.22	165.67	DC	6.54
168006852	232004	MILF_230	230.0	DP&L	232000	STEELE	230.0	DP&L	1	CKT 23032B	operation	550.0	194.58	195.21	DC	7.7
168006949	232004	MILF_230	230.0	DP&L	232002	CEDAR CK	230.0	DP&L	1	CKT 23032B	operation	738.0	146.04	146.57	DC	8.66
168007214	232005	VIENNA	230.0	DP&L	232000	STEELE	230.0	DP&L	1	DPL_P1_2_CKT6716B	operation	550.0	109.88	110.46	DC	7.3
168007007	232006	INDRIV 4	230.0	DP&L	232004	MILF_230	230.0	DP&L	1	DPL_P1_2_CKT23069A	operation	804.0	141.86	142.54	DC	12.54
168007024	232013	SILVER RUN	230.0	PJM	231004	RL_230	230.0	DP&L	1	PJM500_PS_P1-2_HOPE-SILVER	operation	678.0	127.16	127.65	DC	7.48
168007005	232100	CHURCH	138.0	DP&L	232107	TOWNSEND	138.0	DP&L	1	DPL_P1_2_AB2-037 KEENEY	operation	348.0	140.12	140.58	DC	3.94
168007006	232100	CHURCH	138.0	DP&L	232107	TOWNSEND	138.0	DP&L	1	Base Case	operation	280.0	136.13	136.6	DC	2.89
168007113	232106	MIDLTNTP	138.0	DP&L	232104	MT PLSNT	138.0	DP&L	1	DPL_P1_2_AB2-037 KEENEY	operation	348.0	123.07	123.52	DC	3.94
168007115	232106	MIDLTNTP	138.0	DP&L	232104	MT PLSNT	138.0	DP&L	1	Base Case	operation	273.0	117.77	118.25	DC	2.89
168006955	232107	TOWNSEND	138.0	DP&L	232106	MIDLTNTP	138.0	DP&L	1	Base Case	operation	273.0	150.22	150.7	DC	2.89
168006956	232107	TOWNSEND	138.0	DP&L	232106	MIDLTNTP	138.0	DP&L	1	DPL_P1_2_AB2-037 KEENEY	operation	348.0	148.53	148.98	DC	3.94
168007187	232114	SHARNGTN	138.0	DP&L	232112	FELTON	138.0	DP&L	1	DPL_P1_2_CKT23031	operation	242.0	103.23	104.8	DC	3.83
168007182	232116	VIENN138	138.0	DP&L	232005	VIENNA	230.0	DP&L	1	DPL_P1_2_CKT6716B	operation	530.0	114.06	114.67	DC	7.3
168007184	232116	VIENN138	138.0	DP&L	232005	VIENNA	230.0	DP&L	1	Base Case	operation	460.0	111.87	112.51	DC	6.55
168007056	232117	VIENNA 8	138.0	DP&L	232116	VIENN138	138.0	DP&L	1	Base Case	operation	390.0	131.95	132.71	DC	6.55
168007057	232117	VIENNA 8	138.0	DP&L	232116	VIENN138	138.0	DP&L	1	DPL_P1_2_CKT6716B	operation	482.0	125.44	126.11	DC	7.3
168007010	232119	NELSON	138.0	DP&L	232121	INDRV2&3	138.0	DP&L	1	DPL_P1_2_23085 & 13710	operation	193.0	140.95	141.8	DC	3.71
168006905	232234	TODD	69.0	DP&L	232233	PRESTON	69.0	DP&L	1	DPL_P1_2_23085 & 13710	operation	93.0	168.11	169.27	DC	2.39
168006906	232234	TODD	69.0	DP&L	232233	PRESTON	69.0	DP&L	1	Base Case	operation	82.0	107.91	108.76	DC	1.54
168007047	232239	SHARPTWN	69.0	DP&L	232241	VIENN_69	69.0	DP&L	1	Base Case	operation	50.0	125.42	134.63	DC	4.6
168007048	232239	SHARPTWN	69.0	DP&L	232241	VIENN_69	69.0	DP&L	1	DPL_P1_2_CKT6752	operation	71.0	107.92	117.39	DC	6.73
168007095	232247	DUP-SFRD	69.0	DP&L	232824	PINE ST	69.0	DP&L	1	DPL_P1_2_CKT6722	operation	136.0	117.34	126.19	DC	12.04
168007097	232247	DUP-SFRD	69.0	DP&L	232824	PINE ST	69.0	DP&L	1	Base Case	operation	105.0	96.06	103.8	DC	8.12
168006881	232249	LAUREL	69.0	DP&L	232247	DUP-SFRD	69.0	DP&L	1	DPL_P1_2_CKT6722	operation	93.0	165.74	178.69	DC	12.04
168006882	232249	LAUREL	69.0	DP&L	232247	DUP-SFRD	69.0	DP&L	1	Base Case	operation	82.0	116.46	126.36	DC	8.12
168007251	232249	LAUREL	69.0	DP&L	232828	SHORT 1	69.0	DP&L	1	DPL_P1_2_CKT6705	operation	93.0	92.45	102.77	DC	9.6

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
168007189	232824	PINE ST	69.0	DP&L	232246	NSEAF_69	69.0	DP&L	1	DPL_P1_2_CKT 6722	operation	136.0	102.93	111.78	DC	12.04
168006922	232927	BENNETT_230	230.0	DP&L	232004	MILF_230	230.0	DP&L	2	DPL_P1_2_CKT 23034	operation	678.0	160.79	161.65	DC	13.36
168006924	232927	BENNETT_230	230.0	DP&L	232004	MILF_230	230.0	DP&L	2	Base Case	operation	550.0	107.47	109.04	DC	8.87
169766040	923960	AB2-037 TAP	230.0	DP&L	231003	KEEN_230	230.0	DP&L	2	DPL_P1_2_CKT 23001	operation	727.0	125.83	126.36	DC	8.59
168007132	962380	AG1-087 TAP	230.0	DP&L	232003	CARTANZA	230.0	DP&L	1	CKT 23030B	operation	804.0	115.64	116.94	DC	10.6

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
165122015	3	HOPE CREEK 230.0 kV - HOPE CRK 500.0 kV Ckt 1	Facility owned by LS Power (457): This facility is owned by LS Power. LS Power, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : Months r_PS_I025a_HC230500 (1326) : Upgrade Hope Creek 500/230kV transformer terminal equipment to achieve a SER of 1748 MVA Project Type : FAC Cost : \$1,608,315 Time Estimate : 15.0 Months	\$1,608,315
165121960	2	CARTANZA 230.0 kV - SILVER RUN 230.0 kV Ckt 1	dt23032r0001 (452) : Rebuild Cartanza - Silver Run 230 kV line Project Type : FAC Cost : \$65,000,000 Time Estimate : 48-60 Months dt23032r0002 (453) : Rebuild Cartanza - Silver Run 230 kV line Project Type : FAC Cost : \$67,000,000 Time Estimate : 48-60 Months ds23032r0001 (454) : Replace 3000A CBs at Cartanza with 4000A CBs Project Type : FAC Cost : \$1,000,000 Time Estimate : 12-18 Months ds23032r0002 (459) : Upgrade relaying at Cartanza Project Type : FAC Cost : \$300,000 Time Estimate : 12.0 Months	\$133,300,000
168006883	1	LAUREL 69.0 kV - DUP-SFRD 69.0 kV Ckt 1	ds6736r0001 (1032): Terminal upgrades at the DuPont Seaford Substation. Upgrade 600A disconnect switches to 2000A Project Type : FAC Cost : \$275,000 Time Estimate : 12.0 Months ds6736r0002 (1033): Terminal upgrades at the Laurel Substation. Upgrade 600A disconnect switch to 2000A Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months	\$375,000

ID	Idx	Facility	Upgrade Description	Cost
166827279	6	TOWNSEND 138.0 kV - MIDLTNTP 138.0 kV Ckt 1	ds13808r0001 (959): Upgrade disconnect switch at Middletown Tap Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months ds13808r0003 (1020): Upgrade terminal equipment at Townsend Substation Project Type : FAC Cost : \$300,000 Time Estimate : 12.0 Months dt13808r0005 (1021): 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 Project Type : FAC Cost : \$8,250,000 Time Estimate : 36-48 Months	\$8,650,000
166827284	4	CHURCH 138.0 kV - TOWNSEND 138.0 kV Ckt 1	ds13833r0001 (979) : 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. Project Type : FAC Cost : \$500,000 Time Estimate : 24-36 Months ds13833r0002 (980) : 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. Project Type : FAC Cost : \$200,000 Time Estimate : 24.0 Months ds13833r0003 (981) : 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. Project Type : FAC Cost : \$100,000 Time Estimate : 12-18 Months dt13833r0001 (982) : 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 Project Type : FAC Cost : \$26,000,000 Time Estimate : 48-60 Months	\$26,800,000

ID	Idx	Facility	Upgrade Description	Cost
166827294	5	MIDLTNTP 138.0 kV - MT PLSNT 138.0 kV Ckt 1	ds13808r0001 (959) : Upgrade disconnect switch at Middletown Tap Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months ds13808r0002 (960) : Upgrade circuit breaker and associated Current Transformers and Switches from 2000A to 3000A at Mt. Pleasant Substation Project Type : FAC Cost : \$400,000 Time Estimate : 12.0 Months dt13808r0003 (1001) : To mitigate the (DPL) Mt. Pleasant - Middletown Tap 138 kV line (from bus 232104 to 232106) overload is will require increasing the emergency rating of the line by rebuilding the line with new poles, conductor, foundations, insulators and OPGW. In addition, terminal upgrades will be required at Mt. Pleasant Project Type : FAC Cost : \$7,500,000 Time Estimate : 36-48 Months	\$8,000,000
			TOTAL COST	\$178,733,315

11.6 Flow Gate Details - Primary POI

The following indices contain additional information about each facility presented in the body of the report. For each index, a description of the flowgate and its contingency was included for convenience. The intent of the indices is to provide more details on which projects/generators have contributions to the flowgate in question. All New Service Queue Requests, through the end of the Queue under study, that are contributors to a flowgate will be listed in the indices. Please note that there may be contributors that are subsequently queued after the queue under study that are not listed in the indices. Although this information is not used "as is" for cost allocation purposes, it can be used to gage the impact of other projects/generators. It should be noted the project/generator MW contributions presented in the body of the report are Full MW Impact contributions which are also noted in the indices column named "Full MW Impact", whereas the loading percentages reported in the body of the report, take into consideration the PJM Generator Deliverability Test rules such as commercial probability of each project as well as the ramping impact of "Adder" contributions. The MW Impact found and used in the analysis is shown in the indices column named "Gendeliv MW Impact".

11.6.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
168006883	232249	LAUREL	DP&L	232247	DUP-SFRD	DP&L	1	DPL_P1_2_CKT 6722	single	93.0	95.54	103.95	DC	7.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.1095	80/20	0.1095
232406	W1-004 C	0.1095	80/20	0.1095
232408	W1-005 C	0.1095	80/20	0.1095
232410	W1-006 C	0.1095	80/20	0.1095
232417	X3-008 C	0.1200	80/20	0.1200
232426	Y1-080 FULL	0.0245	80/20	0.0245
232428	Y3-058 C	0.1074	80/20	0.1074
232905	BAYVIEW1	0.1026	80/20	0.1026
232907	VN8	1.5666	80/20	1.5666
232912	OH NUG1	0.2957	80/20	0.2957
232913	OH NUG2	0.2918	80/20	0.2918
232914	OH NUG3	0.2957	80/20	0.2957
232915	OH NUG4	0.2957	80/20	0.2957
232916	OH NUG5	0.2957	80/20	0.2957
232917	OH NUG6	0.2944	80/20	0.2944
232918	OH NUG7	0.2937	80/20	0.2937
232919	VN10	0.2321	80/20	0.2321
232921	TASLEY2G	0.1976	80/20	0.1976
232926	CRISFLD1	0.0890	80/20	0.0890
233923	AA1-102 C	0.5073	80/20	0.5073
293670	O-025 C	0.1108	80/20	0.1108
917081	CHERRYDALE C	0.0624	80/20	0.0624
924681	AB2-120 C	1.9471	80/20	1.9471
924781	AB2-130 C O1	12.9652	80/20	12.9652
924831	AB2-136 C	2.7667	80/20	2.7667
925151	AB2-172 C	1.9013	80/20	1.9013
925261	AB2-180 C	1.6727	80/20	1.6727
927031	AC1-190 C	3.5738	80/20	3.5738
927191	AC1-213 C	0.3746	80/20	0.3746
932161	AC2-023 C	3.2091	80/20	3.2091
938651	AE1-087 C	1.6011	80/20	1.6011
939151	AE1-145	1.0426	80/20	1.0426
945661	AF1-231 C	0.3932	80/20	0.3932
945791	AF1-244	0.4513	80/20	0.4513
945931	AF1-258	0.3823	80/20	0.3823
957611	AF2-055 C	1.8211	80/20	1.8211
957661	AF2-060	0.4692	80/20	0.4692
957671	AF2-061 O1	2.0852	80/20	2.0852
959161	AF2-207 C O1	4.0171	80/20	4.0171
959571	AF2-248 C	0.5738	80/20	0.5738
959581	AF2-249 C	0.1013	80/20	0.1013
959591	AF2-250 C	0.1856	80/20	0.1856

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960341	AF2-325 C	0.4513	80/20	0.4513
960671	AF2-358 C O1	7.3818	80/20	7.3818
960871	AF2-378 C	0.1217	80/20	0.1217
960881	AF2-379 C	0.1274	80/20	0.1274
960941	AF2-385 C	9.5246	80/20	9.5246
961181	AF2-409 O1	6.4900	80/20	6.4900
962161	AG1-061 C O1	18.8156	80/20	18.8156
963001	AG1-149	0.1692	80/20	0.1692
963011	AG1-150	2.0852	80/20	2.0852
965321	AG1-397 C	0.3789	80/20	0.3789
965611	AG1-429 C O1	1.8346	80/20	1.8346
965821	AG1-450	3.0307	80/20	3.0307
965921	AG1-461 C O1	7.8273	80/20	7.8273
CALDERWOOD	CALDERWOOD	0.0089	Confirmed LTF	0.0089
NY	NY	0.0133	Confirmed LTF	0.0133
PRAIRIE	PRAIRIE	0.0465	Confirmed LTF	0.0465
SIGE	SIGE	0.0009	Confirmed LTF	0.0009
CHEOAH	CHEOAH	0.0090	Confirmed LTF	0.0090
COTTONWOOD	COTTONWOOD	0.0378	Confirmed LTF	0.0378
HAMLET	HAMLET	0.0104	Confirmed LTF	0.0104
GIBSON	GIBSON	0.0098	Confirmed LTF	0.0098
BLUEG	BLUEG	0.0312	Confirmed LTF	0.0312
TRIMBLE	TRIMBLE	0.0100	Confirmed LTF	0.0100
CATAWBA	CATAWBA	0.0063	Confirmed LTF	0.0063

11.6.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
165121960	232003	CARTANZA	DP&L	232013	SILVER RUN	PJM	1	DPL_P7_1_DBL_1NCB_FSA	tower	790.0	179.31	179.88	DC	10.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	3.6565	Adder	4.3
232407	W1-004 E	3.6565	Adder	4.3
232409	W1-005 E	3.6565	Adder	4.3
232411	W1-006 E	3.6565	Adder	4.3
232412	X1-032 E	1.1745	Adder	1.38
232418	X3-008 E	3.3865	Adder	3.98
232423	X3-066 E	0.5827	Adder	0.69
232425	Y1-079 E	1.3965	Adder	1.64
232427	Y1-080 E	0.5881	Adder	0.69
232429	Y3-058 E	1.7612	Adder	2.07
232432	Z2-076 C	0.2217	50/50	0.2217
232433	Z2-076 E	0.7080	50/50	0.7080
232434	Z2-077 C	0.2217	50/50	0.2217
232435	Z2-077 E	0.7080	50/50	0.7080
232616	GEN FOOD	1.5837	50/50	1.5837
232851	DUP-SFR1	2.7717	Adder	3.26
232901	NORTHST	4.7928	50/50	4.7928
232904	IR4	23.2894	50/50	23.2894
232920	IR10	0.9005	50/50	0.9005
232922	MR3 (Deactivation : 01/06/2021)	67.3618	50/50	67.3618
233911	AB1-137 C (Withdrawn : 12/07/2020)	0.2346	50/50	0.2346
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.6372	50/50	0.6372
233916	AB1-141 E	1.1818	Adder	1.39
233919	AB1-142 E	1.1818	Adder	1.39
233920	W3-032A-CTG1	20.1091	50/50	20.1091
233921	W3-032A-STG1	12.1072	50/50	12.1072
917082	CHERRYDALE E	3.6574	Adder	4.3
918835	AA1-102 E	27.2786	Adder	32.09
919831	AA2-069 (Suspended)	297.8449	50/50	297.8449
923921	AB2-032 C	2.5513	Adder	3.0
923922	AB2-032 E	1.2006	Adder	1.41
923951	AB2-036 C	8.0155	Adder	9.43
923952	AB2-036 E	13.1142	Adder	15.43
924681	AB2-120 C	13.1921	50/50	13.1921
924682	AB2-120 E	21.5239	50/50	21.5239
924781	AB2-130 C O1	9.1851	Adder	10.81
924782	AB2-130 E O1	14.9862	Adder	17.63
924801	AB2-133 C O1	4.3282	Adder	5.09
924802	AB2-133 E O1	5.4894	Adder	6.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924821	AB2-135 C	5.3552	Adder	6.3
924822	AB2-135 E	6.1074	Adder	7.19
924831	AB2-136 C	6.8664	Adder	8.08
924832	AB2-136 E	7.2817	Adder	8.57
924971	AB2-153 C	1.4257	Adder	1.68
924972	AB2-153 E	2.3262	Adder	2.74
925151	AB2-172 C	5.1890	Adder	6.1
925152	AB2-172 E	8.4663	Adder	9.96
925261	AB2-180 C	4.0422	Adder	4.76
925262	AB2-180 E	1.7324	Adder	2.04
925271	AB2-185 C	3.1535	Adder	3.71
925272	AB2-185 E	1.3515	Adder	1.59
927031	AC1-190 C	9.5822	Adder	11.27
927032	AC1-190 E	4.1066	Adder	4.83
927191	AC1-213 C	0.9301	Adder	1.09
927192	AC1-213 E	0.6104	Adder	0.72
930201	AB1-056 C	23.0797	50/50	23.0797
930202	AB1-056 E	65.7269	50/50	65.7269
931261	AB1-176 C	0.3013	Adder	0.35
931262	AB1-176 E	0.4969	Adder	0.58
932161	AC2-023 C	7.6175	Adder	8.96
932162	AC2-023 E	5.5478	Adder	6.53
933641	AC2-186 C	4.6095	Adder	5.42
933642	AC2-186 E	7.5208	Adder	8.85
936611	AD2-076 C O1	3.6668	Adder	4.31
936612	AD2-076 E O1	5.9827	Adder	7.04
938651	AE1-087 C	4.3697	Adder	5.14
938652	AE1-087 E	1.0924	Adder	1.29
938895	AE1-117 C	16.9934	50/50	16.9934
938896	AE1-117 E	45.3158	50/50	45.3158
939151	AE1-145	5.9009	Adder	6.94
941021	AE2-093 C	4.2623	Adder	5.01
941022	AE2-093 E	6.9543	Adder	8.18
941181	AE2-112 C	1.2722	Adder	1.5
941182	AE2-112 E	2.0756	Adder	2.44
942441	AE2-257 C	11.6988	50/50	11.6988
942442	AE2-257 E	30.8424	50/50	30.8424
943361	AF1-007 C	0.6809	50/50	0.6809
943362	AF1-007 E	1.9353	50/50	1.9353
943441	AF1-015 C	1.6060	Adder	1.89
943442	AF1-015 E	2.2178	Adder	2.61
943651	AF1-036 C	1.6542	Adder	1.95
943652	AF1-036 E	2.2844	Adder	2.69
945661	AF1-231 C	2.2416	Adder	2.64
945662	AF1-231 E	3.3623	Adder	3.96
945791	AF1-244	2.3465	Adder	2.76
945931	AF1-258	0.9239	Adder	1.09
945941	AF1-259	0.1596	Adder	0.19
957611	AF2-055 C	10.3233	Adder	12.15
957612	AF2-055 E	4.4243	Adder	5.21
957661	AF2-060	2.6554	Adder	3.12
957671	AF2-061 O1	11.8017	Adder	13.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959021	AF2-193 C	42.6472	50/50	42.6472
959022	AF2-193 E	115.0400	50/50	115.0400
959031	AF2-194 C	42.6472	50/50	42.6472
959032	AF2-194 E	115.0400	50/50	115.0400
959051	AF2-196 C	3.1906	50/50	3.1906
959052	AF2-196 E	7.4447	50/50	7.4447
959161	AF2-207 C O1	5.8168	Adder	6.84
959162	AF2-207 E O1	8.7252	Adder	10.26
959571	AF2-248 C	0.9837	Adder	1.16
959572	AF2-248 E	1.0994	Adder	1.29
959581	AF2-249 C	0.1736	Adder	0.2
959582	AF2-249 E	0.6944	Adder	0.82
959591	AF2-250 C	0.3182	Adder	0.37
959592	AF2-250 E	0.2459	Adder	0.29
960221	AF2-313 C	2.5342	Adder	2.98
960222	AF2-313 E	1.4367	Adder	1.69
960341	AF2-325 C	1.1572	Adder	1.36
960342	AF2-325 E	1.5980	Adder	1.88
960671	AF2-358 C O1	16.8371	Adder	19.81
960672	AF2-358 E O1	11.2248	Adder	13.21
960871	AF2-378 C	0.3066	Adder	0.36
960872	AF2-378 E	0.4254	Adder	0.5
960881	AF2-379 C	0.4787	Adder	0.56
960882	AF2-379 E	0.6597	Adder	0.78
960941	AF2-385 C	13.7919	Adder	16.23
960942	AF2-385 E	7.8481	Adder	9.23
960961	AF2-387 C O1	16.3042	Adder	19.18
960962	AF2-387 E O1	8.1766	Adder	9.62
961181	AF2-409 O1	28.5031	Adder	33.53
962161	AG1-061 C O1	9.8520	Adder	21.87
962162	AG1-061 E O1	6.5680	Adder	14.58
962261	AG1-072	6.4874	Adder	14.4
962302	AG1-079 E	0.1462	Adder	0.32
962381	AG1-087 C O1	49.5802	50/50	49.5802
962382	AG1-087 E O1	133.7414	50/50	133.7414
963001	AG1-149	0.4664	Adder	1.04
963011	AG1-150	13.8844	50/50	13.8844
964551	AG1-318 C	0.1061	50/50	0.1061
964552	AG1-318 E	0.2476	50/50	0.2476
964962	AG1-360 E	1.3617	Adder	3.02
965321	AG1-397 C	0.6508	Adder	1.44
965322	AG1-397 E	0.8978	Adder	1.99
965611	AG1-429 C O1	5.5120	Adder	12.24
965612	AG1-429 E O1	3.6736	Adder	8.15
965821	AG1-450	3.7104	Adder	8.24
965921	AG1-461 C O1	2.9786	Adder	6.61
965922	AG1-461 E O1	1.6038	Adder	3.56
965951	AG1-464 C O1	2.5716	Adder	5.71
965952	AG1-464 E O1	3.8575	Adder	8.56
966281	AG1-497 C O1	55.4744	50/50	55.4744
966282	AG1-497 E O1	23.7748	50/50	23.7748
966601	AG1-529 C	7.2988	Adder	16.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966602	AG1-529 E	3.8957	Adder	8.65
CALDERWOOD	CALDERWOOD	0.1839	Confirmed LTF	0.1839
NY	NY	0.2229	Confirmed LTF	0.2229
PRAIRIE	PRAIRIE	0.9557	Confirmed LTF	0.9557
O-066	O-066	2.8199	Confirmed LTF	2.8199
SIGE	SIGE	0.0050	Confirmed LTF	0.0050
CHEOAH	CHEOAH	0.1852	Confirmed LTF	0.1852
COTTONWOOD	COTTONWOOD	0.7770	Confirmed LTF	0.7770
G-007	G-007	0.4536	Confirmed LTF	0.4536
HAMLET	HAMLET	0.2131	Confirmed LTF	0.2131
GIBSON	GIBSON	0.2026	Confirmed LTF	0.2026
BLUEG	BLUEG	0.6441	Confirmed LTF	0.6441
TRIMBLE	TRIMBLE	0.2065	Confirmed LTF	0.2065
CATAWBA	CATAWBA	0.1291	Confirmed LTF	0.1291

11.6.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
165122015	232012	HOPE CREEK	PJM	200029	HOPE CRK	PSE&G	1	DPL_P7_1_DBL_4NC	tower	1117.0	137.39	137.91	DC	13.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	4.3871	Adder	5.16
232407	W1-004 E	4.3871	Adder	5.16
232409	W1-005 E	4.3871	Adder	5.16
232411	W1-006 E	4.3871	Adder	5.16
232412	X1-032 E	1.3954	Adder	1.64
232418	X3-008 E	3.6945	Adder	4.35
232423	X3-066 E	0.6264	Adder	0.74
232425	Y1-079 E	1.3675	Adder	1.61
232427	Y1-080 E	0.6616	Adder	0.78
232429	Y3-058 E	2.0912	Adder	2.46
232433	Z2-076 E	0.7602	Adder	0.89
232435	Z2-077 E	0.7602	Adder	0.89
232616	GEN FOOD	1.4453	50/50	1.4453
232813	VAUGHN	0.2195	50/50	0.2195
232851	DUP-SFR1	3.8081	Adder	4.48
232899	W1-062	4.4526	50/50	4.4526
232900	DEMECSMY	4.3617	50/50	4.3617
232901	NORTHST	4.3739	50/50	4.3739
232922	MR3 (Deactivation : 01/06/2021)	61.4734	50/50	61.4734
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.6898	Adder	0.81
233916	AB1-141 E	1.2494	Adder	1.47
233919	AB1-142 E	1.2494	Adder	1.47
233920	W3-032A-CTG1	18.3513	50/50	18.3513
233921	W3-032A-STG1	11.0488	50/50	11.0488
917082	CHERRYDALE E	4.3911	Adder	5.17
918835	AA1-102 E	32.3322	Adder	38.04
919831	AA2-069 (Suspended)	271.8087	50/50	271.8087
923921	AB2-032 C	2.6972	Adder	3.17
923922	AB2-032 E	1.2693	Adder	1.49
923951	AB2-036 C	7.6067	Adder	8.95
923952	AB2-036 E	12.4453	Adder	14.64
923961	AB2-037 C	16.3092	Adder	19.19
923962	AB2-037 E	26.6433	Adder	31.35
924681	AB2-120 C	13.4743	Adder	15.85
924682	AB2-120 E	21.9843	Adder	25.86
924781	AB2-130 C O1	11.7774	Adder	13.86
924782	AB2-130 E O1	19.2157	Adder	22.61
924801	AB2-133 C O1	5.1399	Adder	6.05
924802	AB2-133 E O1	6.5189	Adder	7.67
924821	AB2-135 C	7.6016	Adder	8.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924822	AB2-135 E	8.6694	Adder	10.2
924831	AB2-136 C	7.6196	Adder	8.96
924832	AB2-136 E	8.0804	Adder	9.51
924971	AB2-153 C	1.5072	Adder	1.77
924972	AB2-153 E	2.4592	Adder	2.89
925151	AB2-172 C	5.6609	Adder	6.66
925152	AB2-172 E	9.2362	Adder	10.87
925261	AB2-180 C	4.7995	Adder	5.65
925262	AB2-180 E	2.0569	Adder	2.42
925271	AB2-185 C	3.0879	Adder	3.63
925272	AB2-185 E	1.3234	Adder	1.56
926131	AC1-091 C	4.7147	50/50	4.7147
926132	AC1-091 E	7.7320	50/50	7.7320
926141	AC1-092 C	4.7147	50/50	4.7147
926142	AC1-092 E	7.7320	50/50	7.7320
926151	AC1-093 C	4.4632	50/50	4.4632
926152	AC1-093 E	7.3549	50/50	7.3549
926161	AC1-094 C	3.7717	50/50	3.7717
926162	AC1-094 E	6.2233	50/50	6.2233
927031	AC1-190 C	10.4860	Adder	12.34
927032	AC1-190 E	4.4940	Adder	5.29
927191	AC1-213 C	1.1181	Adder	1.32
927192	AC1-213 E	0.7337	Adder	0.86
930201	AB1-056 C	24.9494	Adder	29.35
930202	AB1-056 E	71.0515	Adder	83.59
931261	AB1-176 C	0.3239	Adder	0.38
931262	AB1-176 E	0.5341	Adder	0.63
932161	AC2-023 C	8.9690	Adder	10.55
932162	AC2-023 E	6.5321	Adder	7.68
933631	AC2-185 C	9.5550	50/50	9.5550
933632	AC2-185 E	15.5898	50/50	15.5898
933641	AC2-186 C	9.0069	50/50	9.0069
933642	AC2-186 E	14.6955	50/50	14.6955
936611	AD2-076 C O1	3.7879	Adder	4.46
936612	AD2-076 E O1	6.1802	Adder	7.27
938651	AE1-087 C	4.7671	Adder	5.61
938652	AE1-087 E	1.1918	Adder	1.4
938895	AE1-117 C	18.3902	Adder	21.64
938896	AE1-117 E	49.0405	Adder	57.69
939151	AE1-145	7.0912	Adder	8.34
941021	AE2-093 C	3.9383	Adder	4.63
941022	AE2-093 E	6.4256	Adder	7.56
941181	AE2-112 C	1.3142	Adder	1.55
941182	AE2-112 E	2.1442	Adder	2.52
942441	AE2-257 C	12.6674	Adder	14.9
942442	AE2-257 E	33.3958	Adder	39.29
943361	AF1-007 C	0.7361	Adder	0.87
943362	AF1-007 E	2.0920	Adder	2.46
943441	AF1-015 C	1.4839	Adder	1.75
943442	AF1-015 E	2.0492	Adder	2.41
943651	AF1-036 C	1.7088	Adder	2.01
943652	AF1-036 E	2.3598	Adder	2.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945661	AF1-231 C	2.6907	Adder	3.17
945662	AF1-231 E	4.0360	Adder	4.75
945791	AF1-244	2.7813	Adder	3.27
945931	AF1-258	1.0970	Adder	1.29
945941	AF1-259	0.1716	Adder	0.2
957611	AF2-055 C	12.3941	Adder	14.58
957612	AF2-055 E	5.3118	Adder	6.25
957661	AF2-060	3.1910	Adder	3.75
957671	AF2-061 O1	14.1824	Adder	16.69
959021	AF2-193 C	46.1021	Adder	54.24
959022	AF2-193 E	124.3596	Adder	146.31
959031	AF2-194 C	46.1021	Adder	54.24
959032	AF2-194 E	124.3596	Adder	146.31
959051	AF2-196 C	3.4547	Adder	4.06
959052	AF2-196 E	8.0611	Adder	9.48
959161	AF2-207 C O1	7.1013	Adder	8.35
959162	AF2-207 E O1	10.6520	Adder	12.53
959571	AF2-248 C	1.1941	Adder	1.4
959572	AF2-248 E	1.3345	Adder	1.57
959581	AF2-249 C	0.2107	Adder	0.25
959582	AF2-249 E	0.8429	Adder	0.99
959591	AF2-250 C	0.3863	Adder	0.45
959592	AF2-250 E	0.2985	Adder	0.35
960221	AF2-313 C	2.7242	Adder	3.2
960222	AF2-313 E	1.5444	Adder	1.82
960341	AF2-325 C	1.2765	Adder	1.5
960342	AF2-325 E	1.7627	Adder	2.07
960671	AF2-358 C O1	18.9909	Adder	22.34
960672	AF2-358 E O1	12.6606	Adder	14.89
960871	AF2-378 C	0.3393	Adder	0.4
960872	AF2-378 E	0.4708	Adder	0.55
960881	AF2-379 C	0.5677	Adder	0.67
960882	AF2-379 E	0.7823	Adder	0.92
960941	AF2-385 C	16.8375	Adder	19.81
960942	AF2-385 E	9.5812	Adder	11.27
960961	AF2-387 C O1	15.0900	Adder	17.75
960962	AF2-387 E O1	7.5676	Adder	8.9
961181	AF2-409 O1	31.1721	Adder	36.67
962161	AG1-061 C O1	12.0296	Adder	26.7
962162	AG1-061 E O1	8.0198	Adder	17.8
962261	AG1-072	6.0043	Adder	13.33
962302	AG1-079 E	0.2561	Adder	0.57
962381	AG1-087 C O1	58.9669	50/50	58.9669
962382	AG1-087 E O1	159.0619	50/50	159.0619
963001	AG1-149	0.5528	Adder	1.23
963011	AG1-150	7.5167	Adder	16.69
964551	AG1-318 C	0.0608	Adder	0.13
964552	AG1-318 E	0.1419	Adder	0.31
964962	AG1-360 E	1.6178	Adder	3.59
965321	AG1-397 C	0.7937	Adder	1.76
965322	AG1-397 E	1.0949	Adder	2.43
965611	AG1-429 C O1	6.6177	Adder	14.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965612	AG1-429 E O1	4.4105	Adder	9.79
965821	AG1-450	4.1746	Adder	9.27
965921	AG1-461 C O1	3.8157	Adder	8.47
965922	AG1-461 E O1	2.0546	Adder	4.56
965951	AG1-464 C O1	9.4810	50/50	9.4810
965952	AG1-464 E O1	14.2215	50/50	14.2215
966281	AG1-497 C O1	50.6251	50/50	50.6251
966282	AG1-497 E O1	21.6965	50/50	21.6965
966601	AG1-529 C	23.5815	50/50	23.5815
966602	AG1-529 E	12.5865	50/50	12.5865
CALDERWOOD	CALDERWOOD	0.1402	Confirmed LTF	0.1402
NY	NY	0.5331	Confirmed LTF	0.5331
PRAIRIE	PRAIRIE	0.7491	Confirmed LTF	0.7491
O-066	O-066	8.5336	Confirmed LTF	8.5336
SIGE	SIGE	0.1025	Confirmed LTF	0.1025
CHEOAH	CHEOAH	0.1406	Confirmed LTF	0.1406
COTTONWOOD	COTTONWOOD	0.5985	Confirmed LTF	0.5985
G-007	G-007	1.5288	Confirmed LTF	1.5288
HAMLET	HAMLET	0.1542	Confirmed LTF	0.1542
GIBSON	GIBSON	0.1600	Confirmed LTF	0.1600
BLUEG	BLUEG	0.5086	Confirmed LTF	0.5086
TRIMBLE	TRIMBLE	0.1631	Confirmed LTF	0.1631
CATAWBA	CATAWBA	0.0952	Confirmed LTF	0.0952

11.6.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
166827284	232100	CHURCH	DP&L	232107	TOWNSEND	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	195.42	196.15	DC	5.86

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.1162	Adder	2.49
232407	W1-004 E	2.1162	Adder	2.49
232409	W1-005 E	2.1162	Adder	2.49
232411	W1-006 E	2.1162	Adder	2.49
232412	X1-032 E	0.6923	Adder	0.81
232417	X3-008 C	0.3001	50/50	0.3001
232418	X3-008 E	3.1031	50/50	3.1031
232422	X3-066 C	0.1518	50/50	0.1518
232423	X3-066 E	1.2321	50/50	1.2321
232424	Y1-079 C	0.2221	50/50	0.2221
232425	Y1-079 E	2.2972	50/50	2.2972
232426	Y1-080 FULL	0.0468	50/50	0.0468
232427	Y1-080 E	0.4865	50/50	0.4865
232428	Y3-058 C	0.1887	50/50	0.1887
232429	Y3-058 E	1.2800	50/50	1.2800
232433	Z2-076 E	0.3195	Adder	0.38
232435	Z2-077 E	0.3195	Adder	0.38
232813	VAUGHN	0.1051	50/50	0.1051
232851	DUP-SFR1	1.6269	Adder	1.91
232902	EASTMUNI	3.3846	50/50	3.3846
232907	VN8	5.4177	50/50	5.4177
232910	NRG_G1	1.6595	50/50	1.6595
232911	NRG_G2	1.6595	50/50	1.6595
232919	VN10	0.4103	50/50	0.4103
232922	MR3 (Deactivation : 01/06/2021)	9.0454	Adder	10.64
232926	CRISFLD1	0.3223	50/50	0.3223
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2813	Adder	0.33
233915	AB1-141 C	0.9820	50/50	0.9820
233916	AB1-141 E	2.9046	50/50	2.9046
233918	AB1-142 C	0.9820	50/50	0.9820
233919	AB1-142 E	2.9046	50/50	2.9046
233923	AA1-102 C	1.8373	50/50	1.8373
233931	AB2-179 C	-9.2465	Adder	-10.88
293670	O-025 C	0.1942	50/50	0.1942
917082	CHERRYDALE E	2.1143	Adder	2.49
918835	AA1-102 E	19.0008	50/50	19.0008
919831	AA2-069 (Suspended)	39.9949	Adder	47.05
923921	AB2-032 C	6.2703	50/50	6.2703
923922	AB2-032 E	2.9507	50/50	2.9507
923951	AB2-036 C	12.6635	50/50	12.6635
923952	AB2-036 E	20.7187	50/50	20.7187

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924681	AB2-120 C	6.4703	Adder	7.61
924682	AB2-120 E	10.5569	Adder	12.42
924781	AB2-130 C O1	5.4550	Adder	6.42
924782	AB2-130 E O1	8.9003	Adder	10.47
924801	AB2-133 C O1	11.5421	50/50	11.5421
924802	AB2-133 E O1	14.6387	50/50	14.6387
924821	AB2-135 C	12.2976	50/50	12.2976
924822	AB2-135 E	14.0250	50/50	14.0250
924831	AB2-136 C	5.9562	50/50	5.9562
924832	AB2-136 E	6.3165	50/50	6.3165
924971	AB2-153 C	3.5040	50/50	3.5040
924972	AB2-153 E	5.7170	50/50	5.7170
925151	AB2-172 C	4.7548	50/50	4.7548
925152	AB2-172 E	7.7578	50/50	7.7578
925261	AB2-180 C	2.9378	50/50	2.9378
925262	AB2-180 E	1.2590	50/50	1.2590
925271	AB2-185 C	5.1871	50/50	5.1871
925272	AB2-185 E	2.2231	50/50	2.2231
926131	AC1-091 C	0.6418	Adder	0.76
926132	AC1-091 E	1.0526	Adder	1.24
926141	AC1-092 C	0.6418	Adder	0.76
926142	AC1-092 E	1.0526	Adder	1.24
926151	AC1-093 C	0.6076	Adder	0.71
926152	AC1-093 E	1.0013	Adder	1.18
926161	AC1-094 C	0.5135	Adder	0.6
926162	AC1-094 E	0.8472	Adder	1.0
927031	AC1-190 C	8.6961	50/50	8.6961
927032	AC1-190 E	3.7269	50/50	3.7269
927191	AC1-213 C	0.6564	50/50	0.6564
927192	AC1-213 E	0.4308	50/50	0.4308
930201	AB1-056 C	9.8959	Adder	11.64
930202	AB1-056 E	28.1818	Adder	33.16
931261	AB1-176 C	0.6372	50/50	0.6372
931262	AB1-176 E	1.0507	50/50	1.0507
932161	AC2-023 C	5.6437	50/50	5.6437
932162	AC2-023 E	4.1103	50/50	4.1103
933631	AC2-185 C	1.3008	Adder	1.53
933632	AC2-185 E	2.1223	Adder	2.5
933641	AC2-186 C	3.1389	Adder	3.69
933642	AC2-186 E	5.1214	Adder	6.03
936611	AD2-076 C O1	8.1710	50/50	8.1710
936612	AD2-076 E O1	13.3317	50/50	13.3317
938651	AE1-087 C	4.0040	50/50	4.0040
938652	AE1-087 E	1.0010	50/50	1.0010
938895	AE1-117 C	7.5027	Adder	8.83
938896	AE1-117 E	20.0072	Adder	23.54
939151	AE1-145	3.4061	Adder	4.01
941021	AE2-093 C	5.0565	50/50	5.0565
941022	AE2-093 E	8.2500	50/50	8.2500
941181	AE2-112 C	2.8348	50/50	2.8348
941182	AE2-112 E	4.6253	50/50	4.6253
942441	AE2-257 C	5.1449	Adder	6.05

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942442	AE2-257 E	13.5639	Adder	15.96
943361	AF1-007 C	0.2920	Adder	0.34
943362	AF1-007 E	0.8298	Adder	0.98
943441	AF1-015 C	1.9052	50/50	1.9052
943442	AF1-015 E	2.6311	50/50	2.6311
943651	AF1-036 C	3.6862	50/50	3.6862
943652	AF1-036 E	5.0904	50/50	5.0904
945661	AF1-231 C	1.2961	Adder	1.52
945662	AF1-231 E	1.9442	Adder	2.29
945791	AF1-244	1.6345	50/50	1.6345
945931	AF1-258	0.6715	50/50	0.6715
945941	AF1-259	0.3376	50/50	0.3376
957611	AF2-055 C	5.9678	Adder	7.02
957612	AF2-055 E	2.5577	Adder	3.01
957661	AF2-060	1.5328	Adder	1.8
957671	AF2-061 O1	6.8122	Adder	8.01
959021	AF2-193 C	18.2859	Adder	21.51
959022	AF2-193 E	49.3258	Adder	58.03
959031	AF2-194 C	18.2859	Adder	21.51
959032	AF2-194 E	49.3258	Adder	58.03
959051	AF2-196 C	1.4032	Adder	1.65
959052	AF2-196 E	3.2740	Adder	3.85
959161	AF2-207 C O1	3.4920	Adder	4.11
959162	AF2-207 E O1	6.1623	50/50	6.1623
959571	AF2-248 C	0.6946	50/50	0.6946
959572	AF2-248 E	0.7763	50/50	0.7763
959581	AF2-249 C	0.1226	50/50	0.1226
959582	AF2-249 E	0.4903	50/50	0.4903
959591	AF2-250 C	0.2247	50/50	0.2247
959592	AF2-250 E	0.1736	50/50	0.1736
960221	AF2-313 C	5.3589	50/50	5.3589
960222	AF2-313 E	3.0381	50/50	3.0381
960341	AF2-325 C	1.0239	50/50	1.0239
960342	AF2-325 E	1.4139	50/50	1.4139
960671	AF2-358 C O1	13.8072	50/50	13.8072
960672	AF2-358 E O1	9.2048	50/50	9.2048
960871	AF2-378 C	0.2684	50/50	0.2684
960872	AF2-378 E	0.3724	50/50	0.3724
960881	AF2-379 C	0.3375	50/50	0.3375
960882	AF2-379 E	0.4650	50/50	0.4650
960941	AF2-385 C	9.7407	50/50	9.7407
960942	AF2-385 E	5.5428	50/50	5.5428
960961	AF2-387 C O1	21.7542	50/50	21.7542
960962	AF2-387 E O1	10.9098	50/50	10.9098
961181	AF2-409 O1	22.4440	50/50	22.4440
962161	AG1-061 C O1	13.7777	50/50	13.7777
962162	AG1-061 E O1	9.1851	50/50	9.1851
962261	AG1-072	16.3320	50/50	16.3320
962302	AG1-079 E	0.4867	50/50	0.4867
962381	AG1-087 C O1	8.5411	Adder	18.96
962382	AG1-087 E O1	23.0393	Adder	51.14
963001	AG1-149	0.6129	50/50	0.6129

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963011	AG1-150	3.6105	Adder	8.01
964551	AG1-318 C	0.0249	Adder	0.06
964552	AG1-318 E	0.0581	Adder	0.13
964962	AG1-360 E	0.8026	Adder	1.78
965321	AG1-397 C	0.3777	Adder	0.84
965322	AG1-397 E	0.5210	Adder	1.16
965611	AG1-429 C O1	3.1865	Adder	7.07
965612	AG1-429 E O1	2.1237	Adder	4.71
965821	AG1-450	5.7923	50/50	5.7923
965921	AG1-461 C O1	1.7145	Adder	3.81
965922	AG1-461 E O1	0.9232	Adder	2.05
965951	AG1-464 C O1	1.7512	Adder	3.89
965952	AG1-464 E O1	2.6268	Adder	5.83
966281	AG1-497 C O1	3.9481	Adder	8.76
966282	AG1-497 E O1	1.6920	Adder	3.76
966601	AG1-529 C	3.8100	Adder	8.46
966602	AG1-529 E	2.0336	Adder	4.51
CALDERWOOD	CALDERWOOD	0.0924	Confirmed LTF	0.0924
NY	NY	0.0586	Confirmed LTF	0.0586
PRAIRIE	PRAIRIE	0.4779	Confirmed LTF	0.4779
O-066	O-066	0.4576	Confirmed LTF	0.4576
CHEOAH	CHEOAH	0.0931	Confirmed LTF	0.0931
COTTONWOOD	COTTONWOOD	0.3906	Confirmed LTF	0.3906
G-007	G-007	0.0378	Confirmed LTF	0.0378
HAMLET	HAMLET	0.1091	Confirmed LTF	0.1091
GIBSON	GIBSON	0.1010	Confirmed LTF	0.1010
BLUEG	BLUEG	0.3212	Confirmed LTF	0.3212
TRIMBLE	TRIMBLE	0.1030	Confirmed LTF	0.1030
CATAWBA	CATAWBA	0.0658	Confirmed LTF	0.0658

11.6.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166827294	232106	MIDLTNTP	DP&L	232104	MT PLSNT	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	175.7	176.43	DC	5.86

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.1162	Adder	2.49
232407	W1-004 E	2.1162	Adder	2.49
232409	W1-005 E	2.1162	Adder	2.49
232411	W1-006 E	2.1162	Adder	2.49
232412	X1-032 E	0.6923	Adder	0.81
232417	X3-008 C	0.3001	50/50	0.3001
232418	X3-008 E	3.1031	50/50	3.1031
232422	X3-066 C	0.1518	50/50	0.1518
232423	X3-066 E	1.2321	50/50	1.2321
232424	Y1-079 C	0.2221	50/50	0.2221
232425	Y1-079 E	2.2972	50/50	2.2972
232426	Y1-080 FULL	0.0468	50/50	0.0468
232427	Y1-080 E	0.4865	50/50	0.4865
232428	Y3-058 C	0.1887	50/50	0.1887
232429	Y3-058 E	1.2800	50/50	1.2800
232433	Z2-076 E	0.3195	Adder	0.38
232435	Z2-077 E	0.3195	Adder	0.38
232813	VAUGHN	0.1051	50/50	0.1051
232851	DUP-SFR1	1.6269	Adder	1.91
232902	EASTMUNI	3.3846	50/50	3.3846
232907	VN8	5.4177	50/50	5.4177
232910	NRG_G1	1.6595	50/50	1.6595
232911	NRG_G2	1.6595	50/50	1.6595
232919	VN10	0.4103	50/50	0.4103
232922	MR3 (Deactivation : 01/06/2021)	9.0454	Adder	10.64
232926	CRISFLD1	0.3223	50/50	0.3223
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2813	Adder	0.33
233915	AB1-141 C	0.9820	50/50	0.9820
233916	AB1-141 E	2.9046	50/50	2.9046
233918	AB1-142 C	0.9820	50/50	0.9820
233919	AB1-142 E	2.9046	50/50	2.9046
233923	AA1-102 C	1.8373	50/50	1.8373
233931	AB2-179 C	27.1217	50/50	27.1217
293670	O-025 C	0.1942	50/50	0.1942
917082	CHERRYDALE E	2.1143	Adder	2.49
918835	AA1-102 E	19.0008	50/50	19.0008
919831	AA2-069 (Suspended)	39.9949	Adder	47.05
923921	AB2-032 C	6.2703	50/50	6.2703
923922	AB2-032 E	2.9507	50/50	2.9507
923951	AB2-036 C	12.6635	50/50	12.6635

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923952	AB2-036 E	20.7187	50/50	20.7187
924681	AB2-120 C	6.4703	Adder	7.61
924682	AB2-120 E	10.5569	Adder	12.42
924781	AB2-130 C O1	5.4550	Adder	6.42
924782	AB2-130 E O1	8.9003	Adder	10.47
924801	AB2-133 C O1	11.5421	50/50	11.5421
924802	AB2-133 E O1	14.6387	50/50	14.6387
924821	AB2-135 C	12.2976	50/50	12.2976
924822	AB2-135 E	14.0250	50/50	14.0250
924831	AB2-136 C	5.9562	50/50	5.9562
924832	AB2-136 E	6.3165	50/50	6.3165
924971	AB2-153 C	3.5040	50/50	3.5040
924972	AB2-153 E	5.7170	50/50	5.7170
925151	AB2-172 C	4.7548	50/50	4.7548
925152	AB2-172 E	7.7578	50/50	7.7578
925254	AB2-179 E	8.8503	50/50	8.8503
925261	AB2-180 C	2.9378	50/50	2.9378
925262	AB2-180 E	1.2590	50/50	1.2590
925271	AB2-185 C	5.1871	50/50	5.1871
925272	AB2-185 E	2.2231	50/50	2.2231
927031	AC1-190 C	8.6961	50/50	8.6961
927032	AC1-190 E	3.7269	50/50	3.7269
927191	AC1-213 C	0.6564	50/50	0.6564
927192	AC1-213 E	0.4308	50/50	0.4308
930201	AB1-056 C	9.8959	Adder	11.64
930202	AB1-056 E	28.1818	Adder	33.16
931261	AB1-176 C	0.6372	50/50	0.6372
931262	AB1-176 E	1.0507	50/50	1.0507
932161	AC2-023 C	5.6437	50/50	5.6437
932162	AC2-023 E	4.1103	50/50	4.1103
933641	AC2-186 C	3.1389	Adder	3.69
933642	AC2-186 E	5.1214	Adder	6.03
936611	AD2-076 C O1	8.1710	50/50	8.1710
936612	AD2-076 E O1	13.3317	50/50	13.3317
938651	AE1-087 C	4.0040	50/50	4.0040
938652	AE1-087 E	1.0010	50/50	1.0010
938895	AE1-117 C	7.5027	Adder	8.83
938896	AE1-117 E	20.0072	Adder	23.54
939151	AE1-145	3.4061	Adder	4.01
941021	AE2-093 C	5.0565	50/50	5.0565
941022	AE2-093 E	8.2500	50/50	8.2500
941181	AE2-112 C	2.8348	50/50	2.8348
941182	AE2-112 E	4.6253	50/50	4.6253
942441	AE2-257 C	5.1449	Adder	6.05
942442	AE2-257 E	13.5639	Adder	15.96
943361	AF1-007 C	0.2920	Adder	0.34
943362	AF1-007 E	0.8298	Adder	0.98
943441	AF1-015 C	1.9052	50/50	1.9052
943442	AF1-015 E	2.6311	50/50	2.6311
943651	AF1-036 C	3.6862	50/50	3.6862
943652	AF1-036 E	5.0904	50/50	5.0904
945661	AF1-231 C	1.2961	Adder	1.52

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945662	AF1-231 E	1.9442	Adder	2.29
945791	AF1-244	1.6345	50/50	1.6345
945931	AF1-258	0.6715	50/50	0.6715
945941	AF1-259	0.3376	50/50	0.3376
957611	AF2-055 C	5.9678	Adder	7.02
957612	AF2-055 E	2.5577	Adder	3.01
957661	AF2-060	1.5328	Adder	1.8
957671	AF2-061 O1	6.8122	Adder	8.01
959021	AF2-193 C	18.2859	Adder	21.51
959022	AF2-193 E	49.3258	Adder	58.03
959031	AF2-194 C	18.2859	Adder	21.51
959032	AF2-194 E	49.3258	Adder	58.03
959051	AF2-196 C	1.4032	Adder	1.65
959052	AF2-196 E	3.2740	Adder	3.85
959161	AF2-207 C O1	3.4920	Adder	4.11
959162	AF2-207 E O1	6.1623	50/50	6.1623
959571	AF2-248 C	0.6946	50/50	0.6946
959572	AF2-248 E	0.7763	50/50	0.7763
959581	AF2-249 C	0.1226	50/50	0.1226
959582	AF2-249 E	0.4903	50/50	0.4903
959591	AF2-250 C	0.2247	50/50	0.2247
959592	AF2-250 E	0.1736	50/50	0.1736
960221	AF2-313 C	5.3589	50/50	5.3589
960222	AF2-313 E	3.0381	50/50	3.0381
960341	AF2-325 C	1.0239	50/50	1.0239
960342	AF2-325 E	1.4139	50/50	1.4139
960671	AF2-358 C O1	13.8072	50/50	13.8072
960672	AF2-358 E O1	9.2048	50/50	9.2048
960871	AF2-378 C	0.2684	50/50	0.2684
960872	AF2-378 E	0.3724	50/50	0.3724
960881	AF2-379 C	0.3375	50/50	0.3375
960882	AF2-379 E	0.4650	50/50	0.4650
960941	AF2-385 C	9.7407	50/50	9.7407
960942	AF2-385 E	5.5428	50/50	5.5428
960961	AF2-387 C O1	21.7542	50/50	21.7542
960962	AF2-387 E O1	10.9098	50/50	10.9098
961181	AF2-409 O1	22.4440	50/50	22.4440
962161	AG1-061 C O1	13.7777	50/50	13.7777
962162	AG1-061 E O1	9.1851	50/50	9.1851
962261	AG1-072	16.3320	50/50	16.3320
962302	AG1-079 E	0.4867	50/50	0.4867
962381	AG1-087 C O1	8.5411	Adder	18.96
962382	AG1-087 E O1	23.0393	Adder	51.14
963001	AG1-149	0.6129	50/50	0.6129
963011	AG1-150	3.6105	Adder	8.01
964551	AG1-318 C	0.0249	Adder	0.06
964552	AG1-318 E	0.0581	Adder	0.13
964962	AG1-360 E	0.8026	Adder	1.78
965321	AG1-397 C	0.3777	Adder	0.84
965322	AG1-397 E	0.5210	Adder	1.16
965611	AG1-429 C O1	3.1865	Adder	7.07
965612	AG1-429 E O1	2.1237	Adder	4.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965821	AG1-450	5.7923	50/50	5.7923
965921	AG1-461 C O1	1.7145	Adder	3.81
965922	AG1-461 E O1	0.9232	Adder	2.05
965951	AG1-464 C O1	1.7512	Adder	3.89
965952	AG1-464 E O1	2.6268	Adder	5.83
966281	AG1-497 C O1	3.9481	Adder	8.76
966282	AG1-497 E O1	1.6920	Adder	3.76
966601	AG1-529 C	3.8100	Adder	8.46
966602	AG1-529 E	2.0336	Adder	4.51
CALDERWOOD	CALDERWOOD	0.0924	Confirmed LTF	0.0924
NY	NY	0.0586	Confirmed LTF	0.0586
PRAIRIE	PRAIRIE	0.4779	Confirmed LTF	0.4779
O-066	O-066	0.4576	Confirmed LTF	0.4576
CHEOAH	CHEOAH	0.0931	Confirmed LTF	0.0931
COTTONWOOD	COTTONWOOD	0.3906	Confirmed LTF	0.3906
G-007	G-007	0.0378	Confirmed LTF	0.0378
HAMLET	HAMLET	0.1091	Confirmed LTF	0.1091
GIBSON	GIBSON	0.1010	Confirmed LTF	0.1010
BLUEG	BLUEG	0.3212	Confirmed LTF	0.3212
TRIMBLE	TRIMBLE	0.1030	Confirmed LTF	0.1030
CATAWBA	CATAWBA	0.0658	Confirmed LTF	0.0658

11.6.6 Index 6

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
166827279	232107	TOWNSEND	DP&L	232106	MIDLTNT P	DP&L	1	DPL_P7_1_DBL_1NCB_FS A	tower	348.0	201.16	201.89	DC	5.86

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.1162	Adder	2.49
232407	W1-004 E	2.1162	Adder	2.49
232409	W1-005 E	2.1162	Adder	2.49
232411	W1-006 E	2.1162	Adder	2.49
232412	X1-032 E	0.6923	Adder	0.81
232417	X3-008 C	0.3001	50/50	0.3001
232418	X3-008 E	3.1031	50/50	3.1031
232422	X3-066 C	0.1518	50/50	0.1518
232423	X3-066 E	1.2321	50/50	1.2321
232424	Y1-079 C	0.2221	50/50	0.2221
232425	Y1-079 E	2.2972	50/50	2.2972
232426	Y1-080 FULL	0.0468	50/50	0.0468
232427	Y1-080 E	0.4865	50/50	0.4865
232428	Y3-058 C	0.1887	50/50	0.1887
232429	Y3-058 E	1.2800	50/50	1.2800
232433	Z2-076 E	0.3195	Adder	0.38
232435	Z2-077 E	0.3195	Adder	0.38
232813	VAUGHN	0.1051	50/50	0.1051
232851	DUP-SFR1	1.6269	Adder	1.91
232902	EASTMUNI	3.3846	50/50	3.3846
232907	VN8	5.4177	50/50	5.4177
232910	NRG_G1	1.6595	50/50	1.6595
232911	NRG_G2	1.6595	50/50	1.6595
232919	VN10	0.4103	50/50	0.4103
232922	MR3 (Deactivation : 01/06/2021)	9.0454	Adder	10.64
232926	CRISFLD1	0.3223	50/50	0.3223
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2813	Adder	0.33
233915	AB1-141 C	0.9820	50/50	0.9820
233916	AB1-141 E	2.9046	50/50	2.9046
233918	AB1-142 C	0.9820	50/50	0.9820
233919	AB1-142 E	2.9046	50/50	2.9046
233923	AA1-102 C	1.8373	50/50	1.8373
233931	AB2-179 C	27.1217	50/50	27.1217
293670	O-025 C	0.1942	50/50	0.1942
917082	CHERRYDALE E	2.1143	Adder	2.49
918835	AA1-102 E	19.0008	50/50	19.0008
919831	AA2-069 (Suspended)	39.9949	Adder	47.05
923921	AB2-032 C	6.2703	50/50	6.2703
923922	AB2-032 E	2.9507	50/50	2.9507
923951	AB2-036 C	12.6635	50/50	12.6635

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923952	AB2-036 E	20.7187	50/50	20.7187
924681	AB2-120 C	6.4703	Adder	7.61
924682	AB2-120 E	10.5569	Adder	12.42
924781	AB2-130 C O1	5.4550	Adder	6.42
924782	AB2-130 E O1	8.9003	Adder	10.47
924801	AB2-133 C O1	11.5421	50/50	11.5421
924802	AB2-133 E O1	14.6387	50/50	14.6387
924821	AB2-135 C	12.2976	50/50	12.2976
924822	AB2-135 E	14.0250	50/50	14.0250
924831	AB2-136 C	5.9562	50/50	5.9562
924832	AB2-136 E	6.3165	50/50	6.3165
924971	AB2-153 C	3.5040	50/50	3.5040
924972	AB2-153 E	5.7170	50/50	5.7170
925151	AB2-172 C	4.7548	50/50	4.7548
925152	AB2-172 E	7.7578	50/50	7.7578
925254	AB2-179 E	8.8503	50/50	8.8503
925261	AB2-180 C	2.9378	50/50	2.9378
925262	AB2-180 E	1.2590	50/50	1.2590
925271	AB2-185 C	5.1871	50/50	5.1871
925272	AB2-185 E	2.2231	50/50	2.2231
927031	AC1-190 C	8.6961	50/50	8.6961
927032	AC1-190 E	3.7269	50/50	3.7269
927191	AC1-213 C	0.6564	50/50	0.6564
927192	AC1-213 E	0.4308	50/50	0.4308
930201	AB1-056 C	9.8959	Adder	11.64
930202	AB1-056 E	28.1818	Adder	33.16
931261	AB1-176 C	0.6372	50/50	0.6372
931262	AB1-176 E	1.0507	50/50	1.0507
932161	AC2-023 C	5.6437	50/50	5.6437
932162	AC2-023 E	4.1103	50/50	4.1103
933641	AC2-186 C	3.1389	Adder	3.69
933642	AC2-186 E	5.1214	Adder	6.03
936611	AD2-076 C O1	8.1710	50/50	8.1710
936612	AD2-076 E O1	13.3317	50/50	13.3317
938651	AE1-087 C	4.0040	50/50	4.0040
938652	AE1-087 E	1.0010	50/50	1.0010
938895	AE1-117 C	7.5027	Adder	8.83
938896	AE1-117 E	20.0072	Adder	23.54
939151	AE1-145	3.4061	Adder	4.01
941021	AE2-093 C	5.0565	50/50	5.0565
941022	AE2-093 E	8.2500	50/50	8.2500
941181	AE2-112 C	2.8348	50/50	2.8348
941182	AE2-112 E	4.6253	50/50	4.6253
942441	AE2-257 C	5.1449	Adder	6.05
942442	AE2-257 E	13.5639	Adder	15.96
943361	AF1-007 C	0.2920	Adder	0.34
943362	AF1-007 E	0.8298	Adder	0.98
943441	AF1-015 C	1.9052	50/50	1.9052
943442	AF1-015 E	2.6311	50/50	2.6311
943651	AF1-036 C	3.6862	50/50	3.6862
943652	AF1-036 E	5.0904	50/50	5.0904
945661	AF1-231 C	1.2961	Adder	1.52

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945662	AF1-231 E	1.9442	Adder	2.29
945791	AF1-244	1.6345	50/50	1.6345
945931	AF1-258	0.6715	50/50	0.6715
945941	AF1-259	0.3376	50/50	0.3376
957611	AF2-055 C	5.9678	Adder	7.02
957612	AF2-055 E	2.5577	Adder	3.01
957661	AF2-060	1.5328	Adder	1.8
957671	AF2-061 O1	6.8122	Adder	8.01
959021	AF2-193 C	18.2859	Adder	21.51
959022	AF2-193 E	49.3258	Adder	58.03
959031	AF2-194 C	18.2859	Adder	21.51
959032	AF2-194 E	49.3258	Adder	58.03
959051	AF2-196 C	1.4032	Adder	1.65
959052	AF2-196 E	3.2740	Adder	3.85
959161	AF2-207 C O1	3.4920	Adder	4.11
959162	AF2-207 E O1	6.1623	50/50	6.1623
959571	AF2-248 C	0.6946	50/50	0.6946
959572	AF2-248 E	0.7763	50/50	0.7763
959581	AF2-249 C	0.1226	50/50	0.1226
959582	AF2-249 E	0.4903	50/50	0.4903
959591	AF2-250 C	0.2247	50/50	0.2247
959592	AF2-250 E	0.1736	50/50	0.1736
960221	AF2-313 C	5.3589	50/50	5.3589
960222	AF2-313 E	3.0381	50/50	3.0381
960341	AF2-325 C	1.0239	50/50	1.0239
960342	AF2-325 E	1.4139	50/50	1.4139
960671	AF2-358 C O1	13.8072	50/50	13.8072
960672	AF2-358 E O1	9.2048	50/50	9.2048
960871	AF2-378 C	0.2684	50/50	0.2684
960872	AF2-378 E	0.3724	50/50	0.3724
960881	AF2-379 C	0.3375	50/50	0.3375
960882	AF2-379 E	0.4650	50/50	0.4650
960941	AF2-385 C	9.7407	50/50	9.7407
960942	AF2-385 E	5.5428	50/50	5.5428
960961	AF2-387 C O1	21.7542	50/50	21.7542
960962	AF2-387 E O1	10.9098	50/50	10.9098
961181	AF2-409 O1	22.4440	50/50	22.4440
962161	AG1-061 C O1	13.7777	50/50	13.7777
962162	AG1-061 E O1	9.1851	50/50	9.1851
962261	AG1-072	16.3320	50/50	16.3320
962302	AG1-079 E	0.4867	50/50	0.4867
962381	AG1-087 C O1	8.5411	Adder	18.96
962382	AG1-087 E O1	23.0393	Adder	51.14
963001	AG1-149	0.6129	50/50	0.6129
963011	AG1-150	3.6105	Adder	8.01
964551	AG1-318 C	0.0249	Adder	0.06
964552	AG1-318 E	0.0581	Adder	0.13
964962	AG1-360 E	0.8026	Adder	1.78
965321	AG1-397 C	0.3777	Adder	0.84
965322	AG1-397 E	0.5210	Adder	1.16
965611	AG1-429 C O1	3.1865	Adder	7.07
965612	AG1-429 E O1	2.1237	Adder	4.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965821	AG1-450	5.7923	50/50	5.7923
965921	AG1-461 C O1	1.7145	Adder	3.81
965922	AG1-461 E O1	0.9232	Adder	2.05
965951	AG1-464 C O1	1.7512	Adder	3.89
965952	AG1-464 E O1	2.6268	Adder	5.83
966281	AG1-497 C O1	3.9481	Adder	8.76
966282	AG1-497 E O1	1.6920	Adder	3.76
966601	AG1-529 C	3.8100	Adder	8.46
966602	AG1-529 E	2.0336	Adder	4.51
CALDERWOOD	CALDERWOOD	0.0924	Confirmed LTF	0.0924
NY	NY	0.0586	Confirmed LTF	0.0586
PRAIRIE	PRAIRIE	0.4779	Confirmed LTF	0.4779
O-066	O-066	0.4576	Confirmed LTF	0.4576
CHEOAH	CHEOAH	0.0931	Confirmed LTF	0.0931
COTTONWOOD	COTTONWOOD	0.3906	Confirmed LTF	0.3906
G-007	G-007	0.0378	Confirmed LTF	0.0378
HAMLET	HAMLET	0.1091	Confirmed LTF	0.1091
GIBSON	GIBSON	0.1010	Confirmed LTF	0.1010
BLUEG	BLUEG	0.3212	Confirmed LTF	0.3212
TRIMBLE	TRIMBLE	0.1030	Confirmed LTF	0.1030
CATAWBA	CATAWBA	0.0658	Confirmed LTF	0.0658

11.7 Queue Dependencies

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

Queue Number	Project Name	Status
AA1-102	Kings Creek-Loretto 138kV	Partially in Service - Under Construction
AA2-069	Cartanza 230kV	Suspended
AB1-056	Indian River 230kV I	Engineering and Procurement
AB1-137	Frankford 25kV	Withdrawn
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	Active
AB2-032	Church-Wye Mills 138 kV	Engineering and Procurement
AB2-036	Church-Steele 138kV	Active
AB2-037	Keeney-Steele 230kV	Active
AB2-120	Piney Grove-New Church 138kV	Active
AB2-130	Laurel 69kV	Active
AB2-133	Chestertown-Church 69kV	Engineering and Procurement
AB2-135	Church-Kent 69kV	Active
AB2-136	West Cambridge-Vienna 69kV	Active
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
AB2-185	Wye Mills 25kV	Active
AC1-091	Cedar Creek 138kV I	Active
AC1-092	Cedar Creek 138kV II	Active
AC1-093	Cedar Creek 138kV III	Active
AC1-094	Cedar Creek 138kV IV	Active
AC1-190	East New Market 69kV	Active
AC1-213	North Salisbury 25kV	Active
AC2-023	Hebron 69kV	Active
AC2-185	Cedar Creek 138kV II	Active
AC2-186	Harrington 25kV	Engineering and Procurement
AD2-076	Centreville 69 kV	Active
AE1-087	Todd 69 kV	Engineering and Procurement
AE1-117	Bethany 138 kV	Active
AE1-145	Wallops Island 69 kV	Active
AE2-093	Easton-Steele 138 kV	Active
AE2-112	Carville 138 kV	Active
AE2-257	Cedar Neck 69 kV	Active
AF1-007	Indian River 230 kV I	Active
AF1-015	Easton-Steele 138 kV	Active
AF1-036	Carville 138 kV	Active

Queue Number	Project Name	Status
AF1-231	New Church 138 kV	Active
AF1-244	Kingston 12 kV	Active
AF1-258	Rockawalkin 69 kV	Engineering and Procurement
AF1-259	Price 25 kV	Engineering and Procurement
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
AF2-248	Edgewood 12 kV I	Active
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	Active
AF2-379	Princess Anne 25 kV	Engineering and Procurement
AF2-385	Nelson 69 kV	Active
AF2-387	Hillsboro-Steele 138 kV	Active
AF2-409	Vienna 138 kV	Active
AG1-061	Laurel-Sharptown 69 kV	Active
AG1-072	Hillsboro-Steele 138 kV II	Active
AG1-079	New Meredith 69 kV	Active
AG1-087	Milford-Cartanza 230 kV	Active
AG1-149	Kingston 12 kV II	Active
AG1-150	Wattsville 69 kV II	Active
AG1-318	Ocean Bay 12 kV	Active
AG1-360	Costen 25 kV	Active
AG1-397	Walston 12 kV	Active
AG1-429	Tasley 69 kV	Active
AG1-450	Airey-Vienna 69 kV II	Active
AG1-461	Mumford 69 kV	Active
AG1-464	Harrington 69 kV	Active
AG1-497	Cartanza 230 kV	Active
AG1-529	Farmview 138 kV	Active
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
W3-032A	Cartanza 230kV	In Service
X1-032	Costen 25kV	In Service
X3-008	Todd 69kV	Under Construction
X3-066	Church Hill 69kV	In Service
Y1-079	Wye Mills 69kV	In Service
Y1-080	Dorchester 12kV	In Service
Y3-058	Rockawalkin 69kV	In Service
Z2-076	Worcester South 25kV	In Service
Z2-077	Worcester North 25kV	In Service

11.8 Contingency Descriptions - Primary POI

Contingency Name	Contingency Definition
CKT 23030B	CONTINGENCY 'CKT 23030B' OPEN LINE FROM BUS 232002 TO BUS 232013 CIRCUIT 1 /CEDAR CREEK - SILVER RUN 230 END
DPL_P1_2_CKT 6722	CONTINGENCY 'DPL_P1_2_CKT 6722' DISCONNECT BUS 232827 / SUSSEX - PEPPER - MUMFORD 69 DISCONNECT BUS 232826 / MUMFORD - LAUREL 69 DISCONNECT BUS 231940 / T11 END
DPL_P1_2_CKT 23031	CONTINGENCY 'DPL_P1_2_CKT 23031' OPEN LINE FROM BUS 232002 TO BUS 232004 CIRCUIT 1 /CEDAR CREEK - MILFORD 230 END
CKT 23032B	CONTINGENCY 'CKT 23032B' OPEN LINE FROM BUS 232013 TO BUS 232003 CIRCUIT 1 /SILVER RUN - CARTANZA 230 END
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
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
DPL_P1_2_CKT 23001	CONTINGENCY 'DPL_P1_2_CKT 23001' OPEN LINE FROM BUS 231003 TO BUS 232000 CIRCUIT 1 /#1 KEENEY EHV - STEELE 230 END

Contingency Name	Contingency Definition
DPL_P1_2_CKT 6752	CONTINGENCY 'DPL_P1_2_CKT 6752' DISCONNECT BUS 232824 / DUPONT SEAFORD - PINE ST - NORTH SEAFORD 69 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
PJM500_PS_P1-2_HOPE-SILVER	CONTINGENCY 'PJM500_PS_P1-2_HOPE-SILVER' /* HOPE CREEK TO SILVER RUN DISCONNECT BUS 232012 DISCONNECT BUS 232014 END
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
Base Case	
DPL_P1_2_CKT 6716B	CONTINGENCY 'DPL_P1_2_CKT 6716B' OPEN LINE FROM BUS 232234 TO BUS 232233 CIRCUIT 1 / TODD - PRESTON - 69 END
DPL_P1_2_CKT 6705	CONTINGENCY 'DPL_P1_2_CKT 6705' DISCONNECT BUS 232239 / LAUREL - SHARPTOWN - VIENNA 69 & SHARPTOWN XFMR DISCONNECT BUS 232607 / SHARPTOWN 12 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

12 Short Circuit Analysis - Primary POI

The following Breakers are overdutied

Bus Number	Bus Name	BREAKER	Type	Capacity (Amps)	Duty Percentage Post Queue	Duty Percentage Pre Queue

1.1 System Reinforcements - Short Circuit

13 Summer Peak - Load Flow Analysis - Secondary POI

The Queue Project AG1-461 was evaluated as a 30.0 MW (Capacity 19.5 MW) injection at the 69 kV Mumford Substation in the DPL area. Project AG1-461 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-461 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

13.1 Generation Deliverability

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

None

13.2 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC/D C	MW IMPAC T
166827439	923950	AB2-036 TAP	138.0	DP&L	232100	CHURCH	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	99.75	100.12	DC	2.89

13.3 Contribution to Previously Identified Overloads

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC/D C	MW IMPAC T
174313377	232000	STEELE	230.0	DP&L	923960	AB2-037 TAP	230.0	DP&L	2	DPL_P4-2_DP8	breaker	727.0	113.21	113.73	DC	8.6
174313134	232002	CEDAR CK	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	DPL_P4-2_DP11	breaker	678.0	189.67	190.49	DC	13.94
165121960	232003	CARTANZA	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	DPL_P7_1_DBL_1NCB_FSA	tower	790.0	176.6	177.18	DC	10.19
174103603	232003	CARTANZA	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	DPL_P4-2_DP11	breaker	790.0	179.59	180.2	DC	10.7
174313361	232005	VIENNA	230.0	DP&L	232000	STEELE	230.0	DP&L	1	DPL_P4-2_DPIR235	breaker	550.0	119.38	120.01	DC	7.71
174313240	232006	INDRIV 4	230.0	DP&L	232004	MILF_230	230.0	DP&L	1	DPL_P4-2_DP36	breaker	804.0	144.24	144.89	DC	11.96
165122015	232012	HOPE CREEK	230.0	PJM	200029	HOPE CRK	500.0	PSE&G	1	DPL_P7_1_DBL_4NC	tower	1117.0	136.0	136.52	DC	13.05
174313258	232013	SILVER RUN	230.0	PJM	231004	RL_230	230.0	DP&L	1	DPL_P4-2_DP11	breaker	678.0	129.61	130.15	DC	8.07
174313359	232013	SILVER RUN	230.0	PJM	231004	RL_230	230.0	DP&L	2	DPL_P4-2_DP11	breaker	790.0	111.66	112.13	DC	8.08
166827284	232100	CHURCH	138.0	DP&L	232107	TOWNSE ND	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	196.46	197.19	DC	5.84
174313241	232100	CHURCH	138.0	DP&L	232107	TOWNSE ND	138.0	DP&L	1	DPL_P4-2_DP18_FSA	breaker	348.0	141.46	141.92	DC	3.94
166827294	232106	MIDLTNT P	138.0	DP&L	232104	MT PLSNT	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	176.73	177.46	DC	5.84
174313310	232106	MIDLTNT P	138.0	DP&L	232104	MT PLSNT	138.0	DP&L	1	DPL_P4-2_DP18_FSA	breaker	348.0	124.4	124.86	DC	3.94
166827279	232107	TOWNSE ND	138.0	DP&L	232106	MIDLTNT P	138.0	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	202.19	202.92	DC	5.84
174313214	232107	TOWNSE ND	138.0	DP&L	232106	MIDLTNT P	138.0	DP&L	1	DPL_P4-2_DP18_FSA	breaker	348.0	149.86	150.32	DC	3.94
174313297	232112	FELTON	138.0	DP&L	232110	CHESWOL D	138.0	DP&L	1	DPL_P4-2_DP11	breaker	242.0	116.78	118.52	DC	4.25
174313268	232114	SHARNGT N	138.0	DP&L	232112	FELTON	138.0	DP&L	1	DPL_P4-2_DP11	breaker	242.0	125.5	127.24	DC	4.25
174313332	232116	VIENN138	138.0	DP&L	232005	VIENNA	230.0	DP&L	1	DPL_P4-2_DPIR235	breaker	530.0	123.92	124.58	DC	7.71

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC D C	MW IMPACT
166827181	232117	VIENNA 8	138.0	DP&L	232116	VIENNA138	138.0	DP&L	1	DPL_P2-2_DP1	bus	482.0	113.58	114.18	DC	6.48
166827370	232117	VIENNA 8	138.0	DP&L	232116	VIENNA138	138.0	DP&L	1	DPL_P7_1_DBL_4NC	tower	482.0	116.97	117.61	DC	6.88
166827371	232117	VIENNA 8	138.0	DP&L	232116	VIENNA138	138.0	DP&L	1	DPL_P7_1_B47_DPL1	tower	482.0	113.54	114.15	DC	6.49
174313270	232117	VIENNA 8	138.0	DP&L	232116	VIENNA138	138.0	DP&L	1	DPL_P4-2_DPIR235	breaker	482.0	136.28	137.01	DC	7.71
174313161	232215	KENT	69.0	DP&L	232812	NMEREDTH	69.0	DP&L	1	DPL_P4-2_DP11	breaker	93.0	167.15	168.08	DC	1.91
174313212	232230	TRAP ALT	69.0	DP&L	232232	TRAPPETP	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	153.36	154.16	DC	3.08
174313210	232232	TRAPPETP	69.0	DP&L	232227	EASTN_69	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	154.49	155.31	DC	3.19
174313174	232233	PRESTON	69.0	DP&L	232821	TANYARD	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	168.77	169.59	DC	3.19
174103651	232234	TODD	69.0	DP&L	232233	PRESTON	69.0	DP&L	1	DPL_P4-2_DP12	breaker	93.0	158.6	159.74	DC	2.35
174313216	232241	VIENNA_69	69.0	DP&L	232234	TODD	69.0	DP&L	1	DPL_P4-2_DP11	breaker	143.0	151.28	152.11	DC	2.62
174103810	232247	DUP-SFRD	69.0	DP&L	232824	PINE ST	69.0	DP&L	1	DPL_P4-2_DP11	breaker	136.0	103.89	110.19	DC	8.58
174103654	232812	NMEREDTH	69.0	DP&L	924820	AB2-135TAP	69.0	DP&L	1	DPL_P4-2_DP11	breaker	93.0	146.56	147.49	DC	1.91
174313191	232820	TALBOT	69.0	DP&L	232230	TRAP ALT	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	163.22	164.04	DC	3.19
174313184	232821	TANYARD	69.0	DP&L	232820	TALBOT	69.0	DP&L	1	DPL_P4-2_DP11	breaker	173.0	165.71	166.53	DC	3.19
174313291	923960	AB2-037TAP	230.0	DP&L	231003	KEEN_230	230.0	DP&L	2	DPL_P4-2_DP8	breaker	727.0	126.94	127.47	DC	8.6

13.4 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC D C	MW IMPACT
168007015	232000	STEELE	230.0	DP&L	231003	KEEN_230	230.0	DP&L	1	DPL_P1_2_AB2-037 KEENEY	operation	552.0	138.15	138.73	DC	7.19
168007177	232000	STEELE	230.0	DP&L	923960	AB2-037TAP	230.0	DP&L	2	DPL_P1_2_CKT23001	operation	727.0	113.19	113.72	DC	8.58
168006912	232001	COOLSPRS	230.0	DP&L	232927	BENNETT_230	230.0	DP&L	2	DPL_P1_2_CKT23034	operation	678.0	165.94	166.81	DC	13.56
168006914	232001	COOLSPRS	230.0	DP&L	232927	BENNETT_230	230.0	DP&L	2	Base Case	operation	550.0	113.67	115.27	DC	9.05
168006869	232002	CEDAR CK	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	CKT 23032B	operation	678.0	176.1	176.82	DC	12.46

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
168006871	232002	CEDAR CK	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	Base Case	operation	550.0	139.23	139.5	DC	9.1
168006885	232003	CARTANZA	230.0	DP&L	232013	SILVER RUN	230.0	PJM	1	Base Case	operation	650.0	161.08	162.08	DC	6.57
168006949	232004	MILF_230	230.0	DP&L	232002	CEDAR CK	230.0	DP&L	1	CKT 23032B	operation	738.0	145.4	145.92	DC	8.7
168006951	232004	MILF_230	230.0	DP&L	232002	CEDAR CK	230.0	DP&L	1	Base Case	operation	650.0	99.58	100.0	DC	6.04
175133111	232004	MILF_230	230.0	DP&L	232003	CARTANZA	230.0	DP&L	1	CKT 23030B	operation	804.0	112.75	114.04	DC	10.63
175314483	232004	MILF_230	230.0	DP&L	962380	AG1-087 TAP	230.0	DP&L	1	CKT 23032B	operation	550.0	160.08	160.72	DC	7.79
175563579	232005	VIENNA	230.0	DP&L	232000	STEELE	230.0	DP&L	1	DPL_P1_2_CKT 23034	operation	550.0	112.23	112.82	DC	7.36
168007024	232013	SILVER RUN	230.0	PJM	231004	RL_230	230.0	DP&L	1	PJM500_PS_P1-2_HOPE-SILVER	operation	678.0	125.73	126.23	DC	7.49
168007005	232100	CHURCH	138.0	DP&L	232107	TOWNSEND	138.0	DP&L	1	DPL_P1_2_AB 2-037 KEENEY	operation	348.0	140.67	141.13	DC	3.93
168007006	232100	CHURCH	138.0	DP&L	232107	TOWNSEND	138.0	DP&L	1	Base Case	operation	280.0	136.5	136.96	DC	2.88
168007113	232106	MIDLTNTP	138.0	DP&L	232104	MT PLSNT	138.0	DP&L	1	DPL_P1_2_AB 2-037 KEENEY	operation	348.0	123.62	124.07	DC	3.93
168007115	232106	MIDLTNTP	138.0	DP&L	232104	MT PLSNT	138.0	DP&L	1	Base Case	operation	273.0	118.15	118.62	DC	2.88
168006955	232107	TOWNSEND	138.0	DP&L	232106	MIDLTNTP	138.0	DP&L	1	Base Case	operation	273.0	150.6	151.08	DC	2.88
168007187	232114	SHARNGTN	138.0	DP&L	232112	FELTON	138.0	DP&L	1	DPL_P1_2_CKT 23031	operation	242.0	100.42	101.99	DC	3.82
168007184	232116	VIENN138	138.0	DP&L	232005	VIENNA	230.0	DP&L	1	Base Case	operation	460.0	118.34	118.98	DC	6.48
168007056	232117	VIENNA 8	138.0	DP&L	232116	VIENN138	138.0	DP&L	1	Base Case	operation	390.0	139.59	140.33	DC	6.48
168007010	232119	NELSON	138.0	DP&L	232121	INDRV2&3	138.0	DP&L	1	DPL_P1_2_230 85 & 13710	operation	193.0	155.87	156.7	DC	3.59
168006905	232234	TODD	69.0	DP&L	232233	PRESTON	69.0	DP&L	1	DPL_P1_2_230 85 & 13710	operation	93.0	157.94	159.09	DC	2.35
168006906	232234	TODD	69.0	DP&L	232233	PRESTON	69.0	DP&L	1	Base Case	operation	82.0	102.28	103.12	DC	1.52
168007096	232247	DUP-SFRD	69.0	DP&L	232824	PINE ST	69.0	DP&L	1	DPL_P1_2_230 85 & 13710	operation	136.0	103.82	110.12	DC	8.57
175133018	232249	LAUREL	69.0	DP&L	232247	DUP-SFRD	69.0	DP&L	1	DPL_P1_2_CKT 23002	operation	93.0	133.09	141.75	DC	8.05
168006922	232927	BENNETT_230	230.0	DP&L	232004	MILF_230	230.0	DP&L	2	DPL_P1_2_CKT 23034	operation	678.0	160.91	161.78	DC	13.56
168006924	232927	BENNETT_230	230.0	DP&L	232004	MILF_230	230.0	DP&L	2	Base Case	operation	550.0	107.45	109.05	DC	9.05
169766040	923960	AB2-037 TAP	230.0	DP&L	231003	KEEN_230	230.0	DP&L	2	DPL_P1_2_CKT 23001	operation	727.0	126.86	127.38	DC	8.58
175563208	962380	AG1-087 TAP	230.0	DP&L	232000	STEELE	230.0	DP&L	1	CKT 23032B	operation	550.0	196.24	196.88	DC	7.79

13.5 Flow Gate Details - Secondary POI

The following indices contain additional information about each facility presented in the body of the report. For each index, a description of the flowgate and its contingency was included for convenience. The intent of the indices is to provide more details on which projects/generators have contributions to the flowgate in question. All New Service Queue Requests, through the end of the Queue under study, that are contributors to a flowgate will be listed in the indices. Please note that there may be contributors that are subsequently queued after the queue under study that are not listed in the indices. Although this information is not used "as is" for cost allocation purposes, it can be used to gage the impact of other projects/generators. It should be noted the project/generator MW contributions presented in the body of the report are Full MW Impact contributions which are also noted in the indices column named "Full MW Impact", whereas the loading percentages reported in the body of the report, take into consideration the PJM Generator Deliverability Test rules such as commercial probability of each project as well as the ramping impact of "Adder" contributions. The MW Impact found and used in the analysis is shown in the indices column named "Gendeliv MW Impact".

13.5.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166827439	923950	AB2-036 TAP	DP&L	232100	CHURCH	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	99.75	100.12	DC	2.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.2275	50/50	0.2275
232405	W1-003 E	1.3386	50/50	1.3386
232406	W1-004 C	0.2275	50/50	0.2275
232407	W1-004 E	1.3386	50/50	1.3386
232408	W1-005 C	0.2275	50/50	0.2275
232409	W1-005 E	1.3386	50/50	1.3386
232410	W1-006 C	0.2275	50/50	0.2275
232411	W1-006 E	1.3386	50/50	1.3386
232412	X1-032 E	0.4400	50/50	0.4400
232417	X3-008 C	0.1430	50/50	0.1430
232418	X3-008 E	1.4789	50/50	1.4789
232426	Y1-080 FULL	0.0238	50/50	0.0238
232427	Y1-080 E	0.2472	50/50	0.2472
232428	Y3-058 C	0.0989	50/50	0.0989
232429	Y3-058 E	0.6707	50/50	0.6707
232433	Z2-076 E	0.1662	Adder	0.2
232435	Z2-077 E	0.1662	Adder	0.2
232851	DUP-SFR1	0.7289	Adder	0.86
232902	EASTMUNI	1.3537	50/50	1.3537
232907	VN8	3.0383	50/50	3.0383
232915	OH NUG4	0.6164	50/50	0.6164
232916	OH NUG5	0.6164	50/50	0.6164
232919	VN10	0.2129	50/50	0.2129
232922	MR3 (Deactivation : 01/06/2021)	4.7199	Adder	5.55
232926	CRISFLD1	0.1743	50/50	0.1743
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.1460	Adder	0.17
233923	AA1-102 C	0.9936	50/50	0.9936
233931	AB2-179 C	-4.1874	Adder	-4.93
917082	CHERRYDALE E	1.1363	Adder	1.34
918835	AA1-102 E	10.2756	50/50	10.2756
919831	AA2-069 (Suspended)	20.8696	Adder	24.55
923921	AB2-032 C	-1.7295	Adder	-2.03
923951	AB2-036 C	13.2868	50/50	13.2868
923952	AB2-036 E	21.7385	50/50	21.7385
924681	AB2-120 C	3.4768	Adder	4.09
924682	AB2-120 E	5.6726	Adder	6.67
924781	AB2-130 C O1	2.6653	Adder	3.14
924782	AB2-130 E O1	4.3487	Adder	5.12
924831	AB2-136 C	2.9368	50/50	2.9368
924832	AB2-136 E	3.1144	50/50	3.1144

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924971	AB2-153 C	-0.9665	Adder	-1.14
925151	AB2-172 C	2.2661	50/50	2.2661
925152	AB2-172 E	3.6974	50/50	3.6974
925261	AB2-180 C	1.5393	50/50	1.5393
925262	AB2-180 E	0.6597	50/50	0.6597
927031	AC1-190 C	4.1692	50/50	4.1692
927032	AC1-190 E	1.7868	50/50	1.7868
927191	AC1-213 C	0.2933	Adder	0.35
927192	AC1-213 E	0.1925	Adder	0.23
930201	AB1-056 C	5.1899	Adder	6.11
930202	AB1-056 E	14.7799	Adder	17.39
932161	AC2-023 C	2.9513	50/50	2.9513
932162	AC2-023 E	2.1494	50/50	2.1494
938651	AE1-087 C	1.9083	50/50	1.9083
938652	AE1-087 E	0.4771	50/50	0.4771
938895	AE1-117 C	3.8960	Adder	4.58
938896	AE1-117 E	10.3893	Adder	12.22
939151	AE1-145	1.8295	Adder	2.15
941021	AE2-093 C	2.7835	50/50	2.7835
941022	AE2-093 E	4.5416	50/50	4.5416
942441	AE2-257 C	2.6726	Adder	3.14
942442	AE2-257 E	7.0460	Adder	8.29
943361	AF1-007 C	0.1531	Adder	0.18
943362	AF1-007 E	0.4352	Adder	0.51
943441	AF1-015 C	1.0488	50/50	1.0488
943442	AF1-015 E	1.4484	50/50	1.4484
945661	AF1-231 C	0.6968	Adder	0.82
945662	AF1-231 E	1.0452	Adder	1.23
945791	AF1-244	0.8839	50/50	0.8839
945931	AF1-258	0.3518	50/50	0.3518
945941	AF1-259	-0.0596	Adder	-0.07
957611	AF2-055 C	3.2073	Adder	3.77
957612	AF2-055 E	1.3746	Adder	1.62
957661	AF2-060	0.8233	Adder	0.97
957671	AF2-061 O1	3.6591	Adder	4.3
959021	AF2-193 C	9.5900	Adder	11.28
959022	AF2-193 E	25.8689	Adder	30.43
959031	AF2-194 C	9.5900	Adder	11.28
959032	AF2-194 E	25.8689	Adder	30.43
959051	AF2-196 C	0.7289	Adder	0.86
959052	AF2-196 E	1.7007	Adder	2.0
959161	AF2-207 C O1	1.8094	Adder	2.13
959162	AF2-207 E O1	2.7141	Adder	3.19
959571	AF2-248 C	0.3076	Adder	0.36
959572	AF2-248 E	0.3437	Adder	0.4
959581	AF2-249 C	0.0543	Adder	0.06
959582	AF2-249 E	0.2171	Adder	0.26
959591	AF2-250 C	0.0995	Adder	0.12
959592	AF2-250 E	0.0769	Adder	0.09
960341	AF2-325 C	0.4986	50/50	0.4986
960342	AF2-325 E	0.6886	50/50	0.6886
960671	AF2-358 C O1	7.0548	50/50	7.0548

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960672	AF2-358 E O1	4.7032	50/50	4.7032
960871	AF2-378 C	0.1316	50/50	0.1316
960872	AF2-378 E	0.1826	50/50	0.1826
960881	AF2-379 C	0.1812	50/50	0.1812
960882	AF2-379 E	0.2497	50/50	0.2497
960941	AF2-385 C	4.2901	Adder	5.05
960942	AF2-385 E	2.4412	Adder	2.87
960961	AF2-387 C O1	8.5408	50/50	8.5408
960962	AF2-387 E O1	4.2832	50/50	4.2832
961181	AF2-409 O1	12.5870	50/50	12.5870
962161	AG1-061 C O2	7.6565	50/50	7.6565
962162	AG1-061 E O2	5.1043	50/50	5.1043
962261	AG1-072	6.4120	50/50	6.4120
962381	AG1-087 C O2	5.1117	Adder	11.35
962382	AG1-087 E O2	13.7886	Adder	30.61
963001	AG1-149	0.3315	50/50	0.3315
963011	AG1-150	1.9393	Adder	4.3
964551	AG1-318 C	0.0129	Adder	0.03
964552	AG1-318 E	0.0302	Adder	0.07
964962	AG1-360 E	0.9624	50/50	0.9624
965321	AG1-397 C	0.1980	Adder	0.44
965322	AG1-397 E	0.2731	Adder	0.61
965611	AG1-429 C O2	1.7125	Adder	3.8
965612	AG1-429 E O2	1.1414	Adder	2.53
965821	AG1-450	2.9428	50/50	2.9428
965921	AG1-461 C O2	0.8471	Adder	1.88
965922	AG1-461 E O2	0.4561	Adder	1.01
966281	AG1-497 C O2	2.0601	Adder	4.57
966282	AG1-497 E O2	0.8829	Adder	1.96
966601	AG1-529 C	1.6685	Adder	3.7
966602	AG1-529 E	0.8906	Adder	1.98
CALDERWOOD	CALDERWOOD	0.0403	Confirmed LTF	0.0403
NY	NY	0.0249	Confirmed LTF	0.0249
PRAIRIE	PRAIRIE	0.2092	Confirmed LTF	0.2092
O-066	O-066	0.1817	Confirmed LTF	0.1817
CHEOAH	CHEOAH	0.0405	Confirmed LTF	0.0405
COTTONWOOD	COTTONWOOD	0.1701	Confirmed LTF	0.1701
G-007	G-007	0.0137	Confirmed LTF	0.0137
HAMLET	HAMLET	0.0474	Confirmed LTF	0.0474
GIBSON	GIBSON	0.0437	Confirmed LTF	0.0437
BLUEG	BLUEG	0.1389	Confirmed LTF	0.1389
TRIMBLE	TRIMBLE	0.0445	Confirmed LTF	0.0445
CATAWBA	CATAWBA	0.0287	Confirmed LTF	0.0287

13.5.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313377	232000	STEELE	DP&L	923960	AB2-037 TAP	DP&L	2	DPL_P4-2_DP8	breaker	727.0	113.21	113.73	DC	8.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.6446	50/50	0.6446
232405	W1-003 E	3.7922	50/50	3.7922
232406	W1-004 C	0.6446	50/50	0.6446
232407	W1-004 E	3.7922	50/50	3.7922
232408	W1-005 C	0.6446	50/50	0.6446
232409	W1-005 E	3.7922	50/50	3.7922
232410	W1-006 C	0.6446	50/50	0.6446
232411	W1-006 E	3.7922	50/50	3.7922
232412	X1-032 E	1.2425	50/50	1.2425
232417	X3-008 C	0.4049	50/50	0.4049
232418	X3-008 E	4.1875	50/50	4.1875
232423	X3-066 E	0.7039	Adder	0.83
232424	Y1-079 C	0.1955	50/50	0.1955
232425	Y1-079 E	2.0223	50/50	2.0223
232426	Y1-080 FULL	0.0671	50/50	0.0671
232427	Y1-080 E	0.6980	50/50	0.6980
232428	Y3-058 C	0.2815	50/50	0.2815
232429	Y3-058 E	1.9095	50/50	1.9095
232433	Z2-076 E	0.4814	Adder	0.57
232435	Z2-077 E	0.4814	Adder	0.57
232851	DUP-SFR1	2.3176	Adder	2.73
232902	EASTMUNI	3.8654	50/50	3.8654
232907	VN8	8.3860	50/50	8.3860
232915	OH NUG4	1.7464	50/50	1.7464
232916	OH NUG5	1.7464	50/50	1.7464
232919	VN10	0.6007	50/50	0.6007
232922	MR3 (Deactivation : 01/06/2021)	13.6301	Adder	16.04
232926	CRISFLD1	0.4919	50/50	0.4919
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.4243	Adder	0.5
233916	AB1-141 E	1.4376	Adder	1.69
233919	AB1-142 E	1.4376	Adder	1.69
233923	AA1-102 C	2.8040	50/50	2.8040
233931	AB2-179 C	4.3272	Adder	5.09
293670	O-025 C	0.2914	50/50	0.2914
917082	CHERRYDALE E	3.2200	Adder	3.79
918835	AA1-102 E	28.9974	50/50	28.9974
919831	AA2-069 (Suspended)	60.2665	Adder	70.9
923921	AB2-032 C	3.1034	Adder	3.65
923922	AB2-032 E	1.4604	Adder	1.72
923951	AB2-036 C	11.7746	50/50	11.7746

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923952	AB2-036 E	19.2644	50/50	19.2644
924681	AB2-120 C	9.8534	Adder	11.59
924682	AB2-120 E	16.0767	Adder	18.91
924781	AB2-130 C O1	7.9757	Adder	9.38
924782	AB2-130 E O1	13.0129	Adder	15.31
924801	AB2-133 C O1	5.1135	Adder	6.02
924802	AB2-133 E O1	6.4855	Adder	7.63
924821	AB2-135 C	5.9789	Adder	7.03
924822	AB2-135 E	6.8187	Adder	8.02
924831	AB2-136 C	8.3033	50/50	8.3033
924832	AB2-136 E	8.8055	50/50	8.8055
924971	AB2-153 C	1.7343	Adder	2.04
924972	AB2-153 E	2.8296	Adder	3.33
925151	AB2-172 C	6.4163	50/50	6.4163
925152	AB2-172 E	10.4687	50/50	10.4687
925254	AB2-179 E	1.4120	Adder	1.66
925261	AB2-180 C	4.3826	50/50	4.3826
925262	AB2-180 E	1.8782	50/50	1.8782
925271	AB2-185 C	4.5664	50/50	4.5664
925272	AB2-185 E	1.9570	50/50	1.9570
926131	AC1-091 C	0.8017	Adder	0.94
926132	AC1-091 E	1.3147	Adder	1.55
926141	AC1-092 C	0.8017	Adder	0.94
926142	AC1-092 E	1.3147	Adder	1.55
926151	AC1-093 C	0.7589	Adder	0.89
926152	AC1-093 E	1.2506	Adder	1.47
926161	AC1-094 C	0.6413	Adder	0.75
926162	AC1-094 E	1.0582	Adder	1.24
927031	AC1-190 C	11.8017	50/50	11.8017
927032	AC1-190 E	5.0579	50/50	5.0579
927191	AC1-213 C	0.9852	50/50	0.9852
927192	AC1-213 E	0.6465	50/50	0.6465
930201	AB1-056 C	14.9955	Adder	17.64
930202	AB1-056 E	42.7045	Adder	50.24
931261	AB1-176 C	0.3640	Adder	0.43
931262	AB1-176 E	0.6003	Adder	0.71
932161	AC2-023 C	8.3870	50/50	8.3870
932162	AC2-023 E	6.1083	50/50	6.1083
933631	AC2-185 C	1.6247	Adder	1.91
933632	AC2-185 E	2.6508	Adder	3.12
933641	AC2-186 C	3.7806	Adder	4.45
933642	AC2-186 E	6.1683	Adder	7.26
936611	AD2-076 C O1	4.4808	Adder	5.27
936612	AD2-076 E O1	7.3107	Adder	8.6
938651	AE1-087 C	5.4032	50/50	5.4032
938652	AE1-087 E	1.3508	50/50	1.3508
938895	AE1-117 C	11.3167	Adder	13.31
938896	AE1-117 E	30.1779	Adder	35.5
939151	AE1-145	5.1860	Adder	6.1
941021	AE2-093 C	6.2235	50/50	6.2235
941022	AE2-093 E	10.1542	50/50	10.1542
941181	AE2-112 C	1.5546	Adder	1.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941182	AE2-112 E	2.5364	Adder	2.98
942441	AE2-257 C	7.7617	Adder	9.13
942442	AE2-257 E	20.4627	Adder	24.07
943361	AF1-007 C	0.4424	Adder	0.52
943362	AF1-007 E	1.2574	Adder	1.48
943441	AF1-015 C	2.3450	50/50	2.3450
943442	AF1-015 E	3.2383	50/50	3.2383
943651	AF1-036 C	2.0214	Adder	2.38
943652	AF1-036 E	2.7915	Adder	3.28
945661	AF1-231 C	1.9741	Adder	2.32
945662	AF1-231 E	2.9612	Adder	3.48
945791	AF1-244	2.4944	50/50	2.4944
945931	AF1-258	1.0017	50/50	1.0017
945941	AF1-259	0.1929	Adder	0.23
957611	AF2-055 C	9.0886	Adder	10.69
957612	AF2-055 E	3.8951	Adder	4.58
957661	AF2-060	2.3337	Adder	2.75
957671	AF2-061 O1	10.3720	Adder	12.2
959021	AF2-193 C	27.7090	Adder	32.6
959022	AF2-193 E	74.7445	Adder	87.93
959031	AF2-194 C	27.7090	Adder	32.6
959032	AF2-194 E	74.7445	Adder	87.93
959051	AF2-196 C	2.1168	Adder	2.49
959052	AF2-196 E	4.9393	Adder	5.81
959161	AF2-207 C O1	5.2237	Adder	6.15
959162	AF2-207 E O1	7.8356	Adder	9.22
959571	AF2-248 C	1.0403	50/50	1.0403
959572	AF2-248 E	1.1626	50/50	1.1626
959581	AF2-249 C	0.1836	50/50	0.1836
959582	AF2-249 E	0.7343	50/50	0.7343
959591	AF2-250 C	0.3366	50/50	0.3366
959592	AF2-250 E	0.2601	50/50	0.2601
960221	AF2-313 C	3.0617	Adder	3.6
960222	AF2-313 E	1.7358	Adder	2.04
960341	AF2-325 C	1.4106	50/50	1.4106
960342	AF2-325 E	1.9479	50/50	1.9479
960671	AF2-358 C O1	19.9158	50/50	19.9158
960672	AF2-358 E O1	13.2772	50/50	13.2772
960871	AF2-378 C	0.3722	50/50	0.3722
960872	AF2-378 E	0.5163	50/50	0.5163
960881	AF2-379 C	0.5126	50/50	0.5126
960882	AF2-379 E	0.7064	50/50	0.7064
960941	AF2-385 C	12.3856	Adder	14.57
960942	AF2-385 E	7.0479	Adder	8.29
960961	AF2-387 C O1	24.0326	50/50	24.0326
960962	AF2-387 E O1	12.0524	50/50	12.0524
961181	AF2-409 O1	34.7410	50/50	34.7410
962161	AG1-061 C O2	21.4414	50/50	21.4414
962162	AG1-061 E O2	14.2943	50/50	14.2943
962261	AG1-072	18.0425	50/50	18.0425
962302	AG1-079 E	0.1495	Adder	0.33
962381	AG1-087 C O2	14.5260	Adder	32.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962382	AG1-087 E O2	39.1837	Adder	86.98
963001	AG1-149	0.9354	50/50	0.9354
963011	AG1-150	5.4972	Adder	12.2
964551	AG1-318 C	0.0376	Adder	0.08
964552	AG1-318 E	0.0877	Adder	0.19
964962	AG1-360 E	2.7180	50/50	2.7180
965321	AG1-397 C	0.5674	Adder	1.26
965322	AG1-397 E	0.7828	Adder	1.74
965611	AG1-429 C O2	4.8528	Adder	10.77
965612	AG1-429 E O2	3.2343	Adder	7.18
965821	AG1-450	8.3095	50/50	8.3095
965921	AG1-461 C O2	2.5181	Adder	5.59
965922	AG1-461 E O2	1.3559	Adder	3.01
965951	AG1-464 C O2	2.1092	Adder	4.68
965952	AG1-464 E O2	3.1637	Adder	7.02
966281	AG1-497 C O2	5.9491	Adder	13.21
966282	AG1-497 E O2	2.5496	Adder	5.66
966601	AG1-529 C	5.4292	Adder	12.05
966602	AG1-529 E	2.8978	Adder	6.43
CALDERWOOD	CALDERWOOD	0.1411	Confirmed LTF	0.1411
NY	NY	0.0868	Confirmed LTF	0.0868
PRAIRIE	PRAIRIE	0.7310	Confirmed LTF	0.7310
O-066	O-066	0.6663	Confirmed LTF	0.6663
CHEOAH	CHEOAH	0.1421	Confirmed LTF	0.1421
COTTONWOOD	COTTONWOOD	0.5964	Confirmed LTF	0.5964
G-007	G-007	0.0662	Confirmed LTF	0.0662
HAMLET	HAMLET	0.1657	Confirmed LTF	0.1657
GIBSON	GIBSON	0.1545	Confirmed LTF	0.1545
BLUEG	BLUEG	0.4913	Confirmed LTF	0.4913
TRIMBLE	TRIMBLE	0.1575	Confirmed LTF	0.1575
CATAWBA	CATAWBA	0.1001	Confirmed LTF	0.1001

13.5.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313134	232002	CEDAR CK	DP&L	232013	SILVER RUN	PJM	1	DPL_P4-2_DP11	breaker	678.0	189.67	190.49	DC	13.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	4.8281	Adder	5.68
232407	W1-004 E	4.8281	Adder	5.68
232409	W1-005 E	4.8281	Adder	5.68
232411	W1-006 E	4.8281	Adder	5.68
232412	X1-032 E	1.5510	Adder	1.82
232418	X3-008 E	3.4854	Adder	4.1
232427	Y1-080 E	0.7017	Adder	0.83
232429	Y3-058 E	2.2908	Adder	2.7
232433	Z2-076 E	0.8018	Adder	0.94
232435	Z2-077 E	0.8018	Adder	0.94
232813	VAUGHN	0.2312	50/50	0.2312
232851	DUP-SFR1	4.7957	50/50	4.7957
232899	W1-062	5.2566	50/50	5.2566
232900	DEMECSMY	5.1493	50/50	5.1493
232904	IR4	30.7503	50/50	30.7503
232910	NRG_G1	3.3290	50/50	3.3290
232911	NRG_G2	3.3290	50/50	3.3290
232922	MR3 (Deactivation : 01/06/2021)	20.9944	Adder	24.7
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.7230	Adder	0.85
917082	CHERRYDALE E	4.8290	Adder	5.68
918835	AA1-102 E	36.0247	Adder	42.38
919831	AA2-069 (Suspended)	92.8282	Adder	109.21
924681	AB2-120 C	14.8060	Adder	17.42
924682	AB2-120 E	24.1572	Adder	28.42
924781	AB2-130 C O1	12.6968	Adder	14.94
924782	AB2-130 E O1	20.7159	Adder	24.37
924821	AB2-135 C	5.5247	Adder	6.5
924822	AB2-135 E	6.3008	Adder	7.41
924831	AB2-136 C	7.6856	Adder	9.04
924832	AB2-136 E	8.1504	Adder	9.59
925151	AB2-172 C	5.3405	Adder	6.28
925152	AB2-172 E	8.7134	Adder	10.25
925261	AB2-180 C	5.2577	Adder	6.19
925262	AB2-180 E	2.2533	Adder	2.65
926131	AC1-091 C	5.7900	50/50	5.7900
926132	AC1-091 E	9.4956	50/50	9.4956
926141	AC1-092 C	5.7900	50/50	5.7900
926142	AC1-092 E	9.4956	50/50	9.4956
926151	AC1-093 C	5.4812	50/50	5.4812
926152	AC1-093 E	9.0324	50/50	9.0324

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926161	AC1-094 C	4.6320	50/50	4.6320
926162	AC1-094 E	7.6428	50/50	7.6428
927031	AC1-190 C	10.0171	Adder	11.78
927032	AC1-190 E	4.2931	Adder	5.05
927191	AC1-213 C	1.2251	Adder	1.44
927192	AC1-213 E	0.8040	Adder	0.95
930201	AB1-056 C	30.4734	50/50	30.4734
930202	AB1-056 E	86.7830	50/50	86.7830
932161	AC2-023 C	9.8236	Adder	11.56
932162	AC2-023 E	7.1545	Adder	8.42
933631	AC2-185 C	11.7344	50/50	11.7344
933632	AC2-185 E	19.1456	50/50	19.1456
933641	AC2-186 C	9.5625	50/50	9.5625
933642	AC2-186 E	15.6020	50/50	15.6020
938651	AE1-087 C	4.4972	Adder	5.29
938652	AE1-087 E	1.1243	Adder	1.32
938895	AE1-117 C	19.2747	Adder	22.68
938896	AE1-117 E	51.3993	Adder	60.47
939151	AE1-145	7.7909	Adder	9.17
942441	AE2-257 C	13.2564	Adder	15.6
942442	AE2-257 E	34.9488	Adder	41.12
943361	AF1-007 C	0.8991	50/50	0.8991
943362	AF1-007 E	2.5552	50/50	2.5552
945661	AF1-231 C	2.9598	Adder	3.48
945662	AF1-231 E	4.4397	Adder	5.22
945791	AF1-244	3.0989	Adder	3.65
945931	AF1-258	1.2018	Adder	1.41
957611	AF2-055 C	13.6303	Adder	16.04
957612	AF2-055 E	5.8415	Adder	6.87
957661	AF2-060	3.5059	Adder	4.12
957671	AF2-061 O1	15.5819	Adder	18.33
959021	AF2-193 C	56.3096	50/50	56.3096
959022	AF2-193 E	151.8940	50/50	151.8940
959031	AF2-194 C	56.3096	50/50	56.3096
959032	AF2-194 E	151.8940	50/50	151.8940
959051	AF2-196 C	3.6154	Adder	4.25
959052	AF2-196 E	8.4359	Adder	9.92
959161	AF2-207 C O1	7.8089	Adder	9.19
959162	AF2-207 E O1	11.7133	Adder	13.78
959571	AF2-248 C	1.3113	Adder	1.54
959572	AF2-248 E	1.4656	Adder	1.72
959581	AF2-249 C	0.2314	Adder	0.27
959582	AF2-249 E	0.9256	Adder	1.09
959591	AF2-250 C	0.4242	Adder	0.5
959592	AF2-250 E	0.3278	Adder	0.39
960341	AF2-325 C	1.2583	Adder	1.48
960342	AF2-325 E	1.7376	Adder	2.04
960671	AF2-358 C O1	20.3199	Adder	23.91
960672	AF2-358 E O1	13.5466	Adder	15.94
960871	AF2-378 C	0.3387	Adder	0.4
960872	AF2-378 E	0.4699	Adder	0.55
960881	AF2-379 C	0.6317	Adder	0.74

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960882	AF2-379 E	0.8706	Adder	1.02
960941	AF2-385 C	18.5151	Adder	21.78
960942	AF2-385 E	10.5358	Adder	12.4
961181	AF2-409 O1	37.7086	Adder	44.36
962161	AG1-061 C O2	13.3349	Adder	29.6
962162	AG1-061 E O2	8.8899	Adder	19.73
962302	AG1-079 E	0.2362	Adder	0.52
962381	AG1-087 C O2	56.8606	50/50	56.8606
962382	AG1-087 E O2	153.3802	50/50	153.3802
963001	AG1-149	0.6159	Adder	1.37
963011	AG1-150	8.2584	Adder	18.33
964551	AG1-318 C	0.0638	Adder	0.14
964552	AG1-318 E	0.1489	Adder	0.33
964962	AG1-360 E	1.7982	Adder	3.99
965321	AG1-397 C	0.8601	Adder	1.91
965322	AG1-397 E	1.1865	Adder	2.63
965611	AG1-429 C O2	7.2777	Adder	16.15
965612	AG1-429 E O2	4.8504	Adder	10.77
965821	AG1-450	4.4276	Adder	9.83
965921	AG1-461 C O2	4.0833	Adder	9.06
965922	AG1-461 E O2	2.1987	Adder	4.88
965951	AG1-464 C O2	10.0658	50/50	10.0658
965952	AG1-464 E O2	15.0987	50/50	15.0987
966281	AG1-497 C O2	9.1634	Adder	20.34
966282	AG1-497 E O2	3.9272	Adder	8.72
966601	AG1-529 C	24.5639	50/50	24.5639
966602	AG1-529 E	13.1108	50/50	13.1108
CALDERWOOD	CALDERWOOD	0.1889	Confirmed LTF	0.1889
NY	NY	0.2323	Confirmed LTF	0.2323
PRAIRIE	PRAIRIE	0.9815	Confirmed LTF	0.9815
O-066	O-066	2.9545	Confirmed LTF	2.9545
SIGE	SIGE	0.0061	Confirmed LTF	0.0061
CHEOAH	CHEOAH	0.1902	Confirmed LTF	0.1902
COTTONWOOD	COTTONWOOD	0.7980	Confirmed LTF	0.7980
G-007	G-007	0.4746	Confirmed LTF	0.4746
HAMLET	HAMLET	0.2189	Confirmed LTF	0.2189
GIBSON	GIBSON	0.2080	Confirmed LTF	0.2080
BLUEG	BLUEG	0.6614	Confirmed LTF	0.6614
TRIMBLE	TRIMBLE	0.2120	Confirmed LTF	0.2120
CATAWBA	CATAWBA	0.1326	Confirmed LTF	0.1326

13.5.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174103603	232003	CARTANZA	DP&L	232013	SILVER RUN	PJM	1	DPL_P4-2_DP11	breaker	790.0	179.59	180.2	DC	10.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	3.8858	Adder	4.57
232407	W1-004 E	3.8858	Adder	4.57
232409	W1-005 E	3.8858	Adder	4.57
232411	W1-006 E	3.8858	Adder	4.57
232412	X1-032 E	1.2458	Adder	1.47
232418	X3-008 E	2.6772	Adder	3.15
232427	Y1-080 E	0.5463	Adder	0.64
232429	Y3-058 E	1.8078	Adder	2.13
232432	Z2-076 C	0.2379	50/50	0.2379
232433	Z2-076 E	0.7595	50/50	0.7595
232434	Z2-077 C	0.2379	50/50	0.2379
232435	Z2-077 E	0.7595	50/50	0.7595
232616	GEN FOOD	1.6351	50/50	1.6351
232851	DUP-SFR1	2.8996	Adder	3.41
232901	NORTHST	4.9482	50/50	4.9482
232904	IR4	25.2130	50/50	25.2130
232920	IR10	0.9712	50/50	0.9712
232922	MR3 (Deactivation : 01/06/2021)	69.5456	50/50	69.5456
233911	AB1-137 C (Withdrawn : 12/07/2020)	0.2528	50/50	0.2528
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.6868	50/50	0.6868
233920	W3-032A-CTG1	20.7611	50/50	20.7611
233921	W3-032A-STG1	12.4997	50/50	12.4997
917082	CHERRYDALE E	3.8868	Adder	4.57
918835	AA1-102 E	28.9197	Adder	34.02
919831	AA2-069 (Suspended)	307.5008	50/50	307.5008
924681	AB2-120 C	14.0243	50/50	14.0243
924682	AB2-120 E	22.8817	50/50	22.8817
924781	AB2-130 C O1	9.5552	Adder	11.24
924782	AB2-130 E O1	15.5900	Adder	18.34
924831	AB2-136 C	5.9500	Adder	7.0
924832	AB2-136 E	6.3099	Adder	7.42
925151	AB2-172 C	4.1021	Adder	4.83
925152	AB2-172 E	6.6929	Adder	7.87
925261	AB2-180 C	4.1489	Adder	4.88
925262	AB2-180 E	1.7781	Adder	2.09
927031	AC1-190 C	7.7058	Adder	9.07
927032	AC1-190 E	3.3025	Adder	3.89
927191	AC1-213 C	0.9694	Adder	1.14
927192	AC1-213 E	0.6362	Adder	0.75

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930201	AB1-056 C	24.9859	50/50	24.9859
930202	AB1-056 E	71.1555	50/50	71.1555
932161	AC2-023 C	7.7373	Adder	9.1
932162	AC2-023 E	5.6351	Adder	6.63
933641	AC2-186 C	4.6588	Adder	5.48
933642	AC2-186 E	7.6012	Adder	8.94
938651	AE1-087 C	3.4544	Adder	4.06
938652	AE1-087 E	0.8636	Adder	1.02
938895	AE1-117 C	18.3134	50/50	18.3134
938896	AE1-117 E	48.8358	50/50	48.8358
939151	AE1-145	6.2713	Adder	7.38
942441	AE2-257 C	12.6139	50/50	12.6139
942442	AE2-257 E	33.2549	50/50	33.2549
943361	AF1-007 C	0.7372	50/50	0.7372
943362	AF1-007 E	2.0951	50/50	2.0951
945661	AF1-231 C	2.3824	Adder	2.8
945662	AF1-231 E	3.5736	Adder	4.2
945791	AF1-244	2.4877	Adder	2.93
945931	AF1-258	0.9483	Adder	1.12
957611	AF2-055 C	10.9709	Adder	12.91
957612	AF2-055 E	4.7018	Adder	5.53
957661	AF2-060	2.8221	Adder	3.32
957671	AF2-061 O1	12.5426	Adder	14.76
959021	AF2-193 C	46.1696	50/50	46.1696
959022	AF2-193 E	124.5416	50/50	124.5416
959031	AF2-194 C	46.1696	50/50	46.1696
959032	AF2-194 E	124.5416	50/50	124.5416
959051	AF2-196 C	3.4402	50/50	3.4402
959052	AF2-196 E	8.0270	50/50	8.0270
959161	AF2-207 C O1	6.0857	Adder	7.16
959162	AF2-207 E O1	9.1285	Adder	10.74
959571	AF2-248 C	1.0277	Adder	1.21
959572	AF2-248 E	1.1486	Adder	1.35
959581	AF2-249 C	0.1814	Adder	0.21
959582	AF2-249 E	0.7254	Adder	0.85
959591	AF2-250 C	0.3325	Adder	0.39
959592	AF2-250 E	0.2569	Adder	0.3
960341	AF2-325 C	0.9716	Adder	1.14
960342	AF2-325 E	1.3417	Adder	1.58
960671	AF2-358 C O1	15.8335	Adder	18.63
960672	AF2-358 E O1	10.5556	Adder	12.42
960871	AF2-378 C	0.2619	Adder	0.31
960872	AF2-378 E	0.3634	Adder	0.43
960881	AF2-379 C	0.5044	Adder	0.59
960882	AF2-379 E	0.6950	Adder	0.82
960941	AF2-385 C	14.4293	Adder	16.98
960942	AF2-385 E	8.2108	Adder	9.66
961181	AF2-409 O1	29.9353	Adder	35.22
962161	AG1-061 C O2	10.5991	Adder	23.53
962162	AG1-061 E O2	7.0661	Adder	15.69
962302	AG1-079 E	0.0935	Adder	0.21
962381	AG1-087 C O2	48.3235	50/50	48.3235

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962382	AG1-087 E O2	130.3517	50/50	130.3517
963001	AG1-149	0.4944	Adder	1.1
963011	AG1-150	14.7560	50/50	14.7560
964551	AG1-318 C	0.1143	50/50	0.1143
964552	AG1-318 E	0.2667	50/50	0.2667
964962	AG1-360 E	1.4443	Adder	3.21
965321	AG1-397 C	0.6840	Adder	1.52
965322	AG1-397 E	0.9436	Adder	2.09
965611	AG1-429 C O2	5.8578	Adder	13.0
965612	AG1-429 E O2	3.9041	Adder	8.67
965821	AG1-450	3.4468	Adder	7.65
965921	AG1-461 C O2	3.1319	Adder	6.95
965922	AG1-461 E O2	1.6864	Adder	3.74
965951	AG1-464 C O2	2.5991	Adder	5.77
965952	AG1-464 E O2	3.8987	Adder	8.65
966281	AG1-497 C O2	57.2729	50/50	57.2729
966282	AG1-497 E O2	24.5455	50/50	24.5455
966601	AG1-529 C	7.8431	Adder	17.41
966602	AG1-529 E	4.1862	Adder	9.29
CALDERWOOD	CALDERWOOD	0.1864	Confirmed LTF	0.1864
NY	NY	0.2190	Confirmed LTF	0.2190
PRAIRIE	PRAIRIE	0.9686	Confirmed LTF	0.9686
O-066	O-066	2.7324	Confirmed LTF	2.7324
SIGE	SIGE	0.0033	Confirmed LTF	0.0033
CHEOAH	CHEOAH	0.1877	Confirmed LTF	0.1877
COTTONWOOD	COTTONWOOD	0.7875	Confirmed LTF	0.7875
G-007	G-007	0.4336	Confirmed LTF	0.4336
HAMLET	HAMLET	0.2160	Confirmed LTF	0.2160
GIBSON	GIBSON	0.2047	Confirmed LTF	0.2047
BLUEG	BLUEG	0.6510	Confirmed LTF	0.6510
TRIMBLE	TRIMBLE	0.2087	Confirmed LTF	0.2087
CATAWBA	CATAWBA	0.1312	Confirmed LTF	0.1312

13.5.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313361	232005	VIENNA	DP&L	232000	STEELE	DP&L	1	DPL_P4-2_DPIR235	breaker	550.0	119.38	120.01	DC	7.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	1.0628	50/50	1.0628
232405	W1-003 E	6.2523	50/50	6.2523
232406	W1-004 C	1.0628	50/50	1.0628
232407	W1-004 E	6.2523	50/50	6.2523
232408	W1-005 C	1.0628	50/50	1.0628
232409	W1-005 E	6.2523	50/50	6.2523
232410	W1-006 C	1.0628	50/50	1.0628
232411	W1-006 E	6.2523	50/50	6.2523
232412	X1-032 E	2.0394	50/50	2.0394
232418	X3-008 E	3.4342	Adder	4.04
232427	Y1-080 E	0.7332	Adder	0.86
232429	Y3-058 E	2.1745	Adder	2.56
232433	Z2-076 E	0.3745	Adder	0.44
232435	Z2-077 E	0.3745	Adder	0.44
232851	DUP-SFR1	1.8333	Adder	2.16
232907	VN8	13.9753	50/50	13.9753
232912	OH NUG1	2.8805	50/50	2.8805
232914	OH NUG3	2.8805	50/50	2.8805
232915	OH NUG4	2.8805	50/50	2.8805
232916	OH NUG5	2.8805	50/50	2.8805
232917	OH NUG6	2.8677	50/50	2.8677
232926	CRISFLD1	0.8065	50/50	0.8065
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2839	Adder	0.33
233923	AA1-102 C	4.5971	50/50	4.5971
917082	CHERRYDALE E	5.3058	Adder	6.24
918835	AA1-102 E	47.5416	50/50	47.5416
924681	AB2-120 C	16.2650	Adder	19.14
924682	AB2-120 E	26.5376	Adder	31.22
924781	AB2-130 C O1	7.8851	Adder	9.28
924782	AB2-130 E O1	12.8651	Adder	15.14
924831	AB2-136 C	7.8407	Adder	9.22
924832	AB2-136 E	8.3149	Adder	9.78
925151	AB2-172 C	5.2622	Adder	6.19
925152	AB2-172 E	8.5856	Adder	10.1
925261	AB2-180 C	4.9907	Adder	5.87
925262	AB2-180 E	2.1389	Adder	2.52
927031	AC1-190 C	9.9371	Adder	11.69
927032	AC1-190 E	4.2588	Adder	5.01
927191	AC1-213 C	1.1266	Adder	1.33
927192	AC1-213 E	0.7393	Adder	0.87
930201	AB1-056 C	8.6221	Adder	10.14

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	24.5542	Adder	28.89
932161	AC2-023 C	9.5242	Adder	11.2
932162	AC2-023 E	6.9365	Adder	8.16
938651	AE1-087 C	4.4313	Adder	5.21
938652	AE1-087 E	1.1078	Adder	1.3
938895	AE1-117 C	7.5876	Adder	8.93
938896	AE1-117 E	20.2335	Adder	23.8
939151	AE1-145	8.5383	Adder	10.05
942441	AE2-257 C	5.0706	Adder	5.97
942442	AE2-257 E	13.3679	Adder	15.73
943361	AF1-007 C	0.2544	Adder	0.3
943362	AF1-007 E	0.7230	Adder	0.85
945661	AF1-231 C	3.2560	Adder	3.83
945662	AF1-231 E	4.8840	Adder	5.75
945791	AF1-244	4.0896	50/50	4.0896
945931	AF1-258	1.1407	Adder	1.34
957611	AF2-055 C	14.9762	Adder	17.62
957612	AF2-055 E	6.4184	Adder	7.55
957661	AF2-060	3.8422	Adder	4.52
957671	AF2-061 O1	17.0765	Adder	20.09
959021	AF2-193 C	15.9321	Adder	18.74
959022	AF2-193 E	42.9766	Adder	50.56
959031	AF2-194 C	15.9321	Adder	18.74
959032	AF2-194 E	42.9766	Adder	50.56
959051	AF2-196 C	1.3829	Adder	1.63
959052	AF2-196 E	3.2267	Adder	3.8
959161	AF2-207 C O1	6.3909	Adder	7.52
959162	AF2-207 E O1	9.5863	Adder	11.28
959571	AF2-248 C	1.1220	Adder	1.32
959572	AF2-248 E	1.2540	Adder	1.48
959581	AF2-249 C	0.1980	Adder	0.23
959582	AF2-249 E	0.7920	Adder	0.93
959591	AF2-250 C	0.3630	Adder	0.43
959592	AF2-250 E	0.2805	Adder	0.33
960341	AF2-325 C	1.2689	Adder	1.49
960342	AF2-325 E	1.7523	Adder	2.06
960671	AF2-358 C O1	21.3170	Adder	25.08
960672	AF2-358 E O1	14.2113	Adder	16.72
960871	AF2-378 C	0.3438	Adder	0.4
960872	AF2-378 E	0.4769	Adder	0.56
960881	AF2-379 C	0.6719	Adder	0.79
960882	AF2-379 E	0.9259	Adder	1.09
960941	AF2-385 C	15.1530	Adder	17.83
960942	AF2-385 E	8.6226	Adder	10.14
961181	AF2-409 O1	57.8960	50/50	57.8960
962161	AG1-061 C O2	13.8401	Adder	30.72
962162	AG1-061 E O2	9.2267	Adder	20.48
963001	AG1-149	1.5336	50/50	1.5336
963011	AG1-150	9.0505	Adder	20.09
964551	AG1-318 C	0.0258	Adder	0.06
964552	AG1-318 E	0.0601	Adder	0.13
964962	AG1-360 E	4.4611	50/50	4.4611

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965321	AG1-397 C	0.6795	Adder	1.51
965322	AG1-397 E	0.9373	Adder	2.08
965611	AG1-429 C O2	7.9963	Adder	17.75
965612	AG1-429 E O2	5.3294	Adder	11.83
965821	AG1-450	4.6263	Adder	10.27
965921	AG1-461 C O2	2.2590	Adder	5.01
965922	AG1-461 E O2	1.2164	Adder	2.7
CALDERWOOD	CALDERWOOD	0.1208	Confirmed LTF	0.1208
NY	NY	0.1206	Confirmed LTF	0.1206
PRAIRIE	PRAIRIE	0.6277	Confirmed LTF	0.6277
O-066	O-066	1.3864	Confirmed LTF	1.3864
CHEOAH	CHEOAH	0.1216	Confirmed LTF	0.1216
COTTONWOOD	COTTONWOOD	0.5103	Confirmed LTF	0.5103
G-007	G-007	0.2079	Confirmed LTF	0.2079
HAMLET	HAMLET	0.1409	Confirmed LTF	0.1409
GIBSON	GIBSON	0.1327	Confirmed LTF	0.1327
BLUEG	BLUEG	0.4218	Confirmed LTF	0.4218
TRIMBLE	TRIMBLE	0.1352	Confirmed LTF	0.1352
CATAWBA	CATAWBA	0.0851	Confirmed LTF	0.0851

13.5.6 Index 6

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313240	232006	INDRIV 4	DP&L	232004	MILF_230	DP&L	1	DPL_P4-2_DP36	breaker	804.0	144.24	144.89	DC	11.96

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	5.0409	Adder	5.93
232407	W1-004 E	5.0409	Adder	5.93
232409	W1-005 E	5.0409	Adder	5.93
232411	W1-006 E	5.0409	Adder	5.93
232412	X1-032 E	1.5512	Adder	1.82
232418	X3-008 E	2.5966	Adder	3.05
232427	Y1-080 E	0.5286	Adder	0.62
232429	Y3-058 E	2.0730	Adder	2.44
232432	Z2-076 C	0.3522	50/50	0.3522
232433	Z2-076 E	1.1244	50/50	1.1244
232434	Z2-077 C	0.3522	50/50	0.3522
232435	Z2-077 E	1.1244	50/50	1.1244
232851	DUP-SFR1	2.6321	Adder	3.1
232904	IR4	41.6172	50/50	41.6172
232905	BAYVIEW1	0.9457	50/50	0.9457
232915	OH NUG4	2.7394	50/50	2.7394
232916	OH NUG5	2.7394	50/50	2.7394
232920	IR10	1.4617	50/50	1.4617
232921	TASLEY2G	1.8208	50/50	1.8208
233911	AB1-137 C (Withdrawn : 12/07/2020)	0.3865	50/50	0.3865
233912	AB1-137 E (Withdrawn : 12/07/2020)	1.0498	50/50	1.0498
917081	CHERRYDALE C	0.5750	50/50	0.5750
917082	CHERRYDALE E	5.9459	50/50	5.9459
918835	AA1-102 E	35.6413	Adder	41.93
924681	AB2-120 C	18.3095	50/50	18.3095
924682	AB2-120 E	29.8735	50/50	29.8735
924781	AB2-130 C O1	9.9406	Adder	11.69
924782	AB2-130 E O1	16.2189	Adder	19.08
924831	AB2-136 C	5.7633	Adder	6.78
924832	AB2-136 E	6.1119	Adder	7.19
925151	AB2-172 C	3.9787	Adder	4.68
925152	AB2-172 E	6.4916	Adder	7.64
925261	AB2-180 C	4.7577	Adder	5.6
925262	AB2-180 E	2.0390	Adder	2.4
927031	AC1-190 C	7.4723	Adder	8.79
927032	AC1-190 E	3.2024	Adder	3.77
927191	AC1-213 C	1.1578	Adder	1.36
927192	AC1-213 E	0.7598	Adder	0.89
930201	AB1-056 C	41.2424	50/50	41.2424
930202	AB1-056 E	117.4512	50/50	117.4512

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
932161	AC2-023 C	8.6194	Adder	10.14
932162	AC2-023 E	6.2775	Adder	7.39
938651	AE1-087 C	3.3505	Adder	3.94
938652	AE1-087 E	0.8376	Adder	0.99
938895	AE1-117 C	27.8462	50/50	27.8462
938896	AE1-117 E	74.2566	50/50	74.2566
939151	AE1-145	9.6250	50/50	9.6250
942441	AE2-257 C	18.9506	50/50	18.9506
942442	AE2-257 E	49.9606	50/50	49.9606
943361	AF1-007 C	1.2168	50/50	1.2168
943362	AF1-007 E	3.4582	50/50	3.4582
945661	AF1-231 C	3.0965	Adder	3.64
945662	AF1-231 E	4.6447	Adder	5.46
945791	AF1-244	3.0659	Adder	3.61
945931	AF1-258	1.0875	Adder	1.28
957611	AF2-055 C	16.7829	50/50	16.7829
957612	AF2-055 E	7.1927	50/50	7.1927
957661	AF2-060	4.3312	50/50	4.3312
957671	AF2-061 O1	19.2500	50/50	19.2500
959021	AF2-193 C	76.2088	50/50	76.2088
959022	AF2-193 E	205.5716	50/50	205.5716
959031	AF2-194 C	76.2088	50/50	76.2088
959032	AF2-194 E	205.5716	50/50	205.5716
959051	AF2-196 C	5.1683	50/50	5.1683
959052	AF2-196 E	12.0595	50/50	12.0595
959161	AF2-207 C O1	6.8364	Adder	8.04
959162	AF2-207 E O1	10.2546	Adder	12.06
959571	AF2-248 C	1.1816	Adder	1.39
959572	AF2-248 E	1.3206	Adder	1.55
959581	AF2-249 C	0.2085	Adder	0.25
959582	AF2-249 E	0.8341	Adder	0.98
959591	AF2-250 C	0.3823	Adder	0.45
959592	AF2-250 E	0.2954	Adder	0.35
960341	AF2-325 C	0.9415	Adder	1.11
960342	AF2-325 E	1.3002	Adder	1.53
960671	AF2-358 C O1	15.3199	Adder	18.02
960672	AF2-358 E O1	10.2133	Adder	12.02
960871	AF2-378 C	0.2538	Adder	0.3
960872	AF2-378 E	0.3521	Adder	0.41
960881	AF2-379 C	0.6041	Adder	0.71
960882	AF2-379 E	0.8324	Adder	0.98
960941	AF2-385 C	16.2093	Adder	19.07
960942	AF2-385 E	9.2237	Adder	10.85
961181	AF2-409 O1	25.5042	Adder	30.0
962161	AG1-061 C O2	11.0160	Adder	24.45
962162	AG1-061 E O2	7.3440	Adder	16.3
963001	AG1-149	0.6094	Adder	1.35
963011	AG1-150	19.2500	50/50	19.2500
964551	AG1-318 C	0.1735	50/50	0.1735
964552	AG1-318 E	0.4047	50/50	0.4047
964962	AG1-360 E	1.7984	Adder	3.99
965321	AG1-397 C	0.8737	Adder	1.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965322	AG1-397 E	1.2052	Adder	2.68
965611	AG1-429 C O2	16.9075	50/50	16.9075
965612	AG1-429 E O2	11.2685	50/50	11.2685
965821	AG1-450	3.3355	Adder	7.4
965921	AG1-461 C O2	3.5013	Adder	7.77
965922	AG1-461 E O2	1.8853	Adder	4.18
CALDERWOOD	CALDERWOOD	0.1491	Confirmed LTF	0.1491
NY	NY	0.1786	Confirmed LTF	0.1786
PRAIRIE	PRAIRIE	0.7749	Confirmed LTF	0.7749
O-066	O-066	2.2478	Confirmed LTF	2.2478
SIGE	SIGE	0.0036	Confirmed LTF	0.0036
CHEOAH	CHEOAH	0.1501	Confirmed LTF	0.1501
COTTONWOOD	COTTONWOOD	0.6300	Confirmed LTF	0.6300
G-007	G-007	0.3580	Confirmed LTF	0.3580
HAMLET	HAMLET	0.1727	Confirmed LTF	0.1727
GIBSON	GIBSON	0.1638	Confirmed LTF	0.1638
BLUEG	BLUEG	0.5208	Confirmed LTF	0.5208
TRIMBLE	TRIMBLE	0.1670	Confirmed LTF	0.1670
CATAWBA	CATAWBA	0.1050	Confirmed LTF	0.1050

13.5.7 Index 7

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
165122015	232012	HOPE CREEK	PJM	200029	HOPE CRK	PSE&G	1	DPL_P7_1_DBL_4NC	tower	1117.0	136.0	136.52	DC	13.05

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	4.3871	Adder	5.16
232407	W1-004 E	4.3871	Adder	5.16
232409	W1-005 E	4.3871	Adder	5.16
232411	W1-006 E	4.3871	Adder	5.16
232412	X1-032 E	1.3954	Adder	1.64
232418	X3-008 E	3.6945	Adder	4.35
232423	X3-066 E	0.6264	Adder	0.74
232425	Y1-079 E	1.3675	Adder	1.61
232427	Y1-080 E	0.6616	Adder	0.78
232429	Y3-058 E	2.0912	Adder	2.46
232433	Z2-076 E	0.7602	Adder	0.89
232435	Z2-077 E	0.7602	Adder	0.89
232616	GEN FOOD	1.4453	50/50	1.4453
232813	VAUGHN	0.2195	50/50	0.2195
232851	DUP-SFR1	3.8081	Adder	4.48
232899	W1-062	4.4526	50/50	4.4526
232900	DEMECSMY	4.3617	50/50	4.3617
232901	NORTHST	4.3739	50/50	4.3739
232922	MR3 (Deactivation : 01/06/2021)	61.4734	50/50	61.4734
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.6898	Adder	0.81
233916	AB1-141 E	1.2494	Adder	1.47
233919	AB1-142 E	1.2494	Adder	1.47
233920	W3-032A-CTG1	18.3513	50/50	18.3513
233921	W3-032A-STG1	11.0488	50/50	11.0488
917082	CHERRYDALE E	4.3911	Adder	5.17
918835	AA1-102 E	32.3322	Adder	38.04
919831	AA2-069 (Suspended)	271.8087	50/50	271.8087
923921	AB2-032 C	2.6972	Adder	3.17
923922	AB2-032 E	1.2693	Adder	1.49
923951	AB2-036 C	7.6067	Adder	8.95
923952	AB2-036 E	12.4453	Adder	14.64
923961	AB2-037 C	16.3092	Adder	19.19
923962	AB2-037 E	26.6433	Adder	31.35
924681	AB2-120 C	13.4743	Adder	15.85
924682	AB2-120 E	21.9843	Adder	25.86
924781	AB2-130 C O1	11.7774	Adder	13.86
924782	AB2-130 E O1	19.2157	Adder	22.61
924801	AB2-133 C O1	5.1399	Adder	6.05
924802	AB2-133 E O1	6.5189	Adder	7.67
924821	AB2-135 C	7.6016	Adder	8.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924822	AB2-135 E	8.6694	Adder	10.2
924831	AB2-136 C	7.6196	Adder	8.96
924832	AB2-136 E	8.0804	Adder	9.51
924971	AB2-153 C	1.5072	Adder	1.77
924972	AB2-153 E	2.4592	Adder	2.89
925151	AB2-172 C	5.6609	Adder	6.66
925152	AB2-172 E	9.2362	Adder	10.87
925261	AB2-180 C	4.7995	Adder	5.65
925262	AB2-180 E	2.0569	Adder	2.42
925271	AB2-185 C	3.0879	Adder	3.63
925272	AB2-185 E	1.3234	Adder	1.56
926131	AC1-091 C	4.7147	50/50	4.7147
926132	AC1-091 E	7.7320	50/50	7.7320
926141	AC1-092 C	4.7147	50/50	4.7147
926142	AC1-092 E	7.7320	50/50	7.7320
926151	AC1-093 C	4.4632	50/50	4.4632
926152	AC1-093 E	7.3549	50/50	7.3549
926161	AC1-094 C	3.7717	50/50	3.7717
926162	AC1-094 E	6.2233	50/50	6.2233
927031	AC1-190 C	10.4860	Adder	12.34
927032	AC1-190 E	4.4940	Adder	5.29
927191	AC1-213 C	1.1181	Adder	1.32
927192	AC1-213 E	0.7337	Adder	0.86
930201	AB1-056 C	24.9494	Adder	29.35
930202	AB1-056 E	71.0515	Adder	83.59
931261	AB1-176 C	0.3239	Adder	0.38
931262	AB1-176 E	0.5341	Adder	0.63
932161	AC2-023 C	8.9690	Adder	10.55
932162	AC2-023 E	6.5321	Adder	7.68
933631	AC2-185 C	9.5550	50/50	9.5550
933632	AC2-185 E	15.5898	50/50	15.5898
933641	AC2-186 C	9.0069	50/50	9.0069
933642	AC2-186 E	14.6955	50/50	14.6955
936611	AD2-076 C O1	3.7879	Adder	4.46
936612	AD2-076 E O1	6.1802	Adder	7.27
938651	AE1-087 C	4.7671	Adder	5.61
938652	AE1-087 E	1.1918	Adder	1.4
938895	AE1-117 C	18.3902	Adder	21.64
938896	AE1-117 E	49.0405	Adder	57.69
939151	AE1-145	7.0912	Adder	8.34
941021	AE2-093 C	3.9383	Adder	4.63
941022	AE2-093 E	6.4256	Adder	7.56
941181	AE2-112 C	1.3142	Adder	1.55
941182	AE2-112 E	2.1442	Adder	2.52
942441	AE2-257 C	12.6674	Adder	14.9
942442	AE2-257 E	33.3958	Adder	39.29
943361	AF1-007 C	0.7361	Adder	0.87
943362	AF1-007 E	2.0920	Adder	2.46
943441	AF1-015 C	1.4839	Adder	1.75
943442	AF1-015 E	2.0492	Adder	2.41
943651	AF1-036 C	1.7088	Adder	2.01
943652	AF1-036 E	2.3598	Adder	2.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945661	AF1-231 C	2.6907	Adder	3.17
945662	AF1-231 E	4.0360	Adder	4.75
945791	AF1-244	2.7813	Adder	3.27
945931	AF1-258	1.0970	Adder	1.29
945941	AF1-259	0.1716	Adder	0.2
957611	AF2-055 C	12.3941	Adder	14.58
957612	AF2-055 E	5.3118	Adder	6.25
957661	AF2-060	3.1910	Adder	3.75
957671	AF2-061 O1	14.1824	Adder	16.69
959021	AF2-193 C	46.1021	Adder	54.24
959022	AF2-193 E	124.3596	Adder	146.31
959031	AF2-194 C	46.1021	Adder	54.24
959032	AF2-194 E	124.3596	Adder	146.31
959051	AF2-196 C	3.4547	Adder	4.06
959052	AF2-196 E	8.0611	Adder	9.48
959161	AF2-207 C O1	7.1013	Adder	8.35
959162	AF2-207 E O1	10.6520	Adder	12.53
959571	AF2-248 C	1.1941	Adder	1.4
959572	AF2-248 E	1.3345	Adder	1.57
959581	AF2-249 C	0.2107	Adder	0.25
959582	AF2-249 E	0.8429	Adder	0.99
959591	AF2-250 C	0.3863	Adder	0.45
959592	AF2-250 E	0.2985	Adder	0.35
960221	AF2-313 C	2.7242	Adder	3.2
960222	AF2-313 E	1.5444	Adder	1.82
960341	AF2-325 C	1.2765	Adder	1.5
960342	AF2-325 E	1.7627	Adder	2.07
960671	AF2-358 C O1	18.9909	Adder	22.34
960672	AF2-358 E O1	12.6606	Adder	14.89
960871	AF2-378 C	0.3393	Adder	0.4
960872	AF2-378 E	0.4708	Adder	0.55
960881	AF2-379 C	0.5677	Adder	0.67
960882	AF2-379 E	0.7823	Adder	0.92
960941	AF2-385 C	16.8375	Adder	19.81
960942	AF2-385 E	9.5812	Adder	11.27
960961	AF2-387 C O1	15.0900	Adder	17.75
960962	AF2-387 E O1	7.5676	Adder	8.9
961181	AF2-409 O1	31.1721	Adder	36.67
962161	AG1-061 C O2	11.5463	Adder	25.63
962162	AG1-061 E O2	7.6975	Adder	17.09
962261	AG1-072	6.0043	Adder	13.33
962302	AG1-079 E	0.2561	Adder	0.57
962381	AG1-087 C O2	54.9768	50/50	54.9768
962382	AG1-087 E O2	148.2988	50/50	148.2988
963001	AG1-149	0.5528	Adder	1.23
963011	AG1-150	7.5167	Adder	16.69
964551	AG1-318 C	0.0608	Adder	0.13
964552	AG1-318 E	0.1419	Adder	0.31
964962	AG1-360 E	1.6178	Adder	3.59
965321	AG1-397 C	0.7937	Adder	1.76
965322	AG1-397 E	1.0949	Adder	2.43
965611	AG1-429 C O2	6.6177	Adder	14.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965612	AG1-429 E O2	4.4105	Adder	9.79
965821	AG1-450	4.1746	Adder	9.27
965921	AG1-461 C O2	3.8217	Adder	8.48
965922	AG1-461 E O2	2.0578	Adder	4.57
965951	AG1-464 C O2	9.4810	50/50	9.4810
965952	AG1-464 E O2	14.2215	50/50	14.2215
966281	AG1-497 C O2	50.6251	50/50	50.6251
966282	AG1-497 E O2	21.6965	50/50	21.6965
966601	AG1-529 C	23.5815	50/50	23.5815
966602	AG1-529 E	12.5865	50/50	12.5865
CALDERWOOD	CALDERWOOD	0.1402	Confirmed LTF	0.1402
NY	NY	0.5331	Confirmed LTF	0.5331
PRAIRIE	PRAIRIE	0.7491	Confirmed LTF	0.7491
O-066	O-066	8.5336	Confirmed LTF	8.5336
SIGE	SIGE	0.1025	Confirmed LTF	0.1025
CHEOAH	CHEOAH	0.1406	Confirmed LTF	0.1406
COTTONWOOD	COTTONWOOD	0.5985	Confirmed LTF	0.5985
G-007	G-007	1.5288	Confirmed LTF	1.5288
HAMLET	HAMLET	0.1542	Confirmed LTF	0.1542
GIBSON	GIBSON	0.1600	Confirmed LTF	0.1600
BLUEG	BLUEG	0.5086	Confirmed LTF	0.5086
TRIMBLE	TRIMBLE	0.1631	Confirmed LTF	0.1631
CATAWBA	CATAWBA	0.0952	Confirmed LTF	0.0952

13.5.8 Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313258	232013	SILVER RUN	PJM	231004	RL_230	DP&L	1	DPL_P4-2_DP11	breaker	678.0	129.61	130.15	DC	8.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.8581	Adder	3.36
232407	W1-004 E	2.8581	Adder	3.36
232409	W1-005 E	2.8581	Adder	3.36
232411	W1-006 E	2.8581	Adder	3.36
232412	X1-032 E	0.9165	Adder	1.08
232418	X3-008 E	1.8774	Adder	2.21
232427	Y1-080 E	0.3965	Adder	0.47
232429	Y3-058 E	1.3337	Adder	1.57
232433	Z2-076 E	0.4767	Adder	0.56
232435	Z2-077 E	0.4767	Adder	0.56
232616	GEN FOOD	0.7400	50/50	0.7400
232851	DUP-SFR1	2.2852	Adder	2.69
232899	W1-062	2.1692	50/50	2.1692
232901	NORTHST	2.2393	50/50	2.2393
232904	IR4	18.4824	50/50	18.4824
232920	IR10	0.7166	50/50	0.7166
232922	MR3 (Deactivation : 01/06/2021)	31.4731	50/50	31.4731
233911	AB1-137 C (Withdrawn : 12/07/2020)	0.1867	50/50	0.1867
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.5070	50/50	0.5070
233920	W3-032A-CTG1	9.3955	50/50	9.3955
233921	W3-032A-STG1	5.6568	50/50	5.6568
917082	CHERRYDALE E	2.8590	Adder	3.36
918835	AA1-102 E	21.2787	Adder	25.03
919831	AA2-069 (Suspended)	139.1606	50/50	139.1606
924681	AB2-120 C	8.7675	Adder	10.31
924682	AB2-120 E	14.3049	Adder	16.83
924781	AB2-130 C O1	7.2737	Adder	8.56
924782	AB2-130 E O1	11.8675	Adder	13.96
924831	AB2-136 C	4.2584	Adder	5.01
924832	AB2-136 E	4.5159	Adder	5.31
925151	AB2-172 C	2.8766	Adder	3.38
925152	AB2-172 E	4.6935	Adder	5.52
925261	AB2-180 C	3.0610	Adder	3.6
925262	AB2-180 E	1.3119	Adder	1.54
926131	AC1-091 C	2.2368	50/50	2.2368
926132	AC1-091 E	3.6684	50/50	3.6684
926141	AC1-092 C	2.2368	50/50	2.2368
926142	AC1-092 E	3.6684	50/50	3.6684
926151	AC1-093 C	2.1175	50/50	2.1175

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926152	AC1-093 E	3.4894	50/50	3.4894
926161	AC1-094 C	1.7894	50/50	1.7894
926162	AC1-094 E	2.9526	50/50	2.9526
927031	AC1-190 C	5.4252	Adder	6.38
927032	AC1-190 E	2.3251	Adder	2.74
927191	AC1-213 C	0.7167	Adder	0.84
927192	AC1-213 E	0.4704	Adder	0.55
930201	AB1-056 C	18.3160	50/50	18.3160
930202	AB1-056 E	52.1608	50/50	52.1608
932161	AC2-023 C	5.7002	Adder	6.71
932162	AC2-023 E	4.1514	Adder	4.88
933631	AC2-185 C	4.5332	50/50	4.5332
933632	AC2-185 E	7.3964	50/50	7.3964
933641	AC2-186 C	4.1620	Adder	4.9
933642	AC2-186 E	6.7907	Adder	7.99
938651	AE1-087 C	2.4224	Adder	2.85
938652	AE1-087 E	0.6056	Adder	0.71
938895	AE1-117 C	13.5182	50/50	13.5182
938896	AE1-117 E	36.0486	50/50	36.0486
939151	AE1-145	4.6129	Adder	5.43
942441	AE2-257 C	9.3050	50/50	9.3050
942442	AE2-257 E	24.5314	50/50	24.5314
943361	AF1-007 C	0.5404	50/50	0.5404
943362	AF1-007 E	1.5358	50/50	1.5358
945661	AF1-231 C	1.7523	Adder	2.06
945662	AF1-231 E	2.6284	Adder	3.09
945791	AF1-244	1.8304	Adder	2.15
945931	AF1-258	0.6997	Adder	0.82
957611	AF2-055 C	8.0697	Adder	9.49
957612	AF2-055 E	3.4584	Adder	4.07
957661	AF2-060	2.0758	Adder	2.44
957671	AF2-061 O1	9.2259	Adder	10.85
959021	AF2-193 C	33.8448	50/50	33.8448
959022	AF2-193 E	91.2956	50/50	91.2956
959031	AF2-194 C	33.8448	50/50	33.8448
959032	AF2-194 E	91.2956	50/50	91.2956
959051	AF2-196 C	2.5377	50/50	2.5377
959052	AF2-196 E	5.9214	50/50	5.9214
959161	AF2-207 C O1	4.5421	Adder	5.34
959162	AF2-207 E O1	6.8131	Adder	8.02
959571	AF2-248 C	0.7643	Adder	0.9
959572	AF2-248 E	0.8543	Adder	1.01
959581	AF2-249 C	0.1349	Adder	0.16
959582	AF2-249 E	0.5395	Adder	0.63
959591	AF2-250 C	0.2473	Adder	0.29
959592	AF2-250 E	0.1911	Adder	0.22
960341	AF2-325 C	0.6907	Adder	0.81
960342	AF2-325 E	0.9538	Adder	1.12
960671	AF2-358 C O1	11.5194	Adder	13.55
960672	AF2-358 E O1	7.6796	Adder	9.03
960871	AF2-378 C	0.1869	Adder	0.22
960872	AF2-378 E	0.2593	Adder	0.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960881	AF2-379 C	0.3717	Adder	0.44
960882	AF2-379 E	0.5122	Adder	0.6
960941	AF2-385 C	10.7694	Adder	12.67
960942	AF2-385 E	6.1282	Adder	7.21
961181	AF2-409 O1	22.0388	Adder	25.93
962161	AG1-061 C O2	7.8226	Adder	17.36
962162	AG1-061 E O2	5.2151	Adder	11.58
962302	AG1-079 E	0.0952	Adder	0.21
962381	AG1-087 C O2	34.8849	50/50	34.8849
962382	AG1-087 E O2	94.1012	50/50	94.1012
963001	AG1-149	0.3638	Adder	0.81
963011	AG1-150	4.8897	Adder	10.85
964551	AG1-318 C	0.0844	50/50	0.0844
964552	AG1-318 E	0.1969	50/50	0.1969
964962	AG1-360 E	1.0626	Adder	2.36
965321	AG1-397 C	0.5055	Adder	1.12
965322	AG1-397 E	0.6974	Adder	1.55
965611	AG1-429 C O2	4.3087	Adder	9.56
965612	AG1-429 E O2	2.8717	Adder	6.37
965821	AG1-450	2.5017	Adder	5.55
965921	AG1-461 C O2	2.3639	Adder	5.25
965922	AG1-461 E O2	1.2729	Adder	2.83
965951	AG1-464 C O2	2.3220	Adder	5.15
965952	AG1-464 E O2	3.4830	Adder	7.73
966281	AG1-497 C O2	25.9190	50/50	25.9190
966282	AG1-497 E O2	11.1082	50/50	11.1082
966601	AG1-529 C	13.8548	50/50	13.8548
966602	AG1-529 E	7.3949	50/50	7.3949
G-007A	G-007A	2.5701	Confirmed LTF	2.5701
VFT	VFT	5.8050	Confirmed LTF	5.8050
CALDERWOOD	CALDERWOOD	0.2286	Confirmed LTF	0.2286
PRAIRIE	PRAIRIE	1.1598	Confirmed LTF	1.1598
CHEOAH	CHEOAH	0.2307	Confirmed LTF	0.2307
CBM-N	CBM-N	0.8496	Confirmed LTF	0.8496
COTTONWOOD	COTTONWOOD	0.9555	Confirmed LTF	0.9555
HAMLET	HAMLET	0.2766	Confirmed LTF	0.2766
GIBSON	GIBSON	0.2435	Confirmed LTF	0.2435
BLUEG	BLUEG	0.7743	Confirmed LTF	0.7743
TRIMBLE	TRIMBLE	0.2476	Confirmed LTF	0.2476
CATAWBA	CATAWBA	0.1656	Confirmed LTF	0.1656

13.5.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313359	232013	SILVER RUN	PJM	231004	RL_230	DP&L	2	DPL_P4-2_DP11	breaker	790.0	111.66	112.13	DC	8.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.8621	Adder	3.37
232407	W1-004 E	2.8621	Adder	3.37
232409	W1-005 E	2.8621	Adder	3.37
232411	W1-006 E	2.8621	Adder	3.37
232412	X1-032 E	0.9178	Adder	1.08
232418	X3-008 E	1.8799	Adder	2.21
232427	Y1-080 E	0.3970	Adder	0.47
232429	Y3-058 E	1.3356	Adder	1.57
232433	Z2-076 E	0.4774	Adder	0.56
232435	Z2-077 E	0.4774	Adder	0.56
232616	GEN FOOD	0.7410	50/50	0.7410
232851	DUP-SFR1	2.2884	Adder	2.69
232899	W1-062	2.1721	50/50	2.1721
232901	NORTHST	2.2425	50/50	2.2425
232904	IR4	18.5078	50/50	18.5078
232920	IR10	0.7176	50/50	0.7176
232922	MR3 (Deactivation : 01/06/2021)	31.5170	50/50	31.5170
233911	AB1-137 C (Withdrawn : 12/07/2020)	0.1869	50/50	0.1869
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.5077	50/50	0.5077
233920	W3-032A-CTG1	9.4086	50/50	9.4086
233921	W3-032A-STG1	5.6647	50/50	5.6647
917082	CHERRYDALE E	2.8629	Adder	3.37
918835	AA1-102 E	21.3079	Adder	25.07
919831	AA2-069 (Suspended)	139.3545	50/50	139.3545
924681	AB2-120 C	8.7795	Adder	10.33
924682	AB2-120 E	14.3244	Adder	16.85
924781	AB2-130 C O1	7.2835	Adder	8.57
924782	AB2-130 E O1	11.8837	Adder	13.98
924831	AB2-136 C	4.2643	Adder	5.02
924832	AB2-136 E	4.5222	Adder	5.32
925151	AB2-172 C	2.8805	Adder	3.39
925152	AB2-172 E	4.6998	Adder	5.53
925261	AB2-180 C	3.0652	Adder	3.61
925262	AB2-180 E	1.3137	Adder	1.55
926131	AC1-091 C	2.2398	50/50	2.2398
926132	AC1-091 E	3.6733	50/50	3.6733
926141	AC1-092 C	2.2398	50/50	2.2398
926142	AC1-092 E	3.6733	50/50	3.6733
926151	AC1-093 C	2.1203	50/50	2.1203

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926152	AC1-093 E	3.4941	50/50	3.4941
926161	AC1-094 C	1.7918	50/50	1.7918
926162	AC1-094 E	2.9565	50/50	2.9565
927031	AC1-190 C	5.4326	Adder	6.39
927032	AC1-190 E	2.3283	Adder	2.74
927191	AC1-213 C	0.7178	Adder	0.84
927192	AC1-213 E	0.4710	Adder	0.55
930201	AB1-056 C	18.3411	50/50	18.3411
930202	AB1-056 E	52.2323	50/50	52.2323
932161	AC2-023 C	5.7078	Adder	6.72
932162	AC2-023 E	4.1570	Adder	4.89
933631	AC2-185 C	4.5393	50/50	4.5393
933632	AC2-185 E	7.4063	50/50	7.4063
933641	AC2-186 C	4.1678	Adder	4.9
933642	AC2-186 E	6.8001	Adder	8.0
938651	AE1-087 C	2.4257	Adder	2.85
938652	AE1-087 E	0.6064	Adder	0.71
938895	AE1-117 C	13.5370	50/50	13.5370
938896	AE1-117 E	36.0986	50/50	36.0986
939151	AE1-145	4.6192	Adder	5.43
942441	AE2-257 C	9.3179	50/50	9.3179
942442	AE2-257 E	24.5653	50/50	24.5653
943361	AF1-007 C	0.5411	50/50	0.5411
943362	AF1-007 E	1.5379	50/50	1.5379
945661	AF1-231 C	1.7547	Adder	2.06
945662	AF1-231 E	2.6321	Adder	3.1
945791	AF1-244	1.8329	Adder	2.16
945931	AF1-258	0.7006	Adder	0.82
957611	AF2-055 C	8.0807	Adder	9.51
957612	AF2-055 E	3.4632	Adder	4.07
957661	AF2-060	2.0787	Adder	2.45
957671	AF2-061 O1	9.2385	Adder	10.87
959021	AF2-193 C	33.8912	50/50	33.8912
959022	AF2-193 E	91.4208	50/50	91.4208
959031	AF2-194 C	33.8912	50/50	33.8912
959032	AF2-194 E	91.4208	50/50	91.4208
959051	AF2-196 C	2.5412	50/50	2.5412
959052	AF2-196 E	5.9296	50/50	5.9296
959161	AF2-207 C O1	4.5482	Adder	5.35
959162	AF2-207 E O1	6.8224	Adder	8.03
959571	AF2-248 C	0.7654	Adder	0.9
959572	AF2-248 E	0.8555	Adder	1.01
959581	AF2-249 C	0.1351	Adder	0.16
959582	AF2-249 E	0.5403	Adder	0.64
959591	AF2-250 C	0.2476	Adder	0.29
959592	AF2-250 E	0.1914	Adder	0.23
960341	AF2-325 C	0.6916	Adder	0.81
960342	AF2-325 E	0.9551	Adder	1.12
960671	AF2-358 C O1	11.5352	Adder	13.57
960672	AF2-358 E O1	7.6901	Adder	9.05
960871	AF2-378 C	0.1871	Adder	0.22
960872	AF2-378 E	0.2596	Adder	0.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960881	AF2-379 C	0.3722	Adder	0.44
960882	AF2-379 E	0.5129	Adder	0.6
960941	AF2-385 C	10.7840	Adder	12.69
960942	AF2-385 E	6.1365	Adder	7.22
961181	AF2-409 O1	22.0694	Adder	25.96
962161	AG1-061 C O2	7.8332	Adder	17.39
962162	AG1-061 E O2	5.2222	Adder	11.59
962302	AG1-079 E	0.0953	Adder	0.21
962381	AG1-087 C O2	34.9325	50/50	34.9325
962382	AG1-087 E O2	94.2296	50/50	94.2296
963001	AG1-149	0.3643	Adder	0.81
963011	AG1-150	4.8964	Adder	10.87
964551	AG1-318 C	0.0845	50/50	0.0845
964552	AG1-318 E	0.1972	50/50	0.1972
964962	AG1-360 E	1.0641	Adder	2.36
965321	AG1-397 C	0.5062	Adder	1.12
965322	AG1-397 E	0.6983	Adder	1.55
965611	AG1-429 C O2	4.3146	Adder	9.58
965612	AG1-429 E O2	2.8756	Adder	6.38
965821	AG1-450	2.5051	Adder	5.56
965921	AG1-461 C O2	2.3671	Adder	5.25
965922	AG1-461 E O2	1.2746	Adder	2.83
965951	AG1-464 C O2	2.3252	Adder	5.16
965952	AG1-464 E O2	3.4878	Adder	7.74
966281	AG1-497 C O2	25.9552	50/50	25.9552
966282	AG1-497 E O2	11.1236	50/50	11.1236
966601	AG1-529 C	13.8739	50/50	13.8739
966602	AG1-529 E	7.4051	50/50	7.4051
G-007A	G-007A	2.5725	Confirmed LTF	2.5725
VFT	VFT	5.8115	Confirmed LTF	5.8115
CALDERWOOD	CALDERWOOD	0.2291	Confirmed LTF	0.2291
PRAIRIE	PRAIRIE	1.1623	Confirmed LTF	1.1623
CHEOAH	CHEOAH	0.2312	Confirmed LTF	0.2312
CBM-N	CBM-N	0.8496	Confirmed LTF	0.8496
COTTONWOOD	COTTONWOOD	0.9576	Confirmed LTF	0.9576
HAMLET	HAMLET	0.2772	Confirmed LTF	0.2772
GIBSON	GIBSON	0.2435	Confirmed LTF	0.2435
BLUEG	BLUEG	0.7760	Confirmed LTF	0.7760
TRIMBLE	TRIMBLE	0.2482	Confirmed LTF	0.2482
CATAWBA	CATAWBA	0.1659	Confirmed LTF	0.1659

13.5.10 Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166827284	232100	CHURCH	DP&L	232107	TOWNSEND	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	196.46	197.19	DC	5.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.1162	Adder	2.49
232407	W1-004 E	2.1162	Adder	2.49
232409	W1-005 E	2.1162	Adder	2.49
232411	W1-006 E	2.1162	Adder	2.49
232412	X1-032 E	0.6923	Adder	0.81
232417	X3-008 C	0.3001	50/50	0.3001
232418	X3-008 E	3.1031	50/50	3.1031
232422	X3-066 C	0.1518	50/50	0.1518
232423	X3-066 E	1.2321	50/50	1.2321
232424	Y1-079 C	0.2221	50/50	0.2221
232425	Y1-079 E	2.2972	50/50	2.2972
232426	Y1-080 FULL	0.0468	50/50	0.0468
232427	Y1-080 E	0.4865	50/50	0.4865
232428	Y3-058 C	0.1887	50/50	0.1887
232429	Y3-058 E	1.2800	50/50	1.2800
232433	Z2-076 E	0.3195	Adder	0.38
232435	Z2-077 E	0.3195	Adder	0.38
232813	VAUGHN	0.1051	50/50	0.1051
232851	DUP-SFR1	1.6269	Adder	1.91
232902	EASTMUNI	3.3846	50/50	3.3846
232907	VN8	5.4177	50/50	5.4177
232910	NRG_G1	1.6595	50/50	1.6595
232911	NRG_G2	1.6595	50/50	1.6595
232919	VN10	0.4103	50/50	0.4103
232922	MR3 (Deactivation : 01/06/2021)	9.0454	Adder	10.64
232926	CRISFLD1	0.3223	50/50	0.3223
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2813	Adder	0.33
233915	AB1-141 C	0.9820	50/50	0.9820
233916	AB1-141 E	2.9046	50/50	2.9046
233918	AB1-142 C	0.9820	50/50	0.9820
233919	AB1-142 E	2.9046	50/50	2.9046
233923	AA1-102 C	1.8373	50/50	1.8373
233931	AB2-179 C	-9.2465	Adder	-10.88
293670	O-025 C	0.1942	50/50	0.1942
917082	CHERRYDALE E	2.1143	Adder	2.49
918835	AA1-102 E	19.0008	50/50	19.0008
919831	AA2-069 (Suspended)	39.9949	Adder	47.05
923921	AB2-032 C	6.2703	50/50	6.2703
923922	AB2-032 E	2.9507	50/50	2.9507
923951	AB2-036 C	12.6635	50/50	12.6635
923952	AB2-036 E	20.7187	50/50	20.7187

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924681	AB2-120 C	6.4703	Adder	7.61
924682	AB2-120 E	10.5569	Adder	12.42
924781	AB2-130 C O1	5.4550	Adder	6.42
924782	AB2-130 E O1	8.9003	Adder	10.47
924801	AB2-133 C O1	11.5421	50/50	11.5421
924802	AB2-133 E O1	14.6387	50/50	14.6387
924821	AB2-135 C	12.2976	50/50	12.2976
924822	AB2-135 E	14.0250	50/50	14.0250
924831	AB2-136 C	5.9562	50/50	5.9562
924832	AB2-136 E	6.3165	50/50	6.3165
924971	AB2-153 C	3.5040	50/50	3.5040
924972	AB2-153 E	5.7170	50/50	5.7170
925151	AB2-172 C	4.7548	50/50	4.7548
925152	AB2-172 E	7.7578	50/50	7.7578
925261	AB2-180 C	2.9378	50/50	2.9378
925262	AB2-180 E	1.2590	50/50	1.2590
925271	AB2-185 C	5.1871	50/50	5.1871
925272	AB2-185 E	2.2231	50/50	2.2231
926131	AC1-091 C	0.6418	Adder	0.76
926132	AC1-091 E	1.0526	Adder	1.24
926141	AC1-092 C	0.6418	Adder	0.76
926142	AC1-092 E	1.0526	Adder	1.24
926151	AC1-093 C	0.6076	Adder	0.71
926152	AC1-093 E	1.0013	Adder	1.18
926161	AC1-094 C	0.5135	Adder	0.6
926162	AC1-094 E	0.8472	Adder	1.0
927031	AC1-190 C	8.6961	50/50	8.6961
927032	AC1-190 E	3.7269	50/50	3.7269
927191	AC1-213 C	0.6564	50/50	0.6564
927192	AC1-213 E	0.4308	50/50	0.4308
930201	AB1-056 C	9.8959	Adder	11.64
930202	AB1-056 E	28.1818	Adder	33.16
931261	AB1-176 C	0.6372	50/50	0.6372
931262	AB1-176 E	1.0507	50/50	1.0507
932161	AC2-023 C	5.6437	50/50	5.6437
932162	AC2-023 E	4.1103	50/50	4.1103
933631	AC2-185 C	1.3008	Adder	1.53
933632	AC2-185 E	2.1223	Adder	2.5
933641	AC2-186 C	3.1389	Adder	3.69
933642	AC2-186 E	5.1214	Adder	6.03
936611	AD2-076 C O1	8.1710	50/50	8.1710
936612	AD2-076 E O1	13.3317	50/50	13.3317
938651	AE1-087 C	4.0040	50/50	4.0040
938652	AE1-087 E	1.0010	50/50	1.0010
938895	AE1-117 C	7.5027	Adder	8.83
938896	AE1-117 E	20.0072	Adder	23.54
939151	AE1-145	3.4061	Adder	4.01
941021	AE2-093 C	5.0565	50/50	5.0565
941022	AE2-093 E	8.2500	50/50	8.2500
941181	AE2-112 C	2.8348	50/50	2.8348
941182	AE2-112 E	4.6253	50/50	4.6253
942441	AE2-257 C	5.1449	Adder	6.05

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942442	AE2-257 E	13.5639	Adder	15.96
943361	AF1-007 C	0.2920	Adder	0.34
943362	AF1-007 E	0.8298	Adder	0.98
943441	AF1-015 C	1.9052	50/50	1.9052
943442	AF1-015 E	2.6311	50/50	2.6311
943651	AF1-036 C	3.6862	50/50	3.6862
943652	AF1-036 E	5.0904	50/50	5.0904
945661	AF1-231 C	1.2961	Adder	1.52
945662	AF1-231 E	1.9442	Adder	2.29
945791	AF1-244	1.6345	50/50	1.6345
945931	AF1-258	0.6715	50/50	0.6715
945941	AF1-259	0.3376	50/50	0.3376
957611	AF2-055 C	5.9678	Adder	7.02
957612	AF2-055 E	2.5577	Adder	3.01
957661	AF2-060	1.5328	Adder	1.8
957671	AF2-061 O1	6.8122	Adder	8.01
959021	AF2-193 C	18.2859	Adder	21.51
959022	AF2-193 E	49.3258	Adder	58.03
959031	AF2-194 C	18.2859	Adder	21.51
959032	AF2-194 E	49.3258	Adder	58.03
959051	AF2-196 C	1.4032	Adder	1.65
959052	AF2-196 E	3.2740	Adder	3.85
959161	AF2-207 C O1	3.4920	Adder	4.11
959162	AF2-207 E O1	6.1623	50/50	6.1623
959571	AF2-248 C	0.6946	50/50	0.6946
959572	AF2-248 E	0.7763	50/50	0.7763
959581	AF2-249 C	0.1226	50/50	0.1226
959582	AF2-249 E	0.4903	50/50	0.4903
959591	AF2-250 C	0.2247	50/50	0.2247
959592	AF2-250 E	0.1736	50/50	0.1736
960221	AF2-313 C	5.3589	50/50	5.3589
960222	AF2-313 E	3.0381	50/50	3.0381
960341	AF2-325 C	1.0239	50/50	1.0239
960342	AF2-325 E	1.4139	50/50	1.4139
960671	AF2-358 C O1	13.8072	50/50	13.8072
960672	AF2-358 E O1	9.2048	50/50	9.2048
960871	AF2-378 C	0.2684	50/50	0.2684
960872	AF2-378 E	0.3724	50/50	0.3724
960881	AF2-379 C	0.3375	50/50	0.3375
960882	AF2-379 E	0.4650	50/50	0.4650
960941	AF2-385 C	9.7407	50/50	9.7407
960942	AF2-385 E	5.5428	50/50	5.5428
960961	AF2-387 C O1	21.7542	50/50	21.7542
960962	AF2-387 E O1	10.9098	50/50	10.9098
961181	AF2-409 O1	22.4440	50/50	22.4440
962161	AG1-061 C O2	13.9771	50/50	13.9771
962162	AG1-061 E O2	9.3180	50/50	9.3180
962261	AG1-072	16.3320	50/50	16.3320
962302	AG1-079 E	0.4867	50/50	0.4867
962381	AG1-087 C O2	9.4299	Adder	20.93
962382	AG1-087 E O2	25.4370	Adder	56.46
963001	AG1-149	0.6129	50/50	0.6129

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963011	AG1-150	3.6105	Adder	8.01
964551	AG1-318 C	0.0249	Adder	0.06
964552	AG1-318 E	0.0581	Adder	0.13
964962	AG1-360 E	0.8026	Adder	1.78
965321	AG1-397 C	0.3777	Adder	0.84
965322	AG1-397 E	0.5210	Adder	1.16
965611	AG1-429 C O2	3.1865	Adder	7.07
965612	AG1-429 E O2	2.1237	Adder	4.71
965821	AG1-450	5.7923	50/50	5.7923
965921	AG1-461 C O2	1.7107	Adder	3.8
965922	AG1-461 E O2	0.9211	Adder	2.04
965951	AG1-464 C O2	1.7512	Adder	3.89
965952	AG1-464 E O2	2.6268	Adder	5.83
966281	AG1-497 C O2	3.9481	Adder	8.76
966282	AG1-497 E O2	1.6920	Adder	3.76
966601	AG1-529 C	3.8100	Adder	8.46
966602	AG1-529 E	2.0336	Adder	4.51
CALDERWOOD	CALDERWOOD	0.0924	Confirmed LTF	0.0924
NY	NY	0.0586	Confirmed LTF	0.0586
PRAIRIE	PRAIRIE	0.4779	Confirmed LTF	0.4779
O-066	O-066	0.4576	Confirmed LTF	0.4576
CHEOAH	CHEOAH	0.0931	Confirmed LTF	0.0931
COTTONWOOD	COTTONWOOD	0.3906	Confirmed LTF	0.3906
G-007	G-007	0.0378	Confirmed LTF	0.0378
HAMLET	HAMLET	0.1091	Confirmed LTF	0.1091
GIBSON	GIBSON	0.1010	Confirmed LTF	0.1010
BLUEG	BLUEG	0.3212	Confirmed LTF	0.3212
TRIMBLE	TRIMBLE	0.1030	Confirmed LTF	0.1030
CATAWBA	CATAWBA	0.0658	Confirmed LTF	0.0658

13.5.11 Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166827294	232106	MIDLTNTP	DP&L	232104	MT PLSNT	DP&L	1	DPL_P7_1_DBL_1NCB_FSA	tower	348.0	176.73	177.46	DC	5.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.1162	Adder	2.49
232407	W1-004 E	2.1162	Adder	2.49
232409	W1-005 E	2.1162	Adder	2.49
232411	W1-006 E	2.1162	Adder	2.49
232412	X1-032 E	0.6923	Adder	0.81
232417	X3-008 C	0.3001	50/50	0.3001
232418	X3-008 E	3.1031	50/50	3.1031
232422	X3-066 C	0.1518	50/50	0.1518
232423	X3-066 E	1.2321	50/50	1.2321
232424	Y1-079 C	0.2221	50/50	0.2221
232425	Y1-079 E	2.2972	50/50	2.2972
232426	Y1-080 FULL	0.0468	50/50	0.0468
232427	Y1-080 E	0.4865	50/50	0.4865
232428	Y3-058 C	0.1887	50/50	0.1887
232429	Y3-058 E	1.2800	50/50	1.2800
232433	Z2-076 E	0.3195	Adder	0.38
232435	Z2-077 E	0.3195	Adder	0.38
232813	VAUGHN	0.1051	50/50	0.1051
232851	DUP-SFR1	1.6269	Adder	1.91
232902	EASTMUNI	3.3846	50/50	3.3846
232907	VN8	5.4177	50/50	5.4177
232910	NRG_G1	1.6595	50/50	1.6595
232911	NRG_G2	1.6595	50/50	1.6595
232919	VN10	0.4103	50/50	0.4103
232922	MR3 (Deactivation : 01/06/2021)	9.0454	Adder	10.64
232926	CRISFLD1	0.3223	50/50	0.3223
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2813	Adder	0.33
233915	AB1-141 C	0.9820	50/50	0.9820
233916	AB1-141 E	2.9046	50/50	2.9046
233918	AB1-142 C	0.9820	50/50	0.9820
233919	AB1-142 E	2.9046	50/50	2.9046
233923	AA1-102 C	1.8373	50/50	1.8373
233931	AB2-179 C	27.1217	50/50	27.1217
293670	O-025 C	0.1942	50/50	0.1942
917082	CHERRYDALE E	2.1143	Adder	2.49
918835	AA1-102 E	19.0008	50/50	19.0008
919831	AA2-069 (Suspended)	39.9949	Adder	47.05
923921	AB2-032 C	6.2703	50/50	6.2703
923922	AB2-032 E	2.9507	50/50	2.9507
923951	AB2-036 C	12.6635	50/50	12.6635

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923952	AB2-036 E	20.7187	50/50	20.7187
924681	AB2-120 C	6.4703	Adder	7.61
924682	AB2-120 E	10.5569	Adder	12.42
924781	AB2-130 C O1	5.4550	Adder	6.42
924782	AB2-130 E O1	8.9003	Adder	10.47
924801	AB2-133 C O1	11.5421	50/50	11.5421
924802	AB2-133 E O1	14.6387	50/50	14.6387
924821	AB2-135 C	12.2976	50/50	12.2976
924822	AB2-135 E	14.0250	50/50	14.0250
924831	AB2-136 C	5.9562	50/50	5.9562
924832	AB2-136 E	6.3165	50/50	6.3165
924971	AB2-153 C	3.5040	50/50	3.5040
924972	AB2-153 E	5.7170	50/50	5.7170
925151	AB2-172 C	4.7548	50/50	4.7548
925152	AB2-172 E	7.7578	50/50	7.7578
925254	AB2-179 E	8.8503	50/50	8.8503
925261	AB2-180 C	2.9378	50/50	2.9378
925262	AB2-180 E	1.2590	50/50	1.2590
925271	AB2-185 C	5.1871	50/50	5.1871
925272	AB2-185 E	2.2231	50/50	2.2231
927031	AC1-190 C	8.6961	50/50	8.6961
927032	AC1-190 E	3.7269	50/50	3.7269
927191	AC1-213 C	0.6564	50/50	0.6564
927192	AC1-213 E	0.4308	50/50	0.4308
930201	AB1-056 C	9.8959	Adder	11.64
930202	AB1-056 E	28.1818	Adder	33.16
931261	AB1-176 C	0.6372	50/50	0.6372
931262	AB1-176 E	1.0507	50/50	1.0507
932161	AC2-023 C	5.6437	50/50	5.6437
932162	AC2-023 E	4.1103	50/50	4.1103
933641	AC2-186 C	3.1389	Adder	3.69
933642	AC2-186 E	5.1214	Adder	6.03
936611	AD2-076 C O1	8.1710	50/50	8.1710
936612	AD2-076 E O1	13.3317	50/50	13.3317
938651	AE1-087 C	4.0040	50/50	4.0040
938652	AE1-087 E	1.0010	50/50	1.0010
938895	AE1-117 C	7.5027	Adder	8.83
938896	AE1-117 E	20.0072	Adder	23.54
939151	AE1-145	3.4061	Adder	4.01
941021	AE2-093 C	5.0565	50/50	5.0565
941022	AE2-093 E	8.2500	50/50	8.2500
941181	AE2-112 C	2.8348	50/50	2.8348
941182	AE2-112 E	4.6253	50/50	4.6253
942441	AE2-257 C	5.1449	Adder	6.05
942442	AE2-257 E	13.5639	Adder	15.96
943361	AF1-007 C	0.2920	Adder	0.34
943362	AF1-007 E	0.8298	Adder	0.98
943441	AF1-015 C	1.9052	50/50	1.9052
943442	AF1-015 E	2.6311	50/50	2.6311
943651	AF1-036 C	3.6862	50/50	3.6862
943652	AF1-036 E	5.0904	50/50	5.0904
945661	AF1-231 C	1.2961	Adder	1.52

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945662	AF1-231 E	1.9442	Adder	2.29
945791	AF1-244	1.6345	50/50	1.6345
945931	AF1-258	0.6715	50/50	0.6715
945941	AF1-259	0.3376	50/50	0.3376
957611	AF2-055 C	5.9678	Adder	7.02
957612	AF2-055 E	2.5577	Adder	3.01
957661	AF2-060	1.5328	Adder	1.8
957671	AF2-061 O1	6.8122	Adder	8.01
959021	AF2-193 C	18.2859	Adder	21.51
959022	AF2-193 E	49.3258	Adder	58.03
959031	AF2-194 C	18.2859	Adder	21.51
959032	AF2-194 E	49.3258	Adder	58.03
959051	AF2-196 C	1.4032	Adder	1.65
959052	AF2-196 E	3.2740	Adder	3.85
959161	AF2-207 C O1	3.4920	Adder	4.11
959162	AF2-207 E O1	6.1623	50/50	6.1623
959571	AF2-248 C	0.6946	50/50	0.6946
959572	AF2-248 E	0.7763	50/50	0.7763
959581	AF2-249 C	0.1226	50/50	0.1226
959582	AF2-249 E	0.4903	50/50	0.4903
959591	AF2-250 C	0.2247	50/50	0.2247
959592	AF2-250 E	0.1736	50/50	0.1736
960221	AF2-313 C	5.3589	50/50	5.3589
960222	AF2-313 E	3.0381	50/50	3.0381
960341	AF2-325 C	1.0239	50/50	1.0239
960342	AF2-325 E	1.4139	50/50	1.4139
960671	AF2-358 C O1	13.8072	50/50	13.8072
960672	AF2-358 E O1	9.2048	50/50	9.2048
960871	AF2-378 C	0.2684	50/50	0.2684
960872	AF2-378 E	0.3724	50/50	0.3724
960881	AF2-379 C	0.3375	50/50	0.3375
960882	AF2-379 E	0.4650	50/50	0.4650
960941	AF2-385 C	9.7407	50/50	9.7407
960942	AF2-385 E	5.5428	50/50	5.5428
960961	AF2-387 C O1	21.7542	50/50	21.7542
960962	AF2-387 E O1	10.9098	50/50	10.9098
961181	AF2-409 O1	22.4440	50/50	22.4440
962161	AG1-061 C O2	13.9771	50/50	13.9771
962162	AG1-061 E O2	9.3180	50/50	9.3180
962261	AG1-072	16.3320	50/50	16.3320
962302	AG1-079 E	0.4867	50/50	0.4867
962381	AG1-087 C O2	9.4299	Adder	20.93
962382	AG1-087 E O2	25.4370	Adder	56.46
963001	AG1-149	0.6129	50/50	0.6129
963011	AG1-150	3.6105	Adder	8.01
964551	AG1-318 C	0.0249	Adder	0.06
964552	AG1-318 E	0.0581	Adder	0.13
964962	AG1-360 E	0.8026	Adder	1.78
965321	AG1-397 C	0.3777	Adder	0.84
965322	AG1-397 E	0.5210	Adder	1.16
965611	AG1-429 C O2	3.1865	Adder	7.07
965612	AG1-429 E O2	2.1237	Adder	4.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965821	AG1-450	5.7923	50/50	5.7923
965921	AG1-461 C O2	1.7107	Adder	3.8
965922	AG1-461 E O2	0.9211	Adder	2.04
965951	AG1-464 C O2	1.7512	Adder	3.89
965952	AG1-464 E O2	2.6268	Adder	5.83
966281	AG1-497 C O2	3.9481	Adder	8.76
966282	AG1-497 E O2	1.6920	Adder	3.76
966601	AG1-529 C	3.8100	Adder	8.46
966602	AG1-529 E	2.0336	Adder	4.51
CALDERWOOD	CALDERWOOD	0.0924	Confirmed LTF	0.0924
NY	NY	0.0586	Confirmed LTF	0.0586
PRAIRIE	PRAIRIE	0.4779	Confirmed LTF	0.4779
O-066	O-066	0.4576	Confirmed LTF	0.4576
CHEOAH	CHEOAH	0.0931	Confirmed LTF	0.0931
COTTONWOOD	COTTONWOOD	0.3906	Confirmed LTF	0.3906
G-007	G-007	0.0378	Confirmed LTF	0.0378
HAMLET	HAMLET	0.1091	Confirmed LTF	0.1091
GIBSON	GIBSON	0.1010	Confirmed LTF	0.1010
BLUEG	BLUEG	0.3212	Confirmed LTF	0.3212
TRIMBLE	TRIMBLE	0.1030	Confirmed LTF	0.1030
CATAWBA	CATAWBA	0.0658	Confirmed LTF	0.0658

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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
166827279	232107	TOWNSEND	DP&L	232106	MIDLTNT P	DP&L	1	DPL_P7_1_DBL_1NCB_FS A	tower	348.0	202.19	202.92	DC	5.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	2.1162	Adder	2.49
232407	W1-004 E	2.1162	Adder	2.49
232409	W1-005 E	2.1162	Adder	2.49
232411	W1-006 E	2.1162	Adder	2.49
232412	X1-032 E	0.6923	Adder	0.81
232417	X3-008 C	0.3001	50/50	0.3001
232418	X3-008 E	3.1031	50/50	3.1031
232422	X3-066 C	0.1518	50/50	0.1518
232423	X3-066 E	1.2321	50/50	1.2321
232424	Y1-079 C	0.2221	50/50	0.2221
232425	Y1-079 E	2.2972	50/50	2.2972
232426	Y1-080 FULL	0.0468	50/50	0.0468
232427	Y1-080 E	0.4865	50/50	0.4865
232428	Y3-058 C	0.1887	50/50	0.1887
232429	Y3-058 E	1.2800	50/50	1.2800
232433	Z2-076 E	0.3195	Adder	0.38
232435	Z2-077 E	0.3195	Adder	0.38
232813	VAUGHN	0.1051	50/50	0.1051
232851	DUP-SFR1	1.6269	Adder	1.91
232902	EASTMUNI	3.3846	50/50	3.3846
232907	VN8	5.4177	50/50	5.4177
232910	NRG_G1	1.6595	50/50	1.6595
232911	NRG_G2	1.6595	50/50	1.6595
232919	VN10	0.4103	50/50	0.4103
232922	MR3 (Deactivation : 01/06/2021)	9.0454	Adder	10.64
232926	CRISFLD1	0.3223	50/50	0.3223
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2813	Adder	0.33
233915	AB1-141 C	0.9820	50/50	0.9820
233916	AB1-141 E	2.9046	50/50	2.9046
233918	AB1-142 C	0.9820	50/50	0.9820
233919	AB1-142 E	2.9046	50/50	2.9046
233923	AA1-102 C	1.8373	50/50	1.8373
233931	AB2-179 C	27.1217	50/50	27.1217
293670	O-025 C	0.1942	50/50	0.1942
917082	CHERRYDALE E	2.1143	Adder	2.49
918835	AA1-102 E	19.0008	50/50	19.0008
919831	AA2-069 (Suspended)	39.9949	Adder	47.05
923921	AB2-032 C	6.2703	50/50	6.2703
923922	AB2-032 E	2.9507	50/50	2.9507
923951	AB2-036 C	12.6635	50/50	12.6635

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923952	AB2-036 E	20.7187	50/50	20.7187
924681	AB2-120 C	6.4703	Adder	7.61
924682	AB2-120 E	10.5569	Adder	12.42
924781	AB2-130 C O1	5.4550	Adder	6.42
924782	AB2-130 E O1	8.9003	Adder	10.47
924801	AB2-133 C O1	11.5421	50/50	11.5421
924802	AB2-133 E O1	14.6387	50/50	14.6387
924821	AB2-135 C	12.2976	50/50	12.2976
924822	AB2-135 E	14.0250	50/50	14.0250
924831	AB2-136 C	5.9562	50/50	5.9562
924832	AB2-136 E	6.3165	50/50	6.3165
924971	AB2-153 C	3.5040	50/50	3.5040
924972	AB2-153 E	5.7170	50/50	5.7170
925151	AB2-172 C	4.7548	50/50	4.7548
925152	AB2-172 E	7.7578	50/50	7.7578
925254	AB2-179 E	8.8503	50/50	8.8503
925261	AB2-180 C	2.9378	50/50	2.9378
925262	AB2-180 E	1.2590	50/50	1.2590
925271	AB2-185 C	5.1871	50/50	5.1871
925272	AB2-185 E	2.2231	50/50	2.2231
927031	AC1-190 C	8.6961	50/50	8.6961
927032	AC1-190 E	3.7269	50/50	3.7269
927191	AC1-213 C	0.6564	50/50	0.6564
927192	AC1-213 E	0.4308	50/50	0.4308
930201	AB1-056 C	9.8959	Adder	11.64
930202	AB1-056 E	28.1818	Adder	33.16
931261	AB1-176 C	0.6372	50/50	0.6372
931262	AB1-176 E	1.0507	50/50	1.0507
932161	AC2-023 C	5.6437	50/50	5.6437
932162	AC2-023 E	4.1103	50/50	4.1103
933641	AC2-186 C	3.1389	Adder	3.69
933642	AC2-186 E	5.1214	Adder	6.03
936611	AD2-076 C O1	8.1710	50/50	8.1710
936612	AD2-076 E O1	13.3317	50/50	13.3317
938651	AE1-087 C	4.0040	50/50	4.0040
938652	AE1-087 E	1.0010	50/50	1.0010
938895	AE1-117 C	7.5027	Adder	8.83
938896	AE1-117 E	20.0072	Adder	23.54
939151	AE1-145	3.4061	Adder	4.01
941021	AE2-093 C	5.0565	50/50	5.0565
941022	AE2-093 E	8.2500	50/50	8.2500
941181	AE2-112 C	2.8348	50/50	2.8348
941182	AE2-112 E	4.6253	50/50	4.6253
942441	AE2-257 C	5.1449	Adder	6.05
942442	AE2-257 E	13.5639	Adder	15.96
943361	AF1-007 C	0.2920	Adder	0.34
943362	AF1-007 E	0.8298	Adder	0.98
943441	AF1-015 C	1.9052	50/50	1.9052
943442	AF1-015 E	2.6311	50/50	2.6311
943651	AF1-036 C	3.6862	50/50	3.6862
943652	AF1-036 E	5.0904	50/50	5.0904
945661	AF1-231 C	1.2961	Adder	1.52

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945662	AF1-231 E	1.9442	Adder	2.29
945791	AF1-244	1.6345	50/50	1.6345
945931	AF1-258	0.6715	50/50	0.6715
945941	AF1-259	0.3376	50/50	0.3376
957611	AF2-055 C	5.9678	Adder	7.02
957612	AF2-055 E	2.5577	Adder	3.01
957661	AF2-060	1.5328	Adder	1.8
957671	AF2-061 O1	6.8122	Adder	8.01
959021	AF2-193 C	18.2859	Adder	21.51
959022	AF2-193 E	49.3258	Adder	58.03
959031	AF2-194 C	18.2859	Adder	21.51
959032	AF2-194 E	49.3258	Adder	58.03
959051	AF2-196 C	1.4032	Adder	1.65
959052	AF2-196 E	3.2740	Adder	3.85
959161	AF2-207 C O1	3.4920	Adder	4.11
959162	AF2-207 E O1	6.1623	50/50	6.1623
959571	AF2-248 C	0.6946	50/50	0.6946
959572	AF2-248 E	0.7763	50/50	0.7763
959581	AF2-249 C	0.1226	50/50	0.1226
959582	AF2-249 E	0.4903	50/50	0.4903
959591	AF2-250 C	0.2247	50/50	0.2247
959592	AF2-250 E	0.1736	50/50	0.1736
960221	AF2-313 C	5.3589	50/50	5.3589
960222	AF2-313 E	3.0381	50/50	3.0381
960341	AF2-325 C	1.0239	50/50	1.0239
960342	AF2-325 E	1.4139	50/50	1.4139
960671	AF2-358 C O1	13.8072	50/50	13.8072
960672	AF2-358 E O1	9.2048	50/50	9.2048
960871	AF2-378 C	0.2684	50/50	0.2684
960872	AF2-378 E	0.3724	50/50	0.3724
960881	AF2-379 C	0.3375	50/50	0.3375
960882	AF2-379 E	0.4650	50/50	0.4650
960941	AF2-385 C	9.7407	50/50	9.7407
960942	AF2-385 E	5.5428	50/50	5.5428
960961	AF2-387 C O1	21.7542	50/50	21.7542
960962	AF2-387 E O1	10.9098	50/50	10.9098
961181	AF2-409 O1	22.4440	50/50	22.4440
962161	AG1-061 C O2	13.9771	50/50	13.9771
962162	AG1-061 E O2	9.3180	50/50	9.3180
962261	AG1-072	16.3320	50/50	16.3320
962302	AG1-079 E	0.4867	50/50	0.4867
962381	AG1-087 C O2	9.4299	Adder	20.93
962382	AG1-087 E O2	25.4370	Adder	56.46
963001	AG1-149	0.6129	50/50	0.6129
963011	AG1-150	3.6105	Adder	8.01
964551	AG1-318 C	0.0249	Adder	0.06
964552	AG1-318 E	0.0581	Adder	0.13
964962	AG1-360 E	0.8026	Adder	1.78
965321	AG1-397 C	0.3777	Adder	0.84
965322	AG1-397 E	0.5210	Adder	1.16
965611	AG1-429 C O2	3.1865	Adder	7.07
965612	AG1-429 E O2	2.1237	Adder	4.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965821	AG1-450	5.7923	50/50	5.7923
965921	AG1-461 C O2	1.7107	Adder	3.8
965922	AG1-461 E O2	0.9211	Adder	2.04
965951	AG1-464 C O2	1.7512	Adder	3.89
965952	AG1-464 E O2	2.6268	Adder	5.83
966281	AG1-497 C O2	3.9481	Adder	8.76
966282	AG1-497 E O2	1.6920	Adder	3.76
966601	AG1-529 C	3.8100	Adder	8.46
966602	AG1-529 E	2.0336	Adder	4.51
CALDERWOOD	CALDERWOOD	0.0924	Confirmed LTF	0.0924
NY	NY	0.0586	Confirmed LTF	0.0586
PRAIRIE	PRAIRIE	0.4779	Confirmed LTF	0.4779
O-066	O-066	0.4576	Confirmed LTF	0.4576
CHEOAH	CHEOAH	0.0931	Confirmed LTF	0.0931
COTTONWOOD	COTTONWOOD	0.3906	Confirmed LTF	0.3906
G-007	G-007	0.0378	Confirmed LTF	0.0378
HAMLET	HAMLET	0.1091	Confirmed LTF	0.1091
GIBSON	GIBSON	0.1010	Confirmed LTF	0.1010
BLUEG	BLUEG	0.3212	Confirmed LTF	0.3212
TRIMBLE	TRIMBLE	0.1030	Confirmed LTF	0.1030
CATAWBA	CATAWBA	0.0658	Confirmed LTF	0.0658

13.5.13 Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
174313297	232112	FELTON	DP&L	232110	CHESWOLD	DP&L	1	DPL_P4-2_DP11	breaker	242.0	116.78	118.52	DC	4.25

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
231940	T-011	0.0849	50/50	0.0849
232405	W1-003 E	1.2883	Adder	1.52
232407	W1-004 E	1.2883	Adder	1.52
232409	W1-005 E	1.2883	Adder	1.52
232411	W1-006 E	1.2883	Adder	1.52
232412	X1-032 E	0.4891	50/50	0.4891
232418	X3-008 E	0.9043	Adder	1.06
232427	Y1-080 E	0.1924	Adder	0.23
232428	Y3-058 C	0.1105	50/50	0.1105
232429	Y3-058 E	0.7499	50/50	0.7499
232432	Z2-076 C	0.0799	50/50	0.0799
232433	Z2-076 E	0.2552	50/50	0.2552
232434	Z2-077 C	0.0799	50/50	0.0799
232435	Z2-077 E	0.2552	50/50	0.2552
232851	DUP-SFR1	1.7360	50/50	1.7360
232905	BAYVIEW1	0.2411	50/50	0.2411
232916	OH NUG5	0.6985	50/50	0.6985
232920	IR10	0.3219	50/50	0.3219
232921	TASLEY2G	0.4642	50/50	0.4642
232922	MR3 (Deactivation : 01/06/2021)	4.9081	Adder	5.77
232926	CRISFLD1	0.1929	50/50	0.1929
233911	AB1-137 C (Withdrawn : 12/07/2020)	0.0843	50/50	0.0843
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2291	50/50	0.2291
233923	AA1-102 C	1.0996	50/50	1.0996
293670	O-025 C	0.1187	50/50	0.1187
917081	CHERRYDALE C	0.1466	50/50	0.1466
917082	CHERRYDALE E	1.5159	50/50	1.5159
918835	AA1-102 E	11.3720	50/50	11.3720
919831	AA2-069 (Suspended)	21.7014	Adder	25.53
924681	AB2-120 C	3.9477	Adder	4.64
924682	AB2-120 E	6.4410	Adder	7.58
924781	AB2-130 C O1	4.7555	50/50	4.7555
924782	AB2-130 E O1	7.7590	50/50	7.7590
924831	AB2-136 C	2.0601	Adder	2.42
924832	AB2-136 E	2.1848	Adder	2.57
925151	AB2-172 C	1.3857	Adder	1.63
925152	AB2-172 E	2.2608	Adder	2.66
925261	AB2-180 C	1.7210	50/50	1.7210
925262	AB2-180 E	0.7376	50/50	0.7376

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927031	AC1-190 C	2.6156	Adder	3.08
927032	AC1-190 E	1.1210	Adder	1.32
927191	AC1-213 C	0.4012	50/50	0.4012
927192	AC1-213 E	0.2633	50/50	0.2633
930201	AB1-056 C	6.6137	Adder	7.78
930202	AB1-056 E	18.8346	Adder	22.16
932161	AC2-023 C	2.7325	Adder	3.21
932162	AC2-023 E	1.9901	Adder	2.34
933641	AC2-186 C	2.8031	50/50	2.8031
933642	AC2-186 E	4.5734	50/50	4.5734
938651	AE1-087 C	1.1669	Adder	1.37
938652	AE1-087 E	0.2917	Adder	0.34
938895	AE1-117 C	6.0998	50/50	6.0998
938896	AE1-117 E	16.2662	50/50	16.2662
939151	AE1-145	2.4452	50/50	2.4452
942441	AE2-257 C	4.1735	50/50	4.1735
942442	AE2-257 E	11.0029	50/50	11.0029
943361	AF1-007 C	0.1951	Adder	0.23
943362	AF1-007 E	0.5546	Adder	0.65
945661	AF1-231 C	0.7896	Adder	0.93
945662	AF1-231 E	1.1844	Adder	1.39
945791	AF1-244	0.9782	50/50	0.9782
945931	AF1-258	0.3934	50/50	0.3934
957611	AF2-055 C	4.2787	50/50	4.2787
957612	AF2-055 E	1.8338	50/50	1.8338
957661	AF2-060	1.1003	50/50	1.1003
957671	AF2-061 O1	4.8904	50/50	4.8904
959021	AF2-193 C	12.2209	Adder	14.38
959022	AF2-193 E	32.9657	Adder	38.78
959031	AF2-194 C	12.2209	Adder	14.38
959032	AF2-194 E	32.9657	Adder	38.78
959051	AF2-196 C	1.1382	50/50	1.1382
959052	AF2-196 E	2.6559	50/50	2.6559
959161	AF2-207 C O1	2.6754	50/50	2.6754
959162	AF2-207 E O1	4.0132	50/50	4.0132
959571	AF2-248 C	0.4420	50/50	0.4420
959572	AF2-248 E	0.4940	50/50	0.4940
959581	AF2-249 C	0.0780	50/50	0.0780
959582	AF2-249 E	0.3120	50/50	0.3120
959591	AF2-250 C	0.1430	50/50	0.1430
959592	AF2-250 E	0.1105	50/50	0.1105
960341	AF2-325 C	0.3337	Adder	0.39
960342	AF2-325 E	0.4608	Adder	0.54
960671	AF2-358 C O1	5.5911	Adder	6.58
960672	AF2-358 E O1	3.7274	Adder	4.39
960871	AF2-378 C	0.0904	Adder	0.11
960872	AF2-378 E	0.1254	Adder	0.15
960881	AF2-379 C	0.2022	50/50	0.2022
960882	AF2-379 E	0.2787	50/50	0.2787
960941	AF2-385 C	6.3435	50/50	6.3435
960942	AF2-385 E	3.6097	50/50	3.6097
961181	AF2-409 O1	10.3420	Adder	12.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962161	AG1-061 C O2	8.1549	50/50	8.1549
962162	AG1-061 E O2	5.4366	50/50	5.4366
962381	AG1-087 C O2	5.7180	Adder	12.69
962382	AG1-087 E O2	15.4242	Adder	34.24
963001	AG1-149	0.3668	50/50	0.3668
963011	AG1-150	4.8904	50/50	4.8904
964551	AG1-318 C	0.0381	50/50	0.0381
964552	AG1-318 E	0.0890	50/50	0.0890
964962	AG1-360 E	1.0699	50/50	1.0699
965321	AG1-397 C	0.5272	50/50	0.5272
965322	AG1-397 E	0.7272	50/50	0.7272
965611	AG1-429 C O2	4.3105	50/50	4.3105
965612	AG1-429 E O2	2.8729	50/50	2.8729
965821	AG1-450	1.2138	Adder	2.69
965921	AG1-461 C O2	2.7628	50/50	2.7628
965922	AG1-461 E O2	1.4876	50/50	1.4876
965951	AG1-464 C O2	2.9506	50/50	2.9506
965952	AG1-464 E O2	4.4259	50/50	4.4259
966281	AG1-497 C O2	2.1422	Adder	4.76
966282	AG1-497 E O2	0.9181	Adder	2.04
966601	AG1-529 C	10.0607	50/50	10.0607
966602	AG1-529 E	5.3698	50/50	5.3698
CALDERWOOD	CALDERWOOD	0.0328	Confirmed LTF	0.0328
NY	NY	0.0343	Confirmed LTF	0.0343
PRAIRIE	PRAIRIE	0.1705	Confirmed LTF	0.1705
O-066	O-066	0.4038	Confirmed LTF	0.4038
CHEOAH	CHEOAH	0.0330	Confirmed LTF	0.0330
COTTONWOOD	COTTONWOOD	0.1386	Confirmed LTF	0.1386
G-007	G-007	0.0609	Confirmed LTF	0.0609
HAMLET	HAMLET	0.0381	Confirmed LTF	0.0381
GIBSON	GIBSON	0.0360	Confirmed LTF	0.0360
BLUEG	BLUEG	0.1146	Confirmed LTF	0.1146
TRIMBLE	TRIMBLE	0.0367	Confirmed LTF	0.0367
CATAWBA	CATAWBA	0.0231	Confirmed LTF	0.0231

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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
174313268	232114	SHARNGTN	DP&L	232112	FELTON	DP&L	1	DPL_P4-2_DP11	breaker	242.0	125.5	127.24	DC	4.25

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
231940	T-011	0.0849	50/50	0.0849
232405	W1-003 E	1.2883	Adder	1.52
232407	W1-004 E	1.2883	Adder	1.52
232409	W1-005 E	1.2883	Adder	1.52
232411	W1-006 E	1.2883	Adder	1.52
232412	X1-032 E	0.4891	50/50	0.4891
232418	X3-008 E	0.9043	Adder	1.06
232427	Y1-080 E	0.1924	Adder	0.23
232428	Y3-058 C	0.1105	50/50	0.1105
232429	Y3-058 E	0.7499	50/50	0.7499
232432	Z2-076 C	0.0799	50/50	0.0799
232433	Z2-076 E	0.2552	50/50	0.2552
232434	Z2-077 C	0.0799	50/50	0.0799
232435	Z2-077 E	0.2552	50/50	0.2552
232851	DUP-SFR1	1.7360	50/50	1.7360
232905	BAYVIEW1	0.2411	50/50	0.2411
232916	OH NUG5	0.6985	50/50	0.6985
232920	IR10	0.3219	50/50	0.3219
232921	TASLEY2G	0.4642	50/50	0.4642
232922	MR3 (Deactivation : 01/06/2021)	4.9081	Adder	5.77
232926	CRISFLD1	0.1929	50/50	0.1929
233911	AB1-137 C (Withdrawn : 12/07/2020)	0.0843	50/50	0.0843
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2291	50/50	0.2291
233923	AA1-102 C	1.0996	50/50	1.0996
293670	O-025 C	0.1187	50/50	0.1187
917081	CHERRYDALE C	0.1466	50/50	0.1466
917082	CHERRYDALE E	1.5159	50/50	1.5159
918835	AA1-102 E	11.3720	50/50	11.3720
919831	AA2-069 (Suspended)	21.7014	Adder	25.53
924681	AB2-120 C	3.9477	Adder	4.64
924682	AB2-120 E	6.4410	Adder	7.58
924781	AB2-130 C O1	4.7555	50/50	4.7555
924782	AB2-130 E O1	7.7590	50/50	7.7590
924831	AB2-136 C	2.0601	Adder	2.42
924832	AB2-136 E	2.1848	Adder	2.57
925151	AB2-172 C	1.3857	Adder	1.63
925152	AB2-172 E	2.2608	Adder	2.66
925261	AB2-180 C	1.7210	50/50	1.7210
925262	AB2-180 E	0.7376	50/50	0.7376

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927031	AC1-190 C	2.6156	Adder	3.08
927032	AC1-190 E	1.1210	Adder	1.32
927191	AC1-213 C	0.4012	50/50	0.4012
927192	AC1-213 E	0.2633	50/50	0.2633
930201	AB1-056 C	6.6137	Adder	7.78
930202	AB1-056 E	18.8346	Adder	22.16
932161	AC2-023 C	2.7325	Adder	3.21
932162	AC2-023 E	1.9901	Adder	2.34
933641	AC2-186 C	2.8031	50/50	2.8031
933642	AC2-186 E	4.5734	50/50	4.5734
938651	AE1-087 C	1.1669	Adder	1.37
938652	AE1-087 E	0.2917	Adder	0.34
938895	AE1-117 C	6.0998	50/50	6.0998
938896	AE1-117 E	16.2662	50/50	16.2662
939151	AE1-145	2.4452	50/50	2.4452
942441	AE2-257 C	4.1735	50/50	4.1735
942442	AE2-257 E	11.0029	50/50	11.0029
943361	AF1-007 C	0.1951	Adder	0.23
943362	AF1-007 E	0.5546	Adder	0.65
945661	AF1-231 C	0.7896	Adder	0.93
945662	AF1-231 E	1.1844	Adder	1.39
945791	AF1-244	0.9782	50/50	0.9782
945931	AF1-258	0.3934	50/50	0.3934
957611	AF2-055 C	4.2787	50/50	4.2787
957612	AF2-055 E	1.8338	50/50	1.8338
957661	AF2-060	1.1003	50/50	1.1003
957671	AF2-061 O1	4.8904	50/50	4.8904
959021	AF2-193 C	12.2209	Adder	14.38
959022	AF2-193 E	32.9657	Adder	38.78
959031	AF2-194 C	12.2209	Adder	14.38
959032	AF2-194 E	32.9657	Adder	38.78
959051	AF2-196 C	1.1382	50/50	1.1382
959052	AF2-196 E	2.6559	50/50	2.6559
959161	AF2-207 C O1	2.6754	50/50	2.6754
959162	AF2-207 E O1	4.0132	50/50	4.0132
959571	AF2-248 C	0.4420	50/50	0.4420
959572	AF2-248 E	0.4940	50/50	0.4940
959581	AF2-249 C	0.0780	50/50	0.0780
959582	AF2-249 E	0.3120	50/50	0.3120
959591	AF2-250 C	0.1430	50/50	0.1430
959592	AF2-250 E	0.1105	50/50	0.1105
960341	AF2-325 C	0.3337	Adder	0.39
960342	AF2-325 E	0.4608	Adder	0.54
960671	AF2-358 C O1	5.5911	Adder	6.58
960672	AF2-358 E O1	3.7274	Adder	4.39
960871	AF2-378 C	0.0904	Adder	0.11
960872	AF2-378 E	0.1254	Adder	0.15
960881	AF2-379 C	0.2022	50/50	0.2022
960882	AF2-379 E	0.2787	50/50	0.2787
960941	AF2-385 C	6.3435	50/50	6.3435
960942	AF2-385 E	3.6097	50/50	3.6097
961181	AF2-409 O1	10.3420	Adder	12.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962161	AG1-061 C O2	8.1549	50/50	8.1549
962162	AG1-061 E O2	5.4366	50/50	5.4366
962381	AG1-087 C O2	5.7180	Adder	12.69
962382	AG1-087 E O2	15.4242	Adder	34.24
963001	AG1-149	0.3668	50/50	0.3668
963011	AG1-150	4.8904	50/50	4.8904
964551	AG1-318 C	0.0381	50/50	0.0381
964552	AG1-318 E	0.0890	50/50	0.0890
964962	AG1-360 E	1.0699	50/50	1.0699
965321	AG1-397 C	0.5272	50/50	0.5272
965322	AG1-397 E	0.7272	50/50	0.7272
965611	AG1-429 C O2	4.3105	50/50	4.3105
965612	AG1-429 E O2	2.8729	50/50	2.8729
965821	AG1-450	1.2138	Adder	2.69
965921	AG1-461 C O2	2.7628	50/50	2.7628
965922	AG1-461 E O2	1.4876	50/50	1.4876
965951	AG1-464 C O2	2.9506	50/50	2.9506
965952	AG1-464 E O2	4.4259	50/50	4.4259
966281	AG1-497 C O2	2.1422	Adder	4.76
966282	AG1-497 E O2	0.9181	Adder	2.04
966601	AG1-529 C	10.0607	50/50	10.0607
966602	AG1-529 E	5.3698	50/50	5.3698
CALDERWOOD	CALDERWOOD	0.0328	Confirmed LTF	0.0328
NY	NY	0.0343	Confirmed LTF	0.0343
PRAIRIE	PRAIRIE	0.1705	Confirmed LTF	0.1705
O-066	O-066	0.4038	Confirmed LTF	0.4038
CHEOAH	CHEOAH	0.0330	Confirmed LTF	0.0330
COTTONWOOD	COTTONWOOD	0.1386	Confirmed LTF	0.1386
G-007	G-007	0.0609	Confirmed LTF	0.0609
HAMLET	HAMLET	0.0381	Confirmed LTF	0.0381
GIBSON	GIBSON	0.0360	Confirmed LTF	0.0360
BLUEG	BLUEG	0.1146	Confirmed LTF	0.1146
TRIMBLE	TRIMBLE	0.0367	Confirmed LTF	0.0367
CATAWBA	CATAWBA	0.0231	Confirmed LTF	0.0231

13.5.15 Index 15

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313332	232116	VIENN138	DP&L	232005	VIENNA	DP&L	1	DPL_P4-2_DPIR235	breaker	530.0	123.92	124.58	DC	7.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	1.0628	50/50	1.0628
232405	W1-003 E	6.2523	50/50	6.2523
232406	W1-004 C	1.0628	50/50	1.0628
232407	W1-004 E	6.2523	50/50	6.2523
232408	W1-005 C	1.0628	50/50	1.0628
232409	W1-005 E	6.2523	50/50	6.2523
232410	W1-006 C	1.0628	50/50	1.0628
232411	W1-006 E	6.2523	50/50	6.2523
232412	X1-032 E	2.0394	50/50	2.0394
232418	X3-008 E	3.4342	Adder	4.04
232427	Y1-080 E	0.7332	Adder	0.86
232429	Y3-058 E	2.1745	Adder	2.56
232433	Z2-076 E	0.3745	Adder	0.44
232435	Z2-077 E	0.3745	Adder	0.44
232851	DUP-SFR1	1.8333	Adder	2.16
232907	VN8	13.9753	50/50	13.9753
232912	OH NUG1	2.8805	50/50	2.8805
232914	OH NUG3	2.8805	50/50	2.8805
232915	OH NUG4	2.8805	50/50	2.8805
232916	OH NUG5	2.8805	50/50	2.8805
232917	OH NUG6	2.8677	50/50	2.8677
232926	CRISFLD1	0.8065	50/50	0.8065
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2839	Adder	0.33
233923	AA1-102 C	4.5971	50/50	4.5971
917082	CHERRYDALE E	5.3058	Adder	6.24
918835	AA1-102 E	47.5416	50/50	47.5416
924681	AB2-120 C	16.2650	Adder	19.14
924682	AB2-120 E	26.5376	Adder	31.22
924781	AB2-130 C O1	7.8851	Adder	9.28
924782	AB2-130 E O1	12.8651	Adder	15.14
924831	AB2-136 C	7.8407	Adder	9.22
924832	AB2-136 E	8.3149	Adder	9.78
925151	AB2-172 C	5.2622	Adder	6.19
925152	AB2-172 E	8.5856	Adder	10.1
925261	AB2-180 C	4.9907	Adder	5.87
925262	AB2-180 E	2.1389	Adder	2.52
927031	AC1-190 C	9.9371	Adder	11.69
927032	AC1-190 E	4.2588	Adder	5.01
927191	AC1-213 C	1.1266	Adder	1.33
927192	AC1-213 E	0.7393	Adder	0.87
930201	AB1-056 C	8.6221	Adder	10.14

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	24.5542	Adder	28.89
932161	AC2-023 C	9.5242	Adder	11.2
932162	AC2-023 E	6.9365	Adder	8.16
938651	AE1-087 C	4.4313	Adder	5.21
938652	AE1-087 E	1.1078	Adder	1.3
938895	AE1-117 C	7.5876	Adder	8.93
938896	AE1-117 E	20.2335	Adder	23.8
939151	AE1-145	8.5383	Adder	10.05
942441	AE2-257 C	5.0706	Adder	5.97
942442	AE2-257 E	13.3679	Adder	15.73
943361	AF1-007 C	0.2544	Adder	0.3
943362	AF1-007 E	0.7230	Adder	0.85
945661	AF1-231 C	3.2560	Adder	3.83
945662	AF1-231 E	4.8840	Adder	5.75
945791	AF1-244	4.0896	50/50	4.0896
945931	AF1-258	1.1407	Adder	1.34
957611	AF2-055 C	14.9762	Adder	17.62
957612	AF2-055 E	6.4184	Adder	7.55
957661	AF2-060	3.8422	Adder	4.52
957671	AF2-061 O1	17.0765	Adder	20.09
959021	AF2-193 C	15.9321	Adder	18.74
959022	AF2-193 E	42.9766	Adder	50.56
959031	AF2-194 C	15.9321	Adder	18.74
959032	AF2-194 E	42.9766	Adder	50.56
959051	AF2-196 C	1.3829	Adder	1.63
959052	AF2-196 E	3.2267	Adder	3.8
959161	AF2-207 C O1	6.3909	Adder	7.52
959162	AF2-207 E O1	9.5863	Adder	11.28
959571	AF2-248 C	1.1220	Adder	1.32
959572	AF2-248 E	1.2540	Adder	1.48
959581	AF2-249 C	0.1980	Adder	0.23
959582	AF2-249 E	0.7920	Adder	0.93
959591	AF2-250 C	0.3630	Adder	0.43
959592	AF2-250 E	0.2805	Adder	0.33
960341	AF2-325 C	1.2689	Adder	1.49
960342	AF2-325 E	1.7523	Adder	2.06
960671	AF2-358 C O1	21.3170	Adder	25.08
960672	AF2-358 E O1	14.2113	Adder	16.72
960871	AF2-378 C	0.3438	Adder	0.4
960872	AF2-378 E	0.4769	Adder	0.56
960881	AF2-379 C	0.6719	Adder	0.79
960882	AF2-379 E	0.9259	Adder	1.09
960941	AF2-385 C	15.1530	Adder	17.83
960942	AF2-385 E	8.6226	Adder	10.14
961181	AF2-409 O1	57.8960	50/50	57.8960
962161	AG1-061 C O2	13.8401	Adder	30.72
962162	AG1-061 E O2	9.2267	Adder	20.48
963001	AG1-149	1.5336	50/50	1.5336
963011	AG1-150	9.0505	Adder	20.09
964551	AG1-318 C	0.0258	Adder	0.06
964552	AG1-318 E	0.0601	Adder	0.13
964962	AG1-360 E	4.4611	50/50	4.4611

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965321	AG1-397 C	0.6795	Adder	1.51
965322	AG1-397 E	0.9373	Adder	2.08
965611	AG1-429 C O2	7.9963	Adder	17.75
965612	AG1-429 E O2	5.3294	Adder	11.83
965821	AG1-450	4.6263	Adder	10.27
965921	AG1-461 C O2	2.2590	Adder	5.01
965922	AG1-461 E O2	1.2164	Adder	2.7
CALDERWOOD	CALDERWOOD	0.1208	Confirmed LTF	0.1208
NY	NY	0.1206	Confirmed LTF	0.1206
PRAIRIE	PRAIRIE	0.6277	Confirmed LTF	0.6277
O-066	O-066	1.3864	Confirmed LTF	1.3864
CHEOAH	CHEOAH	0.1216	Confirmed LTF	0.1216
COTTONWOOD	COTTONWOOD	0.5103	Confirmed LTF	0.5103
G-007	G-007	0.2079	Confirmed LTF	0.2079
HAMLET	HAMLET	0.1409	Confirmed LTF	0.1409
GIBSON	GIBSON	0.1327	Confirmed LTF	0.1327
BLUEG	BLUEG	0.4218	Confirmed LTF	0.4218
TRIMBLE	TRIMBLE	0.1352	Confirmed LTF	0.1352
CATAWBA	CATAWBA	0.0851	Confirmed LTF	0.0851

13.5.16 Index 16

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313270	232117	VIENNA 8	DP&L	232116	VIENN138	DP&L	1	DPL_P4-2_DPIR235	breaker	482.0	136.28	137.01	DC	7.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	1.0628	50/50	1.0628
232405	W1-003 E	6.2523	50/50	6.2523
232406	W1-004 C	1.0628	50/50	1.0628
232407	W1-004 E	6.2523	50/50	6.2523
232408	W1-005 C	1.0628	50/50	1.0628
232409	W1-005 E	6.2523	50/50	6.2523
232410	W1-006 C	1.0628	50/50	1.0628
232411	W1-006 E	6.2523	50/50	6.2523
232412	X1-032 E	2.0394	50/50	2.0394
232418	X3-008 E	3.4342	Adder	4.04
232427	Y1-080 E	0.7332	Adder	0.86
232429	Y3-058 E	2.1745	Adder	2.56
232433	Z2-076 E	0.3745	Adder	0.44
232435	Z2-077 E	0.3745	Adder	0.44
232851	DUP-SFR1	1.8333	Adder	2.16
232907	VN8	13.9753	50/50	13.9753
232912	OH NUG1	2.8805	50/50	2.8805
232914	OH NUG3	2.8805	50/50	2.8805
232915	OH NUG4	2.8805	50/50	2.8805
232916	OH NUG5	2.8805	50/50	2.8805
232917	OH NUG6	2.8677	50/50	2.8677
232926	CRISFLD1	0.8065	50/50	0.8065
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.2839	Adder	0.33
233923	AA1-102 C	4.5971	50/50	4.5971
917082	CHERRYDALE E	5.3058	Adder	6.24
918835	AA1-102 E	47.5416	50/50	47.5416
924681	AB2-120 C	16.2650	Adder	19.14
924682	AB2-120 E	26.5376	Adder	31.22
924781	AB2-130 C O1	7.8851	Adder	9.28
924782	AB2-130 E O1	12.8651	Adder	15.14
924831	AB2-136 C	7.8407	Adder	9.22
924832	AB2-136 E	8.3149	Adder	9.78
925151	AB2-172 C	5.2622	Adder	6.19
925152	AB2-172 E	8.5856	Adder	10.1
925261	AB2-180 C	4.9907	Adder	5.87
925262	AB2-180 E	2.1389	Adder	2.52
927031	AC1-190 C	9.9371	Adder	11.69
927032	AC1-190 E	4.2588	Adder	5.01
927191	AC1-213 C	1.1266	Adder	1.33
927192	AC1-213 E	0.7393	Adder	0.87
930201	AB1-056 C	8.6221	Adder	10.14

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930202	AB1-056 E	24.5542	Adder	28.89
932161	AC2-023 C	9.5242	Adder	11.2
932162	AC2-023 E	6.9365	Adder	8.16
938651	AE1-087 C	4.4313	Adder	5.21
938652	AE1-087 E	1.1078	Adder	1.3
938895	AE1-117 C	7.5876	Adder	8.93
938896	AE1-117 E	20.2335	Adder	23.8
939151	AE1-145	8.5383	Adder	10.05
942441	AE2-257 C	5.0706	Adder	5.97
942442	AE2-257 E	13.3679	Adder	15.73
943361	AF1-007 C	0.2544	Adder	0.3
943362	AF1-007 E	0.7230	Adder	0.85
945661	AF1-231 C	3.2560	Adder	3.83
945662	AF1-231 E	4.8840	Adder	5.75
945791	AF1-244	4.0896	50/50	4.0896
945931	AF1-258	1.1407	Adder	1.34
957611	AF2-055 C	14.9762	Adder	17.62
957612	AF2-055 E	6.4184	Adder	7.55
957661	AF2-060	3.8422	Adder	4.52
957671	AF2-061 O1	17.0765	Adder	20.09
959021	AF2-193 C	15.9321	Adder	18.74
959022	AF2-193 E	42.9766	Adder	50.56
959031	AF2-194 C	15.9321	Adder	18.74
959032	AF2-194 E	42.9766	Adder	50.56
959051	AF2-196 C	1.3829	Adder	1.63
959052	AF2-196 E	3.2267	Adder	3.8
959161	AF2-207 C O1	6.3909	Adder	7.52
959162	AF2-207 E O1	9.5863	Adder	11.28
959571	AF2-248 C	1.1220	Adder	1.32
959572	AF2-248 E	1.2540	Adder	1.48
959581	AF2-249 C	0.1980	Adder	0.23
959582	AF2-249 E	0.7920	Adder	0.93
959591	AF2-250 C	0.3630	Adder	0.43
959592	AF2-250 E	0.2805	Adder	0.33
960341	AF2-325 C	1.2689	Adder	1.49
960342	AF2-325 E	1.7523	Adder	2.06
960671	AF2-358 C O1	21.3170	Adder	25.08
960672	AF2-358 E O1	14.2113	Adder	16.72
960871	AF2-378 C	0.3438	Adder	0.4
960872	AF2-378 E	0.4769	Adder	0.56
960881	AF2-379 C	0.6719	Adder	0.79
960882	AF2-379 E	0.9259	Adder	1.09
960941	AF2-385 C	15.1530	Adder	17.83
960942	AF2-385 E	8.6226	Adder	10.14
961181	AF2-409 O1	57.8960	50/50	57.8960
962161	AG1-061 C O2	13.8401	Adder	30.72
962162	AG1-061 E O2	9.2267	Adder	20.48
963001	AG1-149	1.5336	50/50	1.5336
963011	AG1-150	9.0505	Adder	20.09
964551	AG1-318 C	0.0258	Adder	0.06
964552	AG1-318 E	0.0601	Adder	0.13
964962	AG1-360 E	4.4611	50/50	4.4611

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965321	AG1-397 C	0.6795	Adder	1.51
965322	AG1-397 E	0.9373	Adder	2.08
965611	AG1-429 C O2	7.9963	Adder	17.75
965612	AG1-429 E O2	5.3294	Adder	11.83
965821	AG1-450	4.6263	Adder	10.27
965921	AG1-461 C O2	2.2590	Adder	5.01
965922	AG1-461 E O2	1.2164	Adder	2.7
CALDERWOOD	CALDERWOOD	0.1208	Confirmed LTF	0.1208
NY	NY	0.1206	Confirmed LTF	0.1206
PRAIRIE	PRAIRIE	0.6277	Confirmed LTF	0.6277
O-066	O-066	1.3864	Confirmed LTF	1.3864
CHEOAH	CHEOAH	0.1216	Confirmed LTF	0.1216
COTTONWOOD	COTTONWOOD	0.5103	Confirmed LTF	0.5103
G-007	G-007	0.2079	Confirmed LTF	0.2079
HAMLET	HAMLET	0.1409	Confirmed LTF	0.1409
GIBSON	GIBSON	0.1327	Confirmed LTF	0.1327
BLUEG	BLUEG	0.4218	Confirmed LTF	0.4218
TRIMBLE	TRIMBLE	0.1352	Confirmed LTF	0.1352
CATAWBA	CATAWBA	0.0851	Confirmed LTF	0.0851

13.5.17 Index 17

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313161	232215	KENT	DP&L	232812	NMEREDTH	DP&L	1	DPL_P4-2_DP11	breaker	93.0	167.15	168.08	DC	1.91

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	0.5784	Adder	0.68
232407	W1-004 E	0.5784	Adder	0.68
232409	W1-005 E	0.5784	Adder	0.68
232411	W1-006 E	0.5784	Adder	0.68
232412	X1-032 E	0.1854	Adder	0.22
232429	Y3-058 E	0.2707	Adder	0.32
232433	Z2-076 E	0.0994	Adder	0.12
232435	Z2-077 E	0.0994	Adder	0.12
232813	VAUGHN	0.1161	50/50	0.1161
232851	DUP-SFR1	0.6650	Adder	0.78
232899	W1-062	0.8585	50/50	0.8585
232900	DEMECSMY	0.8410	50/50	0.8410
232910	NRG_G1	2.1081	50/50	2.1081
232911	NRG_G2	2.1081	50/50	2.1081
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.0899	Adder	0.11
233931	AB2-179 C	-2.0882	Adder	-2.46
917082	CHERRYDALE E	0.5786	Adder	0.68
918835	AA1-102 E	4.3051	Adder	5.06
923921	AB2-032 C	-1.1696	Adder	-1.38
924681	AB2-120 C	1.7742	Adder	2.09
924682	AB2-120 E	2.8948	Adder	3.41
924781	AB2-130 C O1	1.7892	Adder	2.1
924782	AB2-130 E O1	2.9193	Adder	3.43
924971	AB2-153 C	-0.6536	Adder	-0.77
925261	AB2-180 C	0.6213	Adder	0.73
925262	AB2-180 E	0.2663	Adder	0.31
926131	AC1-091 C	0.4484	Adder	0.53
926132	AC1-091 E	0.7354	Adder	0.87
926141	AC1-092 C	0.4484	Adder	0.53
926142	AC1-092 E	0.7354	Adder	0.87
926151	AC1-093 C	0.4245	Adder	0.5
926152	AC1-093 E	0.6995	Adder	0.82
926161	AC1-094 C	0.3587	Adder	0.42
926162	AC1-094 E	0.5919	Adder	0.7
927191	AC1-213 C	0.1486	Adder	0.17
927192	AC1-213 E	0.0975	Adder	0.11
930201	AB1-056 C	3.1284	Adder	3.68
930202	AB1-056 E	8.9091	Adder	10.48
932161	AC2-023 C	1.1398	Adder	1.34
932162	AC2-023 E	0.8301	Adder	0.98
933631	AC2-185 C	0.9088	Adder	1.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933632	AC2-185 E	1.4828	Adder	1.74
933641	AC2-186 C	2.8454	50/50	2.8454
933642	AC2-186 E	4.6426	50/50	4.6426
938895	AE1-117 C	2.3958	Adder	2.82
938896	AE1-117 E	6.3887	Adder	7.52
939151	AE1-145	0.9338	Adder	1.1
942441	AE2-257 C	1.6443	Adder	1.93
942442	AE2-257 E	4.3349	Adder	5.1
943361	AF1-007 C	0.0923	Adder	0.11
943362	AF1-007 E	0.2623	Adder	0.31
945661	AF1-231 C	0.3547	Adder	0.42
945662	AF1-231 E	0.5320	Adder	0.63
945791	AF1-244	0.3703	Adder	0.44
945931	AF1-258	0.1420	Adder	0.17
945941	AF1-259	-0.0824	Adder	-0.1
957611	AF2-055 C	1.6333	Adder	1.92
957612	AF2-055 E	0.7000	Adder	0.82
957661	AF2-060	0.4202	Adder	0.49
957671	AF2-061 O1	1.8676	Adder	2.2
959021	AF2-193 C	5.7807	Adder	6.8
959022	AF2-193 E	15.5934	Adder	18.35
959031	AF2-194 C	5.7807	Adder	6.8
959032	AF2-194 E	15.5934	Adder	18.35
959051	AF2-196 C	0.4484	Adder	0.53
959052	AF2-196 E	1.0464	Adder	1.23
959161	AF2-207 C O1	0.9997	Adder	1.18
959162	AF2-207 E O1	1.4996	Adder	1.76
959571	AF2-248 C	0.1646	Adder	0.19
959572	AF2-248 E	0.1840	Adder	0.22
959581	AF2-249 C	0.0291	Adder	0.03
959582	AF2-249 E	0.1162	Adder	0.14
959591	AF2-250 C	0.0533	Adder	0.06
959592	AF2-250 E	0.0412	Adder	0.05
960881	AF2-379 C	0.0758	Adder	0.09
960882	AF2-379 E	0.1044	Adder	0.12
960941	AF2-385 C	2.3704	Adder	2.79
960942	AF2-385 E	1.3488	Adder	1.59
961181	AF2-409 O1	4.4200	Adder	5.2
962161	AG1-061 C O2	1.6039	Adder	3.56
962162	AG1-061 E O2	1.0693	Adder	2.37
962262	AG1-072 BAT	1.5911	Merchant Transmission	1.5911
962381	AG1-087 C O2	2.8987	Adder	6.43
962382	AG1-087 E O2	7.8191	Adder	17.36
963001	AG1-149	0.0736	Adder	0.16
963011	AG1-150	0.9898	Adder	2.2
964551	AG1-318 C	0.0079	Adder	0.02
964552	AG1-318 E	0.0185	Adder	0.04
964962	AG1-360 E	0.2150	Adder	0.48
965321	AG1-397 C	0.1050	Adder	0.23
965322	AG1-397 E	0.1448	Adder	0.32
965611	AG1-429 C O2	0.8721	Adder	1.94
965612	AG1-429 E O2	0.5812	Adder	1.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965921	AG1-461 C O2	0.5581	Adder	1.24
965922	AG1-461 E O2	0.3005	Adder	0.67
965951	AG1-464 C O2	2.9952	50/50	2.9952
965952	AG1-464 E O2	4.4928	50/50	4.4928
966601	AG1-529 C	1.7507	Adder	3.89
966602	AG1-529 E	0.9344	Adder	2.07
G-007A	G-007A	0.0048	Confirmed LTF	0.0048
CALDERWOOD	CALDERWOOD	0.0318	Confirmed LTF	0.0318
NY	NY	0.0155	Confirmed LTF	0.0155
PRAIRIE	PRAIRIE	0.1653	Confirmed LTF	0.1653
O-066	O-066	0.0673	Confirmed LTF	0.0673
CHEOAH	CHEOAH	0.0320	Confirmed LTF	0.0320
COTTONWOOD	COTTONWOOD	0.1344	Confirmed LTF	0.1344
HAMLET	HAMLET	0.0375	Confirmed LTF	0.0375
GIBSON	GIBSON	0.0344	Confirmed LTF	0.0344
BLUEG	BLUEG	0.1094	Confirmed LTF	0.1094
TRIMBLE	TRIMBLE	0.0351	Confirmed LTF	0.0351
CATAWBA	CATAWBA	0.0228	Confirmed LTF	0.0228

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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
174313212	232230	TRAP ALT	DP&L	232232	TRAPPETP	DP&L	1	DPL_P4-2_DP11	breaker	173.0	153.36	154.16	DC	3.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.2229	50/50	0.2229
232405	W1-003 E	1.3113	50/50	1.3113
232406	W1-004 C	0.2229	50/50	0.2229
232407	W1-004 E	1.3113	50/50	1.3113
232408	W1-005 C	0.2229	50/50	0.2229
232409	W1-005 E	1.3113	50/50	1.3113
232410	W1-006 C	0.2229	50/50	0.2229
232411	W1-006 E	1.3113	50/50	1.3113
232412	X1-032 E	0.4404	50/50	0.4404
232417	X3-008 C	0.4489	50/50	0.4489
232418	X3-008 E	4.6428	50/50	4.6428
232426	Y1-080 FULL	0.0495	50/50	0.0495
232427	Y1-080 E	0.5151	50/50	0.5151
232428	Y3-058 C	0.1289	50/50	0.1289
232429	Y3-058 E	0.8745	50/50	0.8745
232433	Z2-076 E	0.1416	Adder	0.17
232435	Z2-077 E	0.1416	Adder	0.17
232851	DUP-SFR1	0.7568	Adder	0.89
232905	BAYVIEW1	0.2081	50/50	0.2081
232907	VN8	3.3408	50/50	3.3408
232915	OH NUG4	0.6031	50/50	0.6031
232916	OH NUG5	0.6031	50/50	0.6031
232919	VN10	0.3728	50/50	0.3728
232921	TASLEY2G	0.4008	50/50	0.4008
232926	CRISFLD1	0.1754	50/50	0.1754
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.1156	Adder	0.14
233923	AA1-102 C	0.9996	50/50	0.9996
293670	O-025 C	0.1185	50/50	0.1185
917081	CHERRYDALE C	0.1265	50/50	0.1265
917082	CHERRYDALE E	1.3087	50/50	1.3087
918835	AA1-102 E	10.3379	50/50	10.3379
924681	AB2-120 C	3.3921	Adder	3.99
924682	AB2-120 E	5.5346	Adder	6.51
924781	AB2-130 C O1	3.6014	50/50	3.6014
924782	AB2-130 E O1	5.8761	50/50	5.8761
924831	AB2-136 C	7.5466	50/50	7.5466
924832	AB2-136 E	8.0031	50/50	8.0031
925151	AB2-172 C	7.1140	50/50	7.1140
925152	AB2-172 E	11.6070	50/50	11.6070
925261	AB2-180 C	2.0070	50/50	2.0070
925262	AB2-180 E	0.8602	50/50	0.8602

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927031	AC1-190 C	12.6686	50/50	12.6686
927032	AC1-190 E	5.4294	50/50	5.4294
927191	AC1-213 C	0.4007	50/50	0.4007
927192	AC1-213 E	0.2630	50/50	0.2630
930201	AB1-056 C	3.8488	Adder	4.53
930202	AB1-056 E	10.9606	Adder	12.89
932161	AC2-023 C	4.1181	50/50	4.1181
932162	AC2-023 E	2.9992	50/50	2.9992
938651	AE1-087 C	5.9907	50/50	5.9907
938652	AE1-087 E	1.4977	50/50	1.4977
938895	AE1-117 C	3.0910	Adder	3.64
938896	AE1-117 E	8.2427	Adder	9.7
939151	AE1-145	1.7894	Adder	2.11
942441	AE2-257 C	2.1038	Adder	2.48
942442	AE2-257 E	5.5463	Adder	6.53
943361	AF1-007 C	0.1136	Adder	0.13
943362	AF1-007 E	0.3227	Adder	0.38
945661	AF1-231 C	0.6817	Adder	0.8
945662	AF1-231 E	1.0226	Adder	1.2
945791	AF1-244	0.8893	50/50	0.8893
945931	AF1-258	0.4588	50/50	0.4588
957611	AF2-055 C	3.6939	50/50	3.6939
957612	AF2-055 E	1.5831	50/50	1.5831
957661	AF2-060	0.8052	Adder	0.95
957671	AF2-061 O1	3.5788	Adder	4.21
959021	AF2-193 C	7.1119	Adder	8.37
959022	AF2-193 E	19.1841	Adder	22.57
959031	AF2-194 C	7.1119	Adder	8.37
959032	AF2-194 E	19.1841	Adder	22.57
959051	AF2-196 C	0.5738	Adder	0.68
959052	AF2-196 E	1.3388	Adder	1.58
959161	AF2-207 C O1	2.3742	50/50	2.3742
959162	AF2-207 E O1	3.5614	50/50	3.5614
959571	AF2-248 C	0.4098	50/50	0.4098
959572	AF2-248 E	0.4580	50/50	0.4580
959581	AF2-249 C	0.0723	50/50	0.0723
959582	AF2-249 E	0.2893	50/50	0.2893
959591	AF2-250 C	0.1326	50/50	0.1326
959592	AF2-250 E	0.1025	50/50	0.1025
960341	AF2-325 C	1.3834	50/50	1.3834
960342	AF2-325 E	1.9105	50/50	1.9105
960671	AF2-358 C O1	14.0592	50/50	14.0592
960672	AF2-358 E O1	9.3728	50/50	9.3728
960871	AF2-378 C	0.3506	50/50	0.3506
960872	AF2-378 E	0.4864	50/50	0.4864
960881	AF2-379 C	0.1928	50/50	0.1928
960882	AF2-379 E	0.2658	50/50	0.2658
960941	AF2-385 C	5.6294	50/50	5.6294
960942	AF2-385 E	3.2033	50/50	3.2033
961181	AF2-409 O1	13.8400	50/50	13.8400
962161	AG1-061 C O2	8.0257	50/50	8.0257
962162	AG1-061 E O2	5.3505	50/50	5.3505

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962262	AG1-072 BAT	1.4119	Merchant Transmission	1.4119
962381	AG1-087 C O2	2.7518	Adder	6.11
962382	AG1-087 E O2	7.4229	Adder	16.48
963001	AG1-149	0.3335	50/50	0.3335
963011	AG1-150	1.8968	Adder	4.21
964551	AG1-318 C	0.0104	Adder	0.02
964552	AG1-318 E	0.0242	Adder	0.05
964962	AG1-360 E	0.9634	50/50	0.9634
965321	AG1-397 C	0.4754	50/50	0.4754
965322	AG1-397 E	0.6557	50/50	0.6557
965611	AG1-429 C O2	3.7213	50/50	3.7213
965612	AG1-429 E O2	2.4802	50/50	2.4802
965821	AG1-450	6.1320	50/50	6.1320
965921	AG1-461 C O2	0.9014	Adder	2.0
965922	AG1-461 E O2	0.4854	Adder	1.08
966601	AG1-529 C	1.1336	Adder	2.52
966602	AG1-529 E	0.6051	Adder	1.34
CALDERWOOD	CALDERWOOD	0.0333	Confirmed LTF	0.0333
NY	NY	0.0238	Confirmed LTF	0.0238
PRAIRIE	PRAIRIE	0.1731	Confirmed LTF	0.1731
O-066	O-066	0.2154	Confirmed LTF	0.2154
CHEOAH	CHEOAH	0.0335	Confirmed LTF	0.0335
COTTONWOOD	COTTONWOOD	0.1407	Confirmed LTF	0.1407
G-007	G-007	0.0263	Confirmed LTF	0.0263
HAMLET	HAMLET	0.0393	Confirmed LTF	0.0393
GIBSON	GIBSON	0.0366	Confirmed LTF	0.0366
BLUEG	BLUEG	0.1163	Confirmed LTF	0.1163
TRIMBLE	TRIMBLE	0.0373	Confirmed LTF	0.0373
CATAWBA	CATAWBA	0.0234	Confirmed LTF	0.0234

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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
174313210	232232	TRAPPETP	DP&L	232227	EASTN_69	DP&L	1	DPL_P4-2_DP11	breaker	173.0	154.49	155.31	DC	3.19

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.2308	50/50	0.2308
232405	W1-003 E	1.3577	50/50	1.3577
232406	W1-004 C	0.2308	50/50	0.2308
232407	W1-004 E	1.3577	50/50	1.3577
232408	W1-005 C	0.2308	50/50	0.2308
232409	W1-005 E	1.3577	50/50	1.3577
232410	W1-006 C	0.2308	50/50	0.2308
232411	W1-006 E	1.3577	50/50	1.3577
232412	X1-032 E	0.4560	50/50	0.4560
232417	X3-008 C	0.4648	50/50	0.4648
232418	X3-008 E	4.8072	50/50	4.8072
232426	Y1-080 FULL	0.0513	50/50	0.0513
232427	Y1-080 E	0.5333	50/50	0.5333
232428	Y3-058 C	0.1335	50/50	0.1335
232429	Y3-058 E	0.9055	50/50	0.9055
232433	Z2-076 E	0.1466	Adder	0.17
232435	Z2-077 E	0.1466	Adder	0.17
232851	DUP-SFR1	0.7835	Adder	0.92
232905	BAYVIEW1	0.2155	50/50	0.2155
232907	VN8	3.4591	50/50	3.4591
232915	OH NUG4	0.6245	50/50	0.6245
232916	OH NUG5	0.6245	50/50	0.6245
232919	VN10	0.3860	50/50	0.3860
232921	TASLEY2G	0.4150	50/50	0.4150
232926	CRISFLD1	0.1816	50/50	0.1816
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.1197	Adder	0.14
233923	AA1-102 C	1.0351	50/50	1.0351
293670	O-025 C	0.1227	50/50	0.1227
917081	CHERRYDALE C	0.1310	50/50	0.1310
917082	CHERRYDALE E	1.3551	50/50	1.3551
918835	AA1-102 E	10.7043	50/50	10.7043
924681	AB2-120 C	3.5123	Adder	4.13
924682	AB2-120 E	5.7306	Adder	6.74
924781	AB2-130 C O1	3.7290	50/50	3.7290
924782	AB2-130 E O1	6.0842	50/50	6.0842
924831	AB2-136 C	7.8140	50/50	7.8140
924832	AB2-136 E	8.2866	50/50	8.2866
925151	AB2-172 C	7.3659	50/50	7.3659
925152	AB2-172 E	12.0181	50/50	12.0181
925261	AB2-180 C	2.0782	50/50	2.0782
925262	AB2-180 E	0.8906	50/50	0.8906

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927031	AC1-190 C	13.1173	50/50	13.1173
927032	AC1-190 E	5.6217	50/50	5.6217
927191	AC1-213 C	0.4149	50/50	0.4149
927192	AC1-213 E	0.2723	50/50	0.2723
930201	AB1-056 C	3.9851	Adder	4.69
930202	AB1-056 E	11.3488	Adder	13.35
932161	AC2-023 C	4.2638	50/50	4.2638
932162	AC2-023 E	3.1054	50/50	3.1054
938651	AE1-087 C	6.2029	50/50	6.2029
938652	AE1-087 E	1.5507	50/50	1.5507
938895	AE1-117 C	3.2004	Adder	3.77
938896	AE1-117 E	8.5343	Adder	10.04
939151	AE1-145	1.8528	Adder	2.18
942441	AE2-257 C	2.1784	Adder	2.56
942442	AE2-257 E	5.7430	Adder	6.76
943361	AF1-007 C	0.1176	Adder	0.14
943362	AF1-007 E	0.3342	Adder	0.39
945661	AF1-231 C	0.7059	Adder	0.83
945662	AF1-231 E	1.0588	Adder	1.25
945791	AF1-244	0.9208	50/50	0.9208
945931	AF1-258	0.4750	50/50	0.4750
957611	AF2-055 C	3.8248	50/50	3.8248
957612	AF2-055 E	1.6392	50/50	1.6392
957661	AF2-060	0.8338	Adder	0.98
957671	AF2-061 O1	3.7057	Adder	4.36
959021	AF2-193 C	7.3637	Adder	8.66
959022	AF2-193 E	19.8635	Adder	23.37
959031	AF2-194 C	7.3637	Adder	8.66
959032	AF2-194 E	19.8635	Adder	23.37
959051	AF2-196 C	0.5941	Adder	0.7
959052	AF2-196 E	1.3862	Adder	1.63
959161	AF2-207 C O1	2.4583	50/50	2.4583
959162	AF2-207 E O1	3.6875	50/50	3.6875
959571	AF2-248 C	0.4243	50/50	0.4243
959572	AF2-248 E	0.4742	50/50	0.4742
959581	AF2-249 C	0.0749	50/50	0.0749
959582	AF2-249 E	0.2995	50/50	0.2995
959591	AF2-250 C	0.1373	50/50	0.1373
959592	AF2-250 E	0.1061	50/50	0.1061
960341	AF2-325 C	1.4325	50/50	1.4325
960342	AF2-325 E	1.9781	50/50	1.9781
960671	AF2-358 C O1	14.5572	50/50	14.5572
960672	AF2-358 E O1	9.7048	50/50	9.7048
960871	AF2-378 C	0.3630	50/50	0.3630
960872	AF2-378 E	0.5036	50/50	0.5036
960881	AF2-379 C	0.1997	50/50	0.1997
960882	AF2-379 E	0.2752	50/50	0.2752
960941	AF2-385 C	5.8287	50/50	5.8287
960942	AF2-385 E	3.3168	50/50	3.3168
961181	AF2-409 O1	14.3300	50/50	14.3300
962161	AG1-061 C O2	8.3096	50/50	8.3096
962162	AG1-061 E O2	5.5398	50/50	5.5398

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962262	AG1-072 BAT	1.4620	Merchant Transmission	1.4620
962381	AG1-087 C O2	2.8493	Adder	6.32
962382	AG1-087 E O2	7.6860	Adder	17.06
963001	AG1-149	0.3453	50/50	0.3453
963011	AG1-150	1.9640	Adder	4.36
964551	AG1-318 C	0.0107	Adder	0.02
964552	AG1-318 E	0.0250	Adder	0.06
964962	AG1-360 E	0.9975	50/50	0.9975
965321	AG1-397 C	0.4922	50/50	0.4922
965322	AG1-397 E	0.6790	50/50	0.6790
965611	AG1-429 C O2	3.8532	50/50	3.8532
965612	AG1-429 E O2	2.5681	50/50	2.5681
965821	AG1-450	6.3492	50/50	6.3492
965921	AG1-461 C O2	0.9334	Adder	2.07
965922	AG1-461 E O2	0.5026	Adder	1.12
966601	AG1-529 C	1.1737	Adder	2.61
966602	AG1-529 E	0.6265	Adder	1.39
CALDERWOOD	CALDERWOOD	0.0343	Confirmed LTF	0.0343
NY	NY	0.0249	Confirmed LTF	0.0249
PRAIRIE	PRAIRIE	0.1782	Confirmed LTF	0.1782
O-066	O-066	0.2221	Confirmed LTF	0.2221
CHEOAH	CHEOAH	0.0345	Confirmed LTF	0.0345
COTTONWOOD	COTTONWOOD	0.1449	Confirmed LTF	0.1449
G-007	G-007	0.0263	Confirmed LTF	0.0263
HAMLET	HAMLET	0.0404	Confirmed LTF	0.0404
GIBSON	GIBSON	0.0377	Confirmed LTF	0.0377
BLUEG	BLUEG	0.1198	Confirmed LTF	0.1198
TRIMBLE	TRIMBLE	0.0384	Confirmed LTF	0.0384
CATAWBA	CATAWBA	0.0242	Confirmed LTF	0.0242

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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
174313174	232233	PRESTON	DP&L	232821	TANYARD	DP&L	1	DPL_P4-2_DP11	breaker	173.0	168.77	169.59	DC	3.19

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.2308	50/50	0.2308
232405	W1-003 E	1.3577	50/50	1.3577
232406	W1-004 C	0.2308	50/50	0.2308
232407	W1-004 E	1.3577	50/50	1.3577
232408	W1-005 C	0.2308	50/50	0.2308
232409	W1-005 E	1.3577	50/50	1.3577
232410	W1-006 C	0.2308	50/50	0.2308
232411	W1-006 E	1.3577	50/50	1.3577
232412	X1-032 E	0.4560	50/50	0.4560
232417	X3-008 C	0.4648	50/50	0.4648
232418	X3-008 E	4.8072	50/50	4.8072
232426	Y1-080 FULL	0.0513	50/50	0.0513
232427	Y1-080 E	0.5333	50/50	0.5333
232428	Y3-058 C	0.1335	50/50	0.1335
232429	Y3-058 E	0.9055	50/50	0.9055
232433	Z2-076 E	0.1466	Adder	0.17
232435	Z2-077 E	0.1466	Adder	0.17
232851	DUP-SFR1	0.7835	Adder	0.92
232905	BAYVIEW1	0.2155	50/50	0.2155
232907	VN8	3.4591	50/50	3.4591
232915	OH NUG4	0.6245	50/50	0.6245
232916	OH NUG5	0.6245	50/50	0.6245
232919	VN10	0.3860	50/50	0.3860
232921	TASLEY2G	0.4150	50/50	0.4150
232926	CRISFLD1	0.1816	50/50	0.1816
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.1197	Adder	0.14
233923	AA1-102 C	1.0351	50/50	1.0351
293670	O-025 C	0.1227	50/50	0.1227
917081	CHERRYDALE C	0.1310	50/50	0.1310
917082	CHERRYDALE E	1.3551	50/50	1.3551
918835	AA1-102 E	10.7043	50/50	10.7043
924681	AB2-120 C	3.5123	Adder	4.13
924682	AB2-120 E	5.7306	Adder	6.74
924781	AB2-130 C O1	3.7290	50/50	3.7290
924782	AB2-130 E O1	6.0842	50/50	6.0842
924831	AB2-136 C	7.8140	50/50	7.8140
924832	AB2-136 E	8.2866	50/50	8.2866
925151	AB2-172 C	7.3659	50/50	7.3659
925152	AB2-172 E	12.0181	50/50	12.0181
925261	AB2-180 C	2.0782	50/50	2.0782
925262	AB2-180 E	0.8906	50/50	0.8906

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927031	AC1-190 C	13.1173	50/50	13.1173
927032	AC1-190 E	5.6217	50/50	5.6217
927191	AC1-213 C	0.4149	50/50	0.4149
927192	AC1-213 E	0.2723	50/50	0.2723
930201	AB1-056 C	3.9851	Adder	4.69
930202	AB1-056 E	11.3488	Adder	13.35
932161	AC2-023 C	4.2638	50/50	4.2638
932162	AC2-023 E	3.1054	50/50	3.1054
938651	AE1-087 C	6.2029	50/50	6.2029
938652	AE1-087 E	1.5507	50/50	1.5507
938895	AE1-117 C	3.2004	Adder	3.77
938896	AE1-117 E	8.5343	Adder	10.04
939151	AE1-145	1.8528	Adder	2.18
942441	AE2-257 C	2.1784	Adder	2.56
942442	AE2-257 E	5.7430	Adder	6.76
943361	AF1-007 C	0.1176	Adder	0.14
943362	AF1-007 E	0.3342	Adder	0.39
945661	AF1-231 C	0.7059	Adder	0.83
945662	AF1-231 E	1.0588	Adder	1.25
945791	AF1-244	0.9208	50/50	0.9208
945931	AF1-258	0.4750	50/50	0.4750
957611	AF2-055 C	3.8248	50/50	3.8248
957612	AF2-055 E	1.6392	50/50	1.6392
957661	AF2-060	0.8338	Adder	0.98
957671	AF2-061 O1	3.7057	Adder	4.36
959021	AF2-193 C	7.3637	Adder	8.66
959022	AF2-193 E	19.8635	Adder	23.37
959031	AF2-194 C	7.3637	Adder	8.66
959032	AF2-194 E	19.8635	Adder	23.37
959051	AF2-196 C	0.5941	Adder	0.7
959052	AF2-196 E	1.3862	Adder	1.63
959161	AF2-207 C O1	2.4583	50/50	2.4583
959162	AF2-207 E O1	3.6875	50/50	3.6875
959571	AF2-248 C	0.4243	50/50	0.4243
959572	AF2-248 E	0.4742	50/50	0.4742
959581	AF2-249 C	0.0749	50/50	0.0749
959582	AF2-249 E	0.2995	50/50	0.2995
959591	AF2-250 C	0.1373	50/50	0.1373
959592	AF2-250 E	0.1061	50/50	0.1061
960341	AF2-325 C	1.4325	50/50	1.4325
960342	AF2-325 E	1.9781	50/50	1.9781
960671	AF2-358 C O1	14.5572	50/50	14.5572
960672	AF2-358 E O1	9.7048	50/50	9.7048
960871	AF2-378 C	0.3630	50/50	0.3630
960872	AF2-378 E	0.5036	50/50	0.5036
960881	AF2-379 C	0.1997	50/50	0.1997
960882	AF2-379 E	0.2752	50/50	0.2752
960941	AF2-385 C	5.8287	50/50	5.8287
960942	AF2-385 E	3.3168	50/50	3.3168
961181	AF2-409 O1	14.3300	50/50	14.3300
962161	AG1-061 C O2	8.3096	50/50	8.3096
962162	AG1-061 E O2	5.5398	50/50	5.5398

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962262	AG1-072 BAT	1.4620	Merchant Transmission	1.4620
962381	AG1-087 C O2	2.8493	Adder	6.32
962382	AG1-087 E O2	7.6860	Adder	17.06
963001	AG1-149	0.3453	50/50	0.3453
963011	AG1-150	1.9640	Adder	4.36
964551	AG1-318 C	0.0107	Adder	0.02
964552	AG1-318 E	0.0250	Adder	0.06
964962	AG1-360 E	0.9975	50/50	0.9975
965321	AG1-397 C	0.4922	50/50	0.4922
965322	AG1-397 E	0.6790	50/50	0.6790
965611	AG1-429 C O2	3.8532	50/50	3.8532
965612	AG1-429 E O2	2.5681	50/50	2.5681
965821	AG1-450	6.3492	50/50	6.3492
965921	AG1-461 C O2	0.9334	Adder	2.07
965922	AG1-461 E O2	0.5026	Adder	1.12
966601	AG1-529 C	1.1737	Adder	2.61
966602	AG1-529 E	0.6265	Adder	1.39
CALDERWOOD	CALDERWOOD	0.0343	Confirmed LTF	0.0343
NY	NY	0.0249	Confirmed LTF	0.0249
PRAIRIE	PRAIRIE	0.1782	Confirmed LTF	0.1782
O-066	O-066	0.2221	Confirmed LTF	0.2221
CHEOAH	CHEOAH	0.0345	Confirmed LTF	0.0345
COTTONWOOD	COTTONWOOD	0.1449	Confirmed LTF	0.1449
G-007	G-007	0.0263	Confirmed LTF	0.0263
HAMLET	HAMLET	0.0404	Confirmed LTF	0.0404
GIBSON	GIBSON	0.0377	Confirmed LTF	0.0377
BLUEG	BLUEG	0.1198	Confirmed LTF	0.1198
TRIMBLE	TRIMBLE	0.0384	Confirmed LTF	0.0384
CATAWBA	CATAWBA	0.0242	Confirmed LTF	0.0242

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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
174103651	232234	TODD	DP&L	232233	PRESTON	DP&L	1	DPL_P4-2_DP12	breaker	93.0	158.6	159.74	DC	2.35

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	0.8498	Adder	1.0
232407	W1-004 E	0.8498	Adder	1.0
232409	W1-005 E	0.8498	Adder	1.0
232411	W1-006 E	0.8498	Adder	1.0
232412	X1-032 E	0.2905	Adder	0.34
232417	X3-008 C	0.4496	50/50	0.4496
232418	X3-008 E	4.6496	50/50	4.6496
232426	Y1-080 FULL	0.0472	50/50	0.0472
232427	Y1-080 E	0.4909	50/50	0.4909
232428	Y3-058 C	0.1099	50/50	0.1099
232429	Y3-058 E	0.7453	50/50	0.7453
232433	Z2-076 E	0.0950	Adder	0.11
232435	Z2-077 E	0.0950	Adder	0.11
232851	DUP-SFR1	0.5554	Adder	0.65
232907	VN8	2.8151	50/50	2.8151
232919	VN10	0.3451	50/50	0.3451
293670	O-025 C	0.0968	50/50	0.0968
917082	CHERRYDALE E	0.8474	Adder	1.0
918835	AA1-102 E	6.8457	Adder	8.05
924681	AB2-120 C	2.5782	Adder	3.03
924682	AB2-120 E	4.2065	Adder	4.95
924781	AB2-130 C O1	2.4303	Adder	2.86
924782	AB2-130 E O1	3.9653	Adder	4.67
924831	AB2-136 C	7.3978	50/50	7.3978
924832	AB2-136 E	7.8453	50/50	7.8453
925151	AB2-172 C	7.1244	50/50	7.1244
925152	AB2-172 E	11.6241	50/50	11.6241
925261	AB2-180 C	1.7105	50/50	1.7105
925262	AB2-180 E	0.7331	50/50	0.7331
927031	AC1-190 C	12.6472	50/50	12.6472
927032	AC1-190 E	5.4203	50/50	5.4203
927191	AC1-213 C	0.3274	50/50	0.3274
927192	AC1-213 E	0.2149	50/50	0.2149
932161	AC2-023 C	3.5873	50/50	3.5873
932162	AC2-023 E	2.6126	50/50	2.6126
938651	AE1-087 C	5.9995	50/50	5.9995
938652	AE1-087 E	1.4999	50/50	1.4999
939151	AE1-145	1.3615	Adder	1.6
945661	AF1-231 C	0.5193	Adder	0.61
945662	AF1-231 E	0.7790	Adder	0.92
945791	AF1-244	0.5889	Adder	0.69
945931	AF1-258	0.3910	50/50	0.3910

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957611	AF2-055 C	2.3919	Adder	2.81
957612	AF2-055 E	1.0251	Adder	1.21
957661	AF2-060	0.6127	Adder	0.72
957671	AF2-061 O1	2.7231	Adder	3.2
959161	AF2-207 C O1	1.6199	Adder	1.91
959162	AF2-207 E O1	2.4298	Adder	2.86
959571	AF2-248 C	0.2815	Adder	0.33
959572	AF2-248 E	0.3147	Adder	0.37
959581	AF2-249 C	0.0497	Adder	0.06
959582	AF2-249 E	0.1987	Adder	0.23
959591	AF2-250 C	0.0911	Adder	0.11
959592	AF2-250 E	0.0704	Adder	0.08
960341	AF2-325 C	1.3681	50/50	1.3681
960342	AF2-325 E	1.8892	50/50	1.8892
960671	AF2-358 C O1	13.3068	50/50	13.3068
960672	AF2-358 E O1	8.8712	50/50	8.8712
960871	AF2-378 C	0.3451	50/50	0.3451
960872	AF2-378 E	0.4788	50/50	0.4788
960881	AF2-379 C	0.1307	Adder	0.15
960882	AF2-379 E	0.1801	Adder	0.21
960941	AF2-385 C	3.8408	Adder	4.52
960942	AF2-385 E	2.1855	Adder	2.57
961181	AF2-409 O1	11.6620	50/50	11.6620
962161	AG1-061 C O2	2.9275	Adder	6.5
962162	AG1-061 E O2	1.9517	Adder	4.33
963001	AG1-149	0.1170	Adder	0.26
963011	AG1-150	1.4432	Adder	3.2
964962	AG1-360 E	0.3368	Adder	0.75
965321	AG1-397 C	0.1686	Adder	0.37
965322	AG1-397 E	0.2326	Adder	0.52
965611	AG1-429 C O2	1.2771	Adder	2.83
965612	AG1-429 E O2	0.8512	Adder	1.89
965821	AG1-450	5.8442	50/50	5.8442
965921	AG1-461 C O2	0.6885	Adder	1.53
965922	AG1-461 E O2	0.3707	Adder	0.82
CALDERWOOD	CALDERWOOD	0.0214	Confirmed LTF	0.0214
NY	NY	0.0188	Confirmed LTF	0.0188
PRAIRIE	PRAIRIE	0.1111	Confirmed LTF	0.1111
O-066	O-066	0.1952	Confirmed LTF	0.1952
CHEOAH	CHEOAH	0.0215	Confirmed LTF	0.0215
COTTONWOOD	COTTONWOOD	0.0903	Confirmed LTF	0.0903
G-007	G-007	0.0273	Confirmed LTF	0.0273
HAMLET	HAMLET	0.0248	Confirmed LTF	0.0248
GIBSON	GIBSON	0.0235	Confirmed LTF	0.0235
BLUEG	BLUEG	0.0746	Confirmed LTF	0.0746
TRIMBLE	TRIMBLE	0.0239	Confirmed LTF	0.0239
CATAWBA	CATAWBA	0.0150	Confirmed LTF	0.0150

13.5.22 Index 22

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
174313216	232241	VIENN_69	DP&L	232234	TODD	DP&L	1	DPL_P4-2_DP11	breaker	143.0	151.28	152.11	DC	2.62

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	0.9498	Adder	1.12
232407	W1-004 E	0.9498	Adder	1.12
232409	W1-005 E	0.9498	Adder	1.12
232411	W1-006 E	0.9498	Adder	1.12
232412	X1-032 E	0.3190	Adder	0.38
232428	Y3-058 C	0.1099	50/50	0.1099
232429	Y3-058 E	0.7452	50/50	0.7452
232433	Z2-076 E	0.1207	Adder	0.14
232435	Z2-077 E	0.1207	Adder	0.14
232851	DUP-SFR1	0.6449	Adder	0.76
232907	VN8	2.8467	50/50	2.8467
232919	VN10	0.3176	50/50	0.3176
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.0985	Adder	0.12
293670	O-025 C	0.1010	50/50	0.1010
917082	CHERRYDALE E	0.9480	Adder	1.12
918835	AA1-102 E	7.4884	Adder	8.81
924681	AB2-120 C	2.8909	Adder	3.4
924682	AB2-120 E	4.7167	Adder	5.55
924781	AB2-130 C O1	2.6085	Adder	3.07
924782	AB2-130 E O1	4.2560	Adder	5.01
925261	AB2-180 C	1.7102	50/50	1.7102
925262	AB2-180 E	0.7330	50/50	0.7330
927191	AC1-213 C	0.3415	50/50	0.3415
927192	AC1-213 E	0.2241	50/50	0.2241
930201	AB1-056 C	3.2806	Adder	3.86
930202	AB1-056 E	9.3425	Adder	10.99
932161	AC2-023 C	3.5089	50/50	3.5089
932162	AC2-023 E	2.5555	50/50	2.5555
938653	AE1-087 BAT	10.0746	50/50	10.0746
938895	AE1-117 C	2.6345	Adder	3.1
938896	AE1-117 E	7.0252	Adder	8.26
939151	AE1-145	1.5249	Adder	1.79
942441	AE2-257 C	1.7932	Adder	2.11
942442	AE2-257 E	4.7276	Adder	5.56
943361	AF1-007 C	0.0968	Adder	0.11
943362	AF1-007 E	0.2751	Adder	0.32
945661	AF1-231 C	0.5809	Adder	0.68
945662	AF1-231 E	0.8714	Adder	1.03
945791	AF1-244	0.6442	Adder	0.76
945931	AF1-258	0.3909	50/50	0.3909
957611	AF2-055 C	2.6757	Adder	3.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957612	AF2-055 E	1.1467	Adder	1.35
957661	AF2-060	0.6862	Adder	0.81
957671	AF2-061 O1	3.0498	Adder	3.59
959021	AF2-193 C	6.0619	Adder	7.13
959022	AF2-193 E	16.3519	Adder	19.24
959031	AF2-194 C	6.0619	Adder	7.13
959032	AF2-194 E	16.3519	Adder	19.24
959051	AF2-196 C	0.4891	Adder	0.58
959052	AF2-196 E	1.1412	Adder	1.34
959161	AF2-207 C O1	2.0231	50/50	2.0231
959162	AF2-207 E O1	3.0346	50/50	3.0346
959571	AF2-248 C	0.3492	50/50	0.3492
959572	AF2-248 E	0.3903	50/50	0.3903
959581	AF2-249 C	0.0616	50/50	0.0616
959582	AF2-249 E	0.2465	50/50	0.2465
959591	AF2-250 C	0.1130	50/50	0.1130
959592	AF2-250 E	0.0873	50/50	0.0873
960671	AF2-358 C O1	2.9738	Adder	3.5
960672	AF2-358 E O1	1.9825	Adder	2.33
960881	AF2-379 C	0.1643	50/50	0.1643
960882	AF2-379 E	0.2265	50/50	0.2265
960941	AF2-385 C	4.7967	50/50	4.7967
960942	AF2-385 E	2.7295	50/50	2.7295
961181	AF2-409 O1	11.7930	50/50	11.7930
962161	AG1-061 C O2	6.8387	50/50	6.8387
962162	AG1-061 E O2	4.5591	50/50	4.5591
963001	AG1-149	0.1280	Adder	0.28
963011	AG1-150	1.6164	Adder	3.59
964551	AG1-318 C	0.0088	Adder	0.02
964552	AG1-318 E	0.0206	Adder	0.05
964962	AG1-360 E	0.3698	Adder	0.82
965321	AG1-397 C	0.1825	Adder	0.41
965322	AG1-397 E	0.2517	Adder	0.56
965611	AG1-429 C O2	1.4287	Adder	3.17
965612	AG1-429 E O2	0.9522	Adder	2.11
965921	AG1-461 C O2	0.7681	Adder	1.7
965922	AG1-461 E O2	0.4136	Adder	0.92
CALDERWOOD	CALDERWOOD	0.0268	Confirmed LTF	0.0268
NY	NY	0.0188	Confirmed LTF	0.0188
PRAIRIE	PRAIRIE	0.1395	Confirmed LTF	0.1395
O-066	O-066	0.1615	Confirmed LTF	0.1615
CHEOAH	CHEOAH	0.0270	Confirmed LTF	0.0270
COTTONWOOD	COTTONWOOD	0.1134	Confirmed LTF	0.1134
G-007	G-007	0.0189	Confirmed LTF	0.0189
HAMLET	HAMLET	0.0318	Confirmed LTF	0.0318
GIBSON	GIBSON	0.0295	Confirmed LTF	0.0295
BLUEG	BLUEG	0.0937	Confirmed LTF	0.0937
TRIMBLE	TRIMBLE	0.0301	Confirmed LTF	0.0301
CATAWBA	CATAWBA	0.0189	Confirmed LTF	0.0189

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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
174103810	232247	DUP-SFRD	DP&L	232824	PINE ST	DP&L	1	DPL_P4-2_DP11	breaker	136.0	103.89	110.19	DC	8.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
231940	T-011	0.1714	50/50	0.1714
232405	W1-003 E	0.8119	Adder	0.96
232407	W1-004 E	0.8119	Adder	0.96
232409	W1-005 E	0.8119	Adder	0.96
232411	W1-006 E	0.8119	Adder	0.96
232412	X1-032 E	0.2793	Adder	0.33
232417	X3-008 C	0.1328	50/50	0.1328
232418	X3-008 E	1.3733	50/50	1.3733
232426	Y1-080 FULL	0.0274	50/50	0.0274
232427	Y1-080 E	0.2853	50/50	0.2853
232428	Y3-058 C	0.1192	50/50	0.1192
232429	Y3-058 E	0.8089	50/50	0.8089
232851	DUP-SFR1	6.0067	50/50	6.0067
232907	VN8	2.5855	50/50	2.5855
232919	VN10	0.2609	50/50	0.2609
293670	O-025 C	0.1225	50/50	0.1225
917082	CHERRYDALE E	0.8108	Adder	0.95
918835	AA1-102 E	6.5928	Adder	7.76
924681	AB2-120 C	2.4584	Adder	2.89
924682	AB2-120 E	4.0110	Adder	4.72
924781	AB2-130 C O1	11.3706	50/50	11.3706
924782	AB2-130 E O1	18.5520	50/50	18.5520
924831	AB2-136 C	3.0849	50/50	3.0849
924832	AB2-136 E	3.2715	50/50	3.2715
925151	AB2-172 C	2.1042	50/50	2.1042
925152	AB2-172 E	3.4332	50/50	3.4332
925261	AB2-180 C	1.8564	50/50	1.8564
925262	AB2-180 E	0.7956	50/50	0.7956
927031	AC1-190 C	3.9613	50/50	3.9613
927032	AC1-190 E	1.6977	50/50	1.6977
927191	AC1-213 C	0.4140	50/50	0.4140
927192	AC1-213 E	0.2717	50/50	0.2717
932161	AC2-023 C	3.5709	50/50	3.5709
932162	AC2-023 E	2.6007	50/50	2.6007
938651	AE1-087 C	1.7720	50/50	1.7720
938652	AE1-087 E	0.4430	50/50	0.4430
939151	AE1-145	1.3056	Adder	1.54
945661	AF1-231 C	0.4958	Adder	0.58
945662	AF1-231 E	0.7437	Adder	0.87
945791	AF1-244	0.5671	Adder	0.67
945931	AF1-258	0.4243	50/50	0.4243
957611	AF2-055 C	2.2887	Adder	2.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957612	AF2-055 E	0.9809	Adder	1.15
957661	AF2-060	0.5875	Adder	0.69
957671	AF2-061 O1	2.6112	Adder	3.07
959161	AF2-207 C O1	3.9328	50/50	3.9328
959162	AF2-207 E O1	5.8992	50/50	5.8992
959571	AF2-248 C	0.5804	50/50	0.5804
959572	AF2-248 E	0.6487	50/50	0.6487
959581	AF2-249 C	0.1024	50/50	0.1024
959582	AF2-249 E	0.4097	50/50	0.4097
959591	AF2-250 C	0.1878	50/50	0.1878
959592	AF2-250 E	0.1451	50/50	0.1451
960341	AF2-325 C	0.5019	50/50	0.5019
960342	AF2-325 E	0.6932	50/50	0.6932
960671	AF2-358 C O1	8.2800	50/50	8.2800
960672	AF2-358 E O1	5.5200	50/50	5.5200
960871	AF2-378 C	0.1356	50/50	0.1356
960872	AF2-378 E	0.1881	50/50	0.1881
960881	AF2-379 C	0.1649	50/50	0.1649
960882	AF2-379 E	0.2272	50/50	0.2272
960941	AF2-385 C	9.3248	50/50	9.3248
960942	AF2-385 E	5.3062	50/50	5.3062
961181	AF2-409 O1	10.7110	50/50	10.7110
962161	AG1-061 C O2	6.6839	50/50	6.6839
962162	AG1-061 E O2	4.4559	50/50	4.4559
963001	AG1-149	0.1127	Adder	0.25
963011	AG1-150	1.3839	Adder	3.07
964962	AG1-360 E	0.3238	Adder	0.72
965321	AG1-397 C	0.4396	50/50	0.4396
965322	AG1-397 E	0.6064	50/50	0.6064
965611	AG1-429 C O2	1.2220	Adder	2.71
965612	AG1-429 E O2	0.8144	Adder	1.81
965821	AG1-450	3.3967	50/50	3.3967
965921	AG1-461 C O2	5.5754	50/50	5.5754
965922	AG1-461 E O2	3.0022	50/50	3.0022
965953	AG1-464 BAT	2.5244	Merchant Transmission	2.5244
CALDERWOOD	CALDERWOOD	0.0174	Confirmed LTF	0.0174
NY	NY	0.0205	Confirmed LTF	0.0205
PRAIRIE	PRAIRIE	0.0904	Confirmed LTF	0.0904
O-066	O-066	0.2557	Confirmed LTF	0.2557
SIGE	SIGE	0.0003	Confirmed LTF	0.0003
CHEOAH	CHEOAH	0.0175	Confirmed LTF	0.0175
COTTONWOOD	COTTONWOOD	0.0735	Confirmed LTF	0.0735
G-007	G-007	0.0410	Confirmed LTF	0.0410
HAMLET	HAMLET	0.0202	Confirmed LTF	0.0202
GIBSON	GIBSON	0.0191	Confirmed LTF	0.0191
BLUEG	BLUEG	0.0608	Confirmed LTF	0.0608
TRIMBLE	TRIMBLE	0.0195	Confirmed LTF	0.0195
CATAWBA	CATAWBA	0.0122	Confirmed LTF	0.0122

13.5.24 Index 24

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
174103654	232812	NMEREDTH	DP&L	924820	AB2-135 TAP	DP&L	1	DPL_P4-2_DP11	breaker	93.0	146.56	147.49	DC	1.91

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232405	W1-003 E	0.5784	Adder	0.68
232407	W1-004 E	0.5784	Adder	0.68
232409	W1-005 E	0.5784	Adder	0.68
232411	W1-006 E	0.5784	Adder	0.68
232412	X1-032 E	0.1854	Adder	0.22
232429	Y3-058 E	0.2707	Adder	0.32
232433	Z2-076 E	0.0994	Adder	0.12
232435	Z2-077 E	0.0994	Adder	0.12
232813	VAUGHN	0.1161	50/50	0.1161
232851	DUP-SFR1	0.6650	Adder	0.78
232899	W1-062	0.8585	50/50	0.8585
232900	DEMECSMY	0.8410	50/50	0.8410
232910	NRG_G1	2.1081	50/50	2.1081
232911	NRG_G2	2.1081	50/50	2.1081
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.0899	Adder	0.11
233931	AB2-179 C	-2.0882	Adder	-2.46
917082	CHERRYDALE E	0.5786	Adder	0.68
918835	AA1-102 E	4.3051	Adder	5.06
923921	AB2-032 C	-1.1696	Adder	-1.38
924681	AB2-120 C	1.7742	Adder	2.09
924682	AB2-120 E	2.8948	Adder	3.41
924781	AB2-130 C O1	1.7892	Adder	2.1
924782	AB2-130 E O1	2.9193	Adder	3.43
924971	AB2-153 C	-0.6536	Adder	-0.77
925261	AB2-180 C	0.6213	Adder	0.73
925262	AB2-180 E	0.2663	Adder	0.31
926131	AC1-091 C	0.4484	Adder	0.53
926132	AC1-091 E	0.7354	Adder	0.87
926141	AC1-092 C	0.4484	Adder	0.53
926142	AC1-092 E	0.7354	Adder	0.87
926151	AC1-093 C	0.4245	Adder	0.5
926152	AC1-093 E	0.6995	Adder	0.82
926161	AC1-094 C	0.3587	Adder	0.42
926162	AC1-094 E	0.5919	Adder	0.7
927191	AC1-213 C	0.1486	Adder	0.17
927192	AC1-213 E	0.0975	Adder	0.11
930201	AB1-056 C	3.1284	Adder	3.68
930202	AB1-056 E	8.9091	Adder	10.48
932161	AC2-023 C	1.1398	Adder	1.34
932162	AC2-023 E	0.8301	Adder	0.98
933631	AC2-185 C	0.9088	Adder	1.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933632	AC2-185 E	1.4828	Adder	1.74
933641	AC2-186 C	2.8454	50/50	2.8454
933642	AC2-186 E	4.6426	50/50	4.6426
938895	AE1-117 C	2.3958	Adder	2.82
938896	AE1-117 E	6.3887	Adder	7.52
939151	AE1-145	0.9338	Adder	1.1
942441	AE2-257 C	1.6443	Adder	1.93
942442	AE2-257 E	4.3349	Adder	5.1
943361	AF1-007 C	0.0923	Adder	0.11
943362	AF1-007 E	0.2623	Adder	0.31
945661	AF1-231 C	0.3547	Adder	0.42
945662	AF1-231 E	0.5320	Adder	0.63
945791	AF1-244	0.3703	Adder	0.44
945931	AF1-258	0.1420	Adder	0.17
945941	AF1-259	-0.0824	Adder	-0.1
957611	AF2-055 C	1.6333	Adder	1.92
957612	AF2-055 E	0.7000	Adder	0.82
957661	AF2-060	0.4202	Adder	0.49
957671	AF2-061 O1	1.8676	Adder	2.2
959021	AF2-193 C	5.7807	Adder	6.8
959022	AF2-193 E	15.5934	Adder	18.35
959031	AF2-194 C	5.7807	Adder	6.8
959032	AF2-194 E	15.5934	Adder	18.35
959051	AF2-196 C	0.4484	Adder	0.53
959052	AF2-196 E	1.0464	Adder	1.23
959161	AF2-207 C O1	0.9997	Adder	1.18
959162	AF2-207 E O1	1.4996	Adder	1.76
959571	AF2-248 C	0.1646	Adder	0.19
959572	AF2-248 E	0.1840	Adder	0.22
959581	AF2-249 C	0.0291	Adder	0.03
959582	AF2-249 E	0.1162	Adder	0.14
959591	AF2-250 C	0.0533	Adder	0.06
959592	AF2-250 E	0.0412	Adder	0.05
960881	AF2-379 C	0.0758	Adder	0.09
960882	AF2-379 E	0.1044	Adder	0.12
960941	AF2-385 C	2.3704	Adder	2.79
960942	AF2-385 E	1.3488	Adder	1.59
961181	AF2-409 O1	4.4200	Adder	5.2
962161	AG1-061 C O2	1.6039	Adder	3.56
962162	AG1-061 E O2	1.0693	Adder	2.37
962262	AG1-072 BAT	1.5911	Merchant Transmission	1.5911
962302	AG1-079 E	0.7528	50/50	0.7528
962381	AG1-087 C O2	2.8987	Adder	6.43
962382	AG1-087 E O2	7.8191	Adder	17.36
963001	AG1-149	0.0736	Adder	0.16
963011	AG1-150	0.9898	Adder	2.2
964551	AG1-318 C	0.0079	Adder	0.02
964552	AG1-318 E	0.0185	Adder	0.04
964962	AG1-360 E	0.2150	Adder	0.48
965321	AG1-397 C	0.1050	Adder	0.23
965322	AG1-397 E	0.1448	Adder	0.32
965611	AG1-429 C O2	0.8721	Adder	1.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965612	AG1-429 E O2	0.5812	Adder	1.29
965921	AG1-461 C O2	0.5581	Adder	1.24
965922	AG1-461 E O2	0.3005	Adder	0.67
965951	AG1-464 C O2	2.9952	50/50	2.9952
965952	AG1-464 E O2	4.4928	50/50	4.4928
966601	AG1-529 C	1.7507	Adder	3.89
966602	AG1-529 E	0.9344	Adder	2.07
G-007A	G-007A	0.0048	Confirmed LTF	0.0048
CALDERWOOD	CALDERWOOD	0.0318	Confirmed LTF	0.0318
NY	NY	0.0155	Confirmed LTF	0.0155
PRAIRIE	PRAIRIE	0.1653	Confirmed LTF	0.1653
O-066	O-066	0.0673	Confirmed LTF	0.0673
CHEOAH	CHEOAH	0.0320	Confirmed LTF	0.0320
COTTONWOOD	COTTONWOOD	0.1344	Confirmed LTF	0.1344
HAMLET	HAMLET	0.0375	Confirmed LTF	0.0375
GIBSON	GIBSON	0.0344	Confirmed LTF	0.0344
BLUEG	BLUEG	0.1094	Confirmed LTF	0.1094
TRIMBLE	TRIMBLE	0.0351	Confirmed LTF	0.0351
CATAWBA	CATAWBA	0.0228	Confirmed LTF	0.0228

13.5.25 Index 25

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313191	232820	TALBOT	DP&L	232230	TRAP ALT	DP&L	1	DPL_P4-2_DP11	breaker	173.0	163.22	164.04	DC	3.19

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.2308	50/50	0.2308
232405	W1-003 E	1.3577	50/50	1.3577
232406	W1-004 C	0.2308	50/50	0.2308
232407	W1-004 E	1.3577	50/50	1.3577
232408	W1-005 C	0.2308	50/50	0.2308
232409	W1-005 E	1.3577	50/50	1.3577
232410	W1-006 C	0.2308	50/50	0.2308
232411	W1-006 E	1.3577	50/50	1.3577
232412	X1-032 E	0.4560	50/50	0.4560
232417	X3-008 C	0.4648	50/50	0.4648
232418	X3-008 E	4.8072	50/50	4.8072
232426	Y1-080 FULL	0.0513	50/50	0.0513
232427	Y1-080 E	0.5333	50/50	0.5333
232428	Y3-058 C	0.1335	50/50	0.1335
232429	Y3-058 E	0.9055	50/50	0.9055
232433	Z2-076 E	0.1466	Adder	0.17
232435	Z2-077 E	0.1466	Adder	0.17
232851	DUP-SFR1	0.7835	Adder	0.92
232905	BAYVIEW1	0.2155	50/50	0.2155
232907	VN8	3.4591	50/50	3.4591
232915	OH NUG4	0.6245	50/50	0.6245
232916	OH NUG5	0.6245	50/50	0.6245
232919	VN10	0.3860	50/50	0.3860
232921	TASLEY2G	0.4150	50/50	0.4150
232926	CRISFLD1	0.1816	50/50	0.1816
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.1197	Adder	0.14
233923	AA1-102 C	1.0351	50/50	1.0351
293670	O-025 C	0.1227	50/50	0.1227
917081	CHERRYDALE C	0.1310	50/50	0.1310
917082	CHERRYDALE E	1.3551	50/50	1.3551
918835	AA1-102 E	10.7043	50/50	10.7043
924681	AB2-120 C	3.5123	Adder	4.13
924682	AB2-120 E	5.7306	Adder	6.74
924781	AB2-130 C O1	3.7290	50/50	3.7290
924782	AB2-130 E O1	6.0842	50/50	6.0842
924831	AB2-136 C	7.8140	50/50	7.8140
924832	AB2-136 E	8.2866	50/50	8.2866
925151	AB2-172 C	7.3659	50/50	7.3659
925152	AB2-172 E	12.0181	50/50	12.0181
925261	AB2-180 C	2.0782	50/50	2.0782
925262	AB2-180 E	0.8906	50/50	0.8906

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927031	AC1-190 C	13.1173	50/50	13.1173
927032	AC1-190 E	5.6217	50/50	5.6217
927191	AC1-213 C	0.4149	50/50	0.4149
927192	AC1-213 E	0.2723	50/50	0.2723
930201	AB1-056 C	3.9851	Adder	4.69
930202	AB1-056 E	11.3488	Adder	13.35
932161	AC2-023 C	4.2638	50/50	4.2638
932162	AC2-023 E	3.1054	50/50	3.1054
938651	AE1-087 C	6.2029	50/50	6.2029
938652	AE1-087 E	1.5507	50/50	1.5507
938895	AE1-117 C	3.2004	Adder	3.77
938896	AE1-117 E	8.5343	Adder	10.04
939151	AE1-145	1.8528	Adder	2.18
942441	AE2-257 C	2.1784	Adder	2.56
942442	AE2-257 E	5.7430	Adder	6.76
943361	AF1-007 C	0.1176	Adder	0.14
943362	AF1-007 E	0.3342	Adder	0.39
945661	AF1-231 C	0.7059	Adder	0.83
945662	AF1-231 E	1.0588	Adder	1.25
945791	AF1-244	0.9208	50/50	0.9208
945931	AF1-258	0.4750	50/50	0.4750
957611	AF2-055 C	3.8248	50/50	3.8248
957612	AF2-055 E	1.6392	50/50	1.6392
957661	AF2-060	0.8338	Adder	0.98
957671	AF2-061 O1	3.7057	Adder	4.36
959021	AF2-193 C	7.3637	Adder	8.66
959022	AF2-193 E	19.8635	Adder	23.37
959031	AF2-194 C	7.3637	Adder	8.66
959032	AF2-194 E	19.8635	Adder	23.37
959051	AF2-196 C	0.5941	Adder	0.7
959052	AF2-196 E	1.3862	Adder	1.63
959161	AF2-207 C O1	2.4583	50/50	2.4583
959162	AF2-207 E O1	3.6875	50/50	3.6875
959571	AF2-248 C	0.4243	50/50	0.4243
959572	AF2-248 E	0.4742	50/50	0.4742
959581	AF2-249 C	0.0749	50/50	0.0749
959582	AF2-249 E	0.2995	50/50	0.2995
959591	AF2-250 C	0.1373	50/50	0.1373
959592	AF2-250 E	0.1061	50/50	0.1061
960341	AF2-325 C	1.4325	50/50	1.4325
960342	AF2-325 E	1.9781	50/50	1.9781
960671	AF2-358 C O1	14.5572	50/50	14.5572
960672	AF2-358 E O1	9.7048	50/50	9.7048
960871	AF2-378 C	0.3630	50/50	0.3630
960872	AF2-378 E	0.5036	50/50	0.5036
960881	AF2-379 C	0.1997	50/50	0.1997
960882	AF2-379 E	0.2752	50/50	0.2752
960941	AF2-385 C	5.8287	50/50	5.8287
960942	AF2-385 E	3.3168	50/50	3.3168
961181	AF2-409 O1	14.3300	50/50	14.3300
962161	AG1-061 C O2	8.3096	50/50	8.3096
962162	AG1-061 E O2	5.5398	50/50	5.5398

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962262	AG1-072 BAT	1.4620	Merchant Transmission	1.4620
962381	AG1-087 C O2	2.8493	Adder	6.32
962382	AG1-087 E O2	7.6860	Adder	17.06
963001	AG1-149	0.3453	50/50	0.3453
963011	AG1-150	1.9640	Adder	4.36
964551	AG1-318 C	0.0107	Adder	0.02
964552	AG1-318 E	0.0250	Adder	0.06
964962	AG1-360 E	0.9975	50/50	0.9975
965321	AG1-397 C	0.4922	50/50	0.4922
965322	AG1-397 E	0.6790	50/50	0.6790
965611	AG1-429 C O2	3.8532	50/50	3.8532
965612	AG1-429 E O2	2.5681	50/50	2.5681
965821	AG1-450	6.3492	50/50	6.3492
965921	AG1-461 C O2	0.9334	Adder	2.07
965922	AG1-461 E O2	0.5026	Adder	1.12
966601	AG1-529 C	1.1737	Adder	2.61
966602	AG1-529 E	0.6265	Adder	1.39
CALDERWOOD	CALDERWOOD	0.0343	Confirmed LTF	0.0343
NY	NY	0.0249	Confirmed LTF	0.0249
PRAIRIE	PRAIRIE	0.1782	Confirmed LTF	0.1782
O-066	O-066	0.2221	Confirmed LTF	0.2221
CHEOAH	CHEOAH	0.0345	Confirmed LTF	0.0345
COTTONWOOD	COTTONWOOD	0.1449	Confirmed LTF	0.1449
G-007	G-007	0.0263	Confirmed LTF	0.0263
HAMLET	HAMLET	0.0404	Confirmed LTF	0.0404
GIBSON	GIBSON	0.0377	Confirmed LTF	0.0377
BLUEG	BLUEG	0.1198	Confirmed LTF	0.1198
TRIMBLE	TRIMBLE	0.0384	Confirmed LTF	0.0384
CATAWBA	CATAWBA	0.0242	Confirmed LTF	0.0242

13.5.26 Index 26

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174313184	232821	TANYARD	DP&L	232820	TALBOT	DP&L	1	DPL_P4-2_DP11	breaker	173.0	165.71	166.53	DC	3.19

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.2308	50/50	0.2308
232405	W1-003 E	1.3577	50/50	1.3577
232406	W1-004 C	0.2308	50/50	0.2308
232407	W1-004 E	1.3577	50/50	1.3577
232408	W1-005 C	0.2308	50/50	0.2308
232409	W1-005 E	1.3577	50/50	1.3577
232410	W1-006 C	0.2308	50/50	0.2308
232411	W1-006 E	1.3577	50/50	1.3577
232412	X1-032 E	0.4560	50/50	0.4560
232417	X3-008 C	0.4648	50/50	0.4648
232418	X3-008 E	4.8072	50/50	4.8072
232426	Y1-080 FULL	0.0513	50/50	0.0513
232427	Y1-080 E	0.5333	50/50	0.5333
232428	Y3-058 C	0.1335	50/50	0.1335
232429	Y3-058 E	0.9055	50/50	0.9055
232433	Z2-076 E	0.1466	Adder	0.17
232435	Z2-077 E	0.1466	Adder	0.17
232851	DUP-SFR1	0.7835	Adder	0.92
232905	BAYVIEW1	0.2155	50/50	0.2155
232907	VN8	3.4591	50/50	3.4591
232915	OH NUG4	0.6245	50/50	0.6245
232916	OH NUG5	0.6245	50/50	0.6245
232919	VN10	0.3860	50/50	0.3860
232921	TASLEY2G	0.4150	50/50	0.4150
232926	CRISFLD1	0.1816	50/50	0.1816
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.1197	Adder	0.14
233923	AA1-102 C	1.0351	50/50	1.0351
293670	O-025 C	0.1227	50/50	0.1227
917081	CHERRYDALE C	0.1310	50/50	0.1310
917082	CHERRYDALE E	1.3551	50/50	1.3551
918835	AA1-102 E	10.7043	50/50	10.7043
924681	AB2-120 C	3.5123	Adder	4.13
924682	AB2-120 E	5.7306	Adder	6.74
924781	AB2-130 C O1	3.7290	50/50	3.7290
924782	AB2-130 E O1	6.0842	50/50	6.0842
924831	AB2-136 C	7.8140	50/50	7.8140
924832	AB2-136 E	8.2866	50/50	8.2866
925151	AB2-172 C	7.3659	50/50	7.3659
925152	AB2-172 E	12.0181	50/50	12.0181
925261	AB2-180 C	2.0782	50/50	2.0782
925262	AB2-180 E	0.8906	50/50	0.8906

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927031	AC1-190 C	13.1173	50/50	13.1173
927032	AC1-190 E	5.6217	50/50	5.6217
927191	AC1-213 C	0.4149	50/50	0.4149
927192	AC1-213 E	0.2723	50/50	0.2723
930201	AB1-056 C	3.9851	Adder	4.69
930202	AB1-056 E	11.3488	Adder	13.35
932161	AC2-023 C	4.2638	50/50	4.2638
932162	AC2-023 E	3.1054	50/50	3.1054
938651	AE1-087 C	6.2029	50/50	6.2029
938652	AE1-087 E	1.5507	50/50	1.5507
938895	AE1-117 C	3.2004	Adder	3.77
938896	AE1-117 E	8.5343	Adder	10.04
939151	AE1-145	1.8528	Adder	2.18
942441	AE2-257 C	2.1784	Adder	2.56
942442	AE2-257 E	5.7430	Adder	6.76
943361	AF1-007 C	0.1176	Adder	0.14
943362	AF1-007 E	0.3342	Adder	0.39
945661	AF1-231 C	0.7059	Adder	0.83
945662	AF1-231 E	1.0588	Adder	1.25
945791	AF1-244	0.9208	50/50	0.9208
945931	AF1-258	0.4750	50/50	0.4750
957611	AF2-055 C	3.8248	50/50	3.8248
957612	AF2-055 E	1.6392	50/50	1.6392
957661	AF2-060	0.8338	Adder	0.98
957671	AF2-061 O1	3.7057	Adder	4.36
959021	AF2-193 C	7.3637	Adder	8.66
959022	AF2-193 E	19.8635	Adder	23.37
959031	AF2-194 C	7.3637	Adder	8.66
959032	AF2-194 E	19.8635	Adder	23.37
959051	AF2-196 C	0.5941	Adder	0.7
959052	AF2-196 E	1.3862	Adder	1.63
959161	AF2-207 C O1	2.4583	50/50	2.4583
959162	AF2-207 E O1	3.6875	50/50	3.6875
959571	AF2-248 C	0.4243	50/50	0.4243
959572	AF2-248 E	0.4742	50/50	0.4742
959581	AF2-249 C	0.0749	50/50	0.0749
959582	AF2-249 E	0.2995	50/50	0.2995
959591	AF2-250 C	0.1373	50/50	0.1373
959592	AF2-250 E	0.1061	50/50	0.1061
960341	AF2-325 C	1.4325	50/50	1.4325
960342	AF2-325 E	1.9781	50/50	1.9781
960671	AF2-358 C O1	14.5572	50/50	14.5572
960672	AF2-358 E O1	9.7048	50/50	9.7048
960871	AF2-378 C	0.3630	50/50	0.3630
960872	AF2-378 E	0.5036	50/50	0.5036
960881	AF2-379 C	0.1997	50/50	0.1997
960882	AF2-379 E	0.2752	50/50	0.2752
960941	AF2-385 C	5.8287	50/50	5.8287
960942	AF2-385 E	3.3168	50/50	3.3168
961181	AF2-409 O1	14.3300	50/50	14.3300
962161	AG1-061 C O2	8.3096	50/50	8.3096
962162	AG1-061 E O2	5.5398	50/50	5.5398

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962262	AG1-072 BAT	1.4620	Merchant Transmission	1.4620
962381	AG1-087 C O2	2.8493	Adder	6.32
962382	AG1-087 E O2	7.6860	Adder	17.06
963001	AG1-149	0.3453	50/50	0.3453
963011	AG1-150	1.9640	Adder	4.36
964551	AG1-318 C	0.0107	Adder	0.02
964552	AG1-318 E	0.0250	Adder	0.06
964962	AG1-360 E	0.9975	50/50	0.9975
965321	AG1-397 C	0.4922	50/50	0.4922
965322	AG1-397 E	0.6790	50/50	0.6790
965611	AG1-429 C O2	3.8532	50/50	3.8532
965612	AG1-429 E O2	2.5681	50/50	2.5681
965821	AG1-450	6.3492	50/50	6.3492
965921	AG1-461 C O2	0.9334	Adder	2.07
965922	AG1-461 E O2	0.5026	Adder	1.12
966601	AG1-529 C	1.1737	Adder	2.61
966602	AG1-529 E	0.6265	Adder	1.39
CALDERWOOD	CALDERWOOD	0.0343	Confirmed LTF	0.0343
NY	NY	0.0249	Confirmed LTF	0.0249
PRAIRIE	PRAIRIE	0.1782	Confirmed LTF	0.1782
O-066	O-066	0.2221	Confirmed LTF	0.2221
CHEOAH	CHEOAH	0.0345	Confirmed LTF	0.0345
COTTONWOOD	COTTONWOOD	0.1449	Confirmed LTF	0.1449
G-007	G-007	0.0263	Confirmed LTF	0.0263
HAMLET	HAMLET	0.0404	Confirmed LTF	0.0404
GIBSON	GIBSON	0.0377	Confirmed LTF	0.0377
BLUEG	BLUEG	0.1198	Confirmed LTF	0.1198
TRIMBLE	TRIMBLE	0.0384	Confirmed LTF	0.0384
CATAWBA	CATAWBA	0.0242	Confirmed LTF	0.0242

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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
174313291	923960	AB2-037 TAP	DP&L	231003	KEEN_230	DP&L	2	DPL_P4-2_DP8	breaker	727.0	126.94	127.47	DC	8.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
232404	W1-003 C	0.6446	50/50	0.6446
232405	W1-003 E	3.7922	50/50	3.7922
232406	W1-004 C	0.6446	50/50	0.6446
232407	W1-004 E	3.7922	50/50	3.7922
232408	W1-005 C	0.6446	50/50	0.6446
232409	W1-005 E	3.7922	50/50	3.7922
232410	W1-006 C	0.6446	50/50	0.6446
232411	W1-006 E	3.7922	50/50	3.7922
232412	X1-032 E	1.2425	50/50	1.2425
232417	X3-008 C	0.4049	50/50	0.4049
232418	X3-008 E	4.1875	50/50	4.1875
232423	X3-066 E	0.7039	Adder	0.83
232424	Y1-079 C	0.1955	50/50	0.1955
232425	Y1-079 E	2.0223	50/50	2.0223
232426	Y1-080 FULL	0.0671	50/50	0.0671
232427	Y1-080 E	0.6980	50/50	0.6980
232428	Y3-058 C	0.2815	50/50	0.2815
232429	Y3-058 E	1.9095	50/50	1.9095
232433	Z2-076 E	0.4814	Adder	0.57
232435	Z2-077 E	0.4814	Adder	0.57
232851	DUP-SFR1	2.3176	Adder	2.73
232902	EASTMUNI	3.8654	50/50	3.8654
232907	VN8	8.3860	50/50	8.3860
232915	OH NUG4	1.7464	50/50	1.7464
232916	OH NUG5	1.7464	50/50	1.7464
232919	VN10	0.6007	50/50	0.6007
232922	MR3 (Deactivation : 01/06/2021)	13.6301	Adder	16.04
232926	CRISFLD1	0.4919	50/50	0.4919
233912	AB1-137 E (Withdrawn : 12/07/2020)	0.4243	Adder	0.5
233916	AB1-141 E	1.4376	Adder	1.69
233919	AB1-142 E	1.4376	Adder	1.69
233923	AA1-102 C	2.8040	50/50	2.8040
233931	AB2-179 C	4.3272	Adder	5.09
293670	O-025 C	0.2914	50/50	0.2914
917082	CHERRYDALE E	3.2200	Adder	3.79
918835	AA1-102 E	28.9974	50/50	28.9974
919831	AA2-069 (Suspended)	60.2665	Adder	70.9
923921	AB2-032 C	3.1034	Adder	3.65
923922	AB2-032 E	1.4604	Adder	1.72
923951	AB2-036 C	11.7746	50/50	11.7746

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923952	AB2-036 E	19.2644	50/50	19.2644
923961	AB2-037 C	37.9972	50/50	37.9972
923962	AB2-037 E	62.0736	50/50	62.0736
924681	AB2-120 C	9.8534	Adder	11.59
924682	AB2-120 E	16.0767	Adder	18.91
924781	AB2-130 C O1	7.9757	Adder	9.38
924782	AB2-130 E O1	13.0129	Adder	15.31
924801	AB2-133 C O1	5.1135	Adder	6.02
924802	AB2-133 E O1	6.4855	Adder	7.63
924821	AB2-135 C	5.9789	Adder	7.03
924822	AB2-135 E	6.8187	Adder	8.02
924831	AB2-136 C	8.3033	50/50	8.3033
924832	AB2-136 E	8.8055	50/50	8.8055
924971	AB2-153 C	1.7343	Adder	2.04
924972	AB2-153 E	2.8296	Adder	3.33
925151	AB2-172 C	6.4163	50/50	6.4163
925152	AB2-172 E	10.4687	50/50	10.4687
925254	AB2-179 E	1.4120	Adder	1.66
925261	AB2-180 C	4.3826	50/50	4.3826
925262	AB2-180 E	1.8782	50/50	1.8782
925271	AB2-185 C	4.5664	50/50	4.5664
925272	AB2-185 E	1.9570	50/50	1.9570
926131	AC1-091 C	0.8017	Adder	0.94
926132	AC1-091 E	1.3147	Adder	1.55
926141	AC1-092 C	0.8017	Adder	0.94
926142	AC1-092 E	1.3147	Adder	1.55
926151	AC1-093 C	0.7589	Adder	0.89
926152	AC1-093 E	1.2506	Adder	1.47
926161	AC1-094 C	0.6413	Adder	0.75
926162	AC1-094 E	1.0582	Adder	1.24
927031	AC1-190 C	11.8017	50/50	11.8017
927032	AC1-190 E	5.0579	50/50	5.0579
927191	AC1-213 C	0.9852	50/50	0.9852
927192	AC1-213 E	0.6465	50/50	0.6465
930201	AB1-056 C	14.9955	Adder	17.64
930202	AB1-056 E	42.7045	Adder	50.24
931261	AB1-176 C	0.3640	Adder	0.43
931262	AB1-176 E	0.6003	Adder	0.71
932161	AC2-023 C	8.3870	50/50	8.3870
932162	AC2-023 E	6.1083	50/50	6.1083
933631	AC2-185 C	1.6247	Adder	1.91
933632	AC2-185 E	2.6508	Adder	3.12
933641	AC2-186 C	3.7806	Adder	4.45
933642	AC2-186 E	6.1683	Adder	7.26
936611	AD2-076 C O1	4.4808	Adder	5.27
936612	AD2-076 E O1	7.3107	Adder	8.6
938651	AE1-087 C	5.4032	50/50	5.4032
938652	AE1-087 E	1.3508	50/50	1.3508
938895	AE1-117 C	11.3167	Adder	13.31
938896	AE1-117 E	30.1779	Adder	35.5
939151	AE1-145	5.1860	Adder	6.1
941021	AE2-093 C	6.2235	50/50	6.2235

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941022	AE2-093 E	10.1542	50/50	10.1542
941181	AE2-112 C	1.5546	Adder	1.83
941182	AE2-112 E	2.5364	Adder	2.98
942441	AE2-257 C	7.7617	Adder	9.13
942442	AE2-257 E	20.4627	Adder	24.07
943361	AF1-007 C	0.4424	Adder	0.52
943362	AF1-007 E	1.2574	Adder	1.48
943441	AF1-015 C	2.3450	50/50	2.3450
943442	AF1-015 E	3.2383	50/50	3.2383
943651	AF1-036 C	2.0214	Adder	2.38
943652	AF1-036 E	2.7915	Adder	3.28
945661	AF1-231 C	1.9741	Adder	2.32
945662	AF1-231 E	2.9612	Adder	3.48
945791	AF1-244	2.4944	50/50	2.4944
945931	AF1-258	1.0017	50/50	1.0017
945941	AF1-259	0.1929	Adder	0.23
957611	AF2-055 C	9.0886	Adder	10.69
957612	AF2-055 E	3.8951	Adder	4.58
957661	AF2-060	2.3337	Adder	2.75
957671	AF2-061 O1	10.3720	Adder	12.2
959021	AF2-193 C	27.7090	Adder	32.6
959022	AF2-193 E	74.7445	Adder	87.93
959031	AF2-194 C	27.7090	Adder	32.6
959032	AF2-194 E	74.7445	Adder	87.93
959051	AF2-196 C	2.1168	Adder	2.49
959052	AF2-196 E	4.9393	Adder	5.81
959161	AF2-207 C O1	5.2237	Adder	6.15
959162	AF2-207 E O1	7.8356	Adder	9.22
959571	AF2-248 C	1.0403	50/50	1.0403
959572	AF2-248 E	1.1626	50/50	1.1626
959581	AF2-249 C	0.1836	50/50	0.1836
959582	AF2-249 E	0.7343	50/50	0.7343
959591	AF2-250 C	0.3366	50/50	0.3366
959592	AF2-250 E	0.2601	50/50	0.2601
960221	AF2-313 C	3.0617	Adder	3.6
960222	AF2-313 E	1.7358	Adder	2.04
960341	AF2-325 C	1.4106	50/50	1.4106
960342	AF2-325 E	1.9479	50/50	1.9479
960671	AF2-358 C O1	19.9158	50/50	19.9158
960672	AF2-358 E O1	13.2772	50/50	13.2772
960871	AF2-378 C	0.3722	50/50	0.3722
960872	AF2-378 E	0.5163	50/50	0.5163
960881	AF2-379 C	0.5126	50/50	0.5126
960882	AF2-379 E	0.7064	50/50	0.7064
960941	AF2-385 C	12.3856	Adder	14.57
960942	AF2-385 E	7.0479	Adder	8.29
960961	AF2-387 C O1	24.0326	50/50	24.0326
960962	AF2-387 E O1	12.0524	50/50	12.0524
961181	AF2-409 O1	34.7410	50/50	34.7410
962161	AG1-061 C O2	21.4414	50/50	21.4414
962162	AG1-061 E O2	14.2943	50/50	14.2943
962261	AG1-072	18.0425	50/50	18.0425

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962302	AG1-079 E	0.1495	Adder	0.33
962381	AG1-087 C O2	14.5260	Adder	32.24
962382	AG1-087 E O2	39.1837	Adder	86.98
963001	AG1-149	0.9354	50/50	0.9354
963011	AG1-150	5.4972	Adder	12.2
964551	AG1-318 C	0.0376	Adder	0.08
964552	AG1-318 E	0.0877	Adder	0.19
964962	AG1-360 E	2.7180	50/50	2.7180
965321	AG1-397 C	0.5674	Adder	1.26
965322	AG1-397 E	0.7828	Adder	1.74
965611	AG1-429 C O2	4.8528	Adder	10.77
965612	AG1-429 E O2	3.2343	Adder	7.18
965821	AG1-450	8.3095	50/50	8.3095
965921	AG1-461 C O2	2.5181	Adder	5.59
965922	AG1-461 E O2	1.3559	Adder	3.01
965951	AG1-464 C O2	2.1092	Adder	4.68
965952	AG1-464 E O2	3.1637	Adder	7.02
966281	AG1-497 C O2	5.9491	Adder	13.21
966282	AG1-497 E O2	2.5496	Adder	5.66
966601	AG1-529 C	5.4292	Adder	12.05
966602	AG1-529 E	2.8978	Adder	6.43
CALDERWOOD	CALDERWOOD	0.1411	Confirmed LTF	0.1411
NY	NY	0.0868	Confirmed LTF	0.0868
PRAIRIE	PRAIRIE	0.7310	Confirmed LTF	0.7310
O-066	O-066	0.6663	Confirmed LTF	0.6663
CHEOAH	CHEOAH	0.1421	Confirmed LTF	0.1421
COTTONWOOD	COTTONWOOD	0.5964	Confirmed LTF	0.5964
G-007	G-007	0.0662	Confirmed LTF	0.0662
HAMLET	HAMLET	0.1657	Confirmed LTF	0.1657
GIBSON	GIBSON	0.1545	Confirmed LTF	0.1545
BLUEG	BLUEG	0.4913	Confirmed LTF	0.4913
TRIMBLE	TRIMBLE	0.1575	Confirmed LTF	0.1575
CATAWBA	CATAWBA	0.1001	Confirmed LTF	0.1001

13.6 Contingency Descriptions - Secondary POI

Contingency Name	Contingency Definition
DPL_P4-2_DP18_FSA	CONTINGENCY 'DPL_P4-2_DP18_FSA' / 1426 OPEN BRANCH FROM BUS 231002 TO BUS 231003 CKT 1 / 231002 HARMONY 230 231003 KEEN_230 230 1 OPEN BRANCH FROM BUS 231003 TO BUS 923960 CKT 2 / 231003 KEEN_230 230 923960 AB2-037 TAP 230 2 END
DPL_P4-2_DP12	CONTINGENCY 'DPL_P4-2_DP12' / 545 OPEN BRANCH FROM BUS 232103 TO BUS 232000 CKT 2 / 232103 STEEL138 138 232000 STEELE 230 2 OPEN BRANCH FROM BUS 232000 TO BUS 232005 CKT 1 / 232000 STEELE 230 232005 VIENNA 230 1 END
DPL_P4-2_DP11	CONTINGENCY 'DPL_P4-2_DP11' / 913 OPEN BRANCH FROM BUS 232000 TO BUS 962380 CKT 1 / 232000 STEELE 230 962380 AG1-087 TAP 230 1 OPEN BRANCH FROM BUS 232000 TO BUS 232005 CKT 1 / 232000 STEELE 230 232005 VIENNA 230 1 END
DPL_P4-2_DP36	CONTINGENCY 'DPL_P4-2_DP36' / 254 OPEN BRANCH FROM BUS 232001 TO BUS 232006 CKT 1 / 232001 COOLSPRS 230 232006 INDIV 4 230 1 OPEN BRANCH FROM BUS 232001 TO BUS 232927 CKT 2 / 232001 COOLSPRS 230 232927 BENNETT_230 230 2 END
CKT 23032B	CONTINGENCY 'CKT 23032B' / 605 OPEN BRANCH FROM BUS 232003 TO BUS 232013 CKT 1 / 232003 CARTANZA 230 232013 SILVER RUN 230 1 END
DPL_P1_2_CKT 23034	CONTINGENCY 'DPL_P1_2_CKT 23034' / 1105 OPEN BRANCH FROM BUS 232004 TO BUS 232006 CKT 1 / 232004 MILF_230 230 232006 INDIV 4 230 1 END
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

Contingency Name	Contingency Definition
DPL_P1_2_AB2-037 KEENEY	CONTINGENCY 'DPL_P1_2_AB2-037 KEENEY' / 1341 OPEN BRANCH FROM BUS 231003 TO BUS 923960 CKT 2 / 231003 KEEN_230 230 923960 AB2-037 TAP 230 2 END
DPL_P1_2_CKT 23002	CONTINGENCY 'DPL_P1_2_CKT 23002' / 303 OPEN BRANCH FROM BUS 232006 TO BUS 232007 CKT 1 / 232006 INDRIV 4 230 232007 PINEY GR 230 1 OPEN BRANCH FROM BUS 232128 TO BUS 232007 CKT 1 / 232128 PINEY138 138 232007 PINEY GR 230 1 END
DPL_P1_2_CKT 23001	CONTINGENCY 'DPL_P1_2_CKT 23001' / 1597 OPEN BRANCH FROM BUS 231003 TO BUS 232000 CKT 1 / 231003 KEEN_230 230 232000 STEELE 230 1 END
DPL_P1_2_23085 &13710	CONTINGENCY 'DPL_P1_2_23085 &13710' / 540 OPEN BRANCH FROM BUS 232000 TO BUS 232005 CKT 1 / 232000 STEELE 230 232005 VIENNA 230 1 OPEN BRANCH FROM BUS 232116 TO BUS 232005 CKT 1 / 232116 VIENN138 138 232005 VIENNA 230 1 OPEN BRANCH FROM BUS 232116 TO BUS 232117 CKT 1 / 232116 VIENN138 138 232117 VIENNA 8 138 1 END
DPL_P4-2_DP8	CONTINGENCY 'DPL_P4-2_DP8' / 1736 OPEN BRANCH FROM BUS 231003 TO BUS 232000 CKT 1 / 231003 KEEN_230 230 232000 STEELE 230 1 OPEN BRANCH FROM BUS 232103 TO BUS 232000 CKT 1 / 232103 STEEL138 138 232000 STEELE 230 1 END
DPL_P2-2_DP1	CONTINGENCY 'DPL_P2-2_DP1' /*138TH STREET BUS DISCONNECT BRANCH FROM BUS 232124 TO BUS 232126 CKT 1 /*138TH STREET OCEAN BAY 138 138 DISCONNECT BRANCH FROM BUS 232124 TO BUS 232626 CKT 1 /*138TH STREET T2 138 12 DISCONNECT BRANCH FROM BUS 232124 TO BUS 232170 CKT 1 /*138TH STREET SVC END

Contingency Name	Contingency Definition
PJM500_PS_P1-2_HOPE-SILVER	CONTINGENCY 'PJM500_PS_P1-2_HOPE-SILVER' / 1565 OPEN BRANCH FROM BUS 232012 TO BUS 232014 CKT 1 / 232012 HOPE CREEK 230 232014 LSPWR CABLE 230 1 OPEN BRANCH FROM BUS 232012 TO BUS 232014 CKT 2 / 232012 HOPE CREEK 230 232014 LSPWR CABLE 230 2 OPEN BRANCH FROM BUS 200029 TO BUS 232012 CKT 1 / 200029 HOPE CRK 500 232012 HOPE CREEK 230 1 OPEN BRANCH FROM BUS 232013 TO BUS 232014 CKT 1 / 232013 SILVER RUN 230 232014 LSPWR CABLE 230 1 END
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 23031	CONTINGENCY 'DPL_P1_2_CKT 23031' / 1509 OPEN BRANCH FROM BUS 232002 TO BUS 232004 CKT 1 / 232002 CEDAR CK 230 232004 MILF_230 230 1 END
CKT 23030B	CONTINGENCY 'CKT 23030B' / 1647 OPEN BRANCH FROM BUS 232002 TO BUS 232013 CKT 1 / 232002 CEDAR CK 230 232013 SILVER RUN 230 1 END
Base Case	
DPL_P4-2_DPIR235	CONTINGENCY 'DPL_P4-2_DPIR235' / 1015 OPEN BRANCH FROM BUS 232006 TO BUS 232007 CKT 1 / 232006 INDIV 4 230 232007 PINEY GR 230 1 OPEN BRANCH FROM BUS 232128 TO BUS 232007 CKT 1 / 232128 PINEY138 138 232007 PINEY GR 230 1 OPEN BRANCH FROM BUS 232004 TO BUS 232006 CKT 1 / 232004 MILF_230 230 232006 INDIV 4 230 1 END
DPL_P7_1_B47_DPL1	CONTINGENCY 'DPL_P7_1_B47_DPL1' DISCONNECT BRANCH FROM BUS 231003 TO BUS 231004 CKT 1 /* KEENEY REDLION 230 230 DISCONNECT BRANCH FROM BUS 231004 TO BUS 231800 CKT 1 /* B47 B47 230 230 END

14 Affected Systems

None

15 Attachment 1: One Line Diagram