Generation Interconnection

Feasibility Study Report

for

Queue Project AF2-080

CHINQUAPIN-EVERETTS 230 KV

48.5 MW Capacity / 70 MW Energy

July 2020

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1 Introduction

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

2 Preface

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

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

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

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

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

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3 General

The Interconnection Customer (IC) has proposed an uprate to a planned/existing Solar generating facility located in Pitt, North Carolina. This project is an increase to the Interconnection Customer's AC1-189 project, which will share the same point of interconnection. The AF2-080 queue position is a 70 MW uprate (48.5 MW Capacity uprate) to the previous project. The total installed facilities will have a capability of 150 MW with 101.9 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this uprate project is June 30, 2022. This study does not imply a TO commitment to this in-service date.

Queue Number	AF2-080
Project Name	CHINQUAPIN-EVERETTS 230 KV
State	North Carolina
County	Pitt
Transmission Owner	Dominion
MFO	150
MWE	70
MWC	48.5
Fuel	Solar
Basecase Study Year	2023

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

4 Point of Interconnection

AF2-080 will interconnect with the Dominion transmission system as an uprate to AC1-189 which is tapping the Chinquapin to Everetts 230 kV line.

5 Cost Summary

The AF2-080 project will utilize the interconnection facilities being developed under the AC1-189 project.

The AF2-080 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	$ 0
Total System Network Upgrade Costs	$ 881,680,000
Total Costs	**$ 881,680,000**

This cost excludes a Federal Income Tax Gross Up charges. This tax may or may not be charged based on whether this project meets the eligibility requirements of IRS Notice 88-129. If at a future date it is determined

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that the Federal Income Tax Gross charge is required, the Transmission Owner shall be reimbursed by the Interconnection Customer for such taxes.

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

6 Transmission Owner Scope of Work

Dominion assessed the impact of the proposed Queue Project AF2-080 was evaluated as a 48.5 MW Capacity (70.0 MW Energy) injection at the AC1-189 230 kV substation in the Dominion Transmission System, for compliance with NERC Reliability Criteria on Dominion Transmission System. The system was assessed using the summer 2023 AF2 case provided to Dominion by PJM. When performing a generation analysis, Dominion's main analysis will be load flow study results under single contingency (both normal and stressed system conditions). Dominion Criteria considers a transmission facility overloaded if it exceeds 94% of its emergency rating under normal and stressed system conditions. A full listing of Dominion's Planning Criteria and interconnection requirements can be found in the Company's Facility Connection Requirements which are publicly available at: http://www.dominionenergy.com.

The results of these studies evaluate the system under a limited set of operating conditions and do not guarantee the full delivery of the capacity and associated energy of this proposed generation facility under all operating conditions. NERC Planning and Operating Reliability Criteria allow for the re-dispatch of generating units to resolve projected and actual deficiencies in real time and planning studies. Specifically, in Planning Studies, NERC Planning Event 3 and 6 Contingency Conditions (Loss of generator, transmission circuit, transformer, shunt device, or Single Pole of a DC line followed by the loss of a generator, transmission circuit, transformer, shunt device or single pole of a DC line) allow for re-dispatch of generating units to resolve potential reliability deficiencies. For Dominion Planning Criteria the re-dispatch of generating units for these contingency conditions is allowed as long as the projected loading does not exceed 100% of a facility Load Dump Rating.

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

7 Schedule

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

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8 Transmission Owner Analysis

8.1 Power Flow Analysis

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

9 Interconnection Customer Requirements

9.1 System Protection

The IC must design its Customer Facilities in accordance with all applicable standards, including the standards in Dominion's "Dominion Energy Electric Transmission Generator Interconnection Requirements" documented in Dominion's Facility Interconnection Requirements "Exhibit C" located at: https://www.dominionenergy.com/company/moving-energy/electric-transmission-access. Preliminary Protection requirements will be provided as part of the Facilities Study. Detailed Protection Requirements will be provided once the project enters the construction phase.

9.2 Compliance Issues and Interconnection Customer Requirements

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

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

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

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

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

9.3 Power Factor Requirements

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

10 Revenue Metering and SCADA Requirements

10.1 PJM Requirements

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

10.1.1 Meteorological Data Reporting Requirements

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

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

10.2 Interconnected Transmission Owner Requirements

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

11 Summer Peak - Load Flow Analysis

The Queue Project AF2-080 was evaluated as a 70.0 MW (Capacity 48.5 MW) uprate to AC1-189 which is an injection tapping the Chinquapin to Everetts 230 kV line in the Dominion area. Project AF2-080 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-080 was studied with a commercial probability of 53%. Potential network impacts were as follows:

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11.1 Generation Deliverability

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

None

11.2 Multiple Facility Contingency

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

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
95657987	242631	05EDAN 1	138.0	AEP	242620	05DANVL2	138.0	AEP	1	AEP_P4_#11112_05J.FERR 765_A1	breaker	402.0	110.99	111.52	DC	4.65
95657989	242631	05EDAN 1	138.0	AEP	242620	05DANVL2	138.0	AEP	1	AEP_P4_#11111_05J.FERR 765_B1	breaker	402.0	104.88	105.41	DC	4.77
97915773	313714	6PERQUIMANS	230.0	DVP	314662	6S HERTFORD	230.0	DVP	1	DVP_P1-2: LN 246	single	733.200012207	132.62	133.69	DC	7.88
96847360	313845	6HATHAWAY	230.0	DVP	304222	6ROCKYMT 230T	230.0	CPLE	1	DVP_P1-2: LN 2181	single	478.0	101.58	103.9	DC	11.08
97915969	313845	6HATHAWAY	230.0	DVP	314591	6NASH	230.0	DVP	1	DVP_P1-2: LN 2058	single	449.320007324	112.68	115.25	DC	11.56
97915860	313885	6WALBMRL	230.0	DVP	313714	6PERQUIMANS	230.0	DVP	1	DVP_P1-2: LN 246	single	733.200012207	127.53	128.6	DC	7.88
97915834	314203	6MACKEYS	230.0	DVP	314637	6EDENTON	230.0	DVP	1	DVP_P1-2: LN 246	single	731.320007324	131.67	132.75	DC	7.88
97720570	314299	6HARROWG	230.0	DVP	314263	6TYLER1	230.0	DVP	1	DVP_P4-2: 24972-4	breaker	541.0	134.71	135.23	DC	6.17
97720565	314331	6POE	230.0	DVP	314299	6HARROWG	230.0	DVP	1	DVP_P4-2: 24972-4	breaker	541.0	134.73	135.25	DC	6.17
97915958	314435	6SAPONY	230.0	DVP	314282	6CARSON	230.0	DVP	1	DVP_P1-2: LN 246	single	678.679992676	125.26	126.44	DC	8.24
96847727	314554	3BTLEBRO	115.0	DVP	304223	3ROCKYMT 115T	115.0	CPLE	1	DVP_P7-1: LN 2058-2181	tower	93.0	444.16	452.72	DC	7.96
97916008	314563	6CLUBHSE	230.0	DVP	940480	AE2-033 TAP	230.0	DVP	1	DVP_P1-2: LN 246	single	678.679992676	110.31	111.53	DC	8.24
97915748	314569	6EARLEYS	230.0	DVP	314575	6NUCO TP	230.0	DVP	1	DVP_P1-2: LN 2092	single	571.520019531	163.21	165.09	DC	10.8
97915749	314569	6EARLEYS	230.0	DVP	314575	6NUCO TP	230.0	DVP	1	DVP_P1-2: LN 2131	single	571.520019531	162.88	164.76	DC	10.8
97915754	314569	6EARLEYS	230.0	DVP	314575	6NUCO TP	230.0	DVP	1	Base Case	single	571.520019531	102.38	103.84	DC	8.43
96847309	314574	6EVERETS	230.0	DVP	304451	6GREENVILE T	230.0	CPLE	1	DVP_P1-2: LN 2092	single	478.0	106.11	108.56	DC	11.73
96847310	314574	6EVERETS	230.0	DVP	304451	6GREENVILE T	230.0	CPLE	1	DVP_P1-2: LN 2131	single	478.0	105.5	107.95	DC	11.73
96847732	314574	6EVERETS	230.0	DVP	304451	6GREENVILE T	230.0	CPLE	1	DVP_P7-1: LN 2058-2181	tower	478.0	178.3	182.58	DC	20.45
97915760	314575	6NUCO TP	230.0	DVP	957790	AF2-073 TAP	230.0	DVP	1	DVP_P1-2: LN 2092	single	571.520019531	156.8	158.68	DC	10.8
97915761	314575	6NUCO TP	230.0	DVP	957790	AF2-073 TAP	230.0	DVP	1	DVP_P1-2: LN 2131	single	571.520019531	156.49	158.37	DC	10.8
97915920	314583	6LAKEVEW	230.0	DVP	924510	AB2-100 TAP	230.0	DVP	1	DVP_P1-2: LN 246	single	375.059997559	138.92	141.03	DC	7.92

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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
9791592 1	314583	6LAKEVEW	230.0	DVP	924510	AB2-100 TAP	230.0	DVP	1	314572 3EMPORIA 115 925170 AB2-174 TAP 115 1	single	375.059997559	129.68	131.45	DC	6.65
9791592 5	314583	6LAKEVEW	230.0	DVP	924510	AB2-100 TAP	230.0	DVP	1	Base Case	single	375.059997559	108.54	110.19	DC	6.21
9684736 7	314591	6NASH	230.0	DVP	304226	6PA-RMOUNT#4	230.0	CPLE	1	DVP_P1-2: LN 2058	single	478.0	100.61	103.02	DC	11.56
9791587 2	314637	6EDENTON	230.0	DVP	313885	6WALBMRL	230.0	DVP	1	DVP_P1-2: LN 246	single	733.200012207	127.54	128.61	DC	7.88
9772042 5	314638	6ELIZ CT	230.0	DVP	314647	6SHAWBRO	230.0	DVP	1	DVP_P4-2: 246T247	breaker	699.0	241.73	243.11	DC	9.66
9791578 5	314662	6S HERTFORD	230.0	DVP	314651	6WINFALL	230.0	DVP	1	DVP_P1-2: LN 246	single	733.200012207	130.81	131.88	DC	7.88
9791581 4	924510	AB2-100 TAP	230.0	DVP	314563	6CLUBHSE	230.0	DVP	1	DVP_P1-2: LN 246	single	375.059997559	155.29	157.4	DC	7.9
9791581 5	924510	AB2-100 TAP	230.0	DVP	314563	6CLUBHSE	230.0	DVP	1	314572 3EMPORIA 115 925170 AB2-174 TAP 115 1	single	375.059997559	145.9	147.67	DC	6.63
9791581 9	924510	AB2-100 TAP	230.0	DVP	314563	6CLUBHSE	230.0	DVP	1	Base Case	single	375.059997559	124.85	126.5	DC	6.19
9772062 0	940480	AE2-033 TAP	230.0	DVP	314435	6SAPONY	230.0	DVP	1	DVP_P4-2: 2012T2014	breaker	830.0	123.22	123.74	DC	9.42
9854253 6	940480	AE2-033 TAP	230.0	DVP	314435	6SAPONY	230.0	DVP	1	DVP_P7-1: LN 2058-2181	tower	830.0	128.2	128.86	DC	12.14
9854253 7	940480	AE2-033 TAP	230.0	DVP	314435	6SAPONY	230.0	DVP	1	DVP_P7-1: LN 56-2012-B	tower	830.0	126.37	126.83	DC	8.44
9791573 6	957790	AF2-073 TAP	230.0	DVP	957820	AF2-076 TAP	230.0	DVP	1	DVP_P1-2: LN 2092	single	571.520019531	167.33	169.21	DC	10.8
9791573 7	957790	AF2-073 TAP	230.0	DVP	957820	AF2-076 TAP	230.0	DVP	1	DVP_P1-2: LN 2131	single	571.520019531	166.36	168.24	DC	10.8
9791574 2	957790	AF2-073 TAP	230.0	DVP	957820	AF2-076 TAP	230.0	DVP	1	Base Case	single	571.520019531	104.98	106.45	DC	8.43
9791572 4	957820	AF2-076 TAP	230.0	DVP	314537	6SUFFOLK	230.0	DVP	1	DVP_P1-2: LN 2092	single	571.520019531	172.12	174.0	DC	10.8
9791572 5	957820	AF2-076 TAP	230.0	DVP	314537	6SUFFOLK	230.0	DVP	1	DVP_P1-2: LN 2131	single	571.520019531	171.42	173.3	DC	10.8
9791573 0	957820	AF2-076 TAP	230.0	DVP	314537	6SUFFOLK	230.0	DVP	1	Base Case	single	571.520019531	109.54	111.01	DC	8.43

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.

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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
95658259	242631	05EDAN 1	138.0	AEP	242620	05DANVL2	138.0	AEP	1	AEP_P1-2_#1377	operation	402.0	104.83	105.36	DC	4.77
97916327	313701	6CHINQUAPIN	230.0	DVP	314609	6TARBORO	230.0	DVP	1	DVP_P1-2: LN 218	operation	441.799987793	109.08	117.31	DC	36.35
97915772	313714	6PERQUIMANS	230.0	DVP	314662	6S HERTFORD	230.0	DVP	1	Base Case	operation	733.200012207	206.39	207.45	DC	7.72
96847356	313845	6HATHAWAY	230.0	DVP	304222	6ROCKYMT230T	230.0	CPLE	1	DVP_P1-2: LN 2181	operation	478.0	136.94	140.29	DC	15.99
97915964	313845	6HATHAWAY	230.0	DVP	314591	6NASH	230.0	DVP	1	DVP_P1-2: LN 2058	operation	449.320007324	152.31	156.03	DC	16.69
97915859	313885	6WALBMRL	230.0	DVP	313714	6PERQUIMANS	230.0	DVP	1	Base Case	operation	733.200012207	176.26	177.32	DC	7.72
97915833	314203	6MACKEYS	230.0	DVP	314637	6EDENTON	230.0	DVP	1	Base Case	operation	731.320007324	180.53	181.59	DC	7.72
97915952	314435	6SAPONY	230.0	DVP	314282	6CARSON	230.0	DVP	1	DVP_P1-2: LN 246	operation	678.679992676	179.15	179.95	DC	11.89
97915957	314435	6SAPONY	230.0	DVP	314282	6CARSON	230.0	DVP	1	Base Case	operation	678.679992676	141.45	142.06	DC	9.25
97916002	314563	6CLUBHSE	230.0	DVP	940480	AE2-033 TAP	230.0	DVP	1	DVP_P1-2: LN 246	operation	678.679992676	160.15	160.94	DC	11.9
97916007	314563	6CLUBHSE	230.0	DVP	940480	AE2-033 TAP	230.0	DVP	1	Base Case	operation	678.679992676	123.95	124.57	DC	9.26
97916069	314564	6EDGECOM	230.0	DVP	313845	6HATHAWAY	230.0	DVP	1	DVP_P1-2: LN 218	operation	441.799987793	112.79	121.01	DC	36.35
97915743	314569	6EARLEYS	230.0	DVP	314575	6NUCO TP	230.0	DVP	1	DVP_P1-2: LN 2092	operation	571.520019531	271.6	274.34	DC	15.59
97915750	314569	6EARLEYS	230.0	DVP	314575	6NUCO TP	230.0	DVP	1	Base Case	operation	571.520019531	143.74	145.87	DC	12.17
96847303	314574	6EVERETS	230.0	DVP	304451	6GREENVILET	230.0	CPLE	1	DVP_P1-2: LN 2092	operation	478.0	179.06	182.61	DC	16.93
96847308	314574	6EVERETS	230.0	DVP	304451	6GREENVILET	230.0	CPLE	1	Base Case	operation	478.0	124.23	127.49	DC	15.57
97915755	314575	6NUCO TP	230.0	DVP	957790	AF2-073 TAP	230.0	DVP	1	DVP_P1-2: LN 2092	operation	571.520019531	265.2	267.93	DC	15.59
97915762	314575	6NUCO TP	230.0	DVP	957790	AF2-073 TAP	230.0	DVP	1	Base Case	operation	571.520019531	137.33	139.46	DC	12.17
97915915	314583	6LAKEVEW	230.0	DVP	924510	AB2-100 TAP	230.0	DVP	1	DVP_P1-2: LN 246	operation	375.059997559	192.77	194.14	DC	11.42
97915919	314583	6LAKEVEW	230.0	DVP	924510	AB2-100 TAP	230.0	DVP	1	Base Case	operation	375.059997559	150.81	151.88	DC	8.96
96847362	314591	6NASH	230.0	DVP	304226	6PA-RMOUNT#4	230.0	CPLE	1	DVP_P1-2: LN 2058	operation	478.0	137.86	141.35	DC	16.69
97916401	314609	6TARBORO	230.0	DVP	314610	6TOTDP4	230.0	DVP	1	DVP_P1-2: LN 218	operation	441.799987793	99.28	107.51	DC	36.35
97916409	314610	6TOTDP4	230.0	DVP	314564	6EDGECOM	230.0	DVP	1	DVP_P1-2: LN 218	operation	441.799987793	97.76	105.99	DC	36.35
97916460	314616	6TRWBRDG	230.0	DVP	314594	6PLYMOTH	230.0	DVP	1	DVP_P1-2: LN 246	operation	789.599975586	100.27	101.72	DC	11.39
97915871	314637	6EDENTON	230.0	DVP	313885	6WALBMRL	230.0	DVP	1	Base Case	operation	733.200012207	176.26	177.32	DC	7.72

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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
97915791	314638	6ELIZ CT	230.0	DVP	314647	6SHAWBRO	230.0	DVP	1	DVP_P1-2: LN 247	operation	571.520019531	249.41	249.93	DC	6.57
97915784	314662	6S HERTFORD	230.0	DVP	314651	6WINFALL	230.0	DVP	1	Base Case	operation	733.200012207	202.75	203.81	DC	7.72
97915809	924510	AB2-100 TAP	230.0	DVP	314563	6CLUBHSE	230.0	DVP	1	DVP_P1-2: LN 246	operation	375.059997559	214.8	216.17	DC	11.4
97915813	924510	AB2-100 TAP	230.0	DVP	314563	6CLUBHSE	230.0	DVP	1	Base Case	operation	375.059997559	171.34	172.41	DC	8.94
97916430	927020	AC1-189 TAP	230.0	DVP	313701	6CHINQUAPIN	230.0	DVP	1	DVP_P1-2: LN 218	operation	441.799987793	94.32	102.55	DC	36.37
97916075	940480	AE2-033 TAP	230.0	DVP	314435	6SAPONY	230.0	DVP	1	DVP_P1-2: LN 2012-B	operation	678.679992676	149.56	150.12	DC	8.33
97916080	940480	AE2-033 TAP	230.0	DVP	314435	6SAPONY	230.0	DVP	1	Base Case	operation	678.679992676	143.04	143.66	DC	9.26
97915731	957790	AF2-073 TAP	230.0	DVP	957820	AF2-076 TAP	230.0	DVP	1	DVP_P1-2: LN 2092	operation	571.520019531	281.15	283.88	DC	15.59
97915738	957790	AF2-073 TAP	230.0	DVP	957820	AF2-076 TAP	230.0	DVP	1	Base Case	operation	571.520019531	151.34	153.47	DC	12.17
97915719	957820	AF2-076 TAP	230.0	DVP	314537	6SUFFOLK	230.0	DVP	1	DVP_P1-2: LN 2092	operation	571.520019531	288.96	291.69	DC	15.59
97915726	957820	AF2-076 TAP	230.0	DVP	314537	6SUFFOLK	230.0	DVP	1	Base Case	operation	571.520019531	158.95	161.08	DC	12.17

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
95657987,95657989	1	05EDAN 1 138.0 kV - 05DANVL2 138.0 kV Ckt 1	DVP n6124 (518) : PJM Network Upgrade n6124. Increasing the Danville - East Danville 138 kV circuit summer rating to 572/572/572 MVA will still require us to rebuild the line. The network project has a projected in-service date of 06/01/2021. Project Type : FAC Cost : $9,000,000 Time Estimate : Months	$9,000,000
97915760,97915761	14	6NUCO TP 230.0 kV - AF2-073 TAP 230.0 kV Ckt 1	DVP dom-222 (1340) : Rebuild 18.1 miles of 230 kV Line 246 from Nuco TP to AF2-073 with 2-636 ACSR. Project Type : FAC Cost : $27,150,000 Time Estimate : 36-40 Months	$27,150,000
97915860	5	6WALBMRL 230.0 kV - 6PERQUIMANS 230.0 kV Ckt 1	DVP dom-203 (1321) : Wreck and rebuild 16.7 miles of existing single circuit line 2131 between Mackeys to Perquimans 230 kV. Add new circuit between Mackeys to Perquimans 230 kV, constructed as a double circuit line. Utilize 2-636 ACSR for all new and modified circuits. Add a breaker at each 230 kV terminal. Project Type : CON	$44,150,000
97915872	17	6EDENTON 230.0 kV - 6WALBMRL 230.0 kV Ckt 1		

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ID	Idx	Facility	Upgrade Description	Cost
97915834	6	6MACKEYS 230.0 kV - 6EDENTON 230.0 kV Ckt 1	Cost : $44,150,000 Time Estimate : 36-40 Months	
97915724,97915725,97915730	23	AF2-076 TAP 230.0 kV - 6SUFFOLK 230.0 kV Ckt 1	DVP dom-243 (1361) : Rebuild 2.8 miles of 230 kV Line 246 from AF2-076 Tap to Suffolk with 2-768 ACSS. Project Type : FAC Cost : $4,200,000 Time Estimate : 36-40 Months	$4,200,000
98542536,98542537,97720620	21	AE2-033 TAP 230.0 kV - 6SAPONY 230.0 kV Ckt 1	DVP dom-050 (1135) : Rebuild 2.47 miles of 230 kV Line 238 from AE2-033 TAP to Sapony with 2-795 150C ACSR. Project Type : FAC Cost : $3,705,000 Time Estimate : 30-36 Months	$3,705,000
97915785	19	6S HERTFORD 230.0 kV - 6WINFALL 230.0 kV Ckt 1	DVP dom-094 (1179) : Rebuild 3.3 miles of 230 kV Line 2131 from South Hertford to Winfall with 2-636 ACSR. Project Type : FAC Cost : $4,950,000 Time Estimate : 30-36 Months	$4,950,000
97915754,97915748,97915749	12	6EARLEYS 230.0 kV - 6NUCO TP 230.0 kV Ckt 1	DVP dom-017 (1102) : Rebuild 13.7 miles of 230 kV Line 246 from Earleys to Nucor Tap with 2-636 ACSR. Project Type : FAC Cost : $20,550,000 Time Estimate : 30-36 Months	$20,550,000
97915819,97915814,97915815	20	AB2-100 TAP 230.0 kV - 6CLUBHSE 230.0 kV Ckt 1	DVP dom-048 (1133) : Rebuild 2.0 miles of 230 kV Line 254 from Clubhouse to AB2-100 Tap with 2-636 ACSR. Project Type : FAC Cost : $3,000,000 Time Estimate : 30-36 Months	$3,000,000
96847360	3	6HATHAWAY 230.0 kV - 6ROCKYMT230T 230.0 kV Ckt 1	CPLE NonPJMArea (939) : The external (i.e. Non-PJM) Transmission Owner, CPLE, will not evaluate this violation until the impact study phase. DVP dom-003 (1088) : For DEV portion, rebuild 4.13 miles of 230 kV Line 2058 from Hathaway to Rocky Mountain with 2-636 ACSR. Project Type : FAC Cost : $10,325,000 Time Estimate : 30-36 Months	$10,325,000

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ID	Idx	Facility	Upgrade Description	Cost
96847732,96847310,96847309	13	6EVERETS 230.0 kV - 6GREENVILE T 230.0 kV Ckt 1	**CPLE** **NonPJMArea (939) : The external (i.e. Non-PJM) Transmission Owner, CPLE, will not evaluate this violation until the impact study phase.** **DVP** **dom-173 (1243) : Rebuild 20.32 miles of 230 kV Line 218 from Everetts to Greenville with 2-636 ACSR** **Project Type : FAC** **Cost : $30,480,000** **Time Estimate : 30-36 Months**	$30,480,000
96847367	16	6NASH 230.0 kV - 6PA-RMOUNT#4 230.0 kV Ckt 1	**CPLE** **NonPJMArea (939) : The external (i.e. Non-PJM) Transmission Owner, CPLE, will not evaluate this violation until the impact study phase.** **DVP** **dom-005 (1090) : For DEV portion, rebuild 3.3 miles of 230 kV Line 2181 from Nash to Parmount with 2-636 ACSR.** **Project Type : FAC** **Cost : $8,250,000** **Time Estimate : 30-36 Months**	$8,250,000
96847727	10	3BTLEBRO 115.0 kV - 3ROCKYMT115T 115.0 kV Ckt 1	**CPLE** **NonPJMArea (939) : The external (i.e. Non-PJM) Transmission Owner, CPLE, will not evaluate this violation until the impact study phase.** **DVP** **dom-007 (1092) : Build new 500 kV line between Everetts and Suffolk.** **Project Type : CON** **Cost : $570,000,000** **Time Estimate : 48-60 Months** **n6118 (1277) : Upgrading the breaker leads at DVPs terminal will bring the rating to 239/239/239 MVA (Limited by terminal equipment at Rocky Mount) Approximately $0.1 Million** **Project Type : FAC** **Cost : $100,000** **Time Estimate : 18 Months**	$570,100,000
97915773	2	6PERQUIMANS 230.0 kV - 6S HERTFORD 230.0 kV Ckt 1	**DVP** **dom-090 (1175) : Rebuild 4.65 miles of 230 kV Line 2131 from Perquimans to South Hertford with 2-636 ACSR.** **Project Type : FAC** **Cost : $6,975,000** **Time Estimate : 30-36 Months**	$6,975,000

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ID	Idx	Facility	Upgrade Description	Cost
97720570	7	**6HARROWG 230.0 kV - 6TYLER1 230.0 kV Ckt 1**	**DVP** **dom-036 (1121) : Rebuild 4.5 miles of 230 kV Line 2003 from Harrowgate to Tyler with 2-636 ACSR.** **Project Type : FAC** **Cost : $11,250,000** **Time Estimate : 30-36 Months**	$11,250,000
97720565	8	**6POE 230.0 kV - 6HARROWG 230.0 kV Ckt 1**	**DVP** **dom-037 (1122) : Rebuild 12.3 miles of 230 kV Line 2003 from Poe to Harrowgate with 2-636 ACSR.** **Project Type : FAC** **Cost : $30,750,000** **Time Estimate : 30-36 Months**	$30,750,000
97915969	4	**6HATHAWAY 230.0 kV - 6NASH 230.0 kV Ckt 1**	**DVP** **dom-143 (1214) : Rebuild 0.76 miles of 230 kV Line 2181 from Hathaway to Nash with 2-636 ACSR.** **Project Type : FAC** **Cost : $1,900,000** **Time Estimate : 30-36 Months**	$1,900,000
97915958	9	**6SAPONY 230.0 kV - 6CARSON 230.0 kV Ckt 1**	**DVP** **dom-051 (1136) : Rebuild 11.79 miles of 230 kV Line 238 from Sapony to Carson with 2-795 150C ACSR.** **Project Type : FAC** **Cost : $17,685,000** **Time Estimate : 30-36 Months**	$17,685,000
97720425	18	**6ELIZ CT 230.0 kV - 6SHAWBRO 230.0 kV Ckt 1**	**DVP** **dom-255 (1373) : Rebuild 10.28 miles of 230 kV Line 2021 from Elizabeth City to Shawboro with 2-768.2 ACSS 250C. Replace Breaker, Breaker Lead, Wave Trap and Line lead at Elizabeth City 230 kV. Replace Wavetrap, relay (Secondary CT), Line Lead at Shawboro 230 kV.** **Project Type : FAC** **Cost : $17,140,000** **Time Estimate : 36-40 Months**	$17,140,000
97916008	11	**6CLUBHSE 230.0 kV - AE2-033 TAP 230.0 kV Ckt 1**	**DVP** **dom-047 (1132) : Rebuild 14.28 miles of 230 kV Line 238 from Clubhouse to AE2-033 Tap with 2-795 150C ACSR.** **Project Type : FAC** **Cost : $21,420,000** **Time Estimate : 30-36 Months**	$21,420,000

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ID	Idx	Facility	Upgrade Description	Cost
97915920,97915921,97915925	15	6LAKEVEW 230.0 kV - AB2-100 TAP 230.0 kV Ckt 1	DVP dom-049 (1134) : Rebuild 16.0 miles of 230 kV Line 254 from AB2-100 Tap to Lakeview with 2-636 ACSR. Project Type : FAC Cost : $24,000,000 Time Estimate : 30-36 Months	$24,000,000
97915737,97915736,97915742	22	AF2-073 TAP 230.0 kV - AF2-076 TAP 230.0 kV Ckt 1	DVP dom-242 (1360) : Rebuild 9.8 miles of 230 kV Line 246 from AF2-073 Tap to AF2-076 Tap with 2-795 ACSR. Project Type : FAC Cost : $14,700,000 Time Estimate : 36-40 Months	$14,700,000
			TOTAL COST	$881,680,000

11.6 Flow Gate Details

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

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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
95657987	242631	05EDAN 1	AEP	242620	05DANVL 2	AEP	1	AEP_P4_#11112_05J.FERR 765_A1	breaker	402.0	110.99	111.52	DC	4.65

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
244012	05PINNACLE	-1.8090	Adder	-2.13
315131	1EDGECMA (Deactivation : 22/04/2019)	3.5545	Adder	4.18
315132	1EDGECMB (Deactivation : 22/04/2019)	3.5545	Adder	4.18
917332	Z2-043 E	0.3416	Adder	0.4
917342	Z2-044 E	0.2131	Adder	0.25
917512	Z2-088 E OP1	1.3831	Adder	1.63
918492	AA1-063AE OP	1.1318	Adder	1.33
918532	AA1-067 E	0.2426	Adder	0.29
919692	AA2-053 E OP	1.0995	Adder	1.29
919702	AA2-057 E OP	1.2081	Adder	1.42
920592	AA2-165 E	0.1660	Adder	0.2
920672	AA2-174 E OP	0.1271	Adder	0.15
922922	AB1-081 C OP	3.4267	Adder	4.03
922923	AB1-081 E OP	1.4686	Adder	1.73
923262	AB1-132 C OP (Suspended)	4.0634	Adder	4.78
923263	AB1-132 E OP (Suspended)	1.7414	Adder	2.05
923572	AB1-173 C OP	0.6354	Adder	0.75
923573	AB1-173 E OP	0.2965	Adder	0.35
923582	AB1-173AC OP	0.6354	Adder	0.75
923583	AB1-173AE OP	0.2965	Adder	0.35
923911	AB2-031 C O1	0.6307	Adder	0.74
923912	AB2-031 E O1	0.3106	Adder	0.37
923991	AB2-040 C O1	2.0708	Adder	2.44
923992	AB2-040 E O1	1.6943	Adder	1.99
924022	AB2-043 E O1	0.8878	Adder	1.04
924152	AB2-059 E OP	2.0805	Adder	2.45
924162	AB2-060 E OP	1.3365	Adder	1.57
924301	AB2-077 C O1 (Suspended)	0.6357	Adder	0.75
924302	AB2-077 E O1 (Suspended)	0.4238	Adder	0.5
924311	AB2-078 C O1 (Suspended)	0.6357	Adder	0.75
924312	AB2-078 E O1 (Suspended)	0.4238	Adder	0.5
924321	AB2-079 C O1 (Suspended)	0.6357	Adder	0.75
924322	AB2-079 E O1 (Suspended)	0.4238	Adder	0.5

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924501	AB2-099 C (Suspended)	0.1611	Adder	0.19
924502	AB2-099 E (Suspended)	0.0690	Adder	0.08
925122	AB2-169 E	1.6847	Adder	1.98
925172	AB2-174 E O1	1.7694	Adder	2.08
925591	AC1-034 C	2.6159	Adder	3.08
925592	AC1-034 E	1.9734	Adder	2.32
925611	AC1-036 C	0.2686	Adder	0.32
925612	AC1-036 E	0.4382	Adder	0.52
925781	AC1-054 C O1	2.4980	Adder	2.94
925782	AC1-054 E O1	1.1507	Adder	1.35
926051	AC1-083 C O1	3.9626	50/50	3.9626
926052	AC1-083 E O1	6.4654	50/50	6.4654
926071	AC1-086 C	5.9838	Adder	7.04
926072	AC1-086 E	2.7234	Adder	3.2
926201	AC1-098 C	1.9882	Adder	2.34
926202	AC1-098 E	1.1845	Adder	1.39
926211	AC1-099 C	0.6663	Adder	0.78
926212	AC1-099 E	0.3913	Adder	0.46
926271	AC1-105 C O1 (Suspended)	1.9582	Adder	2.3
926272	AC1-105 E O1 (Suspended)	0.9748	Adder	1.15
927021	AC1-189 C	3.0130	Adder	3.54
927022	AC1-189 E	1.5009	Adder	1.77
927141	AC1-208 C	2.9907	Adder	3.52
927142	AC1-208 E	1.3280	Adder	1.56
927251	AC1-221 C	1.5648	50/50	1.5648
927252	AC1-221 E	1.5648	50/50	1.5648
927261	AC1-222 C	1.2518	Adder	1.47
927262	AC1-222 E	1.1917	Adder	1.4
932631	AC2-084 C	2.8343	Adder	3.33
932632	AC2-084 E	1.3960	Adder	1.64
932761	AC2-100 C	3.6012	50/50	3.6012
932762	AC2-100 E	1.7578	50/50	1.7578
933941	AD1-017 C	0.7925	50/50	0.7925
933942	AD1-017 E	1.2931	50/50	1.2931
934311	AD1-055 C	0.8691	Adder	1.02
934312	AD1-055 E	0.2241	Adder	0.26
934331	AD1-057 C O1	3.4134	Adder	4.02
934332	AD1-057 E O1	1.8209	Adder	2.14
934341	AD1-058 C	3.9228	50/50	3.9228
934342	AD1-058 E	0.9968	50/50	0.9968
934611	AD1-087 C O1	2.7885	Adder	3.28
934612	AD1-087 E O1	1.3105	Adder	1.54
934991	AD1-131 C	1.2862	50/50	1.2862
934992	AD1-131 E	0.8574	50/50	0.8574
935171	AD1-152 C O1	2.7711	Adder	3.26
935172	AD1-152 E O1	1.8474	Adder	2.17
936161	AD2-022 C O1	10.5804	50/50	10.5804
936162	AD2-022 E O1	6.3482	50/50	6.3482
936171	AD2-023 C O1	6.1719	50/50	6.1719
936172	AD2-023 E O1	3.3505	50/50	3.3505
936261	AD2-033 C	3.7513	Adder	4.41

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936262	AD2-033 E	2.5008	Adder	2.94
936361	AD2-046 C O1	3.1497	Adder	3.71
936362	AD2-046 E O1	1.4484	Adder	1.7
936481	AD2-063 C O1	4.5403	Adder	5.34
936482	AD2-063 E O1	3.0016	Adder	3.53
937481	AD2-202 C O1	0.7390	Adder	0.87
937482	AD2-202 E O1	0.4157	Adder	0.49
939181	AE1-148 C O1	3.0900	Adder	3.64
939182	AE1-148 E O1	2.0600	Adder	2.42
939441	AE1-176	-0.1149	Adder	-0.14
940081	AE1-250 C	14.0508	50/50	14.0508
940082	AE1-250 E	9.3672	50/50	9.3672
940241	AE2-006	0.1366	Adder	0.16
940571	AE2-044 C	1.7134	Adder	2.02
940572	AE2-044 E	0.7343	Adder	0.86
940661	AE2-053 O1	1.1444	Adder	1.35
941541	AE2-151 C	0.3022	Adder	0.36
941542	AE2-151 E	0.1627	Adder	0.19
942451	AE2-258	0.7407	Adder	0.87
943171	AE2-346 C	0.3866	Adder	0.45
943172	AE2-346 E	0.1657	Adder	0.19
943901	AF1-058 C	0.7057	Adder	0.83
943902	AF1-058 E	0.4705	Adder	0.55
943911	AF1-059	4.9266	Adder	5.8
944141	AF1-082	1.1014	Adder	1.3
945811	AF1-246 C O1	1.9428	Adder	2.29
945812	AF1-246 E O1	2.6829	Adder	3.16
957481	AF2-042 C O1	7.3954	Adder	16.42
957482	AF2-042 E O1	4.9303	Adder	10.94
957861	AF2-080 C	1.4504	Adder	3.22
957862	AF2-080 E	0.6429	Adder	1.43
959231	AF2-214 C	1.9621	Adder	4.36
959232	AF2-214 E	2.9415	Adder	6.53
959311	AF2-222 C	2.4620	Adder	5.47
959312	AF2-222 E	1.6495	Adder	3.66
959511	AF2-242	1.2786	Adder	2.84
959751	AF2-266 O1	1.3105	Adder	2.91
960061	AF2-297 C O1	1.4962	Adder	3.32
960062	AF2-297 E O1	0.9974	Adder	2.21
960122	AF2-303 E O1	2.4361	Adder	5.41
960331	AF2-324 C O1	1.5851	Adder	3.52
960332	AF2-324 E O1	0.8510	Adder	1.89
960351	AF2-326 C	0.5185	Adder	1.15
960352	AF2-326 E	0.1296	Adder	0.29
960811	AF2-372 C	0.2128	Adder	0.47
960812	AF2-372 E	0.3473	Adder	0.77
960821	AF2-373 C	0.1698	Adder	0.38
960822	AF2-373 E	0.2547	Adder	0.57
960831	AF2-374 C	0.1904	Adder	0.42
960832	AF2-374 E	0.3107	Adder	0.69
NEWTON	NEWTON	0.3567	Confirmed LTF	0.3567
CPLE	CPLE	5.5176	Confirmed LTF	5.5176

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
G-007A	G-007A	0.6186	Confirmed LTF	0.6186
VFT	VFT	1.6254	Confirmed LTF	1.6254
CBM-W2	CBM-W2	5.2744	Confirmed LTF	5.2744
TVA	TVA	1.9418	Confirmed LTF	1.9418
EDWARDS	EDWARDS	0.1740	Confirmed LTF	0.1740
CBM-S2	CBM-S2	37.0845	Confirmed LTF	37.0845
CBM-S1	CBM-S1	8.5967	Confirmed LTF	8.5967
TILTON	TILTON	0.3856	Confirmed LTF	0.3856
MADISON	MADISON	1.8829	Confirmed LTF	1.8829
GIBSON	GIBSON	0.2905	Confirmed LTF	0.2905
BLUEG	BLUEG	1.2187	Confirmed LTF	1.2187
TRIMBLE	TRIMBLE	0.4096	Confirmed LTF	0.4096
AA2-074	AA2-074	3.7471	LTF	3.7471

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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
97915773	313714	6PERQUIMANS	DVP	314662	6S HERTFORD	DVP	1	DVP_P1-2: LN 246	single	733.2	132.62	133.69	DC	7.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0325	80/20	0.0325
314574	6EVERETS	0.3446	80/20	0.3446
314582	3KELFORD	0.4969	80/20	0.4969
314589	3MURPHYS	0.0660	80/20	0.0660
314623	3WITAKRS	0.1596	80/20	0.1596
314704	3LAWRENC	0.1176	80/20	0.1176
315126	1ROARAP2	0.9082	80/20	0.9082
315128	1ROARAP4	0.8667	80/20	0.8667
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315136	1ROSEMG1	1.5269	80/20	1.5269
315137	1ROSEMS1	0.9468	80/20	0.9468
315138	1ROSEMG2	0.7156	80/20	0.7156
315139	1GASTONA	2.2149	80/20	2.2149
315141	1GASTONB	2.2149	80/20	2.2149
315161	1KERR 4	0.3901	80/20	0.3901
315162	1KERR 5	0.3901	80/20	0.3901
315163	1KERR 6	0.3901	80/20	0.3901
315164	1KERR 7	0.3901	80/20	0.3901
315292	1DOMTR78	3.3298	80/20	3.3298
315294	1DOMTR10	25.0180	80/20	25.0180
315601	1CONETOE2SOL	1.4398	80/20	1.4398
315602	1HOLLOMANSOL	2.2223	80/20	2.2223
315606	3AA2-053SOLA	1.1036	80/20	1.1036
315607	3AA1-063SOLA	0.8357	80/20	0.8357
315608	3AA2-088SOLA	0.4899	80/20	0.4899
315611	6Z1-036WIND	27.9154	80/20	27.9154
315612	3AA2-057SOLA	0.8869	80/20	0.8869
315614	AA2-178 C	5.2604	80/20	5.2604
920591	AA2-165 C	0.1052	80/20	0.1052
920671	AA2-174 C OP	0.0505	80/20	0.0505
922922	AB1-081 C OP	5.9136	80/20	5.9136
923262	**AB1-132 C OP (Suspended)**	**9.8053**	**80/20**	**9.8053**
923572	AB1-173 C OP	1.1594	80/20	1.1594
923582	AB1-173AC OP	1.1594	80/20	1.1594
923831	AB2-022 C	-1.6400	Adder	-1.93
923911	AB2-031 C O1	1.1508	80/20	1.1508
923991	AB2-040 C O1	3.7787	80/20	3.7787
924151	AB2-059 C OP	1.2022	80/20	1.2022

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924501	**AB2-099 C (Suspended)**	**0.6347**	**80/20**	**0.6347**
924511	AB2-100 C	0.8106	80/20	0.8106
925121	AB2-169 C	2.1767	80/20	2.1767
925171	AB2-174 C O1	0.5928	80/20	0.5928
925591	AC1-034 C	4.5144	80/20	4.5144
925781	AC1-054 C O1	2.9637	80/20	2.9637
926071	AC1-086 C	14.4395	80/20	14.4395
926201	AC1-098 C	5.2053	80/20	5.2053
926211	AC1-099 C	1.7443	80/20	1.7443
927021	AC1-189 C	8.6764	80/20	8.6764
927141	AC1-208 C	6.6480	80/20	6.6480
932631	AC2-084 C	7.4204	80/20	7.4204
933991	AD1-023 C	30.3123	80/20	30.3123
934331	AD1-057 C O1	6.8258	80/20	6.8258
934521	AD1-076 C	142.1118	80/20	142.1118
936401	AD2-051 C O1	12.4167	80/20	12.4167
938171	AE1-026 C O1	68.2899	80/20	68.2899
938221	AE1-035 C	3.2208	80/20	3.2208
940491	AE2-034 C	22.8724	80/20	22.8724
940571	AE2-044 C	2.9568	80/20	2.9568
941541	AE2-151 C	1.3133	80/20	1.3133
942471	AE2-260 C O1	5.3193	80/20	5.3193
942851	AE2-304 C	-0.7263	Adder	-0.85
943171	AE2-346 C	1.5233	80/20	1.5233
943911	AF1-059	5.3880	80/20	5.3880
944141	AF1-082	1.9008	80/20	1.9008
945711	AF1-236 C O1	250.3979	80/20	250.3979
946281	AF1-292 C	0.6331	80/20	0.6331
957521	AF2-046 C	12.9920	80/20	12.9920
957531	AF2-047 C	54.3491	80/20	54.3491
957861	AF2-080 C	7.8803	80/20	7.8803
959231	AF2-214 C	6.3888	80/20	6.3888
959511	AF2-242	13.1813	80/20	13.1813
959731	AF2-264 C	2.1088	80/20	2.1088
960081	AF2-299 C	1.0671	80/20	1.0671
960331	AF2-324 C O1	5.2899	80/20	5.2899
960351	AF2-326 C	1.6838	80/20	1.6838
960831	AF2-374 C	1.3333	80/20	1.3333
WEC	WEC	0.2337	Confirmed LTF	0.2337
LGEE	LGEE	0.4364	Confirmed LTF	0.4364
CPLE	CPLE	2.6804	Confirmed LTF	2.6804
CBM-W2	CBM-W2	9.0499	Confirmed LTF	9.0499
NY	NY	0.2068	Confirmed LTF	0.2068
CBM-W1	CBM-W1	8.8070	Confirmed LTF	8.8070
TVA	TVA	1.8732	Confirmed LTF	1.8732
CBM-S2	CBM-S2	16.2476	Confirmed LTF	16.2476
CBM-S1	CBM-S1	10.4966	Confirmed LTF	10.4966
MADISON	MADISON	0.5000	Confirmed LTF	0.5000
MEC	MEC	1.3920	Confirmed LTF	1.3920
AA2-074	AA2-074	1.8270	LTF	1.8270

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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
96847360	313845	6HATHAWAY	DVP	304222	6ROCKYMT230T	CPLE	1	DVP_P1-2: LN 2181	single	478.0	101.58	103.9	DC	11.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314435	6SAPONY	0.1766	80/20	0.1766
314572	3EMPORIA	0.0497	80/20	0.0497
314574	6EVERETS	0.2240	80/20	0.2240
314582	3KELFORD	0.3819	80/20	0.3819
314589	3MURPHYS	0.0609	80/20	0.0609
314623	3WITAKRS	0.3141	80/20	0.3141
314704	3LAWRENC	0.1694	80/20	0.1694
315115	1S HAMPT1	0.7849	80/20	0.7849
315126	1ROARAP2	1.1859	80/20	1.1859
315128	1ROARAP4	1.1317	80/20	1.1317
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**25.0630**	**80/20**	**25.0630**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**25.0630**	**80/20**	**25.0630**
315136	1ROSEMG1	2.9028	80/20	2.9028
315137	1ROSEMS1	1.8000	80/20	1.8000
315138	1ROSEMG2	1.3604	80/20	1.3604
315139	1GASTONA	3.5951	80/20	3.5951
315141	1GASTONB	3.5951	80/20	3.5951
315292	1DOMTR78	0.8569	80/20	0.8569
315294	1DOMTR10	6.4385	80/20	6.4385
315601	1CONETOE2SOL	2.6952	80/20	2.6952
315602	1HOLLOMANSOL	1.0473	80/20	1.0473
315605	6W1-029WIND	0.2433	80/20	0.2433
315606	3AA2-053SOLA	1.2090	80/20	1.2090
315607	3AA1-063SOLA	1.0879	80/20	1.0879
315608	3AA2-088SOLA	0.6661	80/20	0.6661
315611	6Z1-036WIND	2.4371	80/20	2.4371
315612	3AA2-057SOLA	1.5529	80/20	1.5529
315614	AA2-178 C	0.7843	80/20	0.7843
920591	AA2-165 C	0.1841	80/20	0.1841
920671	AA2-174 C OP	0.0554	80/20	0.0554
922922	AB1-081 C OP	15.1732	80/20	15.1732
923262	**AB1-132 C OP (Suspended)**	**15.9155**	**80/20**	**15.9155**
923572	AB1-173 C OP	1.6606	80/20	1.6606
923582	AB1-173AC OP	1.6606	80/20	1.6606
923801	AB2-015 C OP	4.0595	80/20	4.0595
923911	AB2-031 C O1	1.6483	80/20	1.6483
923991	AB2-040 C O1	5.4124	80/20	5.4124
924151	AB2-059 C OP	3.0847	80/20	3.0847
924501	**AB2-099 C (Suspended)**	**0.4117**	**80/20**	**0.4117**

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924511	AB2-100 C	1.4667	80/20	1.4667
925121	AB2-169 C	0.7206	80/20	0.7206
925171	AB2-174 C O1	0.8699	80/20	0.8699
925591	AC1-034 C	11.5831	80/20	11.5831
925781	AC1-054 C O1	2.9325	80/20	2.9325
926071	AC1-086 C	23.4374	80/20	23.4374
926201	AC1-098 C	6.2999	80/20	6.2999
926211	AC1-099 C	2.1111	80/20	2.1111
927021	AC1-189 C	12.1966	80/20	12.1966
927141	AC1-208 C	9.7050	80/20	9.7050
932631	AC2-084 C	8.9807	80/20	8.9807
933991	AD1-023 C	7.5960	80/20	7.5960
934331	AD1-057 C O1	20.1230	80/20	20.1230
934521	AD1-076 C	29.5910	80/20	29.5910
936401	AD2-051 C O1	6.0417	80/20	6.0417
938171	AE1-026 C O1	19.1647	80/20	19.1647
938221	AE1-035 C	1.5178	80/20	1.5178
938771	AE1-103 C O1	1.6073	80/20	1.6073
940481	AE2-033 C	7.1912	80/20	7.1912
940491	AE2-034 C	3.4100	80/20	3.4100
940571	AE2-044 C	7.5866	80/20	7.5866
941501	AE2-147 C	4.7016	80/20	4.7016
941541	AE2-151 C	0.7823	80/20	0.7823
942471	AE2-260 C O1	9.8487	80/20	9.8487
942851	AE2-304 C	0.2065	80/20	0.2065
943171	AE2-346 C	0.9880	80/20	0.9880
943911	AF1-059	6.8970	80/20	6.8970
944141	AF1-082	4.8771	80/20	4.8771
944871	AF1-152 C	1.5672	80/20	1.5672
945711	AF1-236 C O1	37.3312	80/20	37.3312
946011	AF1-266	6.0196	80/20	6.0196
946281	AF1-292 C	0.9994	80/20	0.9994
957521	AF2-046 C	11.0658	80/20	11.0658
957531	AF2-047 C	8.1028	80/20	8.1028
957791	**AF2-073 C (Withdrawn : 07/02/2020)**	**3.3956**	**80/20**	**3.3956**
957801	**AF2-074 C (Withdrawn : 07/02/2020)**	**1.5091**	**80/20**	**1.5091**
957861	AF2-080 C	11.0774	80/20	11.0774
959231	AF2-214 C	16.3925	80/20	16.3925
959511	AF2-242	5.4341	80/20	5.4341
959731	AF2-264 C	1.5338	80/20	1.5338
960081	AF2-299 C	1.6844	80/20	1.6844
960331	AF2-324 C O1	21.0875	80/20	21.0875
960351	AF2-326 C	3.7166	80/20	3.7166
960831	AF2-374 C	0.9486	80/20	0.9486
961091	AF2-400 C	0.2192	80/20	0.2192
NEWTON	NEWTON	1.3496	Confirmed LTF	1.3496
FARMERCITY	FARMERCITY	0.0774	Confirmed LTF	0.0774
G-007A	G-007A	0.8871	Confirmed LTF	0.8871
VFT	VFT	2.3607	Confirmed LTF	2.3607
CALDERWOOD	CALDERWOOD	1.0725	Confirmed LTF	1.0725
PRAIRIE	PRAIRIE	3.6420	Confirmed LTF	3.6420

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CHEOAH	CHEOAH	1.1001	Confirmed LTF	1.1001
EDWARDS	EDWARDS	0.4070	Confirmed LTF	0.4070
TILTON	TILTON	0.7201	Confirmed LTF	0.7201
GIBSON	GIBSON	0.6519	Confirmed LTF	0.6519
BLUEG	BLUEG	2.0138	Confirmed LTF	2.0138
TRIMBLE	TRIMBLE	0.6389	Confirmed LTF	0.6389
CATAWBA	CATAWBA	1.1585	Confirmed LTF	1.1585

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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
97915969	313845	6HATHAWAY	DVP	314591	6NASH	DVP	1	DVP_P1-2: LN 2058	single	449.32	112.68	115.25	DC	11.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314435	6SAPONY	0.1795	80/20	0.1795
314572	3EMPORIA	0.0495	80/20	0.0495
314574	6EVERETS	0.2332	80/20	0.2332
314582	3KELFORD	0.3455	80/20	0.3455
314589	3MURPHYS	0.0594	80/20	0.0594
314623	3WITAKRS	0.2214	80/20	0.2214
314704	3LAWRENC	0.1687	80/20	0.1687
315115	1S HAMPT1	0.7687	80/20	0.7687
315126	1ROARAP2	1.1465	80/20	1.1465
315128	1ROARAP4	1.0941	80/20	1.0941
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**26.1992**	**80/20**	**26.1992**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**26.1992**	**80/20**	**26.1992**
315136	1ROSEMG1	2.9849	80/20	2.9849
315137	1ROSEMS1	1.8510	80/20	1.8510
315138	1ROSEMG2	1.3990	80/20	1.3990
315139	1GASTONA	3.6772	80/20	3.6772
315141	1GASTONB	3.6772	80/20	3.6772
315292	1DOMTR78	0.8777	80/20	0.8777
315294	1DOMTR10	6.5947	80/20	6.5947
315601	1CONETOE2SOL	2.8147	80/20	2.8147
315602	1HOLLOMANSOL	1.0595	80/20	1.0595
315605	6W1-029WIND	0.2467	80/20	0.2467
315606	3AA2-053SOLA	1.1705	80/20	1.1705
315607	3AA1-063SOLA	1.0545	80/20	1.0545
315608	3AA2-088SOLA	0.6494	80/20	0.6494
315611	6Z1-036WIND	2.4749	80/20	2.4749
315612	3AA2-057SOLA	1.1428	80/20	1.1428
315614	AA2-178 C	0.7978	80/20	0.7978
920591	AA2-165 C	0.1355	80/20	0.1355
920671	AA2-174 C OP	0.0536	80/20	0.0536
922922	AB1-081 C OP	10.5510	80/20	10.5510
923262	**AB1-132 C OP (Suspended)**	**16.2792**	**80/20**	**16.2792**
923572	AB1-173 C OP	1.6336	80/20	1.6336
923582	AB1-173AC OP	1.6336	80/20	1.6336
923801	AB2-015 C OP	3.9820	80/20	3.9820
923911	AB2-031 C O1	1.6215	80/20	1.6215
923991	AB2-040 C O1	5.3244	80/20	5.3244
924151	AB2-059 C OP	2.1450	80/20	2.1450
924501	**AB2-099 C (Suspended)**	**0.4014**	**80/20**	**0.4014**

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924511	AB2-100 C	1.4928	80/20	1.4928
925121	AB2-169 C	0.7426	80/20	0.7426
925171	AB2-174 C O1	0.8593	80/20	0.8593
925591	AC1-034 C	8.0545	80/20	8.0545
925781	AC1-054 C O1	2.8182	80/20	2.8182
926071	AC1-086 C	23.9731	80/20	23.9731
926201	AC1-098 C	5.1403	80/20	5.1403
926211	AC1-099 C	1.7225	80/20	1.7225
927021	AC1-189 C	12.7300	80/20	12.7300
927141	AC1-208 C	7.7959	80/20	7.7959
932631	AC2-084 C	7.3277	80/20	7.3277
933991	AD1-023 C	7.7172	80/20	7.7172
934331	AD1-057 C O1	20.9211	80/20	20.9211
934521	AD1-076 C	30.1201	80/20	30.1201
936401	AD2-051 C O1	6.1146	80/20	6.1146
938171	AE1-026 C O1	19.4515	80/20	19.4515
938221	AE1-035 C	1.5355	80/20	1.5355
938771	AE1-103 C O1	1.5796	80/20	1.5796
940481	AE2-033 C	7.3096	80/20	7.3096
940491	AE2-034 C	3.4688	80/20	3.4688
940571	AE2-044 C	5.2755	80/20	5.2755
941501	AE2-147 C	4.7673	80/20	4.7673
941541	AE2-151 C	0.7628	80/20	0.7628
942471	AE2-260 C O1	10.0150	80/20	10.0150
942851	AE2-304 C	0.2096	80/20	0.2096
943171	AE2-346 C	0.9633	80/20	0.9633
943911	AF1-059	6.8380	80/20	6.8380
944141	AF1-082	3.3914	80/20	3.3914
944871	AF1-152 C	1.5891	80/20	1.5891
945711	AF1-236 C O1	37.9749	80/20	37.9749
946011	AF1-266	6.1187	80/20	6.1187
946281	AF1-292 C	0.9992	80/20	0.9992
957521	AF2-046 C	10.7844	80/20	10.7844
957531	AF2-047 C	8.2425	80/20	8.2425
957791	**AF2-073 C (Withdrawn : 07/02/2020)**	**3.4329**	**80/20**	**3.4329**
957801	**AF2-074 C (Withdrawn : 07/02/2020)**	**1.5257**	**80/20**	**1.5257**
957861	AF2-080 C	11.5619	80/20	11.5619
959231	AF2-214 C	11.3988	80/20	11.3988
959511	AF2-242	5.6218	80/20	5.6218
959731	AF2-264 C	1.4952	80/20	1.4952
960081	AF2-299 C	1.6841	80/20	1.6841
960331	AF2-324 C O1	22.0434	80/20	22.0434
960351	AF2-326 C	2.5194	80/20	2.5194
960831	AF2-374 C	0.9226	80/20	0.9226
961091	AF2-400 C	0.2150	80/20	0.2150
NEWTON	NEWTON	1.3582	Confirmed LTF	1.3582
FARMERCITY	FARMERCITY	0.0779	Confirmed LTF	0.0779
G-007A	G-007A	0.9063	Confirmed LTF	0.9063
VFT	VFT	2.4123	Confirmed LTF	2.4123
CALDERWOOD	CALDERWOOD	1.0810	Confirmed LTF	1.0810
PRAIRIE	PRAIRIE	3.6653	Confirmed LTF	3.6653

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CHEOAH	CHEOAH	1.1086	Confirmed LTF	1.1086
EDWARDS	EDWARDS	0.4095	Confirmed LTF	0.4095
TILTON	TILTON	0.7245	Confirmed LTF	0.7245
GIBSON	GIBSON	0.6557	Confirmed LTF	0.6557
BLUEG	BLUEG	2.0259	Confirmed LTF	2.0259
TRIMBLE	TRIMBLE	0.6428	Confirmed LTF	0.6428
CATAWBA	CATAWBA	1.1687	Confirmed LTF	1.1687

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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
97915860	313885	6WALBMRL	DVP	313714	6PERQUIMANS	DVP	1	DVP_P1-2: LN 246	single	733.2	127.53	128.6	DC	7.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0325	80/20	0.0325
314574	6EVERETS	0.3446	80/20	0.3446
314582	3KELFORD	0.4969	80/20	0.4969
314589	3MURPHYS	0.0660	80/20	0.0660
314623	3WITAKRS	0.1596	80/20	0.1596
314704	3LAWRENC	0.1176	80/20	0.1176
315126	1ROARAP2	0.9082	80/20	0.9082
315128	1ROARAP4	0.8667	80/20	0.8667
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315136	1ROSEMG1	1.5269	80/20	1.5269
315137	1ROSEMS1	0.9468	80/20	0.9468
315138	1ROSEMG2	0.7156	80/20	0.7156
315139	1GASTONA	2.2149	80/20	2.2149
315141	1GASTONB	2.2149	80/20	2.2149
315161	1KERR 4	0.3901	80/20	0.3901
315162	1KERR 5	0.3901	80/20	0.3901
315163	1KERR 6	0.3901	80/20	0.3901
315164	1KERR 7	0.3901	80/20	0.3901
315292	1DOMTR78	3.3298	80/20	3.3298
315294	1DOMTR10	25.0180	80/20	25.0180
315601	1CONETOE2SOL	1.4398	80/20	1.4398
315602	1HOLLOMANSOL	2.2223	80/20	2.2223
315606	3AA2-053SOLA	1.1036	80/20	1.1036
315607	3AA1-063SOLA	0.8357	80/20	0.8357
315608	3AA2-088SOLA	0.4899	80/20	0.4899
315611	6Z1-036WIND	-9.4219	Adder	-11.08
315612	3AA2-057SOLA	0.8869	80/20	0.8869
315614	AA2-178 C	5.2604	80/20	5.2604
920591	AA2-165 C	0.1052	80/20	0.1052
920671	AA2-174 C OP	0.0505	80/20	0.0505
922922	AB1-081 C OP	5.9136	80/20	5.9136
923262	**AB1-132 C OP (Suspended)**	**9.8053**	**80/20**	**9.8053**
923572	AB1-173 C OP	1.1594	80/20	1.1594
923582	AB1-173AC OP	1.1594	80/20	1.1594
923831	AB2-022 C	-1.6400	Adder	-1.93
923911	AB2-031 C O1	1.1508	80/20	1.1508
923991	AB2-040 C O1	3.7787	80/20	3.7787
924151	AB2-059 C OP	1.2022	80/20	1.2022

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924501	**AB2-099 C (Suspended)**	**0.6347**	**80/20**	**0.6347**
924511	AB2-100 C	0.8106	80/20	0.8106
925121	AB2-169 C	2.1767	80/20	2.1767
925171	AB2-174 C O1	0.5928	80/20	0.5928
925591	AC1-034 C	4.5144	80/20	4.5144
925781	AC1-054 C O1	2.9637	80/20	2.9637
926071	AC1-086 C	14.4395	80/20	14.4395
926201	AC1-098 C	5.2053	80/20	5.2053
926211	AC1-099 C	1.7443	80/20	1.7443
927021	AC1-189 C	8.6764	80/20	8.6764
927141	AC1-208 C	6.6480	80/20	6.6480
932631	AC2-084 C	7.4204	80/20	7.4204
933991	AD1-023 C	30.3123	80/20	30.3123
934331	AD1-057 C O1	6.8258	80/20	6.8258
934521	AD1-076 C	142.1118	80/20	142.1118
936401	AD2-051 C O1	12.4167	80/20	12.4167
938171	AE1-026 C O1	68.2899	80/20	68.2899
938221	AE1-035 C	3.2208	80/20	3.2208
940491	AE2-034 C	22.8724	80/20	22.8724
940571	AE2-044 C	2.9568	80/20	2.9568
941541	AE2-151 C	1.3133	80/20	1.3133
942471	AE2-260 C O1	5.3193	80/20	5.3193
942851	AE2-304 C	-0.7263	Adder	-0.85
943171	AE2-346 C	1.5233	80/20	1.5233
943911	AF1-059	5.3880	80/20	5.3880
944141	AF1-082	1.9008	80/20	1.9008
945711	AF1-236 C O1	250.3979	80/20	250.3979
946281	AF1-292 C	0.6331	80/20	0.6331
957521	AF2-046 C	12.9920	80/20	12.9920
957531	AF2-047 C	54.3491	80/20	54.3491
957861	AF2-080 C	7.8803	80/20	7.8803
959231	AF2-214 C	6.3888	80/20	6.3888
959511	AF2-242	13.1813	80/20	13.1813
959731	AF2-264 C	2.1088	80/20	2.1088
960081	AF2-299 C	1.0671	80/20	1.0671
960331	AF2-324 C O1	5.2899	80/20	5.2899
960351	AF2-326 C	1.6838	80/20	1.6838
960831	AF2-374 C	1.3333	80/20	1.3333
WEC	WEC	0.2337	Confirmed LTF	0.2337
LGEE	LGEE	0.4364	Confirmed LTF	0.4364
CPLE	CPLE	2.6804	Confirmed LTF	2.6804
CBM-W2	CBM-W2	9.0499	Confirmed LTF	9.0499
NY	NY	0.2068	Confirmed LTF	0.2068
CBM-W1	CBM-W1	8.8070	Confirmed LTF	8.8070
TVA	TVA	1.8732	Confirmed LTF	1.8732
CBM-S2	CBM-S2	16.2476	Confirmed LTF	16.2476
CBM-S1	CBM-S1	10.4966	Confirmed LTF	10.4966
MADISON	MADISON	0.5000	Confirmed LTF	0.5000
MEC	MEC	1.3920	Confirmed LTF	1.3920
AA2-074	AA2-074	1.8270	LTF	1.8270

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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
97915834	314203	6MACKEYS	DVP	314637	6EDENTON	DVP	1	DVP_P1-2: LN 246	single	731.32	131.67	132.75	DC	7.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0325	80/20	0.0325
314574	6EVERETS	0.3446	80/20	0.3446
314582	3KELFORD	0.4969	80/20	0.4969
314589	3MURPHYS	0.0660	80/20	0.0660
314623	3WITAKRS	0.1596	80/20	0.1596
314704	3LAWRENC	0.1176	80/20	0.1176
315126	1ROARAP2	0.9082	80/20	0.9082
315128	1ROARAP4	0.8667	80/20	0.8667
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315136	1ROSEMG1	1.5269	80/20	1.5269
315137	1ROSEMS1	0.9468	80/20	0.9468
315138	1ROSEMG2	0.7156	80/20	0.7156
315139	1GASTONA	2.2149	80/20	2.2149
315141	1GASTONB	2.2149	80/20	2.2149
315161	1KERR 4	0.3901	80/20	0.3901
315162	1KERR 5	0.3901	80/20	0.3901
315163	1KERR 6	0.3901	80/20	0.3901
315164	1KERR 7	0.3901	80/20	0.3901
315292	1DOMTR78	3.3298	80/20	3.3298
315294	1DOMTR10	25.0180	80/20	25.0180
315601	1CONETOE2SOL	1.4398	80/20	1.4398
315602	1HOLLOMANSOL	2.2223	80/20	2.2223
315606	3AA2-053SOLA	1.1036	80/20	1.1036
315607	3AA1-063SOLA	0.8357	80/20	0.8357
315608	3AA2-088SOLA	0.4899	80/20	0.4899
315611	6Z1-036WIND	-9.4219	Adder	-11.08
315612	3AA2-057SOLA	0.8869	80/20	0.8869
315614	AA2-178 C	5.2604	80/20	5.2604
920591	AA2-165 C	0.1052	80/20	0.1052
920671	AA2-174 C OP	0.0505	80/20	0.0505
922922	AB1-081 C OP	5.9136	80/20	5.9136
923262	**AB1-132 C OP (Suspended)**	**9.8053**	**80/20**	**9.8053**
923572	AB1-173 C OP	1.1594	80/20	1.1594
923582	AB1-173AC OP	1.1594	80/20	1.1594
923831	AB2-022 C	-1.6400	Adder	-1.93
923911	AB2-031 C O1	1.1508	80/20	1.1508
923991	AB2-040 C O1	3.7787	80/20	3.7787
924151	AB2-059 C OP	1.2022	80/20	1.2022

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924501	**AB2-099 C (Suspended)**	**0.6347**	**80/20**	**0.6347**
924511	AB2-100 C	0.8106	80/20	0.8106
925121	AB2-169 C	2.1767	80/20	2.1767
925171	AB2-174 C O1	0.5928	80/20	0.5928
925591	AC1-034 C	4.5144	80/20	4.5144
925781	AC1-054 C O1	2.9637	80/20	2.9637
926071	AC1-086 C	14.4395	80/20	14.4395
926201	AC1-098 C	5.2053	80/20	5.2053
926211	AC1-099 C	1.7443	80/20	1.7443
927021	AC1-189 C	8.6764	80/20	8.6764
927141	AC1-208 C	6.6480	80/20	6.6480
932631	AC2-084 C	7.4204	80/20	7.4204
933991	AD1-023 C	30.3123	80/20	30.3123
934331	AD1-057 C O1	6.8258	80/20	6.8258
934521	AD1-076 C	142.1118	80/20	142.1118
936401	AD2-051 C O1	12.4167	80/20	12.4167
938171	AE1-026 C O1	68.2899	80/20	68.2899
938221	AE1-035 C	3.2208	80/20	3.2208
940491	AE2-034 C	22.8724	80/20	22.8724
940571	AE2-044 C	2.9568	80/20	2.9568
941541	AE2-151 C	1.3133	80/20	1.3133
942471	AE2-260 C O1	5.3193	80/20	5.3193
942851	AE2-304 C	-0.7263	Adder	-0.85
943171	AE2-346 C	1.5233	80/20	1.5233
943911	AF1-059	5.3880	80/20	5.3880
944141	AF1-082	1.9008	80/20	1.9008
945711	AF1-236 C O1	250.3979	80/20	250.3979
946281	AF1-292 C	0.6331	80/20	0.6331
957521	AF2-046 C	12.9920	80/20	12.9920
957531	AF2-047 C	54.3491	80/20	54.3491
957861	AF2-080 C	7.8803	80/20	7.8803
959231	AF2-214 C	6.3888	80/20	6.3888
959511	AF2-242	13.1813	80/20	13.1813
959731	AF2-264 C	2.1088	80/20	2.1088
960081	AF2-299 C	1.0671	80/20	1.0671
960331	AF2-324 C O1	5.2899	80/20	5.2899
960351	AF2-326 C	1.6838	80/20	1.6838
960831	AF2-374 C	1.3333	80/20	1.3333
WEC	WEC	0.2337	Confirmed LTF	0.2337
LGEE	LGEE	0.4364	Confirmed LTF	0.4364
CPLE	CPLE	2.6804	Confirmed LTF	2.6804
CBM-W2	CBM-W2	9.0499	Confirmed LTF	9.0499
NY	NY	0.2068	Confirmed LTF	0.2068
CBM-W1	CBM-W1	8.8070	Confirmed LTF	8.8070
TVA	TVA	1.8732	Confirmed LTF	1.8732
CBM-S2	CBM-S2	16.2476	Confirmed LTF	16.2476
CBM-S1	CBM-S1	10.4966	Confirmed LTF	10.4966
MADISON	MADISON	0.5000	Confirmed LTF	0.5000
MEC	MEC	1.3920	Confirmed LTF	1.3920
AA2-074	AA2-074	1.8270	LTF	1.8270

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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
97720570	314299	6HARROWG	DVP	314263	6TYLER1	DVP	1	DVP_P4-2: 24972-4	breaker	541.0	134.71	135.23	DC	6.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314435	6SAPONY	0.9991	50/50	0.9991
314539	3UNCAMP	1.0317	Adder	1.21
314541	3WATKINS	0.3195	Adder	0.38
314572	3EMPORIA	0.0998	50/50	0.0998
314704	3LAWRENC	0.3711	50/50	0.3711
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**4.8777**	**Adder**	**5.74**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**4.8777**	**Adder**	**5.74**
315136	1ROSEMG1	2.3684	50/50	2.3684
315137	1ROSEMS1	1.4687	50/50	1.4687
315138	1ROSEMG2	1.1100	50/50	1.1100
315139	1GASTONA	3.6125	50/50	3.6125
315141	1GASTONB	3.6125	50/50	3.6125
315294	1DOMTR10	4.0021	Adder	4.71
900672	V4-068 E	0.1643	Adder	0.19
907092	X1-038 E	2.5793	Adder	3.03
917332	Z2-043 E	0.6384	Adder	0.75
917342	Z2-044 E	0.3171	Adder	0.37
917512	Z2-088 E OP1	1.8525	Adder	2.18
918492	AA1-063AE OP	2.8026	Adder	3.3
918512	AA1-065 E OP	1.9029	Adder	2.24
918532	AA1-067 E	0.3158	Adder	0.37
919692	AA2-053 E OP	2.7695	Adder	3.26
919702	AA2-057 E OP	1.9657	Adder	2.31
920042	AA2-088 E OP	5.7728	Adder	6.79
920592	AA2-165 E	0.2702	Adder	0.32
920672	AA2-174 E OP	0.3200	Adder	0.38
922922	AB1-081 C OP	4.6600	Adder	5.48
922923	AB1-081 E OP	1.9972	Adder	2.35
923262	**AB1-132 C OP (Suspended)**	**15.9928**	**50/50**	**15.9928**
923263	**AB1-132 E OP (Suspended)**	**6.8540**	**50/50**	**6.8540**
923572	AB1-173 C OP	2.7475	50/50	2.7475
923573	AB1-173 E OP	1.2822	50/50	1.2822
923582	AB1-173AC OP	2.7475	50/50	2.7475
923583	AB1-173AE OP	1.2822	50/50	1.2822
923801	AB2-015 C OP	3.8649	Adder	4.55
923802	AB2-015 E OP	3.1693	Adder	3.73
923852	AB2-025 E	2.6023	50/50	2.6023
923911	AB2-031 C O1	2.7272	50/50	2.7272

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923912	AB2-031 E O1	1.3432	50/50	1.3432
923991	AB2-040 C O1	8.9549	50/50	8.9549
923992	AB2-040 E O1	7.3267	50/50	7.3267
924022	AB2-043 E O1	1.1913	Adder	1.4
924152	AB2-059 E OP	2.8293	Adder	3.33
924162	AB2-060 E OP	1.7804	Adder	2.09
924301	**AB2-077 C O1 (Suspended)**	**0.8369**	**Adder**	**0.98**
924302	**AB2-077 E O1 (Suspended)**	**0.5579**	**Adder**	**0.66**
924311	**AB2-078 C O1 (Suspended)**	**0.8369**	**Adder**	**0.98**
924312	**AB2-078 E O1 (Suspended)**	**0.5579**	**Adder**	**0.66**
924321	**AB2-079 C O1 (Suspended)**	**0.8369**	**Adder**	**0.98**
924322	**AB2-079 E O1 (Suspended)**	**0.5579**	**Adder**	**0.66**
924501	**AB2-099 C (Suspended)**	**0.3109**	**Adder**	**0.37**
924502	**AB2-099 E (Suspended)**	**0.1332**	**Adder**	**0.16**
924511	AB2-100 C	3.4439	50/50	3.4439
924512	AB2-100 E	9.8337	50/50	9.8337
925061	**AB2-161 C O1 (Suspended)**	**3.3322**	**50/50**	**3.3322**
925062	**AB2-161 E O1 (Suspended)**	**5.4368**	**50/50**	**5.4368**
925122	AB2-169 E	2.2556	Adder	2.65
925171	AB2-174 C O1	1.5519	50/50	1.5519
925172	AB2-174 E O1	8.1400	50/50	8.1400
925591	AC1-034 C	3.5574	Adder	4.19
925592	AC1-034 E	2.6837	Adder	3.16
925781	AC1-054 C O1	4.0091	Adder	4.72
925782	AC1-054 E O1	1.8469	Adder	2.17
926071	AC1-086 C	23.5512	50/50	23.5512
926072	AC1-086 E	10.7190	50/50	10.7190
926201	AC1-098 C	3.6712	Adder	4.32
926202	AC1-098 E	2.1871	Adder	2.57
926211	AC1-099 C	1.2303	Adder	1.45
926212	AC1-099 E	0.7225	Adder	0.85
927021	AC1-189 C	4.0002	Adder	4.71
927022	AC1-189 E	1.9926	Adder	2.34
927141	AC1-208 C	5.7384	Adder	6.75
927142	AC1-208 E	2.5481	Adder	3.0
932581	AC2-078 C O1	6.5573	50/50	6.5573
932582	AC2-078 E O1	10.6987	50/50	10.6987
932591	AC2-079 C O1	3.4283	Adder	4.03
932592	AC2-079 E O1	5.5936	Adder	6.58
932631	AC2-084 C	5.2335	Adder	6.16
932632	AC2-084 E	2.5777	Adder	3.03
933991	AD1-023 C	5.0135	Adder	5.9
933992	AD1-023 E	2.7293	Adder	3.21
934331	AD1-057 C O1	7.2541	Adder	8.53
934332	AD1-057 E O1	3.8696	Adder	4.55

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934521	AD1-076 C	19.0190	Adder	22.38
934522	AD1-076 E	9.6844	Adder	11.39
934571	AD1-082 C	7.5940	50/50	7.5940
934572	AD1-082 E	4.3319	50/50	4.3319
936261	AD2-033 C	4.5356	Adder	5.34
936262	AD2-033 E	3.0237	Adder	3.56
936361	AD2-046 C O1	4.1377	Adder	4.87
936362	AD2-046 E O1	1.9027	Adder	2.24
936401	AD2-051 C O1	4.2709	Adder	5.02
936402	AD2-051 E O1	1.8339	Adder	2.16
936481	AD2-063 C O1	5.8224	Adder	6.85
936482	AD2-063 E O1	3.8493	Adder	4.53
936661	AD2-085 C	2.0955	Adder	2.47
936662	AD2-085 E	3.4190	Adder	4.02
938171	AE1-026 C O1	12.8244	Adder	15.09
938172	AE1-026 E O1	3.3834	Adder	3.98
938221	AE1-035 C	1.0625	Adder	1.25
938222	AE1-035 E	0.5233	Adder	0.62
938631	AE1-085 C O1	13.5690	50/50	13.5690
938632	AE1-085 E O1	6.7845	50/50	6.7845
938771	AE1-103 C O1	1.5476	Adder	1.82
938772	AE1-103 E O1	2.1372	Adder	2.51
939181	AE1-148 C O1	4.0631	Adder	4.78
939182	AE1-148 E O1	2.7087	Adder	3.19
939191	AE1-149 C O1	18.4740	50/50	18.4740
939192	AE1-149 E O1	12.3160	50/50	12.3160
940061	AE2-000BC O1	15.7842	50/50	15.7842
940062	AE2-000BE O1	10.5228	50/50	10.5228
940481	AE2-033 C	35.9338	50/50	35.9338
940482	AE2-033 E	24.2250	50/50	24.2250
940571	AE2-044 C	2.3300	Adder	2.74
940572	AE2-044 E	0.9986	Adder	1.17
940651	AE2-052	6.1580	50/50	6.1580
940661	AE2-053 O1	1.5048	Adder	1.77
941541	AE2-151 C	0.5688	Adder	0.67
941542	AE2-151 E	0.3063	Adder	0.36
942341	AE2-247 C	0.9153	Adder	1.08
942342	AE2-247 E	1.2640	Adder	1.49
942451	AE2-258	0.9939	Adder	1.17
942471	AE2-260 C O1	25.7561	50/50	25.7561
942472	AE2-260 E O1	36.5319	50/50	36.5319
943171	AE2-346 C	0.7461	Adder	0.88
943172	AE2-346 E	0.3198	Adder	0.38
943461	AF1-017 C	0.8281	Adder	0.97
943462	AF1-017 E	1.3511	Adder	1.59
943911	AF1-059	15.4300	50/50	15.4300
944141	AF1-082	1.4979	Adder	1.76
946011	AF1-266	30.0794	50/50	30.0794
946281	AF1-292 C	2.1575	50/50	2.1575
946282	AF1-292 E	1.4545	50/50	1.4545
957521	AF2-046 C	4.8701	Adder	10.81
957522	AF2-046 E	2.4497	Adder	5.44

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957861	AF2-080 C	1.9256	Adder	4.27
957862	AF2-080 E	0.8536	Adder	1.89
958142	AF2-108 BAT	0.3276	Merchant Transmission	0.3276
959231	AF2-214 C	2.6683	Adder	5.92
959232	AF2-214 E	4.0002	Adder	8.88
959511	AF2-242	1.6932	Adder	3.76
959731	AF2-264 C	0.6416	Adder	1.42
959732	AF2-264 E	0.3160	Adder	0.7
960081	AF2-299 C	3.6363	50/50	3.6363
960082	AF2-299 E	2.4242	50/50	2.4242
960122	AF2-303 E O1	3.3429	Adder	7.42
960331	AF2-324 C O1	2.1751	Adder	4.83
960332	AF2-324 E O1	1.1678	Adder	2.59
960351	AF2-326 C	0.7035	Adder	1.56
960352	AF2-326 E	0.1759	Adder	0.39
960361	AF2-327 C	3.2912	50/50	3.2912
960362	AF2-327 E	0.8228	50/50	0.8228
960811	AF2-372 C	0.2802	Adder	0.62
960812	AF2-372 E	0.4572	Adder	1.01
960831	AF2-374 C	0.4002	Adder	0.89
960832	AF2-374 E	0.6530	Adder	1.45
961091	AF2-400 C	0.1106	Adder	0.25
961092	AF2-400 E	0.1815	Adder	0.4
961111	AF2-402 C O1	1.0328	50/50	1.0328
961112	AF2-402 E O1	1.6885	50/50	1.6885
WEC	WEC	0.2063	Confirmed LTF	0.2063
LGEE	LGEE	0.3879	Confirmed LTF	0.3879
CPLE	CPLE	2.3563	Confirmed LTF	2.3563
CBM-W2	CBM-W2	8.2801	Confirmed LTF	8.2801
NY	NY	0.2732	Confirmed LTF	0.2732
CBM-W1	CBM-W1	7.7062	Confirmed LTF	7.7062
TVA	TVA	1.7374	Confirmed LTF	1.7374
O-066	O-066	3.8909	Confirmed LTF	3.8909
CBM-S2	CBM-S2	15.0511	Confirmed LTF	15.0511
CBM-S1	CBM-S1	9.6872	Confirmed LTF	9.6872
G-007	G-007	0.6074	Confirmed LTF	0.6074
MADISON	MADISON	0.4879	Confirmed LTF	0.4879
MEC	MEC	1.2490	Confirmed LTF	1.2490
AA2-074	AA2-074	1.6056	LTF	1.6056

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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
97720565	314331	6POE	DVP	314299	6HARROWG	DVP	1	DVP_P4-2: 24972-4	breaker	541.0	134.73	135.25	DC	6.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314435	6SAPONY	0.9991	50/50	0.9991
314539	3UNCAMP	1.0317	Adder	1.21
314541	3WATKINS	0.3195	Adder	0.38
314572	3EMPORIA	0.0998	50/50	0.0998
314704	3LAWRENC	0.3711	50/50	0.3711
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**4.8777**	**Adder**	**5.74**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**4.8777**	**Adder**	**5.74**
315136	1ROSEMG1	2.3684	50/50	2.3684
315137	1ROSEMS1	1.4687	50/50	1.4687
315138	1ROSEMG2	1.1100	50/50	1.1100
315139	1GASTONA	3.6125	50/50	3.6125
315141	1GASTONB	3.6125	50/50	3.6125
315294	1DOMTR10	4.0021	Adder	4.71
900672	V4-068 E	0.1643	Adder	0.19
907092	X1-038 E	2.5793	Adder	3.03
917332	Z2-043 E	0.6384	Adder	0.75
917342	Z2-044 E	0.3171	Adder	0.37
917512	Z2-088 E OP1	1.8525	Adder	2.18
918492	AA1-063AE OP	2.8026	Adder	3.3
918512	AA1-065 E OP	1.9029	Adder	2.24
918532	AA1-067 E	0.3158	Adder	0.37
919692	AA2-053 E OP	2.7695	Adder	3.26
919702	AA2-057 E OP	1.9657	Adder	2.31
920042	AA2-088 E OP	5.7728	Adder	6.79
920592	AA2-165 E	0.2702	Adder	0.32
920672	AA2-174 E OP	0.3200	Adder	0.38
922922	AB1-081 C OP	4.6600	Adder	5.48
922923	AB1-081 E OP	1.9972	Adder	2.35
923262	**AB1-132 C OP (Suspended)**	**15.9928**	**50/50**	**15.9928**
923263	**AB1-132 E OP (Suspended)**	**6.8540**	**50/50**	**6.8540**
923572	AB1-173 C OP	2.7475	50/50	2.7475
923573	AB1-173 E OP	1.2822	50/50	1.2822
923582	AB1-173AC OP	2.7475	50/50	2.7475
923583	AB1-173AE OP	1.2822	50/50	1.2822
923801	AB2-015 C OP	3.8649	Adder	4.55
923802	AB2-015 E OP	3.1693	Adder	3.73
923852	AB2-025 E	2.6023	50/50	2.6023
923911	AB2-031 C O1	2.7272	50/50	2.7272

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923912	AB2-031 E O1	1.3432	50/50	1.3432
923991	AB2-040 C O1	8.9549	50/50	8.9549
923992	AB2-040 E O1	7.3267	50/50	7.3267
924022	AB2-043 E O1	1.1913	Adder	1.4
924152	AB2-059 E OP	2.8293	Adder	3.33
924162	AB2-060 E OP	1.7804	Adder	2.09
924301	**AB2-077 C O1 (Suspended)**	**0.8369**	**Adder**	**0.98**
924302	**AB2-077 E O1 (Suspended)**	**0.5579**	**Adder**	**0.66**
924311	**AB2-078 C O1 (Suspended)**	**0.8369**	**Adder**	**0.98**
924312	**AB2-078 E O1 (Suspended)**	**0.5579**	**Adder**	**0.66**
924321	**AB2-079 C O1 (Suspended)**	**0.8369**	**Adder**	**0.98**
924322	**AB2-079 E O1 (Suspended)**	**0.5579**	**Adder**	**0.66**
924501	**AB2-099 C (Suspended)**	**0.3109**	**Adder**	**0.37**
924502	**AB2-099 E (Suspended)**	**0.1332**	**Adder**	**0.16**
924511	AB2-100 C	3.4439	50/50	3.4439
924512	AB2-100 E	9.8337	50/50	9.8337
925061	**AB2-161 C O1 (Suspended)**	**3.3322**	**50/50**	**3.3322**
925062	**AB2-161 E O1 (Suspended)**	**5.4368**	**50/50**	**5.4368**
925122	AB2-169 E	2.2556	Adder	2.65
925171	AB2-174 C O1	1.5519	50/50	1.5519
925172	AB2-174 E O1	8.1400	50/50	8.1400
925591	AC1-034 C	3.5574	Adder	4.19
925592	AC1-034 E	2.6837	Adder	3.16
925781	AC1-054 C O1	4.0091	Adder	4.72
925782	AC1-054 E O1	1.8469	Adder	2.17
926071	AC1-086 C	23.5512	50/50	23.5512
926072	AC1-086 E	10.7190	50/50	10.7190
926201	AC1-098 C	3.6712	Adder	4.32
926202	AC1-098 E	2.1871	Adder	2.57
926211	AC1-099 C	1.2303	Adder	1.45
926212	AC1-099 E	0.7225	Adder	0.85
927021	AC1-189 C	4.0002	Adder	4.71
927022	AC1-189 E	1.9926	Adder	2.34
927141	AC1-208 C	5.7384	Adder	6.75
927142	AC1-208 E	2.5481	Adder	3.0
932581	AC2-078 C O1	6.5573	50/50	6.5573
932582	AC2-078 E O1	10.6987	50/50	10.6987
932591	AC2-079 C O1	3.4283	Adder	4.03
932592	AC2-079 E O1	5.5936	Adder	6.58
932631	AC2-084 C	5.2335	Adder	6.16
932632	AC2-084 E	2.5777	Adder	3.03
933991	AD1-023 C	5.0135	Adder	5.9
933992	AD1-023 E	2.7293	Adder	3.21
934331	AD1-057 C O1	7.2541	Adder	8.53
934332	AD1-057 E O1	3.8696	Adder	4.55

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934521	AD1-076 C	19.0190	Adder	22.38
934522	AD1-076 E	9.6844	Adder	11.39
934571	AD1-082 C	7.5940	50/50	7.5940
934572	AD1-082 E	4.3319	50/50	4.3319
936261	AD2-033 C	4.5356	Adder	5.34
936262	AD2-033 E	3.0237	Adder	3.56
936361	AD2-046 C O1	4.1377	Adder	4.87
936362	AD2-046 E O1	1.9027	Adder	2.24
936401	AD2-051 C O1	4.2709	Adder	5.02
936402	AD2-051 E O1	1.8339	Adder	2.16
936481	AD2-063 C O1	5.8224	Adder	6.85
936482	AD2-063 E O1	3.8493	Adder	4.53
936661	AD2-085 C	2.0955	Adder	2.47
936662	AD2-085 E	3.4190	Adder	4.02
938171	AE1-026 C O1	12.8244	Adder	15.09
938172	AE1-026 E O1	3.3834	Adder	3.98
938221	AE1-035 C	1.0625	Adder	1.25
938222	AE1-035 E	0.5233	Adder	0.62
938631	AE1-085 C O1	13.5690	50/50	13.5690
938632	AE1-085 E O1	6.7845	50/50	6.7845
938771	AE1-103 C O1	1.5476	Adder	1.82
938772	AE1-103 E O1	2.1372	Adder	2.51
939181	AE1-148 C O1	4.0631	Adder	4.78
939182	AE1-148 E O1	2.7087	Adder	3.19
939191	AE1-149 C O1	18.4740	50/50	18.4740
939192	AE1-149 E O1	12.3160	50/50	12.3160
940061	AE2-000BC O1	15.7842	50/50	15.7842
940062	AE2-000BE O1	10.5228	50/50	10.5228
940481	AE2-033 C	35.9338	50/50	35.9338
940482	AE2-033 E	24.2250	50/50	24.2250
940571	AE2-044 C	2.3300	Adder	2.74
940572	AE2-044 E	0.9986	Adder	1.17
940651	AE2-052	6.1580	50/50	6.1580
940661	AE2-053 O1	1.5048	Adder	1.77
941541	AE2-151 C	0.5688	Adder	0.67
941542	AE2-151 E	0.3063	Adder	0.36
942341	AE2-247 C	0.9153	Adder	1.08
942342	AE2-247 E	1.2640	Adder	1.49
942451	AE2-258	0.9939	Adder	1.17
942471	AE2-260 C O1	25.7561	50/50	25.7561
942472	AE2-260 E O1	36.5319	50/50	36.5319
943171	AE2-346 C	0.7461	Adder	0.88
943172	AE2-346 E	0.3198	Adder	0.38
943461	AF1-017 C	0.8281	Adder	0.97
943462	AF1-017 E	1.3511	Adder	1.59
943911	AF1-059	15.4300	50/50	15.4300
944141	AF1-082	1.4979	Adder	1.76
946011	AF1-266	30.0794	50/50	30.0794
946281	AF1-292 C	2.1575	50/50	2.1575
946282	AF1-292 E	1.4545	50/50	1.4545
957521	AF2-046 C	4.8701	Adder	10.81
957522	AF2-046 E	2.4497	Adder	5.44

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957861	AF2-080 C	1.9256	Adder	4.27
957862	AF2-080 E	0.8536	Adder	1.89
958142	AF2-108 BAT	0.3276	Merchant Transmission	0.3276
959231	AF2-214 C	2.6683	Adder	5.92
959232	AF2-214 E	4.0002	Adder	8.88
959511	AF2-242	1.6932	Adder	3.76
959731	AF2-264 C	0.6416	Adder	1.42
959732	AF2-264 E	0.3160	Adder	0.7
960081	AF2-299 C	3.6363	50/50	3.6363
960082	AF2-299 E	2.4242	50/50	2.4242
960122	AF2-303 E O1	3.3429	Adder	7.42
960331	AF2-324 C O1	2.1751	Adder	4.83
960332	AF2-324 E O1	1.1678	Adder	2.59
960351	AF2-326 C	0.7035	Adder	1.56
960352	AF2-326 E	0.1759	Adder	0.39
960361	AF2-327 C	3.2912	50/50	3.2912
960362	AF2-327 E	0.8228	50/50	0.8228
960811	AF2-372 C	0.2802	Adder	0.62
960812	AF2-372 E	0.4572	Adder	1.01
960831	AF2-374 C	0.4002	Adder	0.89
960832	AF2-374 E	0.6530	Adder	1.45
961091	AF2-400 C	0.1106	Adder	0.25
961092	AF2-400 E	0.1815	Adder	0.4
961111	AF2-402 C O1	1.0328	50/50	1.0328
961112	AF2-402 E O1	1.6885	50/50	1.6885
WEC	WEC	0.2063	Confirmed LTF	0.2063
LGEE	LGEE	0.3879	Confirmed LTF	0.3879
CPLE	CPLE	2.3563	Confirmed LTF	2.3563
CBM-W2	CBM-W2	8.2801	Confirmed LTF	8.2801
NY	NY	0.2732	Confirmed LTF	0.2732
CBM-W1	CBM-W1	7.7062	Confirmed LTF	7.7062
TVA	TVA	1.7374	Confirmed LTF	1.7374
O-066	O-066	3.8909	Confirmed LTF	3.8909
CBM-S2	CBM-S2	15.0511	Confirmed LTF	15.0511
CBM-S1	CBM-S1	9.6872	Confirmed LTF	9.6872
G-007	G-007	0.6074	Confirmed LTF	0.6074
MADISON	MADISON	0.4879	Confirmed LTF	0.4879
MEC	MEC	1.2490	Confirmed LTF	1.2490
AA2-074	AA2-074	1.6056	LTF	1.6056

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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
97915958	314435	6SAPONY	DVP	314282	6CARSON	DVP	1	DVP_P1-2: LN 246	single	678.68	125.26	126.44	DC	8.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314435	6SAPONY	1.7767	80/20	1.7767
314572	3EMPORIA	0.1786	80/20	0.1786
314574	6EVERETS	0.2977	80/20	0.2977
314582	3KELFORD	0.5909	80/20	0.5909
314589	3MURPHYS	0.1033	80/20	0.1033
314623	3WITAKRS	0.2747	80/20	0.2747
314704	3LAWRENC	0.6597	80/20	0.6597
315126	1ROARAP2	2.4063	80/20	2.4063
315128	1ROARAP4	2.2963	80/20	2.2963
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**10.4823**	**80/20**	**10.4823**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**10.4823**	**80/20**	**10.4823**
315136	1ROSEMG1	4.3501	80/20	4.3501
315137	1ROSEMS1	2.6975	80/20	2.6975
315138	1ROSEMG2	2.0388	80/20	2.0388
315139	1GASTONA	6.6383	80/20	6.6383
315141	1GASTONB	6.6383	80/20	6.6383
315158	1KERR 1	0.4002	80/20	0.4002
315159	1KERR 2	1.1205	80/20	1.1205
315160	1KERR 3	1.1205	80/20	1.1205
315161	1KERR 4	1.1205	80/20	1.1205
315162	1KERR 5	1.1205	80/20	1.1205
315163	1KERR 6	1.1205	80/20	1.1205
315164	1KERR 7	1.1205	80/20	1.1205
315294	1DOMTR10	7.7321	Adder	9.1
315601	1CONETOE2SOL	1.6673	80/20	1.6673
315602	1HOLLOMANSOL	1.9043	80/20	1.9043
315606	3AA2-053SOLA	2.3991	80/20	2.3991
315607	3AA1-063SOLA	2.0770	80/20	2.0770
315608	3AA2-088SOLA	1.0872	80/20	1.0872
315612	3AA2-057SOLA	1.5527	80/20	1.5527
920591	AA2-165 C	0.1841	80/20	0.1841
920671	AA2-174 C OP	0.1099	80/20	0.1099
922922	AB1-081 C OP	9.9876	80/20	9.9876
923262	**AB1-132 C OP (Suspended)**	**29.3882**	**80/20**	**29.3882**
923572	AB1-173 C OP	4.9272	80/20	4.9272
923582	AB1-173AC OP	4.9272	80/20	4.9272
923801	AB2-015 C OP	4.4378	Adder	5.22
923911	AB2-031 C O1	4.8907	80/20	4.8907
923991	AB2-040 C O1	16.0591	80/20	16.0591

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924151	AB2-059 C OP	2.0304	80/20	2.0304
924301	**AB2-077 C O1 (Suspended)**	**1.4183**	**Adder**	**1.67**
924311	**AB2-078 C O1 (Suspended)**	**1.4183**	**Adder**	**1.67**
924321	**AB2-079 C O1 (Suspended)**	**1.4183**	**Adder**	**1.67**
924501	**AB2-099 C (Suspended)**	**0.7157**	**80/20**	**0.7157**
924511	AB2-100 C	6.1819	80/20	6.1819
925171	AB2-174 C O1	2.7810	80/20	2.7810
925591	AC1-034 C	7.6245	80/20	7.6245
925611	AC1-036 C	0.5293	Adder	0.62
925781	AC1-054 C O1	8.2530	80/20	8.2530
926071	AC1-086 C	43.2777	80/20	43.2777
926201	AC1-098 C	8.1359	80/20	8.1359
926211	AC1-099 C	2.7264	80/20	2.7264
927021	AC1-189 C	9.0732	80/20	9.0732
927141	AC1-208 C	12.4257	80/20	12.4257
932631	AC2-084 C	11.5980	80/20	11.5980
933991	AD1-023 C	11.8384	80/20	11.8384
934331	AD1-057 C O1	15.6382	80/20	15.6382
934521	AD1-076 C	36.3614	Adder	42.78
936261	AD2-033 C	7.6172	Adder	8.96
936361	AD2-046 C O1	8.3565	80/20	8.3565
936401	AD2-051 C O1	10.9951	80/20	10.9951
936481	AD2-063 C O1	9.8387	Adder	11.57
938171	AE1-026 C O1	31.0088	80/20	31.0088
938221	AE1-035 C	2.7600	80/20	2.7600
939181	AE1-148 C O1	8.2015	80/20	8.2015
940241	AE2-006	0.2693	Adder	0.32
940481	AE2-033 C	63.9572	80/20	63.9572
940491	AE2-034 C	3.6978	Adder	4.35
940571	AE2-044 C	4.9938	80/20	4.9938
940661	AE2-053 O1	2.5820	Adder	3.04
941541	AE2-151 C	1.3698	80/20	1.3698
942451	AE2-258	1.6869	Adder	1.98
942471	AE2-260 C O1	46.1499	80/20	46.1499
943171	AE2-346 C	1.7176	80/20	1.7176
943911	AF1-059	27.1850	80/20	27.1850
944141	AF1-082	3.2103	80/20	3.2103
945711	AF1-236 C O1	40.4822	Adder	47.63
946011	AF1-266	53.5372	80/20	53.5372
946281	AF1-292 C	3.8601	80/20	3.8601
957521	AF2-046 C	18.8652	80/20	18.8652
957531	AF2-047 C	4.6569	Adder	10.34
957861	AF2-080 C	8.2406	80/20	8.2406
959231	AF2-214 C	10.7902	80/20	10.7902
959311	AF2-222 C	4.7483	Adder	10.54
959511	AF2-242	7.3930	80/20	7.3930
959731	AF2-264 C	2.6430	80/20	2.6430
960081	AF2-299 C	6.5058	80/20	6.5058
960331	AF2-324 C O1	8.8196	80/20	8.8196
960351	AF2-326 C	2.8438	80/20	2.8438

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960811	AF2-372 C	0.4748	Adder	1.05
960831	AF2-374 C	1.7399	80/20	1.7399
961091	AF2-400 C	0.1270	Adder	0.28
WEC	WEC	0.3178	Confirmed LTF	0.3178
LGEE	LGEE	0.5973	Confirmed LTF	0.5973
CPLE	CPLE	3.6396	Confirmed LTF	3.6396
CBM-W2	CBM-W2	12.5225	Confirmed LTF	12.5225
NY	NY	0.3783	Confirmed LTF	0.3783
CBM-W1	CBM-W1	11.9095	Confirmed LTF	11.9095
TVA	TVA	2.6124	Confirmed LTF	2.6124
CBM-S2	CBM-S2	22.6171	Confirmed LTF	22.6171
CBM-S1	CBM-S1	14.6033	Confirmed LTF	14.6033
MADISON	MADISON	0.7096	Confirmed LTF	0.7096
MEC	MEC	1.9068	Confirmed LTF	1.9068
AA2-074	AA2-074	2.4804	LTF	2.4804

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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
96847727	314554	3BTLEBRO	DVP	304223	3ROCKYMT115T	CPLE	1	DVP_P7-1: LN 2058-2181	tower	93.0	444.16	452.72	DC	7.96

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314541	3WATKINS	0.2106	Adder	0.25
314582	3KELFORD	0.3883	50/50	0.3883
314623	3WITAKRS	0.5537	50/50	0.5537
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**12.1487**	**50/50**	**12.1487**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**12.1487**	**50/50**	**12.1487**
315136	1ROSEMG1	1.5941	50/50	1.5941
315137	1ROSEMS1	0.9885	50/50	0.9885
315138	1ROSEMG2	0.7471	50/50	0.7471
315139	1GASTONA	2.0488	50/50	2.0488
315141	1GASTONB	2.0488	50/50	2.0488
315601	1CONETOE2SOL	1.3283	50/50	1.3283
315612	3AA2-057SOLA	2.5571	50/50	2.5571
900672	V4-068 E	0.1239	Adder	0.15
917332	Z2-043 E	0.9788	50/50	0.9788
917342	Z2-044 E	1.3758	50/50	1.3758
917512	Z2-088 E OP1	3.3002	50/50	3.3002
918492	AA1-063AE OP	1.9451	Adder	2.29
918512	AA1-065 E OP	1.4319	Adder	1.68
918532	AA1-067 E	0.2468	Adder	0.29
919692	AA2-053 E OP	1.9800	Adder	2.33
919702	AA2-057 E OP	6.9976	50/50	6.9976
920042	AA2-088 E OP	4.0200	Adder	4.73
920591	AA2-165 C	0.3032	50/50	0.3032
920592	AA2-165 E	0.9618	50/50	0.9618
920672	AA2-174 E OP	0.2288	Adder	0.27
922922	AB1-081 C OP	22.9723	50/50	22.9723
922923	AB1-081 E OP	9.8453	50/50	9.8453
923262	**AB1-132 C OP (Suspended)**	**9.0703**	**50/50**	**9.0703**
923263	**AB1-132 E OP (Suspended)**	**3.8873**	**50/50**	**3.8873**
923572	AB1-173 C OP	1.0085	Adder	1.19
923573	AB1-173 E OP	0.4707	Adder	0.55
923582	AB1-173AC OP	1.0085	Adder	1.19
923583	AB1-173AE OP	0.4707	Adder	0.55
923911	AB2-031 C O1	1.0011	Adder	1.18
923912	AB2-031 E O1	0.4931	Adder	0.58
923991	AB2-040 C O1	3.2871	Adder	3.87
923992	AB2-040 E O1	2.6894	Adder	3.16

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924151	AB2-059 C OP	4.6702	50/50	4.6702
924152	AB2-059 E OP	13.9475	50/50	13.9475
924501	**AB2-099 C (Suspended)**	**0.2638**	**Adder**	**0.31**
924502	**AB2-099 E (Suspended)**	**0.1131**	**Adder**	**0.13**
924512	AB2-100 E	2.0948	Adder	2.46
925172	AB2-174 E O1	2.7106	Adder	3.19
925591	AC1-034 C	17.5369	50/50	17.5369
925592	AC1-034 E	13.2296	50/50	13.2296
926071	AC1-086 C	13.3571	50/50	13.3571
926072	AC1-086 E	6.0793	50/50	6.0793
926201	AC1-098 C	8.4859	50/50	8.4859
926202	AC1-098 E	5.0555	50/50	5.0555
926211	AC1-099 C	2.8437	50/50	2.8437
926212	AC1-099 E	1.6701	50/50	1.6701
927021	AC1-189 C	6.0732	50/50	6.0732
927022	AC1-189 E	3.0252	50/50	3.0252
927141	AC1-208 C	13.5254	50/50	13.5254
927142	AC1-208 E	6.0058	50/50	6.0058
932631	AC2-084 C	12.0970	50/50	12.0970
932632	AC2-084 E	5.9582	50/50	5.9582
934331	AD1-057 C O1	10.1862	50/50	10.1862
934332	AD1-057 E O1	5.4338	50/50	5.4338
936401	AD2-051 C O1	3.1726	Adder	3.73
936402	AD2-051 E O1	1.3623	Adder	1.6
938171	AE1-026 C O1	9.9093	Adder	11.66
938172	AE1-026 E O1	2.6143	Adder	3.08
938221	AE1-035 C	0.7995	Adder	0.94
938222	AE1-035 E	0.3938	Adder	0.46
940571	AE2-044 C	11.4862	50/50	11.4862
940572	AE2-044 E	4.9226	50/50	4.9226
941541	AE2-151 C	0.5014	Adder	0.59
941542	AE2-151 E	0.2700	Adder	0.32
942471	AE2-260 C O1	4.9565	Adder	5.83
942472	AE2-260 E O1	7.0302	Adder	8.27
943171	AE2-346 C	0.6332	Adder	0.74
943172	AE2-346 E	0.2714	Adder	0.32
944141	AF1-082	7.3840	50/50	7.3840
946281	AF1-292 C	0.5556	Adder	0.65
946282	AF1-292 E	0.3746	Adder	0.44
957521	AF2-046 C	3.7559	Adder	8.34
957522	AF2-046 E	1.8893	Adder	4.19
957861	AF2-080 C	5.5159	50/50	5.5159
957862	AF2-080 E	2.4452	50/50	2.4452
959231	AF2-214 C	24.8183	50/50	24.8183
959232	AF2-214 E	37.2070	50/50	37.2070
959511	AF2-242	1.3281	Adder	2.95
959731	AF2-264 C	0.5208	Adder	1.16
959732	AF2-264 E	0.2565	Adder	0.57
960081	AF2-299 C	0.4963	Adder	1.1
960082	AF2-299 E	0.3309	Adder	0.73
960122	AF2-303 E O1	15.7095	50/50	15.7095
960331	AF2-324 C O1	10.2216	50/50	10.2216

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960332	AF2-324 E O1	5.4879	50/50	5.4879
960351	AF2-326 C	6.9299	50/50	6.9299
960352	AF2-326 E	1.7325	50/50	1.7325
960831	AF2-374 C	0.3253	Adder	0.72
960832	AF2-374 E	0.5307	Adder	1.18
NEWTON	NEWTON	0.8596	Confirmed LTF	0.8596
FARMERCITY	FARMERCITY	0.0493	Confirmed LTF	0.0493
G-007A	G-007A	0.5131	Confirmed LTF	0.5131
VFT	VFT	1.3610	Confirmed LTF	1.3610
CALDERWOOD	CALDERWOOD	0.6834	Confirmed LTF	0.6834
PRAIRIE	PRAIRIE	2.3221	Confirmed LTF	2.3221
CHEOAH	CHEOAH	0.7007	Confirmed LTF	0.7007
EDWARDS	EDWARDS	0.2597	Confirmed LTF	0.2597
TILTON	TILTON	0.4593	Confirmed LTF	0.4593
GIBSON	GIBSON	0.4155	Confirmed LTF	0.4155
BLUEG	BLUEG	1.2812	Confirmed LTF	1.2812
TRIMBLE	TRIMBLE	0.4068	Confirmed LTF	0.4068
CATAWBA	CATAWBA	0.7382	Confirmed LTF	0.7382

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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
97916008	314563	6CLUBHSE	DVP	940480	AE2-033 TAP	DVP	1	DVP_P1-2: LN 246	single	678.68	110.31	111.53	DC	8.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.1786	80/20	0.1786
314574	6EVERETS	0.2978	80/20	0.2978
314582	3KELFORD	0.5911	80/20	0.5911
314589	3MURPHYS	0.1034	80/20	0.1034
314623	3WITAKRS	0.2748	80/20	0.2748
314704	3LAWRENC	0.6598	80/20	0.6598
315126	1ROARAP2	2.4069	80/20	2.4069
315128	1ROARAP4	2.2969	80/20	2.2969
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**10.4870**	**80/20**	**10.4870**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**10.4870**	**80/20**	**10.4870**
315136	1ROSEMG1	4.3510	80/20	4.3510
315137	1ROSEMS1	2.6981	80/20	2.6981
315138	1ROSEMG2	2.0392	80/20	2.0392
315139	1GASTONA	6.6397	80/20	6.6397
315141	1GASTONB	6.6397	80/20	6.6397
315158	1KERR 1	0.4004	80/20	0.4004
315159	1KERR 2	1.1211	80/20	1.1211
315160	1KERR 3	1.1211	80/20	1.1211
315161	1KERR 4	1.1211	80/20	1.1211
315162	1KERR 5	1.1211	80/20	1.1211
315163	1KERR 6	1.1211	80/20	1.1211
315164	1KERR 7	1.1211	80/20	1.1211
315294	1DOMTR10	7.7360	Adder	9.1
315601	1CONETOE2SOL	1.6679	80/20	1.6679
315602	1HOLLOMANSOL	1.9050	80/20	1.9050
315606	3AA2-053SOLA	2.3998	80/20	2.3998
315607	3AA1-063SOLA	2.0776	80/20	2.0776
315608	3AA2-088SOLA	1.0877	80/20	1.0877
315612	3AA2-057SOLA	1.5532	80/20	1.5532
920591	AA2-165 C	0.1842	80/20	0.1842
920671	AA2-174 C OP	0.1099	80/20	0.1099
922922	AB1-081 C OP	9.9915	80/20	9.9915
923262	**AB1-132 C OP (Suspended)**	**29.3941**	**80/20**	**29.3941**
923572	AB1-173 C OP	4.9282	80/20	4.9282
923582	AB1-173AC OP	4.9282	80/20	4.9282
923801	AB2-015 C OP	4.4408	Adder	5.22
923911	AB2-031 C O1	4.8917	80/20	4.8917
923991	AB2-040 C O1	16.0622	80/20	16.0622
924021	AB2-043 C O1	0.4591	80/20	0.4591

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924151	AB2-059 C OP	2.0312	80/20	2.0312
924301	**AB2-077 C O1 (Suspended)**	**1.4190**	**Adder**	**1.67**
924311	**AB2-078 C O1 (Suspended)**	**1.4190**	**Adder**	**1.67**
924321	**AB2-079 C O1 (Suspended)**	**1.4190**	**Adder**	**1.67**
924501	**AB2-099 C (Suspended)**	**0.7159**	**80/20**	**0.7159**
924511	AB2-100 C	6.1828	80/20	6.1828
925121	AB2-169 C	0.9963	80/20	0.9963
925171	AB2-174 C O1	2.7816	80/20	2.7816
925591	AC1-034 C	7.6275	80/20	7.6275
925611	AC1-036 C	0.5297	Adder	0.62
925781	AC1-054 C O1	8.2561	80/20	8.2561
926071	AC1-086 C	43.2863	80/20	43.2863
926201	AC1-098 C	8.1389	80/20	8.1389
926211	AC1-099 C	2.7274	80/20	2.7274
927021	AC1-189 C	9.0769	80/20	9.0769
927141	AC1-208 C	12.4295	80/20	12.4295
932631	AC2-084 C	11.6023	80/20	11.6023
933991	AD1-023 C	11.8446	80/20	11.8446
934331	AD1-057 C O1	15.6425	80/20	15.6425
934521	AD1-076 C	36.3805	Adder	42.8
936261	AD2-033 C	7.6218	Adder	8.97
936361	AD2-046 C O1	8.3608	80/20	8.3608
936401	AD2-051 C O1	10.9988	80/20	10.9988
936481	AD2-063 C O1	9.8440	Adder	11.58
938171	AE1-026 C O1	31.0221	80/20	31.0221
938221	AE1-035 C	2.7609	80/20	2.7609
939181	AE1-148 C O1	8.2053	80/20	8.2053
940241	AE2-006	0.2695	Adder	0.32
940491	AE2-034 C	3.7003	Adder	4.35
940571	AE2-044 C	4.9958	80/20	4.9958
940661	AE2-053 O1	3.0390	80/20	3.0390
941541	AE2-151 C	1.3703	80/20	1.3703
942451	AE2-258	1.9856	80/20	1.9856
942471	AE2-260 C O1	46.1557	80/20	46.1557
943171	AE2-346 C	1.7182	80/20	1.7182
943911	AF1-059	27.1930	80/20	27.1930
944141	AF1-082	3.2116	80/20	3.2116
945711	AF1-236 C O1	40.5095	Adder	47.66
946281	AF1-292 C	3.8607	80/20	3.8607
957521	AF2-046 C	18.8722	80/20	18.8722
957531	AF2-047 C	4.6601	Adder	10.34
957861	AF2-080 C	8.2440	80/20	8.2440
959231	AF2-214 C	10.7944	80/20	10.7944
959311	AF2-222 C	4.7514	Adder	10.55
959511	AF2-242	7.3963	80/20	7.3963
959731	AF2-264 C	2.6440	80/20	2.6440
960081	AF2-299 C	6.5069	80/20	6.5069
960331	AF2-324 C O1	8.8235	80/20	8.8235
960351	AF2-326 C	2.8450	80/20	2.8450
960811	AF2-372 C	0.4751	Adder	1.05

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960831	AF2-374 C	1.7405	80/20	1.7405
961091	AF2-400 C	0.1271	Adder	0.28
WEC	WEC	0.3200	Confirmed LTF	0.3200
LGEE	LGEE	0.6013	Confirmed LTF	0.6013
CPLE	CPLE	3.6442	Confirmed LTF	3.6442
CBM-W2	CBM-W2	12.5798	Confirmed LTF	12.5798
NY	NY	0.3744	Confirmed LTF	0.3744
CBM-W1	CBM-W1	11.9971	Confirmed LTF	11.9971
TVA	TVA	2.6222	Confirmed LTF	2.6222
CBM-S2	CBM-S2	22.6576	Confirmed LTF	22.6576
CBM-S1	CBM-S1	14.6629	Confirmed LTF	14.6629
MADISON	MADISON	0.7096	Confirmed LTF	0.7096
MEC	MEC	1.9179	Confirmed LTF	1.9179
AA2-074	AA2-074	2.4836	LTF	2.4836

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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
97915748	314569	6EARLEYS	DVP	314575	6NUCO TP	DVP	1	DVP_P1-2: LN 2092	single	571.52	163.21	165.09	DC	10.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0506	80/20	0.0506
314574	6EVERETS	0.4657	80/20	0.4657
314582	3KELFORD	0.7842	80/20	0.7842
314589	3MURPHYS	0.1032	80/20	0.1032
314623	3WITAKRS	0.2359	80/20	0.2359
314704	3LAWRENC	0.1825	80/20	0.1825
315126	1ROARAP2	1.4097	80/20	1.4097
315128	1ROARAP4	1.3452	80/20	1.3452
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**9.0439**	**80/20**	**9.0439**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**9.0439**	**80/20**	**9.0439**
315136	1ROSEMG1	2.3511	80/20	2.3511
315137	1ROSEMS1	1.4579	80/20	1.4579
315138	1ROSEMG2	1.1019	80/20	1.1019
315139	1GASTONA	3.4385	80/20	3.4385
315141	1GASTONB	3.4385	80/20	3.4385
315161	1KERR 4	0.5966	80/20	0.5966
315162	1KERR 5	0.5966	80/20	0.5966
315163	1KERR 6	0.5966	80/20	0.5966
315164	1KERR 7	0.5966	80/20	0.5966
315292	1DOMTR78	2.8729	80/20	2.8729
315294	1DOMTR10	21.5849	80/20	21.5849
315601	1CONETOE2SOL	1.9914	80/20	1.9914
315602	1HOLLOMANSOL	3.5568	80/20	3.5568
315606	3AA2-053SOLA	1.7258	80/20	1.7258
315607	3AA1-063SOLA	1.2920	80/20	1.2920
315608	3AA2-088SOLA	0.7480	80/20	0.7480
315611	6Z1-036WIND	13.8532	80/20	13.8532
315612	3AA2-057SOLA	1.3289	80/20	1.3289
315614	AA2-178 C	3.4313	80/20	3.4313
920591	AA2-165 C	0.1576	80/20	0.1576
920671	AA2-174 C OP	0.0790	80/20	0.0790
922922	AB1-081 C OP	8.5938	80/20	8.5938
923262	**AB1-132 C OP (Suspended)**	**15.2225**	**80/20**	**15.2225**
923572	AB1-173 C OP	1.8023	80/20	1.8023
923582	AB1-173AC OP	1.8023	80/20	1.8023
923831	AB2-022 C	-0.8983	Adder	-1.06
923911	AB2-031 C O1	1.7889	80/20	1.7889
923991	AB2-040 C O1	5.8740	80/20	5.8740
924151	AB2-059 C OP	1.7471	80/20	1.7471

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924501	**AB2-099 C (Suspended)**	**1.0074**	**80/20**	**1.0074**
924511	AB2-100 C	1.2658	80/20	1.2658
925121	AB2-169 C	2.0776	80/20	2.0776
925171	AB2-174 C O1	0.9219	80/20	0.9219
925591	AC1-034 C	6.5604	80/20	6.5604
925781	AC1-054 C O1	4.5595	80/20	4.5595
926071	AC1-086 C	22.4169	80/20	22.4169
926201	AC1-098 C	8.0374	80/20	8.0374
926211	AC1-099 C	2.6934	80/20	2.6934
927021	AC1-189 C	11.8954	80/20	11.8954
927141	AC1-208 C	10.1471	80/20	10.1471
932631	AC2-084 C	11.4575	80/20	11.4575
933991	AD1-023 C	28.2004	80/20	28.2004
934331	AD1-057 C O1	10.1856	80/20	10.1856
934521	AD1-076 C	113.9255	80/20	113.9255
935111	AD1-144 C	-0.7751	Adder	-0.91
936401	AD2-051 C O1	19.8648	80/20	19.8648
937541	AD2-215 C	-0.7831	Adder	-0.92
938171	AE1-026 C O1	69.7636	80/20	69.7636
938221	AE1-035 C	5.1550	80/20	5.1550
940491	AE2-034 C	14.9192	80/20	14.9192
940571	AE2-044 C	4.2969	80/20	4.2969
941541	AE2-151 C	2.0903	80/20	2.0903
942131	AE2-225 C	-1.0773	Adder	-1.27
942171	AE2-229 C	-1.0773	Adder	-1.27
942471	AE2-260 C O1	8.3171	80/20	8.3171
943171	AE2-346 C	2.4178	80/20	2.4178
943911	AF1-059	8.3370	80/20	8.3370
944141	AF1-082	2.7623	80/20	2.7623
945711	AF1-236 C O1	163.3302	80/20	163.3302
946281	AF1-292 C	0.9859	80/20	0.9859
957521	AF2-046 C	20.4051	80/20	20.4051
957531	AF2-047 C	35.4510	80/20	35.4510
957861	AF2-080 C	10.8039	80/20	10.8039
959231	AF2-214 C	9.2843	80/20	9.2843
959511	AF2-242	13.9123	80/20	13.9123
959731	AF2-264 C	3.3334	80/20	3.3334
960081	AF2-299 C	1.6616	80/20	1.6616
960331	AF2-324 C O1	7.6094	80/20	7.6094
960351	AF2-326 C	2.4520	80/20	2.4520
960831	AF2-374 C	2.1136	80/20	2.1136
WEC	WEC	0.3333	Confirmed LTF	0.3333
LGEE	LGEE	0.6224	Confirmed LTF	0.6224
CPLE	CPLE	3.7739	Confirmed LTF	3.7739
CBM-W2	CBM-W2	12.8665	Confirmed LTF	12.8665
NY	NY	0.2909	Confirmed LTF	0.2909
CBM-W1	CBM-W1	12.5600	Confirmed LTF	12.5600
TVA	TVA	2.6600	Confirmed LTF	2.6600
CBM-S2	CBM-S2	22.9639	Confirmed LTF	22.9639
CBM-S1	CBM-S1	14.9015	Confirmed LTF	14.9015
MADISON	MADISON	0.7056	Confirmed LTF	0.7056
MEC	MEC	1.9799	Confirmed LTF	1.9799

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
AA2-074	AA2-074	2.5717	LTF	2.5717

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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
96847732	314574	6EVERETS	DVP	304451	6GREENVILE T	CPLE	1	DVP_P7-1: LN 2058-2181	tower	478.0	178.3	182.58	DC	20.45

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314539	3UNCAMP	0.9820	Adder	1.16
314541	3WATKINS	0.2993	Adder	0.35
314574	6EVERETS	0.6442	50/50	0.6442
314582	3KELFORD	0.3890	50/50	0.3890
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**9.7655**	**50/50**	**9.7655**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**9.7655**	**50/50**	**9.7655**
315136	1ROSEMG1	1.7016	50/50	1.7016
315137	1ROSEMS1	1.0552	50/50	1.0552
315138	1ROSEMG2	0.7975	50/50	0.7975
315141	1GASTONB	2.3466	50/50	2.3466
315292	1DOMTR78	1.8394	50/50	1.8394
315294	1DOMTR10	13.8199	50/50	13.8199
315601	1CONETOE2SOL	2.5245	50/50	2.5245
315602	1HOLLOMANSOL	1.6852	50/50	1.6852
315611	6Z1-036WIND	3.5636	Adder	4.19
315614	AA2-178 C	1.4283	50/50	1.4283
900672	V4-068 E	0.1798	Adder	0.21
901082	W1-029 E	13.0911	Adder	15.4
907092	X1-038 E	2.4550	Adder	2.89
913392	Y1-086 E	0.7706	Adder	0.91
916042	**Z1-036 E (Suspended)**	**23.8763**	**Adder**	**28.09**
917122	Z2-027 E	0.4007	Adder	0.47
917332	Z2-043 E	0.9806	50/50	0.9806
917342	Z2-044 E	0.2246	Adder	0.26
917512	Z2-088 E OP1	6.2724	50/50	6.2724
918492	AA1-063AE OP	2.0465	Adder	2.41
918512	AA1-065 E OP	4.3745	50/50	4.3745
918532	AA1-067 E	1.6006	50/50	1.6006
919152	AA1-139 E	1.8100	Adder	2.13
919692	AA2-053 E OP	2.1059	Adder	2.48
919702	AA2-057 E OP	1.4646	Adder	1.72
920042	AA2-088 E OP	5.2584	Adder	6.19
920592	AA2-165 E	0.2013	Adder	0.24
920672	AA2-174 E OP	0.2433	Adder	0.29
920692	AA2-178 E	3.5486	50/50	3.5486
922922	AB1-081 C OP	3.5909	Adder	4.22
922923	AB1-081 E OP	1.5390	Adder	1.81
923262	**AB1-132 C OP (Suspended)**	**8.8300**	**Adder**	**10.39**

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923263	AB1-132 E OP (Suspended)	3.7843	Adder	4.45
923572	AB1-173 C OP	1.0108	Adder	1.19
923573	AB1-173 E OP	0.4717	Adder	0.55
923582	AB1-173AC OP	1.0108	Adder	1.19
923583	AB1-173AE OP	0.4717	Adder	0.55
923801	AB2-015 C OP	3.6431	Adder	4.29
923802	AB2-015 E OP	2.9873	Adder	3.51
923831	AB2-022 C	0.8079	Adder	0.95
923832	AB2-022 E	0.4350	Adder	0.51
923852	AB2-025 E	0.2989	Adder	0.35
923911	AB2-031 C O1	1.0033	Adder	1.18
923912	AB2-031 E O1	0.4942	Adder	0.58
923991	AB2-040 C O1	3.2946	Adder	3.88
923992	AB2-040 E O1	2.6956	Adder	3.17
924152	AB2-059 E OP	2.1802	Adder	2.56
924501	AB2-099 C (Suspended)	0.5225	50/50	0.5225
924502	AB2-099 E (Suspended)	0.2239	50/50	0.2239
924512	AB2-100 E	2.4516	Adder	2.88
925121	AB2-169 C	1.7406	50/50	1.7406
925122	AB2-169 E	9.0559	50/50	9.0559
925172	AB2-174 E O1	2.7662	Adder	3.25
925591	AC1-034 C	2.7413	Adder	3.23
925592	AC1-034 E	2.0680	Adder	2.43
926071	AC1-086 C	13.0033	Adder	15.3
926072	AC1-086 E	5.9182	Adder	6.96
926201	AC1-098 C	3.4152	Adder	4.02
926202	AC1-098 E	2.0346	Adder	2.39
926211	AC1-099 C	1.1445	Adder	1.35
926212	AC1-099 E	0.6721	Adder	0.79
927021	AC1-189 C	15.5976	50/50	15.5976
927022	AC1-189 E	7.7696	50/50	7.7696
927141	AC1-208 C	4.4227	Adder	5.2
927142	AC1-208 E	1.9639	Adder	2.31
932631	AC2-084 C	4.8685	Adder	5.73
932632	AC2-084 E	2.3979	Adder	2.82
933991	AD1-023 C	13.5602	50/50	13.5602
933992	AD1-023 E	7.3822	50/50	7.3822
934331	AD1-057 C O1	9.0197	50/50	9.0197
934332	AD1-057 E O1	4.8115	50/50	4.8115
934521	AD1-076 C	55.0866	50/50	55.0866
934522	AD1-076 E	28.0500	50/50	28.0500
936401	AD2-051 C O1	9.4655	50/50	9.4655
936402	AD2-051 E O1	4.0644	50/50	4.0644
938171	AE1-026 C O1	33.4414	50/50	33.4414
938172	AE1-026 E O1	8.8226	50/50	8.8226
938221	AE1-035 C	2.4424	50/50	2.4424
938222	AE1-035 E	1.2030	50/50	1.2030
938531	AE1-072 C O1	5.1803	Adder	6.09
938532	AE1-072 E O1	2.7005	Adder	3.18
938771	AE1-103 C O1	1.4730	Adder	1.73
938772	AE1-103 E O1	2.0341	Adder	2.39
940481	AE2-033 C	4.5821	Adder	5.39

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
940482	AE2-033 E	3.0891	Adder	3.63
940491	AE2-034 C	6.2101	50/50	6.2101
940492	AE2-034 E	2.6615	50/50	2.6615
940571	AE2-044 C	1.7955	Adder	2.11
940572	AE2-044 E	0.7695	Adder	0.91
941101	AE2-104 C O1	0.9879	Adder	1.16
941102	AE2-104 E O1	1.5706	Adder	1.85
941501	AE2-147 C	6.5094	Adder	7.66
941502	AE2-147 E	4.3396	Adder	5.11
941541	AE2-151 C	1.0340	50/50	1.0340
941542	AE2-151 E	0.5567	50/50	0.5567
942131	AE2-225 C	0.6120	Adder	0.72
942132	AE2-225 E	0.4080	Adder	0.48
942171	AE2-229 C	0.6120	Adder	0.72
942172	AE2-229 E	0.4080	Adder	0.48
942471	AE2-260 C O1	5.8246	Adder	6.85
942472	AE2-260 E O1	8.2616	Adder	9.72
942851	AE2-304 C	0.2951	Adder	0.35
942852	AE2-304 E	0.1148	Adder	0.14
943171	AE2-346 C	1.2540	50/50	1.2540
943172	AE2-346 E	0.5374	50/50	0.5374
943611	AF1-032 C	0.4998	Adder	0.59
943612	AF1-032 E	0.2652	Adder	0.31
944141	AF1-082	1.1542	Adder	1.36
944871	AF1-152 C	2.1698	Adder	2.55
944872	AF1-152 E	1.4465	Adder	1.7
945711	AF1-236 C O1	67.9860	50/50	67.9860
945712	AF1-236 E O1	110.9246	50/50	110.9246
946011	AF1-266	3.8356	Adder	4.51
946281	AF1-292 C	0.5991	Adder	0.7
946282	AF1-292 E	0.4039	Adder	0.48
957491	AF2-043 C	0.3244	Adder	0.72
957492	AF2-043 E	0.2162	Adder	0.48
957521	AF2-046 C	12.4840	50/50	12.4840
957522	AF2-046 E	6.2795	50/50	6.2795
957531	AF2-047 C	14.7564	50/50	14.7564
957532	AF2-047 E	7.4226	50/50	7.4226
957791	**AF2-073 C (Withdrawn : 07/02/2020)**	**2.3407**	**Adder**	**5.2**
957792	**AF2-073 E (Withdrawn : 07/02/2020)**	**1.4965**	**Adder**	**3.32**
957801	**AF2-074 C (Withdrawn : 07/02/2020)**	**1.0403**	**Adder**	**2.31**
957802	**AF2-074 E (Withdrawn : 07/02/2020)**	**0.6651**	**Adder**	**1.48**
957821	AF2-076 C O1	0.9148	Adder	2.03
957822	AF2-076 E O1	0.6099	Adder	1.35
957861	AF2-080 C	14.1664	50/50	14.1664
957862	AF2-080 E	6.2799	50/50	6.2799
957871	AF2-081 C O1	1.4922	Adder	3.31
957872	AF2-081 E O1	0.6395	Adder	1.42
958161	AF2-110 C	0.2159	Adder	0.48
958162	AF2-110 E	0.3376	Adder	0.75

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959231	AF2-214 C	2.0561	Adder	4.56
959232	AF2-214 E	3.0825	Adder	6.84
959511	AF2-242	14.1288	50/50	14.1288
959731	AF2-264 C	1.8484	50/50	1.8484
959732	AF2-264 E	0.9104	50/50	0.9104
960081	AF2-299 C	0.5351	Adder	1.19
960082	AF2-299 E	0.3568	Adder	0.79
960122	AF2-303 E O1	12.6277	50/50	12.6277
960331	AF2-324 C O1	8.2165	50/50	8.2165
960332	AF2-324 E O1	4.4113	50/50	4.4113
960351	AF2-326 C	0.4689	Adder	1.04
960352	AF2-326 E	0.1172	Adder	0.26
960831	AF2-374 C	1.0851	50/50	1.0851
960832	AF2-374 E	1.7703	50/50	1.7703
961091	AF2-400 C	0.1043	Adder	0.23
961092	AF2-400 E	0.1711	Adder	0.38
NEWTON	NEWTON	1.6397	Confirmed LTF	1.6397
FARMERCITY	FARMERCITY	0.0953	Confirmed LTF	0.0953
G-007A	G-007A	1.1724	Confirmed LTF	1.1724
VFT	VFT	3.1218	Confirmed LTF	3.1218
CALDERWOOD	CALDERWOOD	1.3494	Confirmed LTF	1.3494
PRAIRIE	PRAIRIE	4.4867	Confirmed LTF	4.4867
AC1-131	AC1-131	5.7225	LTF	5.7225
CHEOAH	CHEOAH	1.3844	Confirmed LTF	1.3844
EDWARDS	EDWARDS	0.4918	Confirmed LTF	0.4918
TILTON	TILTON	0.8662	Confirmed LTF	0.8662
GIBSON	GIBSON	0.7862	Confirmed LTF	0.7862
BLUEG	BLUEG	2.4113	Confirmed LTF	2.4113
TRIMBLE	TRIMBLE	0.7646	Confirmed LTF	0.7646
CATAWBA	CATAWBA	1.4574	Confirmed LTF	1.4574

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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
97915761	314575	6NUCO TP	DVP	957790	AF2-073 TAP	DVP	1	DVP_P1-2: LN 2131	single	571.52	156.49	158.37	DC	10.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0506	80/20	0.0506
314574	6EVERETS	0.4657	80/20	0.4657
314582	3KELFORD	0.7842	80/20	0.7842
314589	3MURPHYS	0.1032	80/20	0.1032
314623	3WITAKRS	0.2359	80/20	0.2359
314704	3LAWRENC	0.1825	80/20	0.1825
315126	1ROARAP2	1.4097	80/20	1.4097
315128	1ROARAP4	1.3452	80/20	1.3452
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**9.0439**	**80/20**	**9.0439**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**9.0439**	**80/20**	**9.0439**
315136	1ROSEMG1	2.3511	80/20	2.3511
315137	1ROSEMS1	1.4579	80/20	1.4579
315138	1ROSEMG2	1.1019	80/20	1.1019
315139	1GASTONA	3.4385	80/20	3.4385
315141	1GASTONB	3.4385	80/20	3.4385
315161	1KERR 4	0.5966	80/20	0.5966
315162	1KERR 5	0.5966	80/20	0.5966
315163	1KERR 6	0.5966	80/20	0.5966
315164	1KERR 7	0.5966	80/20	0.5966
315292	1DOMTR78	2.8729	80/20	2.8729
315294	1DOMTR10	21.5849	80/20	21.5849
315601	1CONETOE2SOL	1.9914	80/20	1.9914
315602	1HOLLOMANSOL	3.5568	80/20	3.5568
315606	3AA2-053SOLA	1.7258	80/20	1.7258
315607	3AA1-063SOLA	1.2920	80/20	1.2920
315608	3AA2-088SOLA	0.7480	80/20	0.7480
315611	6Z1-036WIND	-2.9421	Adder	-3.46
315612	3AA2-057SOLA	1.3289	80/20	1.3289
315614	AA2-178 C	3.4313	80/20	3.4313
920591	AA2-165 C	0.1576	80/20	0.1576
920671	AA2-174 C OP	0.0790	80/20	0.0790
922922	AB1-081 C OP	8.5938	80/20	8.5938
923262	**AB1-132 C OP (Suspended)**	**15.2225**	**80/20**	**15.2225**
923572	AB1-173 C OP	1.8023	80/20	1.8023
923582	AB1-173AC OP	1.8023	80/20	1.8023
923831	AB2-022 C	-0.8983	Adder	-1.06
923911	AB2-031 C O1	1.7889	80/20	1.7889
923991	AB2-040 C O1	5.8740	80/20	5.8740
924151	AB2-059 C OP	1.7471	80/20	1.7471

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924501	AB2-099 C (Suspended)	1.0074	80/20	1.0074
924511	AB2-100 C	1.2658	80/20	1.2658
925121	AB2-169 C	2.0776	80/20	2.0776
925171	AB2-174 C O1	0.9219	80/20	0.9219
925591	AC1-034 C	6.5604	80/20	6.5604
925781	AC1-054 C O1	4.5595	80/20	4.5595
926071	AC1-086 C	22.4169	80/20	22.4169
926201	AC1-098 C	8.0374	80/20	8.0374
926211	AC1-099 C	2.6934	80/20	2.6934
927021	AC1-189 C	11.8954	80/20	11.8954
927141	AC1-208 C	10.1471	80/20	10.1471
932631	AC2-084 C	11.4575	80/20	11.4575
933991	AD1-023 C	28.2004	80/20	28.2004
934331	AD1-057 C O1	10.1856	80/20	10.1856
934521	AD1-076 C	113.9255	80/20	113.9255
935111	AD1-144 C	-0.7751	Adder	-0.91
936361	AD2-046 C O1	3.6817	Adder	4.33
936401	AD2-051 C O1	19.8648	80/20	19.8648
937541	AD2-215 C	-0.7831	Adder	-0.92
938171	AE1-026 C O1	69.7636	80/20	69.7636
938221	AE1-035 C	5.1550	80/20	5.1550
940491	AE2-034 C	14.9192	80/20	14.9192
940571	AE2-044 C	4.2969	80/20	4.2969
941541	AE2-151 C	2.0903	80/20	2.0903
942131	AE2-225 C	-1.0773	Adder	-1.27
942171	AE2-229 C	-1.0773	Adder	-1.27
942471	AE2-260 C O1	8.3171	80/20	8.3171
942851	AE2-304 C	-0.2716	Adder	-0.32
943171	AE2-346 C	2.4178	80/20	2.4178
943911	AF1-059	8.3370	80/20	8.3370
944141	AF1-082	2.7623	80/20	2.7623
945711	AF1-236 C O1	163.3302	80/20	163.3302
946281	AF1-292 C	0.9859	80/20	0.9859
957521	AF2-046 C	20.4051	80/20	20.4051
957531	AF2-047 C	35.4510	80/20	35.4510
957861	AF2-080 C	10.8039	80/20	10.8039
959231	AF2-214 C	9.2843	80/20	9.2843
959511	AF2-242	13.9123	80/20	13.9123
959731	AF2-264 C	3.3334	80/20	3.3334
960081	AF2-299 C	1.6616	80/20	1.6616
960331	AF2-324 C O1	7.6094	80/20	7.6094
960351	AF2-326 C	2.4520	80/20	2.4520
960831	AF2-374 C	2.1136	80/20	2.1136
WEC	WEC	0.3333	Confirmed LTF	0.3333
LGEE	LGEE	0.6224	Confirmed LTF	0.6224
CPLE	CPLE	3.7739	Confirmed LTF	3.7739
CBM-W2	CBM-W2	12.8665	Confirmed LTF	12.8665
NY	NY	0.2909	Confirmed LTF	0.2909
CBM-W1	CBM-W1	12.5600	Confirmed LTF	12.5600
TVA	TVA	2.6600	Confirmed LTF	2.6600
CBM-S2	CBM-S2	22.9639	Confirmed LTF	22.9639
CBM-S1	CBM-S1	14.9015	Confirmed LTF	14.9015

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MADISON	MADISON	0.7056	Confirmed LTF	0.7056
MEC	MEC	1.9799	Confirmed LTF	1.9799
AA2-074	AA2-074	2.5717	LTF	2.5717

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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
97915920	314583	6LAKEVEW	DVP	924510	AB2-100 TAP	DVP	1	DVP_P1-2: LN 246	single	375.06	138.92	141.03	DC	7.92

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314574	6EVERETS	0.2845	80/20	0.2845
314582	3KELFORD	0.4976	80/20	0.4976
314589	3MURPHYS	0.0771	80/20	0.0771
314623	3WITAKRS	0.2391	80/20	0.2391
315115	1S HAMPT1	0.7350	80/20	0.7350
315126	1ROARAP2	1.4379	80/20	1.4379
315128	1ROARAP4	1.3722	80/20	1.3722
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**10.1604**	**80/20**	**10.1604**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**10.1604**	**80/20**	**10.1604**
315136	1ROSEMG1	4.5383	80/20	4.5383
315137	1ROSEMS1	2.8142	80/20	2.8142
315138	1ROSEMG2	2.1269	80/20	2.1269
315139	1GASTONA	6.9609	80/20	6.9609
315141	1GASTONB	6.9609	80/20	6.9609
315161	1KERR 4	0.3967	80/20	0.3967
315162	1KERR 5	0.3967	80/20	0.3967
315163	1KERR 6	0.3967	80/20	0.3967
315164	1KERR 7	0.3967	80/20	0.3967
315292	1DOMTR78	1.1664	80/20	1.1664
315294	1DOMTR10	8.7636	80/20	8.7636
315601	1CONETOE2SOL	1.6052	80/20	1.6052
315602	1HOLLOMANSOL	1.8182	80/20	1.8182
315606	3AA2-053SOLA	1.5271	80/20	1.5271
315607	3AA1-063SOLA	1.2895	80/20	1.2895
315608	3AA2-088SOLA	0.7371	80/20	0.7371
315612	3AA2-057SOLA	1.2816	80/20	1.2816
315614	AA2-178 C	0.9769	80/20	0.9769
920591	AA2-165 C	0.1520	80/20	0.1520
920671	AA2-174 C OP	0.0699	80/20	0.0699
922922	AB1-081 C OP	9.2949	80/20	9.2949
923262	**AB1-132 C OP (Suspended)**	**30.8162**	**80/20**	**30.8162**
923801	AB2-015 C OP	3.5565	80/20	3.5565
924151	AB2-059 C OP	1.8896	80/20	1.8896
924501	**AB2-099 C (Suspended)**	**0.6038**	**80/20**	**0.6038**
925121	AB2-169 C	0.9567	80/20	0.9567
925591	AC1-034 C	7.0956	80/20	7.0956
925781	AC1-054 C O1	3.6761	80/20	3.6761
926071	AC1-086 C	45.3806	80/20	45.3806
926201	AC1-098 C	6.4364	80/20	6.4364

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926211	AC1-099 C	2.1569	80/20	2.1569
927021	AC1-189 C	8.7154	80/20	8.7154
927141	AC1-208 C	9.2895	80/20	9.2895
932631	AC2-084 C	9.1752	80/20	9.1752
933991	AD1-023 C	11.3908	80/20	11.3908
934331	AD1-057 C O1	15.9055	80/20	15.9055
934521	AD1-076 C	41.3318	80/20	41.3318
936401	AD2-051 C O1	10.5361	80/20	10.5361
938171	AE1-026 C O1	29.7744	80/20	29.7744
938221	AE1-035 C	2.6351	80/20	2.6351
938771	AE1-103 C O1	1.2961	80/20	1.2961
940491	AE2-034 C	4.2475	80/20	4.2475
940571	AE2-044 C	4.6474	80/20	4.6474
941541	AE2-151 C	1.1943	80/20	1.1943
943171	AE2-346 C	1.4492	80/20	1.4492
944141	AF1-082	2.9876	80/20	2.9876
945711	AF1-236 C O1	46.4996	80/20	46.4996
957521	AF2-046 C	14.4520	80/20	14.4520
957531	AF2-047 C	10.0928	80/20	10.0928
957861	AF2-080 C	7.9157	80/20	7.9157
959231	AF2-214 C	10.0418	80/20	10.0418
959511	AF2-242	7.0877	80/20	7.0877
959731	AF2-264 C	2.1377	80/20	2.1377
960331	AF2-324 C O1	8.5488	80/20	8.5488
960351	AF2-326 C	2.6203	80/20	2.6203
960831	AF2-374 C	1.3590	80/20	1.3590
961091	AF2-400 C	0.1921	80/20	0.1921
WEC	WEC	0.2703	Confirmed LTF	0.2703
LGEE	LGEE	0.5055	Confirmed LTF	0.5055
CPLE	CPLE	3.1706	Confirmed LTF	3.1706
CBM-W2	CBM-W2	10.6470	Confirmed LTF	10.6470
NY	NY	0.2754	Confirmed LTF	0.2754
CBM-W1	CBM-W1	10.1581	Confirmed LTF	10.1581
TVA	TVA	2.2176	Confirmed LTF	2.2176
CBM-S2	CBM-S2	19.4208	Confirmed LTF	19.4208
CBM-S1	CBM-S1	12.3881	Confirmed LTF	12.3881
MADISON	MADISON	0.6088	Confirmed LTF	0.6088
MEC	MEC	1.6208	Confirmed LTF	1.6208
AA2-074	AA2-074	2.1604	LTF	2.1604

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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
96847367	314591	6NASH	DVP	304226	6PA-RMOUNT#4	CPLE	1	DVP_P1-2: LN 2058	single	478.0	100.61	103.02	DC	11.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314435	6SAPONY	0.1795	80/20	0.1795
314572	3EMPORIA	0.0495	80/20	0.0495
314574	6EVERETS	0.2332	80/20	0.2332
314582	3KELFORD	0.3455	80/20	0.3455
314589	3MURPHYS	0.0594	80/20	0.0594
314623	3WITAKRS	0.2214	80/20	0.2214
314704	3LAWRENC	0.1687	80/20	0.1687
315115	1S HAMPT1	0.7687	80/20	0.7687
315126	1ROARAP2	1.1465	80/20	1.1465
315128	1ROARAP4	1.0941	80/20	1.0941
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**26.1992**	**80/20**	**26.1992**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**26.1992**	**80/20**	**26.1992**
315136	1ROSEMG1	2.9849	80/20	2.9849
315137	1ROSEMS1	1.8510	80/20	1.8510
315138	1ROSEMG2	1.3990	80/20	1.3990
315139	1GASTONA	3.6772	80/20	3.6772
315141	1GASTONB	3.6772	80/20	3.6772
315292	1DOMTR78	0.8777	80/20	0.8777
315294	1DOMTR10	6.5947	80/20	6.5947
315601	1CONETOE2SOL	2.8147	80/20	2.8147
315602	1HOLLOMANSOL	1.0595	80/20	1.0595
315605	6W1-029WIND	0.2467	80/20	0.2467
315606	3AA2-053SOLA	1.1705	80/20	1.1705
315607	3AA1-063SOLA	1.0545	80/20	1.0545
315608	3AA2-088SOLA	0.6494	80/20	0.6494
315611	6Z1-036WIND	2.4749	80/20	2.4749
315612	3AA2-057SOLA	1.1428	80/20	1.1428
315614	AA2-178 C	0.7978	80/20	0.7978
920591	AA2-165 C	0.1355	80/20	0.1355
920671	AA2-174 C OP	0.0536	80/20	0.0536
922922	AB1-081 C OP	10.5510	80/20	10.5510
923262	**AB1-132 C OP (Suspended)**	**16.2792**	**80/20**	**16.2792**
923572	AB1-173 C OP	1.6336	80/20	1.6336
923582	AB1-173AC OP	1.6336	80/20	1.6336
923801	AB2-015 C OP	3.9820	80/20	3.9820
923911	AB2-031 C O1	1.6215	80/20	1.6215
923991	AB2-040 C O1	5.3244	80/20	5.3244
924151	AB2-059 C OP	2.1450	80/20	2.1450
924501	**AB2-099 C (Suspended)**	**0.4014**	**80/20**	**0.4014**

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924511	AB2-100 C	1.4928	80/20	1.4928
925121	AB2-169 C	0.7426	80/20	0.7426
925171	AB2-174 C O1	0.8593	80/20	0.8593
925591	AC1-034 C	8.0545	80/20	8.0545
925781	AC1-054 C O1	2.8182	80/20	2.8182
926071	AC1-086 C	23.9731	80/20	23.9731
926201	AC1-098 C	5.1403	80/20	5.1403
926211	AC1-099 C	1.7225	80/20	1.7225
927021	AC1-189 C	12.7300	80/20	12.7300
927141	AC1-208 C	7.7959	80/20	7.7959
932631	AC2-084 C	7.3277	80/20	7.3277
933991	AD1-023 C	7.7172	80/20	7.7172
934331	AD1-057 C O1	20.9211	80/20	20.9211
934521	AD1-076 C	30.1201	80/20	30.1201
936401	AD2-051 C O1	6.1146	80/20	6.1146
938171	AE1-026 C O1	19.4515	80/20	19.4515
938221	AE1-035 C	1.5355	80/20	1.5355
938771	AE1-103 C O1	1.5796	80/20	1.5796
940481	AE2-033 C	7.3096	80/20	7.3096
940491	AE2-034 C	3.4688	80/20	3.4688
940571	AE2-044 C	5.2755	80/20	5.2755
941501	AE2-147 C	4.7673	80/20	4.7673
941541	AE2-151 C	0.7628	80/20	0.7628
942471	AE2-260 C O1	10.0150	80/20	10.0150
942851	AE2-304 C	0.2096	80/20	0.2096
943171	AE2-346 C	0.9633	80/20	0.9633
943911	AF1-059	6.8380	80/20	6.8380
944141	AF1-082	3.3914	80/20	3.3914
944871	AF1-152 C	1.5891	80/20	1.5891
945711	AF1-236 C O1	37.9749	80/20	37.9749
946011	AF1-266	6.1187	80/20	6.1187
946281	AF1-292 C	0.9992	80/20	0.9992
957521	AF2-046 C	10.7844	80/20	10.7844
957531	AF2-047 C	8.2425	80/20	8.2425
957791	**AF2-073 C (Withdrawn : 07/02/2020)**	**3.4329**	**80/20**	**3.4329**
957801	**AF2-074 C (Withdrawn : 07/02/2020)**	**1.5257**	**80/20**	**1.5257**
957861	AF2-080 C	11.5619	80/20	11.5619
959231	AF2-214 C	11.3988	80/20	11.3988
959511	AF2-242	5.6218	80/20	5.6218
959731	AF2-264 C	1.4952	80/20	1.4952
960081	AF2-299 C	1.6841	80/20	1.6841
960331	AF2-324 C O1	22.0434	80/20	22.0434
960351	AF2-326 C	2.5194	80/20	2.5194
960831	AF2-374 C	0.9226	80/20	0.9226
961091	AF2-400 C	0.2150	80/20	0.2150
NEWTON	NEWTON	1.3582	Confirmed LTF	1.3582
FARMERCITY	FARMERCITY	0.0779	Confirmed LTF	0.0779
G-007A	G-007A	0.9063	Confirmed LTF	0.9063
VFT	VFT	2.4123	Confirmed LTF	2.4123
CALDERWOOD	CALDERWOOD	1.0810	Confirmed LTF	1.0810
PRAIRIE	PRAIRIE	3.6653	Confirmed LTF	3.6653

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CHEOAH	CHEOAH	1.1086	Confirmed LTF	1.1086
EDWARDS	EDWARDS	0.4095	Confirmed LTF	0.4095
TILTON	TILTON	0.7245	Confirmed LTF	0.7245
GIBSON	GIBSON	0.6557	Confirmed LTF	0.6557
BLUEG	BLUEG	2.0259	Confirmed LTF	2.0259
TRIMBLE	TRIMBLE	0.6428	Confirmed LTF	0.6428
CATAWBA	CATAWBA	1.1687	Confirmed LTF	1.1687

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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
97915872	314637	6EDENTON	DVP	313885	6WALBMRL	DVP	1	DVP_P1-2: LN 246	single	733.2	127.54	128.61	DC	7.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0325	80/20	0.0325
314574	6EVERETS	0.3446	80/20	0.3446
314582	3KELFORD	0.4969	80/20	0.4969
314589	3MURPHYS	0.0660	80/20	0.0660
314623	3WITAKRS	0.1596	80/20	0.1596
314704	3LAWRENC	0.1176	80/20	0.1176
315126	1ROARAP2	0.9082	80/20	0.9082
315128	1ROARAP4	0.8667	80/20	0.8667
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315136	1ROSEMG1	1.5269	80/20	1.5269
315137	1ROSEMS1	0.9468	80/20	0.9468
315138	1ROSEMG2	0.7156	80/20	0.7156
315139	1GASTONA	2.2149	80/20	2.2149
315141	1GASTONB	2.2149	80/20	2.2149
315161	1KERR 4	0.3901	80/20	0.3901
315162	1KERR 5	0.3901	80/20	0.3901
315163	1KERR 6	0.3901	80/20	0.3901
315164	1KERR 7	0.3901	80/20	0.3901
315292	1DOMTR78	3.3298	80/20	3.3298
315294	1DOMTR10	25.0180	80/20	25.0180
315601	1CONETOE2SOL	1.4398	80/20	1.4398
315602	1HOLLOMANSOL	2.2223	80/20	2.2223
315606	3AA2-053SOLA	1.1036	80/20	1.1036
315607	3AA1-063SOLA	0.8357	80/20	0.8357
315608	3AA2-088SOLA	0.4899	80/20	0.4899
315611	6Z1-036WIND	-9.4219	Adder	-11.08
315612	3AA2-057SOLA	0.8869	80/20	0.8869
315614	AA2-178 C	5.2604	80/20	5.2604
920591	AA2-165 C	0.1052	80/20	0.1052
920671	AA2-174 C OP	0.0505	80/20	0.0505
922922	AB1-081 C OP	5.9136	80/20	5.9136
923262	**AB1-132 C OP (Suspended)**	**9.8053**	**80/20**	**9.8053**
923572	AB1-173 C OP	1.1594	80/20	1.1594
923582	AB1-173AC OP	1.1594	80/20	1.1594
923831	AB2-022 C	-1.6400	Adder	-1.93
923911	AB2-031 C O1	1.1508	80/20	1.1508
923991	AB2-040 C O1	3.7787	80/20	3.7787
924151	AB2-059 C OP	1.2022	80/20	1.2022

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924501	**AB2-099 C (Suspended)**	**0.6347**	**80/20**	**0.6347**
924511	AB2-100 C	0.8106	80/20	0.8106
925121	AB2-169 C	2.1767	80/20	2.1767
925171	AB2-174 C O1	0.5928	80/20	0.5928
925591	AC1-034 C	4.5144	80/20	4.5144
925781	AC1-054 C O1	2.9637	80/20	2.9637
926071	AC1-086 C	14.4395	80/20	14.4395
926201	AC1-098 C	5.2053	80/20	5.2053
926211	AC1-099 C	1.7443	80/20	1.7443
927021	AC1-189 C	8.6764	80/20	8.6764
927141	AC1-208 C	6.6480	80/20	6.6480
932631	AC2-084 C	7.4204	80/20	7.4204
933991	AD1-023 C	30.3123	80/20	30.3123
934331	AD1-057 C O1	6.8258	80/20	6.8258
934521	AD1-076 C	142.1118	80/20	142.1118
936401	AD2-051 C O1	12.4167	80/20	12.4167
938171	AE1-026 C O1	68.2899	80/20	68.2899
938221	AE1-035 C	3.2208	80/20	3.2208
940491	AE2-034 C	22.8724	80/20	22.8724
940571	AE2-044 C	2.9568	80/20	2.9568
941541	AE2-151 C	1.3133	80/20	1.3133
942471	AE2-260 C O1	5.3193	80/20	5.3193
942851	AE2-304 C	-0.7263	Adder	-0.85
943171	AE2-346 C	1.5233	80/20	1.5233
943911	AF1-059	5.3880	80/20	5.3880
944141	AF1-082	1.9008	80/20	1.9008
945711	AF1-236 C O1	250.3979	80/20	250.3979
946281	AF1-292 C	0.6331	80/20	0.6331
957521	AF2-046 C	12.9920	80/20	12.9920
957531	AF2-047 C	54.3491	80/20	54.3491
957861	AF2-080 C	7.8803	80/20	7.8803
959231	AF2-214 C	6.3888	80/20	6.3888
959511	AF2-242	13.1813	80/20	13.1813
959731	AF2-264 C	2.1088	80/20	2.1088
960081	AF2-299 C	1.0671	80/20	1.0671
960331	AF2-324 C O1	5.2899	80/20	5.2899
960351	AF2-326 C	1.6838	80/20	1.6838
960831	AF2-374 C	1.3333	80/20	1.3333
WEC	WEC	0.2337	Confirmed LTF	0.2337
LGEE	LGEE	0.4364	Confirmed LTF	0.4364
CPLE	CPLE	2.6804	Confirmed LTF	2.6804
CBM-W2	CBM-W2	9.0499	Confirmed LTF	9.0499
NY	NY	0.2068	Confirmed LTF	0.2068
CBM-W1	CBM-W1	8.8070	Confirmed LTF	8.8070
TVA	TVA	1.8732	Confirmed LTF	1.8732
CBM-S2	CBM-S2	16.2476	Confirmed LTF	16.2476
CBM-S1	CBM-S1	10.4966	Confirmed LTF	10.4966
MADISON	MADISON	0.5000	Confirmed LTF	0.5000
MEC	MEC	1.3920	Confirmed LTF	1.3920
AA2-074	AA2-074	1.8270	LTF	1.8270

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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
97720425	314638	6ELIZ CT	DVP	314647	6SHAWBRO	DVP	1	DVP_P4-2: 246T247	breaker	699.0	241.73	243.11	DC	9.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314574	6EVERETS	0.2925	50/50	0.2925
314582	3KELFORD	0.4234	50/50	0.4234
314589	3MURPHYS	0.0577	50/50	0.0577
314638	6ELIZ CT	1.0159	50/50	1.0159
314639	6TANGLEW	1.7856	50/50	1.7856
315292	1DOMTR78	2.8225	50/50	2.8225
315294	1DOMTR10	21.2064	50/50	21.2064
315601	1CONETOE2SOL	1.2226	50/50	1.2226
315602	1HOLLOMANSOL	1.8876	50/50	1.8876
315605	6W1-029WIND	3.1395	50/50	3.1395
315606	3AA2-053SOLA	0.9449	50/50	0.9449
315611	6Z1-036WIND	23.6387	50/50	23.6387
315614	AA2-178 C	4.4565	50/50	4.4565
900672	V4-068 E	0.1834	50/50	0.1834
901082	W1-029 E	122.0103	50/50	122.0103
913392	Y1-086 E	9.6096	50/50	9.6096
916042	**Z1-036 E (Suspended)**	**158.3791**	**50/50**	**158.3791**
917122	Z2-027 E	4.4364	50/50	4.4364
917332	Z2-043 E	1.0673	50/50	1.0673
917512	Z2-088 E OP1	3.0377	50/50	3.0377
918512	AA1-065 E OP	4.8998	50/50	4.8998
918532	AA1-067 E	0.7268	50/50	0.7268
919692	AA2-053 E OP	2.3521	50/50	2.3521
919702	AA2-057 E OP	1.7580	Adder	2.07
920592	AA2-165 E	0.2416	Adder	0.28
920671	AA2-174 C OP	0.0433	50/50	0.0433
920672	AA2-174 E OP	0.2718	50/50	0.2718
920692	AA2-178 E	11.0724	50/50	11.0724
923262	**AB1-132 C OP (Suspended)**	**7.1000**	**Adder**	**8.35**
923263	**AB1-132 E OP (Suspended)**	**3.0429**	**Adder**	**3.58**
923831	AB2-022 C	10.0746	50/50	10.0746
923832	AB2-022 E	5.4248	50/50	5.4248
924501	**AB2-099 C (Suspended)**	**0.5431**	**50/50**	**0.5431**
924502	**AB2-099 E (Suspended)**	**0.2328**	**50/50**	**0.2328**
925121	AB2-169 C	1.8456	50/50	1.8456
925122	AB2-169 E	9.6022	50/50	9.6022
926071	AC1-086 C	10.4556	Adder	12.3
926072	AC1-086 E	4.7587	Adder	5.6
926201	AC1-098 C	4.4387	50/50	4.4387
926202	AC1-098 E	2.6443	50/50	2.6443

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926211	AC1-099 C	1.4874	50/50	1.4874
926212	AC1-099 E	0.8736	50/50	0.8736
927021	AC1-189 C	7.3671	50/50	7.3671
927022	AC1-189 E	3.6697	50/50	3.6697
927141	AC1-208 C	5.6746	50/50	5.6746
927142	AC1-208 E	2.5198	50/50	2.5198
932631	AC2-084 C	6.3275	50/50	6.3275
932632	AC2-084 E	3.1165	50/50	3.1165
933991	AD1-023 C	25.6993	50/50	25.6993
933992	AD1-023 E	13.9907	50/50	13.9907
934521	AD1-076 C	120.4421	50/50	120.4421
934522	AD1-076 E	61.3289	50/50	61.3289
936401	AD2-051 C O1	10.5471	50/50	10.5471
936402	AD2-051 E O1	4.5288	50/50	4.5288
938171	AE1-026 C O1	57.9119	50/50	57.9119
938172	AE1-026 E O1	15.2785	50/50	15.2785
938221	AE1-035 C	2.7357	50/50	2.7357
938222	AE1-035 E	1.3475	50/50	1.3475
940491	AE2-034 C	19.3767	50/50	19.3767
940492	AE2-034 E	8.3043	50/50	8.3043
941501	AE2-147 C	60.6681	50/50	60.6681
941502	AE2-147 E	40.4454	50/50	40.4454
941541	AE2-151 C	1.1190	50/50	1.1190
941542	AE2-151 E	0.6025	50/50	0.6025
942851	AE2-304 C	2.3247	50/50	2.3247
942852	AE2-304 E	0.9041	50/50	0.9041
943171	AE2-346 C	1.3035	50/50	1.3035
943172	AE2-346 E	0.5586	50/50	0.5586
944871	AF1-152 C	20.2227	50/50	20.2227
944872	AF1-152 E	13.4818	50/50	13.4818
945711	AF1-236 C O1	212.1287	50/50	212.1287
945712	AF1-236 E O1	346.1048	50/50	346.1048
957521	AF2-046 C	11.3053	50/50	11.3053
957522	AF2-046 E	5.6867	50/50	5.6867
957531	AF2-047 C	46.0427	50/50	46.0427
957532	AF2-047 E	23.1598	50/50	23.1598
957861	AF2-080 C	6.6911	50/50	6.6911
957862	AF2-080 E	2.9661	50/50	2.9661
959511	AF2-242	11.1792	50/50	11.1792
959731	AF2-264 C	1.8162	50/50	1.8162
959732	AF2-264 E	0.8946	50/50	0.8946
960831	AF2-374 C	1.1373	50/50	1.1373
960832	AF2-374 E	1.8555	50/50	1.8555
WEC	WEC	0.1931	Confirmed LTF	0.1931
LGEE	LGEE	0.3611	Confirmed LTF	0.3611
CPLE	CPLE	2.2670	Confirmed LTF	2.2670
CBM-W2	CBM-W2	7.5512	Confirmed LTF	7.5512
NY	NY	0.1864	Confirmed LTF	0.1864
CBM-W1	CBM-W1	7.2683	Confirmed LTF	7.2683
TVA	TVA	1.5680	Confirmed LTF	1.5680
O-066	O-066	2.7350	Confirmed LTF	2.7350
CBM-S2	CBM-S2	13.7102	Confirmed LTF	13.7102

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S1	CBM-S1	8.7671	Confirmed LTF	8.7671
G-007	G-007	0.4274	Confirmed LTF	0.4274
MADISON	MADISON	0.4234	Confirmed LTF	0.4234
MEC	MEC	1.1536	Confirmed LTF	1.1536
AA2-074	AA2-074	1.5448	LTF	1.5448

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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
97915785	314662	6S HERTFORD	DVP	314651	6WINFALL	DVP	1	DVP_P1-2: LN 246	single	733.2	130.81	131.88	DC	7.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0325	80/20	0.0325
314574	6EVERETS	0.3446	80/20	0.3446
314582	3KELFORD	0.4969	80/20	0.4969
314589	3MURPHYS	0.0660	80/20	0.0660
314623	3WITAKRS	0.1596	80/20	0.1596
314704	3LAWRENC	0.1176	80/20	0.1176
315126	1ROARAP2	0.9082	80/20	0.9082
315128	1ROARAP4	0.8667	80/20	0.8667
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**6.2872**	**80/20**	**6.2872**
315136	1ROSEMG1	1.5269	80/20	1.5269
315137	1ROSEMS1	0.9468	80/20	0.9468
315138	1ROSEMG2	0.7156	80/20	0.7156
315139	1GASTONA	2.2149	80/20	2.2149
315141	1GASTONB	2.2149	80/20	2.2149
315161	1KERR 4	0.3901	80/20	0.3901
315162	1KERR 5	0.3901	80/20	0.3901
315163	1KERR 6	0.3901	80/20	0.3901
315164	1KERR 7	0.3901	80/20	0.3901
315292	1DOMTR78	3.3298	80/20	3.3298
315294	1DOMTR10	25.0180	80/20	25.0180
315601	1CONETOE2SOL	1.4398	80/20	1.4398
315602	1HOLLOMANSOL	2.2223	80/20	2.2223
315606	3AA2-053SOLA	1.1036	80/20	1.1036
315607	3AA1-063SOLA	0.8357	80/20	0.8357
315608	3AA2-088SOLA	0.4899	80/20	0.4899
315611	6Z1-036WIND	27.9154	80/20	27.9154
315612	3AA2-057SOLA	0.8869	80/20	0.8869
315614	AA2-178 C	5.2604	80/20	5.2604
920591	AA2-165 C	0.1052	80/20	0.1052
920671	AA2-174 C OP	0.0505	80/20	0.0505
922922	AB1-081 C OP	5.9136	80/20	5.9136
923262	**AB1-132 C OP (Suspended)**	**9.8053**	**80/20**	**9.8053**
923572	AB1-173 C OP	1.1594	80/20	1.1594
923582	AB1-173AC OP	1.1594	80/20	1.1594
923831	AB2-022 C	-1.6400	Adder	-1.93
923911	AB2-031 C O1	1.1508	80/20	1.1508
923991	AB2-040 C O1	3.7787	80/20	3.7787
924151	AB2-059 C OP	1.2022	80/20	1.2022

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924501	**AB2-099 C (Suspended)**	**0.6347**	**80/20**	**0.6347**
924511	AB2-100 C	0.8106	80/20	0.8106
925121	AB2-169 C	2.1767	80/20	2.1767
925171	AB2-174 C O1	0.5928	80/20	0.5928
925591	AC1-034 C	4.5144	80/20	4.5144
925781	AC1-054 C O1	2.9637	80/20	2.9637
926071	AC1-086 C	14.4395	80/20	14.4395
926201	AC1-098 C	5.2053	80/20	5.2053
926211	AC1-099 C	1.7443	80/20	1.7443
927021	AC1-189 C	8.6764	80/20	8.6764
927141	AC1-208 C	6.6480	80/20	6.6480
932631	AC2-084 C	7.4204	80/20	7.4204
933991	AD1-023 C	30.3123	80/20	30.3123
934331	AD1-057 C O1	6.8258	80/20	6.8258
934521	AD1-076 C	142.1118	80/20	142.1118
936401	AD2-051 C O1	12.4167	80/20	12.4167
938171	AE1-026 C O1	68.2899	80/20	68.2899
938221	AE1-035 C	3.2208	80/20	3.2208
940491	AE2-034 C	22.8724	80/20	22.8724
940571	AE2-044 C	2.9568	80/20	2.9568
941541	AE2-151 C	1.3133	80/20	1.3133
942471	AE2-260 C O1	5.3193	80/20	5.3193
942851	AE2-304 C	2.7456	80/20	2.7456
943171	AE2-346 C	1.5233	80/20	1.5233
943911	AF1-059	5.3880	80/20	5.3880
944141	AF1-082	1.9008	80/20	1.9008
945711	AF1-236 C O1	250.3979	80/20	250.3979
946281	AF1-292 C	0.6331	80/20	0.6331
957521	AF2-046 C	12.9920	80/20	12.9920
957531	AF2-047 C	54.3491	80/20	54.3491
957861	AF2-080 C	7.8803	80/20	7.8803
959231	AF2-214 C	6.3888	80/20	6.3888
959511	AF2-242	13.1813	80/20	13.1813
959731	AF2-264 C	2.1088	80/20	2.1088
960081	AF2-299 C	1.0671	80/20	1.0671
960331	AF2-324 C O1	5.2899	80/20	5.2899
960351	AF2-326 C	1.6838	80/20	1.6838
960831	AF2-374 C	1.3333	80/20	1.3333
WEC	WEC	0.2337	Confirmed LTF	0.2337
LGEE	LGEE	0.4364	Confirmed LTF	0.4364
CPLE	CPLE	2.6804	Confirmed LTF	2.6804
CBM-W2	CBM-W2	9.0499	Confirmed LTF	9.0499
NY	NY	0.2068	Confirmed LTF	0.2068
CBM-W1	CBM-W1	8.8070	Confirmed LTF	8.8070
TVA	TVA	1.8732	Confirmed LTF	1.8732
CBM-S2	CBM-S2	16.2476	Confirmed LTF	16.2476
CBM-S1	CBM-S1	10.4966	Confirmed LTF	10.4966
MADISON	MADISON	0.5000	Confirmed LTF	0.5000
MEC	MEC	1.3920	Confirmed LTF	1.3920
AA2-074	AA2-074	1.8270	LTF	1.8270

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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
97915814	924510	AB2-100 TAP	DVP	314563	6CLUBHSE	DVP	1	DVP_P1-2: LN 246	single	375.06	155.29	157.4	DC	7.9

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314574	6EVERETS	0.2838	80/20	0.2838
314582	3KELFORD	0.4966	80/20	0.4966
314589	3MURPHYS	0.0769	80/20	0.0769
314623	3WITAKRS	0.2386	80/20	0.2386
315115	1S HAMPT1	0.7317	80/20	0.7317
315126	1ROARAP2	1.4350	80/20	1.4350
315128	1ROARAP4	1.3694	80/20	1.3694
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**10.1401**	**80/20**	**10.1401**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**10.1401**	**80/20**	**10.1401**
315136	1ROSEMG1	4.5338	80/20	4.5338
315137	1ROSEMS1	2.8114	80/20	2.8114
315138	1ROSEMG2	2.1248	80/20	2.1248
315139	1GASTONA	6.9543	80/20	6.9543
315141	1GASTONB	6.9543	80/20	6.9543
315161	1KERR 4	0.3942	80/20	0.3942
315162	1KERR 5	0.3942	80/20	0.3942
315163	1KERR 6	0.3942	80/20	0.3942
315164	1KERR 7	0.3942	80/20	0.3942
315292	1DOMTR78	1.1634	80/20	1.1634
315294	1DOMTR10	8.7409	80/20	8.7409
315601	1CONETOE2SOL	1.6020	80/20	1.6020
315602	1HOLLOMANSOL	1.8149	80/20	1.8149
315606	3AA2-053SOLA	1.5240	80/20	1.5240
315607	3AA1-063SOLA	1.2864	80/20	1.2864
315608	3AA2-088SOLA	0.7348	80/20	0.7348
315612	3AA2-057SOLA	1.2789	80/20	1.2789
315614	AA2-178 C	0.9735	80/20	0.9735
920591	AA2-165 C	0.1516	80/20	0.1516
920671	AA2-174 C OP	0.0698	80/20	0.0698
922922	AB1-081 C OP	9.2753	80/20	9.2753
923262	**AB1-132 C OP (Suspended)**	**30.7868**	**80/20**	**30.7868**
923801	AB2-015 C OP	3.5395	80/20	3.5395
924151	AB2-059 C OP	1.8856	80/20	1.8856
924501	**AB2-099 C (Suspended)**	**0.6026**	**80/20**	**0.6026**
924511	AB2-100 C	7.3542	80/20	7.3542
925121	AB2-169 C	0.9543	80/20	0.9543
925591	AC1-034 C	7.0807	80/20	7.0807
925781	AC1-054 C O1	3.6606	80/20	3.6606
926071	AC1-086 C	45.3373	80/20	45.3373

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926201	AC1-098 C	6.4236	80/20	6.4236
926211	AC1-099 C	2.1526	80/20	2.1526
927021	AC1-189 C	8.6967	80/20	8.6967
927141	AC1-208 C	9.2701	80/20	9.2701
932631	AC2-084 C	9.1570	80/20	9.1570
933991	AD1-023 C	11.3636	80/20	11.3636
934331	AD1-057 C O1	15.8841	80/20	15.8841
934521	AD1-076 C	41.2196	80/20	41.2196
936401	AD2-051 C O1	10.5183	80/20	10.5183
938171	AE1-026 C O1	29.7099	80/20	29.7099
938221	AE1-035 C	2.6304	80/20	2.6304
938771	AE1-103 C O1	1.2888	80/20	1.2888
940491	AE2-034 C	4.2328	80/20	4.2328
940571	AE2-044 C	4.6376	80/20	4.6376
941541	AE2-151 C	1.1920	80/20	1.1920
943171	AE2-346 C	1.4462	80/20	1.4462
944141	AF1-082	2.9813	80/20	2.9813
945711	AF1-236 C O1	46.3386	80/20	46.3386
957521	AF2-046 C	14.4171	80/20	14.4171
957531	AF2-047 C	10.0578	80/20	10.0578
957861	AF2-080 C	7.8987	80/20	7.8987
959231	AF2-214 C	10.0206	80/20	10.0206
959511	AF2-242	7.0709	80/20	7.0709
959731	AF2-264 C	2.1330	80/20	2.1330
960331	AF2-324 C O1	8.5317	80/20	8.5317
960351	AF2-326 C	2.6147	80/20	2.6147
960831	AF2-374 C	1.3564	80/20	1.3564
961091	AF2-400 C	0.1911	80/20	0.1911
WEC	WEC	0.2592	Confirmed LTF	0.2592
LGEE	LGEE	0.4855	Confirmed LTF	0.4855
CPLE	CPLE	3.1474	Confirmed LTF	3.1474
CBM-W2	CBM-W2	10.3603	Confirmed LTF	10.3603
NY	NY	0.2947	Confirmed LTF	0.2947
CBM-W1	CBM-W1	9.7203	Confirmed LTF	9.7203
TVA	TVA	2.1686	Confirmed LTF	2.1686
CBM-S2	CBM-S2	19.2185	Confirmed LTF	19.2185
CBM-S1	CBM-S1	12.0899	Confirmed LTF	12.0899
MADISON	MADISON	0.6088	Confirmed LTF	0.6088
MEC	MEC	1.5652	Confirmed LTF	1.5652
AA2-074	AA2-074	2.1447	LTF	2.1447

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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
98542536	940480	AE2-033 TAP	DVP	314435	6SAPONY	DVP	1	DVP_P7-1: LN 2058-2181	tower	830.0	128.2	128.86	DC	12.14

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314539	3UNCAMP	1.1800	Adder	1.39
314541	3WATKINS	0.4059	Adder	0.48
314572	3EMPORIA	0.1781	50/50	0.1781
314704	3LAWRENC	0.6562	50/50	0.6562
315126	1ROARAP2	2.3517	50/50	2.3517
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**11.4287**	**Adder**	**13.45**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**11.4287**	**Adder**	**13.45**
315136	1ROSEMG1	4.4470	50/50	4.4470
315137	1ROSEMS1	2.7576	50/50	2.7576
315138	1ROSEMG2	2.0842	50/50	2.0842
315139	1GASTONA	6.6590	50/50	6.6590
315141	1GASTONB	6.6590	50/50	6.6590
315294	1DOMTR10	6.4730	Adder	7.62
900672	V4-068 E	0.2567	Adder	0.3
907092	X1-038 E	2.9500	Adder	3.47
917332	Z2-043 E	1.0904	Adder	1.28
917342	Z2-044 E	0.5705	Adder	0.67
917512	Z2-088 E OP1	3.8340	Adder	4.51
918492	AA1-063AE OP	4.7118	Adder	5.54
918512	AA1-065 E OP	3.1865	Adder	3.75
918532	AA1-067 E	0.5486	Adder	0.65
919692	AA2-053 E OP	4.8480	Adder	5.7
919702	AA2-057 E OP	3.5108	Adder	4.13
920042	AA2-088 E OP	8.5732	Adder	10.09
920592	AA2-165 E	0.4825	Adder	0.57
920672	AA2-174 E OP	0.5602	Adder	0.66
922922	AB1-081 C OP	8.7046	Adder	10.24
922923	AB1-081 E OP	3.7305	Adder	4.39
923262	**AB1-132 C OP (Suspended)**	**29.4798**	**50/50**	**29.4798**
923263	**AB1-132 E OP (Suspended)**	**12.6342**	**50/50**	**12.6342**
923572	AB1-173 C OP	4.8865	50/50	4.8865
923573	AB1-173 E OP	2.2803	50/50	2.2803
923582	AB1-173AC OP	4.8865	50/50	4.8865
923583	AB1-173AE OP	2.2803	50/50	2.2803
923801	AB2-015 C OP	4.7154	Adder	5.55
923802	AB2-015 E OP	3.8666	Adder	4.55
923911	AB2-031 C O1	4.8503	50/50	4.8503

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
923912	AB2-031 E O1	2.3889	50/50	2.3889
923991	AB2-040 C O1	15.9262	50/50	15.9262
923992	AB2-040 E O1	13.0306	50/50	13.0306
924022	AB2-043 E O1	1.9475	Adder	2.29
924152	AB2-059 E OP	5.2849	Adder	6.22
924162	AB2-060 E OP	2.9089	Adder	3.42
924301	**AB2-077 C O1 (Suspended)**	**1.3639**	**Adder**	**1.6**
924302	**AB2-077 E O1 (Suspended)**	**0.9093**	**Adder**	**1.07**
924311	**AB2-078 C O1 (Suspended)**	**1.3639**	**Adder**	**1.6**
924312	**AB2-078 E O1 (Suspended)**	**0.9093**	**Adder**	**1.07**
924321	**AB2-079 C O1 (Suspended)**	**1.3639**	**Adder**	**1.6**
924322	**AB2-079 E O1 (Suspended)**	**0.9093**	**Adder**	**1.07**
924501	**AB2-099 C (Suspended)**	**0.5127**	**Adder**	**0.6**
924502	**AB2-099 E (Suspended)**	**0.2197**	**Adder**	**0.26**
924511	AB2-100 C	6.2132	50/50	6.2132
924512	AB2-100 E	17.7411	50/50	17.7411
925122	AB2-169 E	3.7423	Adder	4.4
925171	AB2-174 C O1	2.7644	50/50	2.7644
925172	AB2-174 E O1	14.4997	50/50	14.4997
925591	AC1-034 C	6.6450	Adder	7.82
925592	AC1-034 E	5.0129	Adder	5.9
925611	AC1-036 C	0.5114	Adder	0.6
925612	AC1-036 E	0.8344	Adder	0.98
925781	AC1-054 C O1	6.7381	Adder	7.93
925782	AC1-054 E O1	3.1041	Adder	3.65
926071	AC1-086 C	43.4125	50/50	43.4125
926072	AC1-086 E	19.7585	50/50	19.7585
926201	AC1-098 C	6.4358	Adder	7.57
926202	AC1-098 E	3.8341	Adder	4.51
926211	AC1-099 C	2.1567	Adder	2.54
926212	AC1-099 E	1.2666	Adder	1.49
927021	AC1-189 C	7.8724	Adder	9.26
927022	AC1-189 E	3.9215	Adder	4.61
927141	AC1-208 C	10.1488	Adder	11.94
927142	AC1-208 E	4.5065	Adder	5.3
932631	AC2-084 C	9.1744	Adder	10.79
932632	AC2-084 E	4.5187	Adder	5.32
933991	AD1-023 C	8.0608	Adder	9.48
933992	AD1-023 E	4.3883	Adder	5.16
934331	AD1-057 C O1	17.4625	50/50	17.4625
934332	AD1-057 E O1	9.3152	50/50	9.3152
934521	AD1-076 C	29.9773	Adder	35.27
934522	AD1-076 E	15.2644	Adder	17.96
936261	AD2-033 C	7.3540	Adder	8.65
936262	AD2-033 E	4.9027	Adder	5.77
936361	AD2-046 C O1	6.7643	Adder	7.96
936362	AD2-046 E O1	3.1106	Adder	3.66

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936401	AD2-051 C O1	7.1905	Adder	8.46
936402	AD2-051 E O1	3.0875	Adder	3.63
936481	AD2-063 C O1	9.4860	Adder	11.16
936482	AD2-063 E O1	6.2713	Adder	7.38
938171	AE1-026 C O1	20.8241	Adder	24.5
938172	AE1-026 E O1	5.4939	Adder	6.46
938221	AE1-035 C	1.7791	Adder	2.09
938222	AE1-035 E	0.8763	Adder	1.03
938771	AE1-103 C O1	1.7700	Adder	2.08
938772	AE1-103 E O1	2.4443	Adder	2.88
939181	AE1-148 C O1	6.6422	Adder	7.81
939182	AE1-148 E O1	4.4281	Adder	5.21
940241	AE2-006	0.2602	Adder	0.31
940481	AE2-033 C	64.4066	50/50	64.4066
940482	AE2-033 E	43.4202	50/50	43.4202
940571	AE2-044 C	4.3523	Adder	5.12
940572	AE2-044 E	1.8653	Adder	2.19
940661	AE2-053 O1	2.4601	Adder	2.89
941541	AE2-151 C	0.9553	Adder	1.12
941542	AE2-151 E	0.5144	Adder	0.61
942451	AE2-258	1.6248	Adder	1.91
942471	AE2-260 C O1	46.3897	50/50	46.3897
942472	AE2-260 E O1	65.7983	50/50	65.7983
943171	AE2-346 C	1.2305	Adder	1.45
943172	AE2-346 E	0.5274	Adder	0.62
943911	AF1-059	22.8480	Adder	26.88
944141	AF1-082	2.7979	Adder	3.29
946011	AF1-266	53.9134	50/50	53.9134
946281	AF1-292 C	3.8562	50/50	3.8562
946282	AF1-292 E	2.5997	50/50	2.5997
957521	AF2-046 C	7.6850	Adder	17.06
957522	AF2-046 E	3.8656	Adder	8.58
957861	AF2-080 C	3.7895	Adder	8.41
957862	AF2-080 E	1.6799	Adder	3.73
959231	AF2-214 C	4.9842	Adder	11.06
959232	AF2-214 E	7.4721	Adder	16.59
959311	AF2-222 C	4.5897	Adder	10.19
959312	AF2-222 E	3.0751	Adder	6.83
959511	AF2-242	2.8602	Adder	6.35
959731	AF2-264 C	1.0364	Adder	2.3
959732	AF2-264 E	0.5105	Adder	1.13
960081	AF2-299 C	6.4992	50/50	6.4992
960082	AF2-299 E	4.3328	50/50	4.3328
960122	AF2-303 E O1	7.8326	Adder	17.39
960331	AF2-324 C O1	5.0964	Adder	11.31
960332	AF2-324 E O1	2.7362	Adder	6.07
960351	AF2-326 C	1.2763	Adder	2.83
960352	AF2-326 E	0.3191	Adder	0.71
960811	AF2-372 C	0.4566	Adder	1.01
960812	AF2-372 E	0.7452	Adder	1.65
960831	AF2-374 C	0.6838	Adder	1.52
960832	AF2-374 E	1.1157	Adder	2.48

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
961091	AF2-400 C	0.1350	Adder	0.3
961092	AF2-400 E	0.2214	Adder	0.49
WEC	WEC	0.2000	Confirmed LTF	0.2000
LGEE	LGEE	0.3782	Confirmed LTF	0.3782
CPLE	CPLE	2.4542	Confirmed LTF	2.4542
CBM-W2	CBM-W2	8.0999	Confirmed LTF	8.0999
NY	NY	0.2992	Confirmed LTF	0.2992
CBM-W1	CBM-W1	7.4560	Confirmed LTF	7.4560
TVA	TVA	1.7052	Confirmed LTF	1.7052
O-066	O-066	4.2202	Confirmed LTF	4.2202
CBM-S2	CBM-S2	15.0916	Confirmed LTF	15.0916
CBM-S1	CBM-S1	9.4998	Confirmed LTF	9.4998
G-007	G-007	0.6594	Confirmed LTF	0.6594
MADISON	MADISON	0.4818	Confirmed LTF	0.4818
MEC	MEC	1.2156	Confirmed LTF	1.2156
AA2-074	AA2-074	1.6722	LTF	1.6722

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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
97915736	957790	AF2-073 TAP	DVP	957820	AF2-076 TAP	DVP	1	DVP_P1-2: LN 2092	single	571.52	167.33	169.21	DC	10.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0506	80/20	0.0506
314574	6EVERETS	0.4657	80/20	0.4657
314582	3KELFORD	0.7842	80/20	0.7842
314589	3MURPHYS	0.1032	80/20	0.1032
314623	3WITAKRS	0.2359	80/20	0.2359
314704	3LAWRENC	0.1825	80/20	0.1825
315126	1ROARAP2	1.4097	80/20	1.4097
315128	1ROARAP4	1.3452	80/20	1.3452
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**9.0439**	**80/20**	**9.0439**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**9.0439**	**80/20**	**9.0439**
315136	1ROSEMG1	2.3511	80/20	2.3511
315137	1ROSEMS1	1.4579	80/20	1.4579
315138	1ROSEMG2	1.1019	80/20	1.1019
315139	1GASTONA	3.4385	80/20	3.4385
315141	1GASTONB	3.4385	80/20	3.4385
315161	1KERR 4	0.5966	80/20	0.5966
315162	1KERR 5	0.5966	80/20	0.5966
315163	1KERR 6	0.5966	80/20	0.5966
315164	1KERR 7	0.5966	80/20	0.5966
315292	1DOMTR78	2.8729	80/20	2.8729
315294	1DOMTR10	21.5849	80/20	21.5849
315601	1CONETOE2SOL	1.9914	80/20	1.9914
315602	1HOLLOMANSOL	3.5568	80/20	3.5568
315606	3AA2-053SOLA	1.7258	80/20	1.7258
315607	3AA1-063SOLA	1.2920	80/20	1.2920
315608	3AA2-088SOLA	0.7480	80/20	0.7480
315611	6Z1-036WIND	13.8532	80/20	13.8532
315612	3AA2-057SOLA	1.3289	80/20	1.3289
315614	AA2-178 C	3.4313	80/20	3.4313
920591	AA2-165 C	0.1576	80/20	0.1576
920671	AA2-174 C OP	0.0790	80/20	0.0790
922922	AB1-081 C OP	8.5938	80/20	8.5938
923262	**AB1-132 C OP (Suspended)**	**15.2225**	**80/20**	**15.2225**
923572	AB1-173 C OP	1.8023	80/20	1.8023
923582	AB1-173AC OP	1.8023	80/20	1.8023
923911	AB2-031 C O1	1.7889	80/20	1.7889
923991	AB2-040 C O1	5.8740	80/20	5.8740
924151	AB2-059 C OP	1.7471	80/20	1.7471
924501	**AB2-099 C (Suspended)**	**1.0074**	**80/20**	**1.0074**

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924511	AB2-100 C	1.2658	80/20	1.2658
925121	AB2-169 C	2.0776	80/20	2.0776
925171	AB2-174 C O1	0.9219	80/20	0.9219
925591	AC1-034 C	6.5604	80/20	6.5604
925781	AC1-054 C O1	4.5595	80/20	4.5595
926071	AC1-086 C	22.4169	80/20	22.4169
926201	AC1-098 C	8.0374	80/20	8.0374
926211	AC1-099 C	2.6934	80/20	2.6934
927021	AC1-189 C	11.8954	80/20	11.8954
927141	AC1-208 C	10.1471	80/20	10.1471
932631	AC2-084 C	11.4575	80/20	11.4575
933991	AD1-023 C	28.2004	80/20	28.2004
934331	AD1-057 C O1	10.1856	80/20	10.1856
934521	AD1-076 C	113.9255	80/20	113.9255
935111	AD1-144 C	-0.7751	Adder	-0.91
936401	AD2-051 C O1	19.8648	80/20	19.8648
937541	AD2-215 C	-0.7831	Adder	-0.92
938171	AE1-026 C O1	69.7636	80/20	69.7636
938221	AE1-035 C	5.1550	80/20	5.1550
940491	AE2-034 C	14.9192	80/20	14.9192
940571	AE2-044 C	4.2969	80/20	4.2969
941541	AE2-151 C	2.0903	80/20	2.0903
942131	AE2-225 C	-1.0773	Adder	-1.27
942171	AE2-229 C	-1.0773	Adder	-1.27
942471	AE2-260 C O1	8.3171	80/20	8.3171
943171	AE2-346 C	2.4178	80/20	2.4178
943911	AF1-059	8.3370	80/20	8.3370
944141	AF1-082	2.7623	80/20	2.7623
945711	AF1-236 C O1	163.3302	80/20	163.3302
946281	AF1-292 C	0.9859	80/20	0.9859
957521	AF2-046 C	20.4051	80/20	20.4051
957531	AF2-047 C	35.4510	80/20	35.4510
957791	**AF2-073 C (Withdrawn : 07/02/2020)**	**41.1750**	**80/20**	**41.1750**
957801	**AF2-074 C (Withdrawn : 07/02/2020)**	**18.3000**	**80/20**	**18.3000**
957861	AF2-080 C	10.8039	80/20	10.8039
959231	AF2-214 C	9.2843	80/20	9.2843
959511	AF2-242	13.9123	80/20	13.9123
959731	AF2-264 C	3.3334	80/20	3.3334
960081	AF2-299 C	1.6616	80/20	1.6616
960331	AF2-324 C O1	7.6094	80/20	7.6094
960351	AF2-326 C	2.4520	80/20	2.4520
960831	AF2-374 C	2.1136	80/20	2.1136
WEC	WEC	0.3333	Confirmed LTF	0.3333
LGEE	LGEE	0.6224	Confirmed LTF	0.6224
CPLE	CPLE	3.7739	Confirmed LTF	3.7739
CBM-W2	CBM-W2	12.8665	Confirmed LTF	12.8665
NY	NY	0.2909	Confirmed LTF	0.2909
CBM-W1	CBM-W1	12.5600	Confirmed LTF	12.5600
TVA	TVA	2.6600	Confirmed LTF	2.6600
CBM-S2	CBM-S2	22.9639	Confirmed LTF	22.9639
CBM-S1	CBM-S1	14.9015	Confirmed LTF	14.9015

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MADISON	MADISON	0.7056	Confirmed LTF	0.7056
MEC	MEC	1.9799	Confirmed LTF	1.9799
AA2-074	AA2-074	2.5717	LTF	2.5717

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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
97915724	957820	AF2-076 TAP	DVP	314537	6SUFFOLK	DVP	1	DVP_P1-2: LN 2092	single	571.52	172.12	174.0	DC	10.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314572	3EMPORIA	0.0506	80/20	0.0506
314574	6EVERETS	0.4657	80/20	0.4657
314582	3KELFORD	0.7842	80/20	0.7842
314589	3MURPHYS	0.1032	80/20	0.1032
314623	3WITAKRS	0.2359	80/20	0.2359
314704	3LAWRENC	0.1825	80/20	0.1825
315126	1ROARAP2	1.4097	80/20	1.4097
315128	1ROARAP4	1.3452	80/20	1.3452
315131	**1EDGECMA (Deactivation : 22/04/2019)**	**9.0439**	**80/20**	**9.0439**
315132	**1EDGECMB (Deactivation : 22/04/2019)**	**9.0439**	**80/20**	**9.0439**
315136	1ROSEMG1	2.3511	80/20	2.3511
315137	1ROSEMS1	1.4579	80/20	1.4579
315138	1ROSEMG2	1.1019	80/20	1.1019
315139	1GASTONA	3.4385	80/20	3.4385
315141	1GASTONB	3.4385	80/20	3.4385
315161	1KERR 4	0.5966	80/20	0.5966
315162	1KERR 5	0.5966	80/20	0.5966
315163	1KERR 6	0.5966	80/20	0.5966
315164	1KERR 7	0.5966	80/20	0.5966
315292	1DOMTR78	2.8729	80/20	2.8729
315294	1DOMTR10	21.5849	80/20	21.5849
315601	1CONETOE2SOL	1.9914	80/20	1.9914
315602	1HOLLOMANSOL	3.5568	80/20	3.5568
315606	3AA2-053SOLA	1.7258	80/20	1.7258
315607	3AA1-063SOLA	1.2920	80/20	1.2920
315608	3AA2-088SOLA	0.7480	80/20	0.7480
315611	6Z1-036WIND	13.8532	80/20	13.8532
315612	3AA2-057SOLA	1.3289	80/20	1.3289
315614	AA2-178 C	3.4313	80/20	3.4313
920591	AA2-165 C	0.1576	80/20	0.1576
920671	AA2-174 C OP	0.0790	80/20	0.0790
922922	AB1-081 C OP	8.5938	80/20	8.5938
923262	**AB1-132 C OP (Suspended)**	**15.2225**	**80/20**	**15.2225**
923572	AB1-173 C OP	1.8023	80/20	1.8023
923582	AB1-173AC OP	1.8023	80/20	1.8023
923911	AB2-031 C O1	1.7889	80/20	1.7889
923991	AB2-040 C O1	5.8740	80/20	5.8740
924151	AB2-059 C OP	1.7471	80/20	1.7471
924501	**AB2-099 C (Suspended)**	**1.0074**	**80/20**	**1.0074**

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924511	AB2-100 C	1.2658	80/20	1.2658
925121	AB2-169 C	2.0776	80/20	2.0776
925171	AB2-174 C O1	0.9219	80/20	0.9219
925591	AC1-034 C	6.5604	80/20	6.5604
925781	AC1-054 C O1	4.5595	80/20	4.5595
926071	AC1-086 C	22.4169	80/20	22.4169
926201	AC1-098 C	8.0374	80/20	8.0374
926211	AC1-099 C	2.6934	80/20	2.6934
927021	AC1-189 C	11.8954	80/20	11.8954
927141	AC1-208 C	10.1471	80/20	10.1471
932631	AC2-084 C	11.4575	80/20	11.4575
933991	AD1-023 C	28.2004	80/20	28.2004
934331	AD1-057 C O1	10.1856	80/20	10.1856
934521	AD1-076 C	113.9255	80/20	113.9255
936401	AD2-051 C O1	19.8648	80/20	19.8648
938171	AE1-026 C O1	69.7636	80/20	69.7636
938221	AE1-035 C	5.1550	80/20	5.1550
940491	AE2-034 C	14.9192	80/20	14.9192
940571	AE2-044 C	4.2969	80/20	4.2969
941541	AE2-151 C	2.0903	80/20	2.0903
942131	AE2-225 C	-1.0773	Adder	-1.27
942171	AE2-229 C	-1.0773	Adder	-1.27
942471	AE2-260 C O1	8.3171	80/20	8.3171
943171	AE2-346 C	2.4178	80/20	2.4178
943911	AF1-059	8.3370	80/20	8.3370
944141	AF1-082	2.7623	80/20	2.7623
945711	AF1-236 C O1	163.3302	80/20	163.3302
946281	AF1-292 C	0.9859	80/20	0.9859
957521	AF2-046 C	20.4051	80/20	20.4051
957531	AF2-047 C	35.4510	80/20	35.4510
957791	**AF2-073 C (Withdrawn : 07/02/2020)**	**41.1750**	**80/20**	**41.1750**
957801	**AF2-074 C (Withdrawn : 07/02/2020)**	**18.3000**	**80/20**	**18.3000**
957821	AF2-076 C O1	25.8699	80/20	25.8699
957861	AF2-080 C	10.8039	80/20	10.8039
959231	AF2-214 C	9.2843	80/20	9.2843
959511	AF2-242	13.9123	80/20	13.9123
959731	AF2-264 C	3.3334	80/20	3.3334
960081	AF2-299 C	1.6616	80/20	1.6616
960331	AF2-324 C O1	7.6094	80/20	7.6094
960351	AF2-326 C	2.4520	80/20	2.4520
960831	AF2-374 C	2.1136	80/20	2.1136
WEC	WEC	0.3333	Confirmed LTF	0.3333
LGEE	LGEE	0.6224	Confirmed LTF	0.6224
CPLE	CPLE	3.7739	Confirmed LTF	3.7739
CBM-W2	CBM-W2	12.8665	Confirmed LTF	12.8665
NY	NY	0.2909	Confirmed LTF	0.2909
CBM-W1	CBM-W1	12.5600	Confirmed LTF	12.5600
TVA	TVA	2.6600	Confirmed LTF	2.6600
CBM-S2	CBM-S2	22.9639	Confirmed LTF	22.9639
CBM-S1	CBM-S1	14.9015	Confirmed LTF	14.9015
MADISON	MADISON	0.7056	Confirmed LTF	0.7056

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Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MEC	MEC	1.9799	Confirmed LTF	1.9799
AA2-074	AA2-074	2.5717	LTF	2.5717

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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
AA1-063	Huntsville (Cabin Creek) 69kV	Withdrawn
AA1-063A	Carolina–Seaboard 115kV	In Service
AA1-065	Earleys 230kV	In Service
AA1-067	Everetts 34.5kV	In Service
AA1-139	Hickory-Shawboro 230kV	In Service
AA2-053	Carolina-Jackson 115kV	In Service
AA2-057	Hornertown-Whitakers 115kV	In Service
AA2-074	CPLE-PJM	Confirmed
AA2-088	Boykins-Handsome 115kV	In Service
AA2-165	Hornertown-Whitakers 115kV	In Service
AA2-174	Carolina-Jackson 115kV	In Service
AA2-178	Mackeys 230kV	Under Construction
AB1-081	Anaconda-Mayo Dunbar 115kV	Under Construction
AB1-132	Thelma 230kV	Suspended
AB1-173	Brink-Trego 115kV	Engineering and Procurement
AB1-173A	Brink-Trego 115kV	Engineering and Procurement
AB2-015	Franklin 115kV	Engineering and Procurement
AB2-022	Elizabeth City 34.5kV	Engineering and Procurement
AB2-025	Sapony 34.5kV	In Service
AB2-031	Brink-Trego 115kV	Engineering and Procurement
AB2-040	Brink 115kV	Engineering and Procurement
AB2-043	Chase City 115kV	Under Construction
AB2-059	Benson-Dunbar 115kV	Under Construction
AB2-060	Chase City-Lunenburg 115kV	Under Construction
AB2-077	Buggs Island-Chase City 115kV	Suspended
AB2-078	Buggs Island-Chase City 115kV	Suspended
AB2-079	Buggs Island-Chase City 115kV	Suspended
AB2-099	Ahoskie 34.5kV	Suspended
AB2-100	Clubhouse-Lakeview 230kV	Under Construction
AB2-161	Waverly #2 DP 115kV	Suspended
AB2-169	Pantago-Five Points 115kV	Partially in Service - Under Construction
AB2-174	Emporia-Trego 115kV	Under Construction
AC1-034	Heartsease DP - Mayo Dunbar 115kV	Active
AC1-036	Twittys Creek 34.5kV	Engineering and Procurement
AC1-054	Kerr Dam–Eatons Ferry 115 kV	Engineering and Procurement
AC1-083	Smith Mountain-Bearskin 138kV	Active
AC1-086	Thelma 230kV	Active
AC1-098	Dawson-South Justice 115kV	Engineering and Procurement
AC1-099	Dawson-South Justice 115kV	Engineering and Procurement

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Queue Number	Project Name	Status
AC1-105	Halifax-Mt. Laurel 115kV	Suspended
AC1-131	PJM-CPLE	Confirmed
AC1-189	Chinquapin-Everetts 230kV	Active
AC1-208	Cox-Whitakers 115kV	Active
AC1-221	Halifax-Person 230kV	Engineering and Procurement
AC1-222	Crystal Hill-Halifax 115kV	Engineering and Procurement
AC2-078	Disputanta-Waverly 115kV	Active
AC2-079	Ivor-Oakridge 115kV	Active
AC2-084	Dawson-South Justice 115kV	Active
AC2-100	Halifax-Person 230kV	Active
AD1-017	Smith Mountain-Bearskin 138 kV	Active
AD1-023	Cashie-Trowbridge 230 kV	Active
AD1-055	Crystal Hill-Halifax 115 kV	Engineering and Procurement
AD1-057	Hornertown-Hathaway 230 kV	Active
AD1-058	Halifax-Person 230 kV	Engineering and Procurement
AD1-076	Trowbridge 230 kV	Active
AD1-082	Bakers Pond-Ivor 115kV	Active
AD1-087	Clover-Sedge Hill 230 kV	Active
AD1-131	Sedge Hill-Person 230 kV	Active
AD1-144	Kings Fork 34.5 kV	Engineering and Procurement
AD1-152	Clover-Sedge Hill 230 kV	Active
AD2-022	East Danville-Roxborough 230 kV	Active
AD2-023	E. Danville-Roxborough 230 kV	Active
AD2-033	Chase City-Lunenburg 115 kV	Active
AD2-046	Boydton DP-Kerr Dam 115 kV	Active
AD2-051	Earleys – Northampton 230kV	Active
AD2-063	Central-Chase City 115kV	Active
AD2-085	Myrtle-Windsor DP 115kV	Active
AD2-202	Clover-Sedge Hill 230kV	Active
AD2-215	Kings Fork 34.5 kV	Engineering and Procurement
AE1-026	Cashie 230 kV	Active
AE1-035	Earleys 230 kV	Engineering and Procurement
AE1-072	Shawboro-Sligo 230 kV	Active
AE1-085	Bakers Pond-Bell Ave 115 kV	Active
AE1-103	Holland-Union Camp 115 kV	Active
AE1-148	Kerr Dam-Ridge Rd 115 kV	Active
AE1-149	Disputanta-Poe 115 kV	Active
AE1-176	Roanoke-Vinton 12 kV (Niagara Hydro)	In Service
AE1-250	Smith Mountain-E. Danville 138 kV	Active
AE2-000B	N/A	N/A
AE2-006	Twittys Creek 34.5 kV	Engineering and Procurement
AE2-033	Clubhouse-Sappony 230 kV	Active
AE2-034	Mackeys 230 kV	Active
AE2-044	Anaconda-Dunbar 115 kV	Active
AE2-052	Disputanta-Poe 115 kV	Active
AE2-053	Kerr Dam-Ridge Road 115 kV	Active
AE2-104	Suffolk 115 kV	Active
AE2-147	Swamp 230 kV	Active
AE2-151	Earleys 34.5kV	Engineering and Procurement
AE2-225	Suffolk 34 kV	Engineering and Procurement
AE2-229	Suffolk 34 kV	Engineering and Procurement
AE2-247	Myrtle-Windsor 115 kV	Active

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Queue Number	Project Name	Status
AE2-258	Chase City 115 kV	Active
AE2-260	Clubhouse 230 kV	Active
AE2-304	South Hertford 34 kV	Engineering and Procurement
AE2-346	Ahoskie 34.5 kV	Active
AF1-017	Myrtle-Windsor 115 kV	Active
AF1-032	Suffolk 34.5 kV	Engineering and Procurement
AF1-058	Welco 34.5 kV	Engineering and Procurement
AF1-059	Brodnax-South Hill 115 kV	Active
AF1-082	Heartsease-Mayo Dunbar DP	Active
AF1-152	Swamp 230 kV	Active
AF1-236	Mackeys 230 kV	Active
AF1-246	Clover-Rawlings 500 kV	Active
AF1-266	Clubhouse-Sapony 230 kV	Active
AF1-292	Fields Crossroads 34.5 kV	Active
AF2-042	Clover 500 kV	Active
AF2-043	Suffolk 34.5 kV	Active
AF2-046	Tunis-Mapleton 115 kV	Active
AF2-047	Creswell-Riders Creek 115 kV	Active
AF2-073	Nucor Steel-Suffolk 230 kV	Withdrawn
AF2-074	Nucor Steel-Suffolk 230 kV	Withdrawn
AF2-076	Suffolk-Nucor Steel 230 kV	Active
AF2-080	Chinquapin-Everetts 230 kV	Active
AF2-081	Moyock 230 kV	Active
AF2-108	Locks 34.5 kV	Active
AF2-110	Suffolk 115 kV	Active
AF2-214	Heartsease DP-Anaconda 115 kV	Active
AF2-222	Pamplin-Chase City 115 kV	Active
AF2-242	Wharton 115 kV	Active
AF2-264	Tunis 34.5 kV	Active
AF2-266	Clover 230 kV	Active
AF2-297	Sedge Hill 115 kV	Active
AF2-299	Fields 34.5 kV	Active
AF2-303	Edgecombe 230 kV	Active
AF2-324	Edgecombe 230 kV	Active
AF2-326	Edgecombe 13 kV	Active
AF2-327	Wakefield 13 kV	Active
AF2-372	Black Branch 34.5 kV	Active
AF2-373	Mount Laurel 115 kV	Active
AF2-374	Woodland 34.5 kV	Active
AF2-400	Franklin 13.2 kV	Active
AF2-402	Ivor-Oak Ridge 115 kV	Active
V4-068	Murphy's 34.5kV	In Service
W1-029	Winfall 230kV	In Service
X1-038	Union Camp 115kV	In Service
Y1-086	Morgans Corner	In Service
Z1-036	WinFall-Chowan 230kV	Suspended
Z2-027	Pasquotank 34.5kV	In Service
Z2-043	Kelford 34.5kV	In Service
Z2-044	Whitakers 34.5kV	In Service
Z2-088	Tarboro-Everetts 230kV	In Service

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11.8 Contingency Descriptions

Contingency Name	Contingency Definition
DVP_P1-2: LN 218	CONTINGENCY 'DVP_P1-2: LN 218' OPEN BRANCH FROM BUS 304451 TO BUS 314574 CKT 1 /* 6GREENVILE T230.00 - 6EVERETS 230.00 END
AEP_P1-2_#1377	CONTINGENCY 'AEP_P1-2_#1377' OPEN BRANCH FROM BUS 242514 TO BUS 242520 CKT 1 / 242514 05J.FERR 765 242520 05J.FERR 500 1 OPEN BRANCH FROM BUS 242520 TO BUS 306719 CKT 1 / 242520 05J.FERR 500 306719 8ANTIOCH 500 1 END
314572 3EMPORIA 115 925170 AB2-174 TAP 115 1	CONTINGENCY '314572 3EMPORIA 115 925170 AB2-174 TAP 115 1' OPEN BRANCH FROM BUS 314572 TO BUS 925170 CKT 1 END
DVP_P4-2: 2012T2014	CONTINGENCY 'DVP_P4-2: 2012T2014' /* EARLEYS 230 KV OPEN BRANCH FROM BUS 936400 TO BUS 314569 CKT 1 /* AD2-051 TAP 230.00 - 6EARLEYS 230.00 OPEN BRANCH FROM BUS 313857 TO BUS 314569 CKT 1 /* 6WINDSORDP 230.00 - 6EARLEYS 230.00 OPEN BRANCH FROM BUS 313857 TO BUS 314574 CKT 1 /* 6WINDSORDP 230.00 - 6EVERETS 230.00 OPEN BUS 313857 /* ISLAND: 6WINDSORDP 230.00 OPEN BUS 314552 /* ISLAND: 3WINDSORDP 115.00 END
AEP_P4_#11111_05J.FERR 765_B1	CONTINGENCY 'AEP_P4_#11111_05J.FERR 765_B1' OPEN BRANCH FROM BUS 242514 TO BUS 242520 CKT 1 / 242514 05J.FERR 765 242520 05J.FERR 500 1 OPEN BRANCH FROM BUS 242514 TO BUS 242684 CKT 2 / 242514 05J.FERR 765 242684 05J.FERR 138 2 OPEN BRANCH FROM BUS 242520 TO BUS 306719 CKT 1 / 242520 05J.FERR 500 306719 8ANTIOCH 500 1 END
DVP_P1-2: LN 2181	CONTINGENCY 'DVP_P1-2: LN 2181' OPEN BUS 304226 /* ISLAND: 6PA-RMOUNT#4115.00 OPEN BRANCH FROM BUS 304226 TO BUS 314591 CKT 1 /* 6PA-RMOUNT#4230.00 - 6NASH 230.00 OPEN BRANCH FROM BUS 313845 TO BUS 314591 CKT 1 /* 6HATHAWAY 230.00 - 6NASH 230.00 OPEN BUS 314591 /* ISLAND: 6NASH 230.00 END

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Contingency Name	Contingency Definition
DVP_P1-2: LN 246	CONTINGENCY 'DVP_P1-2: LN 246' OPEN BRANCH FROM BUS 957790 TO BUS 314575 CKT 1 /* 6SUFFOLK 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1 /* 6EARLEYS 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1 /* 6NUCO TP 230.00 - 6NUCOR 230.00 OPEN BUS 314575 /* ISLAND: 6NUCO TP 230.00 OPEN BUS 314590 /* ISLAND: 6NUCOR 230.00 END
DVP_P1-2: LN 2058	CONTINGENCY 'DVP_P1-2: LN 2058' OPEN BRANCH FROM BUS 304222 TO BUS 313845 CKT 1 /* 6ROCKYMT230T230.00 - 6HATHAWAY 230.00 OPEN BRANCH FROM BUS 313844 TO BUS 313845 CKT 2 /* 3HATHAWAY 115.00 - 6HATHAWAY 230.00 END
DVP_P1-2: LN 2092	CONTINGENCY 'DVP_P1-2: LN 2092' OPEN BRANCH FROM BUS 313714 TO BUS 314662 CKT 1 /* 6PERQUIMANS 230.00 - 6S HERTFORD 230.00 OPEN BRANCH FROM BUS 314651 TO BUS 314662 CKT 1 /* 6WINFALL 230.00 - 6S HERTFORD 230.00 OPEN BUS 314662 /* ISLAND: 6S HERTFORD 230.00 END
DVP_P1-2: LN 247	CONTINGENCY 'DVP_P1-2: LN 247' OPEN BRANCH FROM BUS 313713 TO BUS 314648 CKT 1 /* 6SWAMP 230.00 - 6SUNBURY 230.00 OPEN BRANCH FROM BUS 314537 TO BUS 314648 CKT 1 /* 6SUFFOLK 230.00 - 6SUNBURY 230.00 OPEN BUS 314648 /* ISLAND: 6SUNBURY 230.00 END
Base Case	
DVP_P1-2: LN 2012-B	CONTINGENCY 'DVP_P1-2: LN 2012-B' OPEN BRANCH FROM BUS 936400 TO BUS 314569 CKT 1 /* AD2-051 TAP230.00 - 6EARLEYS 230.00 END

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Contingency Name	Contingency Definition
DVP_P4-2: 24972-4	CONTINGENCY 'DVP_P4-2: 24972-4' /* CARSON 230 KV OPEN BRANCH FROM BUS 314282 TO BUS 314285 CKT 1 /* 6CARSON 230.00 - 6CHRL249 230.00 OPEN BRANCH FROM BUS 314285 TO BUS 314316 CKT 1 /* 6CHRL249 230.00 - 6LOCKS 230.00 OPEN BRANCH FROM BUS 314314 TO BUS 314316 CKT 2 /* 3LOCKS 115.00 - 6LOCKS 230.00 OPEN BUS 314285 /* ISLAND: 6CHRL249 230.00 OPEN BRANCH FROM BUS 314282 TO BUS 314902 CKT 1 /* 6CARSON 230.00 - 8CARSON 500.00 OPEN BUS 314455 /* 6CARSO_1 230.00 KV END
DVP_P4-2: 246T247	CONTINGENCY 'DVP_P4-2: 246T247' /* SUFFOLK 230 KV OPEN BRANCH FROM BUS 314537 TO BUS 957820 CKT 1 /* 6SUFFOLK 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314569 TO BUS 314575 CKT 1 /* 6EARLEYS 230.00 - 6NUCO TP 230.00 OPEN BRANCH FROM BUS 314575 TO BUS 314590 CKT 1 /* 6NUCO TP 230.00 - 6NUCOR 230.00 OPEN BUS 314575 /* ISLAND: 6NUCO TP 230.00 OPEN BUS 314590 /* ISLAND: 6NUCOR 230.00 OPEN BRANCH FROM BUS 313713 TO BUS 314648 CKT 1 /* 6SWAMP 230.00 - 6SUNBURY 230.00 OPEN BRANCH FROM BUS 314537 TO BUS 314648 CKT 1 /* 6SUFFOLK 230.00 - 6SUNBURY 230.00 OPEN BUS 314648 /* ISLAND: 6SUNBURY 230.00 END
AEP_P4_#11112_05J.FERR 765_A1	CONTINGENCY 'AEP_P4_#11112_05J.FERR 765_A1' OPEN BRANCH FROM BUS 242511 TO BUS 242514 CKT 1 / 242511 05BROADF 765 242514 05J.FERR 765 1 OPEN BRANCH FROM BUS 242514 TO BUS 242520 CKT 1 / 242514 05J.FERR 765 242520 05J.FERR 500 1 OPEN BRANCH FROM BUS 242520 TO BUS 306719 CKT 1 / 242520 05J.FERR 500 306719 8ANTIOCH 500 1 OPEN BRANCH FROM BUS 242566 TO BUS 242567 CKT ZB / 242566 05BROADF 138 242567 05BROADX 138 ZB END
DVP_P1-2: LN 2131	CONTINGENCY 'DVP_P1-2: LN 2131' OPEN BRANCH FROM BUS 313714 TO BUS 313885 CKT 1 /* 6PERQUIMANS 230.00 - 6WALBMRL 230.00 OPEN BRANCH FROM BUS 313885 TO BUS 314637 CKT 1 /* 6WALBMRL 230.00 - 6EDENTON 230.00 OPEN BRANCH FROM BUS 314203 TO BUS 314637 CKT 1 /* 6MACKEYS 230.00 - 6EDENTON 230.00 OPEN BUS 313885 /* ISLAND: 6WALBMRL 230.00 OPEN BUS 314637 /* ISLAND: 6EDENTON 230.00 END

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Contingency Name	Contingency Definition
DVP_P7-1: LN 56-2012-B	CONTINGENCY 'DVP_P7-1: LN 56-2012-B' /* . OPEN BRANCH FROM BUS 313723 TO BUS 314604 CKT 1 /* 3PECAN 115.00 - 3SEABORD 115.00 OPEN BRANCH FROM BUS 314558 TO BUS 314587 CKT 1 /* 3BOYKINS 115.00 - 3MARGTSV 115.00 OPEN BRANCH FROM BUS 314587 TO BUS 314604 CKT 1 /* 3MARGTSV 115.00 - 3SEABORD 115.00 OPEN BUS 314587 /* ISLAND: 3MARGTSV 115.00 OPEN BUS 314604 /* ISLAND: 3SEABORD 115.00 OPEN BRANCH FROM BUS 936400 TO BUS 314569 CKT 1 /* AD2-051 TAP - 6EARLEYS 230.00 END
DVP_P7-1: LN 2058-2181	CONTINGENCY 'DVP_P7-1: LN 2058-2181' /* . OPEN BRANCH FROM BUS 304222 TO BUS 313845 CKT 1 /* 6ROCKYMT230T230.00 - 6HATHAWAY 230.00 OPEN BRANCH FROM BUS 313844 TO BUS 313845 CKT 2 /* 3HATHAWAY 115.00 - 6HATHAWAY 230.00 OPEN BUS 304226 /* ISLAND: 6PA-RMOUNT#4115.00 OPEN BRANCH FROM BUS 304226 TO BUS 314591 CKT 1 /* 6PA-RMOUNT#4230.00 - 6NASH 230.00 OPEN BRANCH FROM BUS 313845 TO BUS 314591 CKT 1 /* 6HATHAWAY 230.00 - 6NASH 230.00 OPEN BUS 314591 /* ISLAND: 6NASH 230.00 END

12 Short Circuit Analysis

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

13 Affected Systems

13.1 TVA

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

13.2 Duke Energy Progress

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

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Attachment 1: One Line Diagram

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