



**Generation Interconnection
Feasibility Study Report
for
Queue Project AG1-462
CORDOVA B 345 KV
180 MW Capacity / 300 MW Energy**

January 2021

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1 Introduction

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

2 Preface

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

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

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

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

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

3 General

The Interconnection Customer (IC), has proposed a Solar generating facility located in Whiteside County, Illinois. The installed facilities will have a total capability of 300 MW with 180 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is October 01, 2023. This study does not imply a TO commitment to this in-service date.

Queue Number	AG1-462
Project Name	CORDOVA B 345 KV
State	Illinois
County	Whiteside
Transmission Owner	ComEd
MFO	300
MWE	300
MWC	180
Fuel	Solar
Basecase Study Year	2024

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

4 Point of Interconnection

Primary

AG1-462 has proposed a primary Point of Interconnection that will interconnect with the ComEd transmission tying into the TSS 940 Cordova B 345 kV substation.

5 Cost Summary

The AG1-462 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$ 6,000,000
Total System Network Upgrade Costs	\$ 738,900,000
Total Costs	\$ 744,900,000

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 2016-36, 2016-25 I.R.B. (6/20/2016). If at a future date it is determined that the Federal Income Tax Gross charge is required, the Transmission Owner shall be reimbursed by the Interconnection Customer for such taxes.

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

6 Transmission Owner Scope of Work

6.1 Attachment Facilities

The generator lead for AG1-462 will interconnect to the expanded bus at TSS 940 Cordova Energy Center (see details in Direct Connection section below). The required Attachment Facilities are one 345kV line MOD, one dead-end structure and a set of revenue-metering as shown in the one-line diagram.

Scope of Work	Cost Estimate
Installation of a 345kV line MOD, a BUS extension, dead-end structure and a set of revenue metering (see notes below on cost estimate)	\$ 1,000,000

6.2 Non-Direct Connection Network Upgrades

In order to accommodate interconnection of AG1-462, TSS 940 Cordova Energy Center substation would need to be expanded to create bus position to interconnect the generator lead.

The scope of work includes installation of one 345kV circuit breaker, relocate termination of 345kV line L0403 to interconnect IC's generator lead, as shown in the one-line diagram below.

The Interconnection Customer is responsible for constructing all the facilities on the Interconnection Customer side of the Point of Interconnection (POI).

ComEd would design, engineer and construct expansion of TSS 940 Cordova Energy Center.

The preliminary cost estimate for Direct Connection Network Upgrade is given in the following tables.

Scope of Work	Cost Estimate
Expansion of bus at TSS 940 Cordova Energy Center, with a 345kV circuit breaker, and line relocation as described above	\$5,000,000
Total Cost Estimate (see notes below on cost estimate)	\$ 5,000,000

Normally it takes about 24-months to engineer, design, procure material and construct 345kV facilities after ISA/ICSA are signed. However, it may take 30-months to align with Nuclear Plant outage window.

6.3 Notes on Cost Estimate:

- 1) These estimates are Order-of-Magnitude estimates of the costs that ComEd would bill to the customer for this interconnection. These estimates are based on a one-line electrical diagram of the project and the information provided by the Interconnection Customer.

- 2) There were no site visits performed for these estimates. There may be costs related to specific site related issues that are not identified in these estimates. The site reviews will be performed during the Facilities Study or during detailed engineering.
- 3) These estimates are not a guarantee of the maximum amount payable by the Interconnection Customer and the actual costs of ComEd's work may differ significantly from these estimates. Interconnection Customer will be responsible for paying actual costs of ComEd's work in accordance with Sections 212.1 and 217 of the PJM Open Access Transmission Tariff.
- 4) The Interconnection Customer is responsible for all engineering, procurement, testing and construction of all equipment on the Interconnection Customer's side of the POI.
- 5) These cost estimates do not include cost of acquiring right-of-way for the transmission line and purchasing any additional land, if needed, for the line terminations. The need and cost for acquiring property and associated legal costs will be investigation during Facilities Study for this project.

7 Schedule

See Sections 6 and 11.

8 Transmission Owner Analysis

See Sections 6 and 11.

9 Interconnection Customer Requirements

The Interconnection Customer is responsible for all design and construction related activities on the Interconnection Customer's side of the Point of Interconnection.

10 Revenue Metering and SCADA Requirements

10.1 PJM Requirements

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

10.2 Meteorological Data Reporting Requirements

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

- Back Panel temperature (Fahrenheit) - (Required for plants with Maximum Facility Output of 3 MW or higher)
- Irradiance (Watts/meter²) - (Required for plants with Maximum Facility Output of 3 MW or higher)

- Ambient air temperature (Fahrenheit) - (Accepted, not required)
- Wind speed (meters/second) - (Accepted, not required)
- Wind direction (decimal degrees from true north) - (Accepted, not required)

10.3 Interconnected Transmission Owner Requirements

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

ComEd interconnection requirements can be found at <https://www.pjm.com/planning/design-engineering/to-tech-standards/private-comed.aspx>

11 Summer Peak - Load Flow Analysis - Primary POI

The Queue Project AG1-462 was evaluated as a 300.0 MW (Capacity 180.0 MW) injection tying into the Cordova B 345 kV substation in the ComEd area. Project AG1-462 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-462 was studied with a commercial probability of 53%. Potential network impacts were as follows:

11.1 Generation Deliverability

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

None

11.2 Multiple Facility Contingency

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

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	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE T LOADIN G %	POST PROJE T LOADIN G %	AC/D C	MW IMPAC T
168538128	270694	CHERRY VA; B	345.0	CE	924470	GARDEN PR; R	345.0	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1479.0	153.91	155.13	DC	18.04
168538129	270694	CHERRY VA; B	345.0	CE	924470	GARDEN PR; R	345.0	CE	1	COMED_P1-2_345-L18905_B-R-A	single	1479.0	150.86	152.08	DC	18.04
168538131	270694	CHERRY VA; B	345.0	CE	924470	GARDEN PR; R	345.0	CE	1	Base Case	single	1201.0	134.04	135.11	DC	12.92
162238665	270730	ELECT JCT; B	345.0	CE	270812	LOMBARD ; B	345.0	CE	1	COMED_P2-2_111-EJ-345R_3	bus	1479.0	126.23	126.75	DC	17.18

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
162238666	270730	ELECT JCT; B	345.0	CE	270812	LOMBARD ; B	345.0	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	124.2	125.29	DC	37.81
162238690	270730	ELECT JCT; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P2-2_111_EJ-345R_4	bus	1341.0	120.95	121.99	DC	30.99
162238691	270730	ELECT JCT; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P2-2_111_EJ-345R_3	bus	1341.0	121.19	122.04	DC	32.53
162238978	270730	ELECT JCT; B	345.0	CE	270812	LOMBARD ; B	345.0	CE	1	COMED_P7-1_345-L13821_R-R+_345-L18502AB-N	tower	1768.0	115.26	115.73	DC	19.58
162238640	270743	ESS W407K;9T	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	132.06	133.06	DC	32.85
162238641	270743	ESS W407K;9T	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P2-2_144_WN-345B_7	bus	1479.0	107.73	108.51	DC	25.63
162238629	270751	ESS W407M;9T	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	133.02	134.02	DC	32.85
162238630	270751	ESS W407M;9T	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P2-2_144_WN-345B_7	bus	1479.0	108.69	109.47	DC	25.63
168538316	270828	NELSON ; B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1656.0	108.06	110.13	DC	34.3
168538317	270828	NELSON ; B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	COMED_P1-2_345-L18905_B-R-A	single	1656.0	106.55	108.62	DC	34.3
168538318	270828	NELSON ; B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	Base Case	single	1334.0	104.95	107.3	DC	31.31
168538384	270846	PLANO ; B	345.0	CE	275207	PLANO ;3M	345.0	CE	1	COMED_P1-3_TR94_PLANO_R-S	single	1379.0	109.29	109.68	DC	14.81
168538370	270847	PLANO ; R	345.0	CE	275208	PLANO ;4M	345.0	CE	1	COMED_P1-3_TR93_PLANO_B-S	single	1379.0	111.97	112.36	DC	15.17
162238634	270917	WAYNE ; R	345.0	CE	270751	ESS W407M;9T	345.0	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	133.02	134.02	DC	32.85
162238635	270917	WAYNE ; R	345.0	CE	270751	ESS W407M;9T	345.0	CE	1	COMED_P2-2_144_WN-345B_7	bus	1479.0	108.69	109.47	DC	25.63
162238605	274749	AURORA EC;RP	345.0	CE	270731	ELECT JCT;4R	345.0	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	139.28	140.27	DC	32.32
168538340	274749	AURORA EC;RP	345.0	CE	270731	ELECT JCT;4R	345.0	CE	1	Base Case	single	1201.0	104.16	104.72	DC	14.75
162238968	274768	LEE CO EC;BP	345.0	CE	270678	BYRON ; B	345.0	CE	1	COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A	tower	2084.0	114.3	115.96	DC	76.87
162238969	274768	LEE CO EC;BP	345.0	CE	270678	BYRON ; B	345.0	CE	1	COMED_P7-1_138-L11106_B-R+_345-L15502_B-R-A	tower	2084.0	114.16	115.83	DC	77.56
168538388	275207	PLANO ;3M	345.0	CE	270630	PLANO ;	765.0	CE	1	COMED_P1-3_TR94_PLANO_R-S	single	1379.0	109.29	109.68	DC	14.81
168538366	275208	PLANO ;4M	345.0	CE	270630	PLANO ;	765.0	CE	1	COMED_P1-3_TR93_PLANO_B-S	single	1379.0	111.97	112.36	DC	15.17

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
162238865	349662	7TAZEWE LL	345.0	AMIL	930760	AB1-122 TAP1	345.0	CE	1	COMED_P7-1_345-L9806_R-S+_345-L19601_B-S	tower	1479.0	184.2	185.11	DC	29.73
162238866	349662	7TAZEWE LL	345.0	AMIL	930760	AB1-122 TAP1	345.0	CE	1	COMED_P7-1_345-L0301_B-S+_345-L0303_R-S-B	tower	1479.0	168.34	169.25	DC	29.8
169766430	349662	7TAZEWE LL	345.0	AMIL	930760	AB1-122 TAP1	345.0	CE	1	COMED_P1-2_345-L1202_B-S	single	1479.0	101.05	102.1	DC	15.55
169766357	924470	GARDEN PR; R	345.0	CE	270883	SILVER LK; R	345.0	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1479.0	172.31	172.86	DC	18.04
169766358	924470	GARDEN PR; R	345.0	CE	270883	SILVER LK; R	345.0	CE	1	COMED_P1-2_345-L18905_B-R-A	single	1479.0	169.26	169.81	DC	18.04
169766359	924470	GARDEN PR; R	345.0	CE	270883	SILVER LK; R	345.0	CE	1	Base Case	single	1201.0	154.95	155.44	DC	12.92
162238880	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P7-1_345-L9806_R-S+_345-L19601_B-S	tower	1768.0	173.35	174.12	DC	29.73
169766372	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P1-2_345-L1202_B-S	single	1479.0	128.65	129.7	DC	15.55
169766373	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	Base Case	single	1201.0	116.67	117.9	DC	14.84
169766568	943410	AF1-012 TAP	345.0	CE	965660	AG1-434 TAP	345.0	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1656.0	111.66	113.74	DC	34.3
169766569	943410	AF1-012 TAP	345.0	CE	965660	AG1-434 TAP	345.0	CE	1	COMED_P1-2_345-L18905_B-R-A	single	1656.0	111.48	113.55	DC	34.3
162238919	946150	AF1-280 TAP	345.0	CE	274768	LEE CO EC;BP	345.0	CE	1	COMED_P7-1_138-L11106_B-R+_345-L15502_B-R-A	tower	1768.0	117.35	121.8	DC	78.68
162238920	946150	AF1-280 TAP	345.0	CE	274768	LEE CO EC;BP	345.0	CE	1	COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A	tower	1768.0	117.37	121.78	DC	77.99
170047206	957470	AF2-041 TAP	345.0	CE	270730	ELECT JCT; B	345.0	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1656.0	125.06	127.12	DC	34.3
170047224	965660	AG1-434 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1656.0	112.61	114.68	DC	34.3
170047225	965660	AG1-434 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	COMED_P1-2_345-L18905_B-R-A	single	1656.0	112.42	114.49	DC	34.3
170047226	965660	AG1-434 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	Base Case	single	1334.0	110.96	113.3	DC	31.31

11.4 Potential Congestion due to Local Energy Deliverability

PJM also studied the delivery of the energy portion of this interconnection request. Any problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed

with network upgrades to eliminate the operational restriction at their discretion by submitting a Merchant Transmission Interconnection request.

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADING %	POST PROJE CT LOADING %	AC/DC	MW IMPACT
168538 278	2706 78	BYRON ; B	345 .0	CE	9304 80	AB1-089 POI	345 .0	CE	1	COMED_P1-2_345-L97104__R	operation	2058 .0	133.77	134.51	DC	33.7
168538 280	2706 78	BYRON ; B	345 .0	CE	9304 80	AB1-089 POI	345 .0	CE	1	Base Case	operation	1679 .0	123.79	124.52	DC	27.12
168538 436	2706 78	BYRON ; B	345 .0	CE	2706 94	CHERRY VA; B	345 .0	CE	1	COMED_P1-2_345-L0622__R-R	operation	1441 .0	113.06	113.53	DC	15.06
168538 407	2706 79	BYRON ; R	345 .0	CE	2706 95	CHERRY VA; R	345 .0	CE	1	COMED_P1-2_345-L0621__B-R	operation	1479 .0	116.4	116.88	DC	15.74
168538 126	2706 94	CHERRY VA; B	345 .0	CE	9244 70	GARDEN PR; R	345 .0	CE	1	COMED_P1-2_345-L18905__B-R-B	operation	1479 .0	175.7	176.62	DC	30.07
168538 130	2706 94	CHERRY VA; B	345 .0	CE	9244 70	GARDEN PR; R	345 .0	CE	1	Base Case	operation	1201 .0	152.22	153.03	DC	21.53
168538 309	2707 30	ELECT JCT; B	345 .0	CE	2708 12	LOMBA RD ; B	345 .0	CE	1	Base Case	operation	1201 .0	130.9	131.52	DC	16.5
168538 310	2707 30	ELECT JCT; B	345 .0	CE	2708 12	LOMBA RD ; B	345 .0	CE	1	COMED_P2-1_111-L11120__	operation	1479 .0	125.19	125.72	DC	17.35
168538 380	2707 30	ELECT JCT; B	345 .0	CE	2708 46	PLANO ; B	345 .0	CE	1	COMED_P1-2_345-L11119_R-N	operation	1341 .0	118.32	119.35	DC	30.86
168538 382	2707 30	ELECT JCT; B	345 .0	CE	2708 46	PLANO ; B	345 .0	CE	1	Base Case	operation	1245 .0	99.92	100.85	DC	26.41
168538 373	2707 31	ELECT JCT;4R	345 .0	CE	2707 33	ELECT JCT;3R	345 .0	CE	1	COMED_P1-2_345-L16704TB-S	operation	1656 .0	120.28	121.0	DC	26.19
168538 374	2707 31	ELECT JCT;4R	345 .0	CE	2707 33	ELECT JCT;3R	345 .0	CE	1	Base Case	operation	1334 .0	115.41	115.99	DC	17.2
168538 427	2707 43	ESS W407K; 9T	345 .0	CE	2747 49	AURORA EC;RP	345 .0	CE	1	Base Case	operation	1201 .0	112.52	113.46	DC	25.11
168538 428	2707 43	ESS W407K; 9T	345 .0	CE	2747 49	AURORA EC;RP	345 .0	CE	1	COMED_P2-1_154-CB_13__	operation	1479 .0	102.85	103.67	DC	26.88
168538 412	2707 51	ESS W407M; 9T	345 .0	CE	2707 43	ESS W407K; 9T	345 .0	CE	1	Base Case	operation	1201 .0	113.7	114.65	DC	25.11
168538 413	2707 51	ESS W407M; 9T	345 .0	CE	2707 43	ESS W407K; 9T	345 .0	CE	1	COMED_P1-2_345-L11723TR-N	operation	1479 .0	104.56	105.4	DC	27.35
168538 475	2708 10	LOCKPORT; B	345 .0	CE	2707 70	GOODIN GS;4B	345 .0	CE	1	COMED_P1-2_345-L11620__B-S	operation	1479 .0	105.7	106.05	DC	25.66
168538 266	2708 28	NELSON ; B	345 .0	CE	9461 50	AF1-280 TAP	345 .0	CE	1	COMED_P1-2_345-L15502__B-R-D	operation	1479 .0	123.62	128.92	DC	78.36
168538 313	2708 28	NELSON ; B	345 .0	CE	9434 10	AF1-012 TAP	345 .0	CE	1	COMED_P1-2_345-L18905__B-R-B	operation	1656 .0	127.62	129.19	DC	57.17
168538 315	2708 28	NELSON ; B	345 .0	CE	9434 10	AF1-012 TAP	345 .0	CE	1	Base Case	operation	1334 .0	123.41	125.18	DC	52.18
168538 383	2708 46	PLANO ; B	345 .0	CE	2752 07	PLANO ;3M	345 .0	CE	1	COMED_P1-3_TR94_PLANO_R-S	operation	1379 .0	119.09	119.35	DC	24.68
168538 369	2708 47	PLANO ; R	345 .0	CE	2752 08	PLANO ;4M	345 .0	CE	1	COMED_P1-3_TR93_PLANO_B-S	operation	1379 .0	122.0	122.26	DC	25.28
168538 249	2708 66	QUAD 6-7	345 .0	CE	6366 10	SUB 91 3	345 .0	MEC	1	EXT_P12:345:MEC:CORD OVA:SUB 39	operation	1471 .0	130.16	136.22	DC	86.84
168538 416	2709 17	WAYNE ; R	345 .0	CE	2707 51	ESS W407M; 9T	345 .0	CE	1	Base Case	operation	1201 .0	113.7	114.65	DC	25.11

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADING %	POST PROJE CT LOADING %	AC/DC	MW IMPACT
168538 417	2709 17	WAYNE ; R	345 .0	CE	2707 51	ESS W407M; 9T	345 .0	CE	1	COMED_P1-2_345-L11723TR-N	operation	1479 .0	104.56	105.4	DC	27.35
168538 338	2747 49	AURORA EC;RP	345 .0	CE	2707 31	ELECT JCT;4R	345 .0	CE	1	Base Case	operation	1201 .0	126.44	127.37	DC	24.58
168538 339	2747 49	AURORA EC;RP	345 .0	CE	2707 31	ELECT JCT;4R	345 .0	CE	1	COMED_P1-2_345-L13821_R-R	operation	1479 .0	114.27	115.1	DC	26.99
168538 254	2747 68	LEE CO EC;BP	345 .0	CE	2706 78	BYRON ; B	345 .0	CE	1	COMED_P1-2_345-L15502_B-R-D	operation	1726 .0	137.5	139.51	DC	77.24
168538 255	2747 68	LEE CO EC;BP	345 .0	CE	2706 78	BYRON ; B	345 .0	CE	1	Base Case	operation	1334 .0	131.97	133.81	DC	54.75
168538 387	2752 07	PLANO ;3M	345 .0	CE	2706 30	PLANO ;	765 .0	CE	1	COMED_P1-3_TR94_PLANO_R-S	operation	1379 .0	119.09	119.35	DC	24.68
168538 365	2752 08	PLANO ;4M	345 .0	CE	2706 30	PLANO ;	765 .0	CE	1	COMED_P1-3_TR93_PLANO_B-S	operation	1379 .0	122.0	122.26	DC	25.28
169766 428	3496 62	7TAZEW ELL	345 .0	AMI L	9307 60	AB1-122 TAP1	345 .0	CE	1	COMED_P1-2_345-L1202__B-S	operation	1479 .0	168.56	169.35	DC	25.91
169766 429	3496 62	7TAZEW ELL	345 .0	AMI L	9307 60	AB1-122 TAP1	345 .0	CE	1	Base Case	operation	1201 .0	155.61	156.54	DC	24.74
169766 806	6994 32	PLS PR1	345 .0	WEC	2748 17	ZION EC ;RP	345 .0	CE	1	COMED_P1-2_345-L2221__R-N	operation	1526 .0	99.7	100.15	DC	15.37
169766 354	9244 70	GARDEN PR; R	345 .0	CE	2708 83	SILVER LK; R	345 .0	CE	1	COMED_P1-2_345-L18905__B-R-B	operation	1479 .0	200.85	201.77	DC	30.07
169766 356	9244 70	GARDEN PR; R	345 .0	CE	2708 83	SILVER LK; R	345 .0	CE	1	Base Case	operation	1201 .0	180.46	181.27	DC	21.53
169766 518	9304 80	AB1-089 POI	345 .0	CE	9627 00	AG1-119 TAP	345 .0	CE	1	COMED_P1-2_345-L97104__R	operation	2058 .0	146.25	146.99	DC	33.7
169766 519	9304 80	AB1-089 POI	345 .0	CE	9627 00	AG1-119 TAP	345 .0	CE	1	Base Case	operation	1679 .0	138.61	139.34	DC	27.12
169766 370	9307 60	AB1-122 TAP1	345 .0	CE	2707 17	DRESDE N ; R	345 .0	CE	1	COMED_P1-2_345-L1202__B-S	operation	1479 .0	193.79	194.58	DC	25.91
169766 371	9307 60	AB1-122 TAP1	345 .0	CE	2707 17	DRESDE N ; R	345 .0	CE	1	Base Case	operation	1201 .0	184.64	185.58	DC	24.74
169766 566	9434 10	AF1-012 TAP	345 .0	CE	9656 60	AG1-434 TAP	345 .0	CE	1	Base Case	operation	1334 .0	135.78	137.56	DC	52.18
169766 567	9434 10	AF1-012 TAP	345 .0	CE	9656 60	AG1-434 TAP	345 .0	CE	1	COMED_P1-2_345-L18905__B-R-A	operation	1656 .0	135.26	136.83	DC	57.17
168538 210	9461 50	AF1-280 TAP	345 .0	CE	2747 68	LEE CO EC;BP	345 .0	CE	1	COMED_P1-2_345-L15502_B-R-D	operation	1479 .0	139.8	145.1	DC	78.36
168538 212	9461 50	AF1-280 TAP	345 .0	CE	2747 68	LEE CO EC;BP	345 .0	CE	1	Base Case	operation	1201 .0	104.12	108.78	DC	55.86
170047 203	9574 70	AF2-041 TAP	345 .0	CE	2707 30	ELECT JCT; B	345 .0	CE	1	Base Case	operation	1334 .0	155.0	156.75	DC	52.18
170047 204	9574 70	AF2-041 TAP	345 .0	CE	2707 30	ELECT JCT; B	345 .0	CE	1	COMED_P1-2_345-L18905__B-R-B	operation	1656 .0	150.48	152.03	DC	57.17
170047 210	9627 00	AG1-119 TAP	345 .0	CE	2709 16	WAYNE ; B	345 .0	CE	1	COMED_P1-2_345-L97104__R	operation	2058 .0	152.38	153.12	DC	33.7
170047 211	9627 00	AG1-119 TAP	345 .0	CE	2709 16	WAYNE ; B	345 .0	CE	1	Base Case	operation	1679 .0	145.87	146.6	DC	27.12
170047 222	9656 60	AG1-434 TAP	345 .0	CE	9574 70	AF2-041 TAP	345 .0	CE	1	Base Case	operation	1334 .0	143.17	144.94	DC	52.18
170047 223	9656 60	AG1-434 TAP	345 .0	CE	9574 70	AF2-041 TAP	345 .0	CE	1	COMED_P1-2_345-L18905__B-R-A	operation	1656 .0	140.98	142.54	DC	57.17

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
168538388	12	PLANO ;3M 345.0 kV - PLANO ; 765.0 kV Ckt 1	<u>ComEd</u> CE_NUN_TSS 167 TR. 93 (1127) : Install 3rd Auto Transformer at TSS 167 Plano. Expand existing 765kV Bus to Ring with addition of 2-765kV Bus Tie Circuit Breakers. Installation of 765kV-345kV Auto Transformer, Installation of 2-345kV Bus Tie Circuit Breakers, bus work for 765kV & 345kV. Relay scheme upgrades. Yard expansion requiring grading and ground grid expansions. Project Type : CON Cost : \$20,000,000 Time Estimate : 36.0 Months	\$20,000,000
168538384	7	PLANO ; B 345.0 kV - PLANO ;3M 345.0 kV Ckt 1		
162238690,162 238691	3	ELECT JCT; B 345.0 kV - PLANO ; B 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L16704 (1126) : ComEd 345kV L16704 SSTE rating is 1603 MVA. The upgrade will be to replace 1-345kV circuit breaker. A preliminary estimate is \$3M. A preliminary construction timeline is 24 months. Upon completion of the upgrade the ratings will be 1334/1726/1837/2084 MVA (SNSLTE/SSTE/SLD) MVA. Project Type : FAC Cost : \$3,000,000 Time Estimate : 24.0 Months	\$3,000,000
168538340,162 238605	10	AURORA EC;RP 345.0 kV - ELECT JCT;4R 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_11119 (1112) : Re-conductor the line and upgrade station conductor at TSS 111 Electric Junction. A preliminary estimate for the upgrade is \$1.5M with an estimated construction timeline of 30 months. Upon completion of the upgrade the ratings will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$1,500,000 Time Estimate : 30.0 Months CE_NUN_11119_1 (1113) : In addition to CE_NUN_11119, this upgrade will require replacement of motor operated 345kV disconnect switches on L11119 at TSS 111 Electric Junction along with a new 345kV Circuit Breaker. A preliminary estimate is \$7.2M with estimated construction timeline of 30 months. Upon completion of the upgrade the ratings will be 1754/2246/2297/2488 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$7,200,000 Time Estimate : 30.0 Months	\$8,700,000

ID	Idx	Facility	Upgrade Description	Cost
168538129,168538128,168538131	1	CHERRY VA; B 345.0 kV - GARDEN PR; R 345.0 kV Ckt 1	<u>ComEd</u> ce-012 (1058) : L15616 SSTE rating is 1568 MVA. The post contingency flow for this event exceeds the rating therefore upgrades are required. Reconductor 26.7 miles of 2338 kcmil. Mitigate sag limits. Upgrade relay package. Replace station conductor at both line terminals. Replace 2-345 kV breakers and CT's at TSS 138 Silver Lake. A preliminary estimate for the upgrades is \$32.4M with an estimated construction timeline of 36 months. Upon completion of all upgrades the new ratings will be 1754/2246/2297/2488 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$32,400,000 Time Estimate : 36.0 Months CE_NUN_L15616_NEW LINE (1150) : L15616.Install a new 345kV line from the AB1-089 interconnection substation to TSS 144 Wayne station. The new line will parallel the path of existing L18901 but not share the same tower. The new line will potentially eliminate the post contingency flow (PJM to confirm). A preliminary estimate for this upgrade places the minimum at \$165M. The timeline and additional cost are subject to easement availability. A more thorough review would be completed during the Facility Study and Engineering portion of this project. Project Type : CON Cost : \$165,000,000	\$197,400,000
169766358,169766359,169766357	15	GARDEN PR; R 345.0 kV - SILVER LK; R 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L15616 (1110) : L15616.Re-conductor the line and upgrade 2-345kV Circuit Breakers at TSS 138 Silver Lake. A preliminary estimate is \$51.7M with an estimated construction timeline of 36 months. Upon completion the ratings will be 1560/1802/2083/2477 MVA (SN/SLTE/SSTE/SLD) Project Type : FAC Cost : \$51,700,000 Time Estimate : 36.0 Months CE_NUN_L15616_NEW LINE (1150) : L15616.Install a new 345kV line from the AB1-089 interconnection substation to TSS 144 Wayne station. The new line will parallel the path of existing L18901 but not share the same tower. The new line will potentially eliminate the post contingency flow (PJM to confirm). A preliminary estimate for this upgrade places the minimum at \$165M. The timeline and additional cost are subject to easement availability. A more thorough review would be completed during the Facility Study and Engineering portion of this project. Project Type : CON Cost : \$165,000,000 Time Estimate : Months	\$216,700,000

ID	Idx	Facility	Upgrade Description	Cost
162238866,162 238865,169766 430	14	7TAZEWELL 345.0 kV - AB1- 122 TAP1 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L1227 (1118) : Mitigate sag on the line segment impacted. A preliminary estimate for the work is \$2M. An estimated construction timeline is 24 months subject to outage coordination with Dresden Nuclear Station. Upon completion the rating limits will be 1201/1479/1568/1768/2033 MVA (SN/SLTE/SSTE/SLD/ALDR) Project Type : FAC Cost : \$2,000,000 Time Estimate : 30.0 Months CE_NUN_L1227_2 (1120) : Sag mitigation the line segment impacted. A preliminary estimate for the work is \$39.9M. An estimated construction timeline is 30 months. Upon completion the rating limits will be 1679/2058/2107/2280 MVA (SN/SLTE/SSTE/SLD) Project Type : FAC Cost : \$39,900,000 Time Estimate : 30.0 Months	\$347,900,000
162238866,162 238865,169766 430	14	7TAZEWELL 345.0 kV - AB1- 122 TAP1 345.0 kV Ckt 1	CE_NUN_L93915 (Former L1227)_NEW LINE (1147) : Construct new 345kV from AB1-122 Interconnection Substation to Ameren (Tazewell) Station. In addition to new overhead conductor and new towers. Upgrade existing towers, new 345kV circuit breakers at the AB1-122 Interconnection Substation and facility work at Ameren's station. A minimum estimate for this upgrade will be \$306M (not including Ameren costs). A construction timeline is subject to availability of easement. This upgrade relieves the constrained path and does not impact the ratings. Project Type : CON Cost : \$306,000,000	
168538318,168 538316,168538 317	6	NELSON ; B 345.0 kV - AF1- 012 TAP 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L15502 (1041) : ComEd 345kV L15502 SSTE rating is 1837 MVA. The upgrade will be to re-conductor a portion of the line, 1-345kV circuit breaker and associated switches and upgrade of station conductor. A preliminary estimate for the upgrade is \$25.4M with an estimated construction timeline of 30 months. Upon completion of the upgrade the ratings will be 2293/2293/2293/2436 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$25,400,000 Time Estimate : 30.0 Months	\$25,400,000

ID	Idx	Facility	Upgrade Description	Cost
169766372,169 766373,162238 880	16	AB1-122 TAP1 345.0 kV - DRESDEN ; R 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L1227_1 (1119) : Re-conductor the line segment impacted. A preliminary estimate for the work is \$4M. An estimated construction timeline is 30 months subject to outage coordination with Dresden Nuclear Station. Upon completion the rating limits will be 1679/2058/2107/2280 MVA (SN/SLTE/SSTE/SLD) Project Type : FAC Cost : \$4,000,000 Time Estimate : 30.0 Months CE_NUN_L1227_3 (1121) : Re-conductor the line segment impacted and upgrade relay package. A preliminary estimate for the work is \$5M. An estimated construction timeline is 30 months subject to outage coordination with Dresden Nuclear Station. Upon completion the rating limits will be 1961/2112/2524/3015/3467 MVA (SN/SLTE/SSTE/SLD/ALDR) Project Type : FAC Cost : \$5,000,000 Time Estimate : 30.0 Months	\$5,000,000
168538366	13	PLANO ;4M 345.0 kV - PLANO ; 765.0 kV Ckt 1	<u>ComEd</u> CE_NUN_TSS 167 TR. 94 (1128) : Install 3rd Auto Transformer at TSS 167 Plano. Expand existing 765kV Bus to Ring with addition of 2-765kV Bus Tie Circuit Breakers. Installation of 765kV-345kV Auto Transformer, Installation of 2-345kV Bus Tie Circuit Breakers, bus work for 765kV & 345kV. Relay scheme upgrades. Yard expansion requiring grading and ground grid expansions. Project Type : CON Cost : \$20,000,000 Time Estimate : 36.0 Months	\$20,000,000
168538370	8	PLANO ; R 345.0 kV - PLANO ;4M 345.0 kV Ckt 1		
162238641,162 238640	4	ESS W407K;9T 345.0 kV - AURORA EC;RP 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L14419_1 (1038) : ComEd 345kV L14419_1 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate for the upgrade is \$1.1M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$1,100,000 Time Estimate : 30.0 Months CE_NUN_L14419_5 (1122) : ComEd 345kV L14419_1 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line and station conductor. A preliminary estimate for the upgrade is \$2.5M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1754/2246/2297/2488 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$2,500,000 Time Estimate : 30.0 Months	\$3,600,000

ID	Idx	Facility	Upgrade Description	Cost
162238919,162 238920	18	AF1-280 TAP 345.0 kV - LEE CO EC;BP 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L15501 (1148) : Re-conductor the line, upgrade 1-345kV circuit breaker, upgrade station conductor at both line terminals, new line disconnect switches. A preliminary estimate for this upgrade is \$8.5M. Estimated construction timeline of 30 months. Upon completion the limiting ratings will be 1679/2058/2107/2280 MVA (SN/SLTE/SSTE/SLD) Project Type : FAC Cost : \$8,500,000 Time Estimate : 30.0 Months	\$8,500,000
162238634,162 238635	9	WAYNE ; R 345.0 kV - ESS W407M;9T 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L14419_2 (1040) : ComEd 345kV L14419_2 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate for the upgrade is \$3.3M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,300,000 Time Estimate : 30.0 Months CE_NUN_L14419_6 (1123) : ComEd 345kV L14419_1 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate for the upgrade is \$3.3M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1679/2058/2107/2280 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,300,000 Time Estimate : 30.0 Months	\$6,600,000
162238629,162 238630	5	ESS W407M;9T 345.0 kV - ESS W407K;9T 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L14419_4 (1039) : ComEd 345kV L14419_1 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate for the upgrade is \$3.3M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,300,000 Time Estimate : 30.0 Months CE_NUN_L14419_6 (1123) : ComEd 345kV L14419_1 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate for the upgrade is \$3.3M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1679/2058/2107/2280 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,300,000 Time Estimate : 30.0 Months	\$6,600,000

ID	Idx	Facility	Upgrade Description	Cost
162238978,162 238665,162238 666	2	ELECT JCT; B 345.0 kV - LOMBARD ; B 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L11124 (1012) : ComEd 345kV L11124 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate is \$14.6M with an estimated construction timeline of 30 months. Upon completion of the upgrade the ratings will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$14,600,000 Time Estimate : 30.0 Months CE_NUN_L11124_1 (1072) : ComEd 345kV L11124 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line and station conductor. A preliminary estimate is \$15.3M with an estimated construction timeline of 30 months. Upon completion of the upgrade the ratings will be 1364/1726/1846/2221 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$14,600,000 Time Estimate : 30.0 Months CE_NUN_L11124_2 (1114) : In addition to CE_NUN_11124_1, the upgrade will be to replace 2-345kV Circuit Breakers and station conductor. A preliminary estimate is \$7M with an estimated construction timeline of 30 months. Upon completion of the upgrade the ratings will be 1461/1656/1909/1912 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$7,000,000 Time Estimate : 30.0 Months	\$21,600,000
162238968,162 238969	11	LEE CO EC;BP 345.0 kV - BYRON ; B 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L0627 (1086) : ComEd 345kV L0627 SSTE rating is 1837 MVA. The upgrade will be to re-conductor the line and upgrade station conductor at Byron Station. A preliminary estimate for the upgrades is \$17.2M. The preliminary construction timeline is 24-30 months contingent upon outage coordination with Byron Nuclear Station. Note that the preliminary cost estimate does not include the potential for new transmission towers. This unknown will add to this estimate if required. Upon completion of the upgrades the new ratings will be 1679/1904/1944/2088 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$17,200,000 Time Estimate : 24-30 Months CE_NUN_L0627_1 (1111) : ComEd 345kV L0627 SLD & ALDR ratings are 2084 MVA & 2397MVA. In addition to CE_NUN_0627 upgrade, mitigate sag on line. A preliminary estimate is \$10M with a estimated construction timeline of 30 months. Upon completion the ratings will 1679/2058/2107/2280/2622 MVA (SN/SLTE/SSTE/SLD/ALDR) Project Type : FAC Cost : \$10,000,000 Time Estimate : 30.0 Months	\$27,200,000

ID	Idx	Facility	Upgrade Description	Cost
170047224,170047225,170047226	20	AG1-434 TAP 345.0 kV - AF2-041 TAP 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L15502_2 (1078) : SSTE is 1837MVA. Replace station conductor at TSS111 Electric Junction, replace MOD. A preliminary estimate for the upgrade is \$1.7M with an estimated construction timeline of 30 months. Upon completion the new ratings will be 1529/1765/2041/2280 MVA (SN/SLTE.SSTE/SLD). Project Type : FAC Cost : \$1,700,000 Time Estimate : 30.0 Months	\$1,700,000
170047206	19	AF2-041 TAP 345.0 kV - ELECT JCT; B 345.0 kV Ckt 1	<u>ComEd</u> CE_NUN_L15502_3 (1079) : SSTE is 1837MVA. Replace station conductor at TSS111 EJ, replace MOD. Relay upgrades, re-conductor part of the line. New ratings will be 1683/2068/2172/2308 Project Type : FAC Cost : \$22,300,000 Time Estimate : 36.0 Months	\$22,300,000
169766569,169766568	17	AF1-012 TAP 345.0 kV - AG1-434 TAP 345.0 kV Ckt 1		
			TOTAL COST	\$738,900,000

11.6 Flow Gate Details - Primary POI

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

11.6.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
168538128	270694	CHERRY VA; B	CE	924470	GARDEN PR; R	CE	1	COMED_P1-2_345-L18905__B-R-B	single	1479.0	153.91	155.13	DC	18.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.8330	Adder	2.16
274656	BYRON ;1U	47.1816	80/20	47.1816
274657	BYRON ;2U	46.1202	80/20	46.1202
274662	QUAD CITI;1U	14.3801	80/20	14.3801
274663	QUAD CITI;2U	14.4212	80/20	14.4212
274700	CORDOVA ;2C	2.5251	80/20	2.5251
274701	CORDOVA ;1S	2.8407	80/20	2.8407
274715	NELSON EC;1C	3.3801	80/20	3.3801
274716	NELSON EC;1S	2.4663	80/20	2.4663
274717	NELSON EC;2C	3.4063	80/20	3.4063
274718	NELSON EC;2S	2.4884	80/20	2.4884
274760	LEE CO EC;1U	2.3883	80/20	2.3883
274761	LEE CO EC;2U	2.3883	80/20	2.3883
274762	LEE CO EC;3U	2.3883	80/20	2.3883
274763	LEE CO EC;4U	2.3658	80/20	2.3658
274764	LEE CO EC;5U	2.3939	80/20	2.3939
274765	LEE CO EC;6U	2.3939	80/20	2.3939
274766	LEE CO EC;7U	2.3601	80/20	2.3601
274767	LEE CO EC;8U	2.3601	80/20	2.3601
274822	ROCKFORD ;11	4.7229	80/20	4.7229
274823	ROCKFORD ;21	4.8469	80/20	4.8469
274824	ROCKFORD ;12	4.6818	80/20	4.6818
274856	ECOGROVE ;U1	0.6543	80/20	0.6543
274857	BIG SKY ;U1	0.4276	80/20	0.4276
274858	BIG SKY ;U2	0.4276	80/20	0.4276
276156	O-029 C	0.1885	80/20	0.1885
276157	O-029 C	0.2037	80/20	0.2037
276158	O-029 C	0.3718	80/20	0.3718
276162	X1-087	0.3256	80/20	0.3256
276590	R-018	0.2553	80/20	0.2553
293513	O-009 C1	0.3480	80/20	0.3480
293514	O-009 C2	0.1766	80/20	0.1766
293515	O-009 C3	0.1952	80/20	0.1952
295110	SUBLETTE C	0.0679	80/20	0.0679
919221	AA1-146	3.1532	80/20	3.1532
919581	AA2-030 C	19.9861	80/20	19.9861
926431	AC1-114	0.7872	80/20	0.7872
927511	AC1-113 1	0.3936	80/20	0.3936
927521	AC1-113 2	0.3936	80/20	0.3936
930482	AB1-089 CT	78.4047	80/20	78.4047
930483	AB1-089 ST	62.3348	80/20	62.3348

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
932881	AC2-115 1	0.7871	80/20	0.7871
932891	AC2-115 2	0.7871	80/20	0.7871
932921	AC2-116	0.2755	80/20	0.2755
933911	AD1-013 C	1.2814	Adder	1.51
933931	AD1-016 C	0.4443	Adder	0.52
934701	AD1-098 C O1	5.8095	80/20	5.8095
934971	AD1-129 C	1.3325	80/20	1.3325
936791	AD2-102 C	28.4124	80/20	28.4124
937001	AD2-134 C	1.9179	Adder	2.26
937311	AD2-172 C	4.4892	80/20	4.4892
937531	AD2-214 C	4.5574	80/20	4.5574
938861	AE1-114 C O1	6.1414	80/20	6.1414
939051	AE1-134 1	1.5531	80/20	1.5531
939061	AE1-134 2	1.5531	80/20	1.5531
940501	AE2-035 C	4.4892	80/20	4.4892
941131	AE2-107 C	3.8937	Adder	4.58
943411	AF1-012 C	10.9525	80/20	10.9525
943921	AF1-060	2.2104	80/20	2.2104
946151	AF1-280 C O1	22.2748	80/20	22.2748
946161	AF1-281 C O1	0.4878	80/20	0.4878
946321	AF1-296 C O1	3.8861	80/20	3.8861
946501	AF1-314 C	7.9762	80/20	7.9762
946671	AF1-331	1.6641	Adder	1.96
952431	J760	5.1186	PJM External (MISO)	5.1186
953681	J818	13.1403	PJM External (MISO)	13.1403
953901	J850	21.7525	PJM External (MISO)	21.7525
953921	J855 C	1.2775	PJM External (MISO)	1.2775
954001	J864	4.2268	PJM External (MISO)	4.2268
954061	J870	16.8860	PJM External (MISO)	16.8860
954071	J871	8.4430	PJM External (MISO)	8.4430
955221	J1000	3.7820	PJM External (MISO)	3.7820
955971	J1084	11.0760	PJM External (MISO)	11.0760
956581	J1154	6.6187	PJM External (MISO)	6.6187
956901	J1188	5.5035	PJM External (MISO)	5.5035
958911	AF2-182 C	29.2662	80/20	29.2662
958921	AF2-183 C	5.2029	80/20	5.2029
959101	AF2-201 C O1	10.9878	80/20	10.9878
960551	AF2-346 C	4.6939	80/20	4.6939
960721	AF2-363 C O1	7.7099	80/20	7.7099
960751	AF2-366 C	4.1928	Adder	4.93
961011	AF2-392 C O1	4.5764	80/20	4.5764
961021	AF2-393 O1	7.8006	80/20	7.8006
961031	AF2-394 O1	5.2004	80/20	5.2004
962701	AG1-119 C	46.0494	80/20	46.0494
962711	AG1-120 C O1	11.0882	80/20	11.0882
962781	AG1-127 C	2.5017	Adder	5.55
962791	AG1-128 C O1	2.2993	Adder	5.1
963681	AG1-220 C O1	3.3316	Adder	7.4
964461	AG1-309 FTIR	520.9803	80/20	520.9803
965661	AG1-434 C O1	1.2169	Adder	2.7
965931	AG1-462 C O1	18.0414	80/20	18.0414
966521	AG1-521 C O1	10.2112	80/20	10.2112

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966821	AG1-553 C O1	26.4607	80/20	26.4607
WEC	WEC	0.4867	Confirmed LTF	0.4867
CBM-W2	CBM-W2	9.3632	Confirmed LTF	9.3632
NY	NY	0.2616	Confirmed LTF	0.2616
TVA	TVA	0.9814	Confirmed LTF	0.9814
SIGE	SIGE	0.0358	Confirmed LTF	0.0358
CBM-S2	CBM-S2	0.1357	Confirmed LTF	0.1357
CBM-S1	CBM-S1	0.1972	Confirmed LTF	0.1972
HAMLET	HAMLET	0.0295	Confirmed LTF	0.0295
MEC	MEC	9.6881	Confirmed LTF	9.6881
GIBSON	GIBSON	0.1048	Confirmed LTF	0.1048
BLUEG	BLUEG	0.5816	Confirmed LTF	0.5816
TRIMBLE	TRIMBLE	0.1976	Confirmed LTF	0.1976
LAGN	LAGN	2.4640	Confirmed LTF	2.4640
CATAWBA	CATAWBA	0.0003	Confirmed LTF	0.0003
CBM-W1	CBM-W1	47.1493	Confirmed LTF	47.1493

11.6.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
162238665	270730	ELECT JCT; B	CE	270812	LOMBARD ; B	CE	1	COMED_P2-2_111_EJ-345R_3	bus	1479.0	126.23	126.75	DC	17.18

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.7991	Adder	2.12
274738	AURORA EC;3P	4.0530	50/50	4.0530
274740	AURORA EC;4P	4.0530	50/50	4.0530
274859	EASYR;U1 E	5.9233	Adder	6.97
274860	EASYR;U2 E	5.9233	Adder	6.97
274872	LEE DEKAL;1U	0.6412	50/50	0.6412
276167	Z1-106 E2	1.1169	50/50	1.1169
276168	Z1-106 E1	1.1234	50/50	1.1234
276591	L-013 2	3.2390	50/50	3.2390
290051	GSG-6; E	7.0990	Adder	8.35
290108	LEEDK;1U E	20.3200	50/50	20.3200
293516	O-009 E1	4.5550	Adder	5.36
293517	O-009 E2	2.3136	Adder	2.72
293518	O-009 E3	2.5479	Adder	3.0
293715	O-029 E	4.8698	Adder	5.73
293716	O-029 E	2.6701	Adder	3.14
293717	O-029 E	2.4541	Adder	2.89
294763	P-046 E	3.8882	Adder	4.57
295109	WESTBROOK E	3.8007	Adder	4.47
295111	SUBLETTE E	1.4504	Adder	1.71
916221	Z1-073 E	3.6873	Adder	4.34
919581	AA2-030 C	10.7721	Adder	12.67
926331	AC1-110 1	2.5352	50/50	2.5352
926341	AC1-110 2	2.5352	50/50	2.5352
930482	AB1-089 CT	17.1057	Adder	20.12
930483	AB1-089 ST	13.5997	Adder	16.0
933431	AC2-156 C O1	0.8044	50/50	0.8044
933432	AC2-156 E O1	1.3124	50/50	1.3124
933911	AD1-013 C	1.2638	Adder	1.49
933912	AD1-013 E	2.0189	Adder	2.38
934432	AD1-067 E	0.3748	Adder	0.44
934701	AD1-098 C O1	4.6290	Adder	5.45
934702	AD1-098 E O1	3.3797	Adder	3.98
937001	AD2-134 C	1.8558	Adder	2.18
937002	AD2-134 E	7.6663	Adder	9.02
937311	AD2-172 C	1.0207	Adder	1.2
937312	AD2-172 E	1.4095	Adder	1.66
937531	AD2-214 C	2.2448	Adder	2.64
937532	AD2-214 E	1.4966	Adder	1.76
938861	AE1-114 C O1	1.8661	Adder	2.2
938862	AE1-114 E O1	6.3666	Adder	7.49

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939051	AE1-134 1	0.8371	Adder	0.98
939061	AE1-134 2	0.8371	Adder	0.98
940501	AE2-035 C	1.0207	Adder	1.2
940502	AE2-035 E	1.4095	Adder	1.66
941131	AE2-107 C	5.4864	50/50	5.4864
941132	AE2-107 E	3.6576	50/50	3.6576
943121	AE2-341 C	10.6646	50/50	10.6646
943122	AE2-341 E	5.2369	50/50	5.2369
943411	AF1-012 C	10.8801	50/50	10.8801
943412	AF1-012 E	7.2534	50/50	7.2534
943591	AF1-030 C O1	7.0921	50/50	7.0921
943592	AF1-030 E O1	3.5089	50/50	3.5089
943921	AF1-060	0.5026	Adder	0.59
944041	AF1-072	0.9098	Adder	1.07
945351	AF1-200 FTIR	175.0914	Merchant Transmission	175.0914
946151	AF1-280 C O1	8.7442	Adder	10.29
946152	AF1-280 E O1	4.0211	Adder	4.73
946161	AF1-281 C O1	0.1915	Adder	0.23
946162	AF1-281 E O1	1.0851	Adder	1.28
946321	AF1-296 C O1	1.8445	Adder	2.17
946322	AF1-296 E O1	8.6355	Adder	10.16
946501	AF1-314 C	1.8135	Adder	2.13
946502	AF1-314 E	8.4904	Adder	9.99
946671	AF1-331	1.6414	Adder	1.93
955971	J1084	7.9065	PJM External (MISO)	7.9065
957333	AF2-027 BAT	3.0640	Merchant Transmission	3.0640
957471	AF2-041 C	26.6022	50/50	26.6022
957472	AF2-041 E	13.3011	50/50	13.3011
958911	AF2-182 C	11.4888	Adder	13.52
958912	AF2-182 E	7.6592	Adder	9.01
958921	AF2-183 C	2.0424	Adder	2.4
958922	AF2-183 E	3.0637	Adder	3.6
959081	AF2-199 C	8.8674	50/50	8.8674
959082	AF2-199 E	4.4337	50/50	4.4337
959091	AF2-200 C O1	17.7348	50/50	17.7348
959092	AF2-200 E O1	8.8674	50/50	8.8674
959101	AF2-201 C O1	2.4982	Adder	2.94
959102	AF2-201 E O1	7.1738	Adder	8.44
960381	AF2-329	5.5337	50/50	5.5337
960551	AF2-346 C	4.6629	50/50	4.6629
960552	AF2-346 E	3.1086	50/50	3.1086
960721	AF2-363 C O1	3.4519	Adder	4.06
960722	AF2-363 E O1	2.3013	Adder	2.71
960731	AF2-364 C O1	3.5125	Adder	4.13
960732	AF2-364 E O1	2.3417	Adder	2.75
960751	AF2-366 C	5.8608	50/50	5.8608
960752	AF2-366 E	3.9072	50/50	3.9072
961011	AF2-392 C O1	2.2688	Adder	2.67
961012	AF2-392 E O1	10.6223	Adder	12.5
961021	AF2-393 O1	3.8673	Adder	4.55
961031	AF2-394 O1	2.5782	Adder	3.03
962012	AG1-044 E	0.0184	Adder	0.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962691	AG1-118 C O1	18.5184	50/50	18.5184
962692	AG1-118 E O1	12.3456	50/50	12.3456
962701	AG1-119 C	6.0201	Adder	13.36
962702	AG1-119 E	4.0134	Adder	8.91
962711	AG1-120 C O1	2.6835	Adder	5.96
962712	AG1-120 E O1	1.7890	Adder	3.97
962781	AG1-127 C	6.4693	50/50	6.4693
962782	AG1-127 E	4.3129	50/50	4.3129
962791	AG1-128 C O1	2.2248	Adder	4.94
962792	AG1-128 E O1	10.4112	Adder	23.11
963681	AG1-220 C O1	9.2511	50/50	9.2511
963682	AG1-220 E O1	6.1674	50/50	6.1674
964461	AG1-309 FTIR	122.4256	Merchant Transmission	122.4256
965061	AG1-371	4.4337	50/50	4.4337
965071	AG1-372	2.9558	50/50	2.9558
965081	AG1-373	1.4779	50/50	1.4779
965551	AG1-423 C O1	4.9557	Adder	11.0
965552	AG1-423 E O1	3.3038	Adder	7.33
965661	AG1-434 C O1	4.6137	50/50	4.6137
965662	AG1-434 E O1	21.6003	50/50	21.6003
965931	AG1-462 C O1	4.6448	Adder	10.31
965932	AG1-462 E O1	3.0966	Adder	6.87
966441	AG1-513 C	0.1760	Adder	0.39
966442	AG1-513 E	0.2640	Adder	0.59
966521	AG1-521 C O1	2.8392	Adder	6.3
966522	AG1-521 E O1	0.7098	Adder	1.58
966821	AG1-553 C O1	6.8124	Adder	15.12
966822	AG1-553 E O1	1.7031	Adder	3.78
CBM-W2	CBM-W2	4.1216	Confirmed LTF	4.1216
NY	NY	0.1029	Confirmed LTF	0.1029
TVA	TVA	0.4312	Confirmed LTF	0.4312
O-066	O-066	1.2114	Confirmed LTF	1.2114
SIGE	SIGE	0.0161	Confirmed LTF	0.0161
CBM-S2	CBM-S2	0.2192	Confirmed LTF	0.2192
CBM-S1	CBM-S1	0.0882	Confirmed LTF	0.0882
G-007	G-007	0.1880	Confirmed LTF	0.1880
HAMLET	HAMLET	0.0035	Confirmed LTF	0.0035
MEC	MEC	3.7929	Confirmed LTF	3.7929
GIBSON	GIBSON	0.0311	Confirmed LTF	0.0311
BLUEG	BLUEG	0.2066	Confirmed LTF	0.2066
TRIMBLE	TRIMBLE	0.0712	Confirmed LTF	0.0712
LAGN	LAGN	1.0027	Confirmed LTF	1.0027
CBM-W1	CBM-W1	3.2526	Confirmed LTF	3.2526

11.6.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
162238691	270730	ELECT JCT; B	CE	270846	PLANO ; B	CE	1	COMED_P2-2_111_EJ-345R_3	bus	1341.0	121.19	122.04	DC	32.53

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.0153	Adder	2.37
274658	DRESDEN ;2U	65.1442	Adder	76.64
274738	AURORA EC;3P	4.4199	50/50	4.4199
274740	AURORA EC;4P	4.4199	50/50	4.4199
274820	ELGIN EC ;2P	2.9992	50/50	2.9992
274859	EASYR;U1 E	10.7826	Adder	12.69
274860	EASYR;U2 E	10.7826	Adder	12.69
276167	Z1-106 E2	1.5751	50/50	1.5751
276168	Z1-106 E1	1.5795	50/50	1.5795
276170	Z1-108 E	2.3775	Adder	2.8
276591	L-013 2	4.5678	50/50	4.5678
290021	O50 E	8.8849	Adder	10.45
290051	GSG-6; E	8.0566	Adder	9.48
290108	LEEDK;1U E	17.6324	Adder	20.74
293516	O-009 E1	7.6345	Adder	8.98
293517	O-009 E2	3.8777	Adder	4.56
293518	O-009 E3	4.2704	Adder	5.02
293715	O-029 E	8.1621	Adder	9.6
293716	O-029 E	4.4752	Adder	5.26
293717	O-029 E	4.1132	Adder	4.84
294401	BSHIL;1U E	4.2745	Adder	5.03
294410	BSHIL;2U E	4.2745	Adder	5.03
294763	P-046 E	8.7230	Adder	10.26
295109	WESTBROOK E	4.3134	Adder	5.07
295111	SUBLETTE E	2.3574	Adder	2.77
915011	Y3-013 1	3.0391	Adder	3.58
915021	Y3-013 2	3.0391	Adder	3.58
915031	Y3-013 3	3.0391	Adder	3.58
916221	Z1-073 E	4.1846	Adder	4.92
919581	AA2-030 C	17.4152	Adder	20.49
920272	AA2-123 E	2.3290	Adder	2.74
924472	AB2-096 CT1	18.0819	Adder	21.27
924473	AB2-096 CT2	18.0819	Adder	21.27
924474	AB2-096 CT3	18.0819	Adder	21.27
925581	AC1-033 C	0.7001	Adder	0.82
925582	AC1-033 E	4.6866	Adder	5.51
926331	AC1-110 1	2.7647	50/50	2.7647
926341	AC1-110 2	2.7647	50/50	2.7647
927451	AC1-142A 1	1.7381	Adder	2.04
927461	AC1-142A 2	1.7400	Adder	2.05
930482	AB1-089 CT	36.1829	Adder	42.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930483	AB1-089 ST	28.7668	Adder	33.84
930771	AB1-122 CT2	41.1772	Adder	48.44
933911	AD1-013 C	1.4087	Adder	1.66
933912	AD1-013 E	2.2503	Adder	2.65
933931	AD1-016 C	0.8846	Adder	1.04
933932	AD1-016 E	1.4433	Adder	1.7
934051	AD1-031 C O1	1.4215	Adder	1.67
934052	AD1-031 E O1	2.3193	Adder	2.73
934111	AD1-039 2	4.0354	Adder	4.75
934432	AD1-067 E	0.4254	Adder	0.5
934701	AD1-098 C O1	5.3522	Adder	6.3
934702	AD1-098 E O1	3.9077	Adder	4.6
934971	AD1-129 C	0.8539	Adder	1.0
934972	AD1-129 E	0.5693	Adder	0.67
936791	AD2-102 C	13.1682	Adder	15.49
936792	AD2-102 E	8.7788	Adder	10.33
937001	AD2-134 C	2.1061	Adder	2.48
937002	AD2-134 E	8.7004	Adder	10.24
937311	AD2-172 C	2.2898	Adder	2.69
937312	AD2-172 E	3.1621	Adder	3.72
937531	AD2-214 C	3.9774	Adder	4.68
937532	AD2-214 E	2.6516	Adder	3.12
938851	AE1-113 C O1	3.6650	Adder	4.31
938852	AE1-113 E O1	12.9941	Adder	15.29
938861	AE1-114 C O1	3.6371	Adder	4.28
938862	AE1-114 E O1	12.4088	Adder	14.6
939051	AE1-134 1	1.3533	Adder	1.59
939061	AE1-134 2	1.3533	Adder	1.59
940501	AE2-035 C	2.2898	Adder	2.69
940502	AE2-035 E	3.1621	Adder	3.72
940752	AE2-062 E	0.0313	Adder	0.07
941131	AE2-107 C	4.7607	Adder	5.6
941132	AE2-107 E	3.1738	Adder	3.73
942421	AE2-255 C O1	1.3883	Adder	1.63
942422	AE2-255 E O1	4.1648	Adder	4.9
942991	AE2-321 C	7.7834	Adder	9.16
942992	AE2-321 E	3.8336	Adder	4.51
943411	AF1-012 C	13.0439	Adder	15.35
943412	AF1-012 E	8.6959	Adder	10.23
943801	AF1-048 C	3.6384	Adder	4.28
943802	AF1-048 E	2.4256	Adder	2.85
943921	AF1-060	1.1275	Adder	1.33
944041	AF1-072	2.1858	Adder	2.57
945352	AF1-200 NFTW	581.7840	50/50	581.7840
946151	AF1-280 C O1	15.3283	Adder	18.03
946152	AF1-280 E O1	7.0488	Adder	8.29
946161	AF1-281 C O1	0.3357	Adder	0.39
946162	AF1-281 E O1	1.9021	Adder	2.24
946321	AF1-296 C O1	3.4748	Adder	4.09
946322	AF1-296 E O1	16.2682	Adder	19.14
946501	AF1-314 C	4.0684	Adder	4.79
946502	AF1-314 E	19.0476	Adder	22.41

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946661	AF1-330 C	1.9098	Adder	2.25
946662	AF1-330 E	0.4192	Adder	0.49
946671	AF1-331	1.8295	Adder	2.15
952381	J703	8.7915	PJM External (MISO)	8.7915
952391	J704	3.7601	PJM External (MISO)	3.7601
952431	J760	2.5245	PJM External (MISO)	2.5245
953151	J831	2.9900	PJM External (MISO)	2.9900
953491	J947	15.3280	PJM External (MISO)	15.3280
953681	J818	11.4492	PJM External (MISO)	11.4492
953891	J849	8.5863	PJM External (MISO)	8.5863
953901	J850	20.0350	PJM External (MISO)	20.0350
953921	J855 C	1.0240	PJM External (MISO)	1.0240
953922	J855 E	5.5400	PJM External (MISO)	5.5400
954001	J864	3.3976	PJM External (MISO)	3.3976
954061	J870	13.4800	PJM External (MISO)	13.4800
954071	J871	6.7400	PJM External (MISO)	6.7400
954141	J878	15.6260	PJM External (MISO)	15.6260
954191	J886	10.5855	PJM External (MISO)	10.5855
954691	J732	13.2787	PJM External (MISO)	13.2787
954741	J928 C	0.8572	PJM External (MISO)	0.8572
954742	J928 E	4.6377	PJM External (MISO)	4.6377
955091	J986	9.6565	PJM External (MISO)	9.6565
955221	J1000	3.1680	PJM External (MISO)	3.1680
955241	J1002	6.8112	PJM External (MISO)	6.8112
955251	J1003	3.6680	PJM External (MISO)	3.6680
955582	J1042 E	14.2758	PJM External (MISO)	14.2758
955971	J1084	10.0725	PJM External (MISO)	10.0725
956141	J1101	1.4114	PJM External (MISO)	1.4114
956571	J1153	11.0760	PJM External (MISO)	11.0760
956581	J1154	5.7630	PJM External (MISO)	5.7630
956731	J1171	7.3110	PJM External (MISO)	7.3110
956852	J1183 E	0.0927	PJM External (MISO)	0.0927
956901	J1188	3.8925	PJM External (MISO)	3.8925
957331	AF2-027 C	2.0261	Adder	2.38
957332	AF2-027 E	3.0391	Adder	3.58
957401	AF2-034 C	0.7257	Adder	0.85
957402	AF2-034 E	0.6182	Adder	0.73
957471	AF2-041 C	31.7376	50/50	31.7376
957472	AF2-041 E	15.8688	50/50	15.8688
958911	AF2-182 C	20.1394	Adder	23.69
958912	AF2-182 E	13.4263	Adder	15.8
958921	AF2-183 C	3.5803	Adder	4.21
958922	AF2-183 E	5.3705	Adder	6.32
959081	AF2-199 C	10.5792	50/50	10.5792
959082	AF2-199 E	5.2896	50/50	5.2896
959091	AF2-200 C O1	21.1584	50/50	21.1584
959092	AF2-200 E O1	10.5792	50/50	10.5792
959101	AF2-201 C O1	5.6046	Adder	6.59
959102	AF2-201 E O1	16.0940	Adder	18.93
960551	AF2-346 C	5.5902	Adder	6.58
960552	AF2-346 E	3.7268	Adder	4.38
960581	AF2-349 C	20.6519	Adder	24.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960582	AF2-349 E	13.7680	Adder	16.2
960721	AF2-363 C O1	4.7974	Adder	5.64
960722	AF2-363 E O1	3.1982	Adder	3.76
960731	AF2-364 C O1	6.3404	Adder	7.46
960732	AF2-364 E O1	4.2270	Adder	4.97
960751	AF2-366 C	5.0562	Adder	5.95
960752	AF2-366 E	3.3708	Adder	3.97
961011	AF2-392 C O1	3.7032	Adder	4.36
961012	AF2-392 E O1	17.3377	Adder	20.4
961021	AF2-393 O1	6.3123	Adder	7.43
961031	AF2-394 O1	4.2082	Adder	4.95
962012	AG1-044 E	0.0304	Adder	0.07
962691	AG1-118 C O1	10.9026	Adder	24.2
962692	AG1-118 E O1	7.2684	Adder	16.13
962701	AG1-119 C	11.8124	Adder	26.22
962702	AG1-119 E	7.8749	Adder	17.48
962711	AG1-120 C O1	3.6950	Adder	8.2
962712	AG1-120 E O1	2.4633	Adder	5.47
962781	AG1-127 C	2.9818	Adder	6.62
962782	AG1-127 E	1.9878	Adder	4.41
962791	AG1-128 C O1	2.5249	Adder	5.6
962792	AG1-128 E O1	11.8156	Adder	26.23
963681	AG1-220 C O1	4.1705	Adder	9.26
963682	AG1-220 E O1	2.7803	Adder	6.17
964461	AG1-309 FTIR	273.9313	Merchant Transmission	273.9313
965061	AG1-371	5.2896	50/50	5.2896
965071	AG1-372	3.5264	50/50	3.5264
965081	AG1-373	1.7632	50/50	1.7632
965141	AG1-379 C	4.0380	Adder	8.96
965142	AG1-379 E	1.8483	Adder	4.1
965551	AG1-423 C O1	19.1328	50/50	19.1328
965552	AG1-423 E O1	12.7552	50/50	12.7552
965661	AG1-434 C O1	5.8045	50/50	5.8045
965662	AG1-434 E O1	27.1755	50/50	27.1755
965931	AG1-462 C O1	8.7918	Adder	19.52
965932	AG1-462 E O1	5.8612	Adder	13.01
966441	AG1-513 C	0.2410	Adder	0.53
966442	AG1-513 E	0.3615	Adder	0.8
966521	AG1-521 C O1	4.2909	Adder	9.52
966522	AG1-521 E O1	1.0727	Adder	2.38
966821	AG1-553 C O1	12.8946	Adder	28.62
966822	AG1-553 E O1	3.2237	Adder	7.16
WEC	WEC	3.6430	Confirmed LTF	3.6430
CBM-W2	CBM-W2	14.3360	Confirmed LTF	14.3360
NY	NY	0.4363	Confirmed LTF	0.4363
TVA	TVA	1.3818	Confirmed LTF	1.3818
O-066	O-066	5.1821	Confirmed LTF	5.1821
SIGE	SIGE	0.0779	Confirmed LTF	0.0779
CBM-S1	CBM-S1	0.2785	Confirmed LTF	0.2785
G-007	G-007	0.8074	Confirmed LTF	0.8074
HAMLET	HAMLET	0.0889	Confirmed LTF	0.0889
MEC	MEC	11.8222	Confirmed LTF	11.8222

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
GIBSON	GIBSON	0.0480	Confirmed LTF	0.0480
BLUEG	BLUEG	0.7986	Confirmed LTF	0.7986
TRIMBLE	TRIMBLE	0.2760	Confirmed LTF	0.2760
LAGN	LAGN	3.3442	Confirmed LTF	3.3442
CATAWBA	CATAWBA	0.0269	Confirmed LTF	0.0269
CBM-W1	CBM-W1	72.3152	Confirmed LTF	72.3152

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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
162238640	270743	ESS W407K;9T	CE	274749	AURORA EC;RP	CE	1	COMED_P2-2_111_EJ-345B__2	bus	1479.0	132.06	133.06	DC	32.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.9390	Adder	2.28
274693	ROCKY RD ;1P	4.9438	50/50	4.9438
274695	ROCKY RD ;2P	4.9930	50/50	4.9930
274697	ROCKY RD ;3P	1.3564	50/50	1.3564
274818	ELGIN EC ;1P	6.1193	50/50	6.1193
274819	ELGIN EC ;3P	5.9003	50/50	5.9003
274820	ELGIN EC ;2P	6.1193	50/50	6.1193
274821	ELGIN EC ;4P	5.9445	50/50	5.9445
274859	EASYR;U1 E	13.9642	Adder	16.43
274860	EASYR;U2 E	13.9642	Adder	16.43
276167	Z1-106 E2	1.4340	Adder	1.69
276168	Z1-106 E1	1.4417	Adder	1.7
276170	Z1-108 E	4.6211	Adder	5.44
276591	L-013 2	4.1587	Adder	4.89
290051	GSG-6; E	7.7662	Adder	9.14
290108	LEEDK;1U E	15.8661	Adder	18.67
293516	O-009 E1	7.7042	Adder	9.06
293517	O-009 E2	3.9131	Adder	4.6
293518	O-009 E3	4.3094	Adder	5.07
293715	O-029 E	8.2367	Adder	9.69
293716	O-029 E	4.5160	Adder	5.31
293717	O-029 E	4.1507	Adder	4.88
294763	P-046 E	13.0043	Adder	15.3
295109	WESTBROOK E	4.1579	Adder	4.89
295111	SUBLETTE E	2.6058	Adder	3.07
915011	Y3-013 1	3.8467	Adder	4.53
915021	Y3-013 2	3.8467	Adder	4.53
915031	Y3-013 3	3.8467	Adder	4.53
916221	Z1-073 E	4.0338	Adder	4.75
919581	AA2-030 C	17.9891	Adder	21.16
920272	AA2-123 E	4.2932	Adder	5.05
924472	AB2-096 CT1	32.4357	Adder	38.16
924473	AB2-096 CT2	32.4357	Adder	38.16
924474	AB2-096 CT3	32.4357	Adder	38.16
926331	AC1-110 1	1.1713	Adder	1.38
926341	AC1-110 2	1.1713	Adder	1.38
930482	AB1-089 CT	67.6128	Adder	79.54
930483	AB1-089 ST	53.7548	Adder	63.24
933911	AD1-013 C	1.3548	Adder	1.59
933912	AD1-013 E	2.1642	Adder	2.55
933931	AD1-016 C	1.6280	Adder	1.92

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933932	AD1-016 E	2.6562	Adder	3.12
934432	AD1-067 E	0.4100	Adder	0.48
934701	AD1-098 C O1	5.2058	Adder	6.12
934702	AD1-098 E O1	3.8008	Adder	4.47
934971	AD1-129 C	1.4858	Adder	1.75
934972	AD1-129 E	0.9905	Adder	1.17
936791	AD2-102 C	21.2711	Adder	25.02
936792	AD2-102 E	14.1807	Adder	16.68
937001	AD2-134 C	2.0302	Adder	2.39
937002	AD2-134 E	8.3868	Adder	9.87
937311	AD2-172 C	3.4136	Adder	4.02
937312	AD2-172 E	4.7141	Adder	5.55
937531	AD2-214 C	4.1214	Adder	4.85
937532	AD2-214 E	2.7476	Adder	3.23
938861	AE1-114 C O1	4.8471	Adder	5.7
938862	AE1-114 E O1	16.5372	Adder	19.46
939051	AE1-134 1	1.3979	Adder	1.64
939061	AE1-134 2	1.3979	Adder	1.64
940501	AE2-035 C	3.4136	Adder	4.02
940502	AE2-035 E	4.7141	Adder	5.55
941131	AE2-107 C	4.2838	Adder	5.04
941132	AE2-107 E	2.8559	Adder	3.36
942991	AE2-321 C	14.2751	Adder	16.79
942992	AE2-321 E	7.0310	Adder	8.27
943411	AF1-012 C	11.0759	Adder	13.03
943412	AF1-012 E	7.3839	Adder	8.69
943801	AF1-048 C	6.6731	Adder	7.85
943802	AF1-048 E	4.4487	Adder	5.23
943921	AF1-060	1.6808	Adder	1.98
944041	AF1-072	5.3576	50/50	5.3576
945352	AF1-200 NFTW	160.5240	Merchant Transmission	160.5240
946151	AF1-280 C O1	18.6250	Adder	21.91
946152	AF1-280 E O1	8.5648	Adder	10.08
946161	AF1-281 C O1	0.4078	Adder	0.48
946162	AF1-281 E O1	2.3111	Adder	2.72
946321	AF1-296 C O1	3.5830	Adder	4.22
946322	AF1-296 E O1	16.7748	Adder	19.74
946501	AF1-314 C	6.0652	Adder	7.14
946502	AF1-314 E	28.3962	Adder	33.41
946661	AF1-330 C	3.5204	Adder	4.14
946662	AF1-330 E	0.7728	Adder	0.91
946671	AF1-331	1.7595	Adder	2.07
952381	J703	12.0901	PJM External (MISO)	12.0901
952391	J704	5.1683	PJM External (MISO)	5.1683
952431	J760	4.4037	PJM External (MISO)	4.4037
953151	J831	4.1304	PJM External (MISO)	4.1304
953491	J947	20.7780	PJM External (MISO)	20.7780
953681	J818	17.7638	PJM External (MISO)	17.7638
953891	J849	11.8100	PJM External (MISO)	11.8100
953901	J850	31.6400	PJM External (MISO)	31.6400
953921	J855 C	1.3711	PJM External (MISO)	1.3711
953922	J855 E	7.4179	PJM External (MISO)	7.4179

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954001	J864	4.8021	PJM External (MISO)	4.8021
954061	J870	18.6640	PJM External (MISO)	18.6640
954071	J871	9.3320	PJM External (MISO)	9.3320
954141	J878	21.7400	PJM External (MISO)	21.7400
954191	J886	14.5965	PJM External (MISO)	14.5965
954741	J928 C	1.1790	PJM External (MISO)	1.1790
954742	J928 E	6.3789	PJM External (MISO)	6.3789
955091	J986	13.1909	PJM External (MISO)	13.1909
955221	J1000	4.0525	PJM External (MISO)	4.0525
955241	J1002	9.6961	PJM External (MISO)	9.6961
955251	J1003	5.4075	PJM External (MISO)	5.4075
955582	J1042 E	21.3750	PJM External (MISO)	21.3750
956141	J1101	1.9462	PJM External (MISO)	1.9462
956571	J1153	15.3075	PJM External (MISO)	15.3075
956581	J1154	8.9423	PJM External (MISO)	8.9423
956731	J1171	10.3950	PJM External (MISO)	10.3950
956852	J1183 E	0.1275	PJM External (MISO)	0.1275
956901	J1188	6.1955	PJM External (MISO)	6.1955
957331	AF2-027 C	2.5644	Adder	3.02
957332	AF2-027 E	3.8467	Adder	4.53
957471	AF2-041 C	15.8309	Adder	18.62
957472	AF2-041 E	7.9155	Adder	9.31
958911	AF2-182 C	24.4708	Adder	28.79
958912	AF2-182 E	16.3139	Adder	19.19
958921	AF2-183 C	4.3504	Adder	5.12
958922	AF2-183 E	6.5256	Adder	7.68
959081	AF2-199 C	5.2770	Adder	6.21
959082	AF2-199 E	2.6385	Adder	3.1
959091	AF2-200 C O1	10.5539	Adder	12.42
959092	AF2-200 E O1	5.2770	Adder	6.21
959101	AF2-201 C O1	8.3553	Adder	9.83
959102	AF2-201 E O1	23.9930	Adder	28.23
960551	AF2-346 C	4.7468	Adder	5.58
960552	AF2-346 E	3.1646	Adder	3.72
960581	AF2-349 C	37.0459	Adder	43.58
960582	AF2-349 E	24.6973	Adder	29.06
960721	AF2-363 C O1	5.9801	Adder	7.04
960722	AF2-363 E O1	3.9867	Adder	4.69
960731	AF2-364 C O1	12.8042	Adder	15.06
960732	AF2-364 E O1	8.5361	Adder	10.04
960751	AF2-366 C	4.5785	Adder	5.39
960752	AF2-366 E	3.0524	Adder	3.59
961011	AF2-392 C O1	3.9761	Adder	4.68
961012	AF2-392 E O1	18.6152	Adder	21.9
961021	AF2-393 O1	6.7774	Adder	7.97
961031	AF2-394 O1	4.5183	Adder	5.32
962012	AG1-044 E	0.0316	Adder	0.07
962701	AG1-119 C	56.0682	50/50	56.0682
962702	AG1-119 E	37.3788	50/50	37.3788
962711	AG1-120 C O1	4.5727	Adder	10.15
962712	AG1-120 E O1	3.0485	Adder	6.77
962781	AG1-127 C	2.7193	Adder	6.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962782	AG1-127 E	1.8128	Adder	4.02
962791	AG1-128 C O1	2.4339	Adder	5.4
962792	AG1-128 E O1	11.3897	Adder	25.28
963681	AG1-220 C O1	3.6981	Adder	8.21
963682	AG1-220 E O1	2.4654	Adder	5.47
964461	AG1-309 FTIR	460.7444	Merchant Transmission	460.7444
965061	AG1-371	1.3984	Adder	3.1
965071	AG1-372	0.9323	Adder	2.07
965081	AG1-373	0.4661	Adder	1.03
965551	AG1-423 C O1	51.3480	50/50	51.3480
965552	AG1-423 E O1	34.2320	50/50	34.2320
965661	AG1-434 C O1	1.7646	Adder	3.92
965662	AG1-434 E O1	8.2617	Adder	18.34
965931	AG1-462 C O1	8.8785	Adder	19.71
965932	AG1-462 E O1	5.9190	Adder	13.14
966521	AG1-521 C O1	4.6373	Adder	10.29
966522	AG1-521 E O1	1.1593	Adder	2.57
966821	AG1-553 C O1	13.0219	Adder	28.91
966822	AG1-553 E O1	3.2555	Adder	7.23
WEC	WEC	4.7045	Confirmed LTF	4.7045
CBM-W2	CBM-W2	10.0352	Confirmed LTF	10.0352
NY	NY	0.4159	Confirmed LTF	0.4159
TVA	TVA	0.9912	Confirmed LTF	0.9912
O-066	O-066	4.9533	Confirmed LTF	4.9533
SIGE	SIGE	0.0407	Confirmed LTF	0.0407
CBM-S1	CBM-S1	0.1813	Confirmed LTF	0.1813
G-007	G-007	0.7718	Confirmed LTF	0.7718
HAMLET	HAMLET	0.1322	Confirmed LTF	0.1322
MEC	MEC	12.2957	Confirmed LTF	12.2957
GIBSON	GIBSON	0.2424	Confirmed LTF	0.2424
BLUEG	BLUEG	1.0468	Confirmed LTF	1.0468
TRIMBLE	TRIMBLE	0.3489	Confirmed LTF	0.3489
LAGN	LAGN	2.8682	Confirmed LTF	2.8682
CATAWBA	CATAWBA	0.0581	Confirmed LTF	0.0581
CBM-W1	CBM-W1	87.9194	Confirmed LTF	87.9194

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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
162238629	270751	ESS W407M;9T	CE	270743	ESS W407K;9T	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	133.02	134.02	DC	32.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.9390	Adder	2.28
274693	ROCKY RD ;1P	4.9438	50/50	4.9438
274695	ROCKY RD ;2P	4.9930	50/50	4.9930
274697	ROCKY RD ;3P	1.3564	50/50	1.3564
274818	ELGIN EC ;1P	6.1193	50/50	6.1193
274819	ELGIN EC ;3P	5.9003	50/50	5.9003
274820	ELGIN EC ;2P	6.1193	50/50	6.1193
274821	ELGIN EC ;4P	5.9445	50/50	5.9445
274859	EASYR;U1 E	13.9642	Adder	16.43
274860	EASYR;U2 E	13.9642	Adder	16.43
276167	Z1-106 E2	1.4340	Adder	1.69
276168	Z1-106 E1	1.4417	Adder	1.7
276170	Z1-108 E	4.6211	Adder	5.44
276591	L-013 2	4.1587	Adder	4.89
290051	GSG-6; E	7.7662	Adder	9.14
290108	LEEDK;1U E	15.8661	Adder	18.67
293516	O-009 E1	7.7042	Adder	9.06
293517	O-009 E2	3.9131	Adder	4.6
293518	O-009 E3	4.3094	Adder	5.07
293715	O-029 E	8.2367	Adder	9.69
293716	O-029 E	4.5160	Adder	5.31
293717	O-029 E	4.1507	Adder	4.88
294763	P-046 E	13.0043	Adder	15.3
295109	WESTBROOK E	4.1579	Adder	4.89
295111	SUBLETTE E	2.6058	Adder	3.07
915011	Y3-013 1	3.8467	Adder	4.53
915021	Y3-013 2	3.8467	Adder	4.53
915031	Y3-013 3	3.8467	Adder	4.53
916221	Z1-073 E	4.0338	Adder	4.75
919581	AA2-030 C	17.9891	Adder	21.16
920272	AA2-123 E	4.2932	Adder	5.05
924472	AB2-096 CT1	32.4357	Adder	38.16
924473	AB2-096 CT2	32.4357	Adder	38.16
924474	AB2-096 CT3	32.4357	Adder	38.16
926331	AC1-110 1	1.1713	Adder	1.38
926341	AC1-110 2	1.1713	Adder	1.38
930482	AB1-089 CT	67.6128	Adder	79.54
930483	AB1-089 ST	53.7548	Adder	63.24
933911	AD1-013 C	1.3548	Adder	1.59
933912	AD1-013 E	2.1642	Adder	2.55
933931	AD1-016 C	1.6280	Adder	1.92

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933932	AD1-016 E	2.6562	Adder	3.12
934432	AD1-067 E	0.4100	Adder	0.48
934701	AD1-098 C O1	5.2058	Adder	6.12
934702	AD1-098 E O1	3.8008	Adder	4.47
934971	AD1-129 C	1.4858	Adder	1.75
934972	AD1-129 E	0.9905	Adder	1.17
936791	AD2-102 C	21.2711	Adder	25.02
936792	AD2-102 E	14.1807	Adder	16.68
937001	AD2-134 C	2.0302	Adder	2.39
937002	AD2-134 E	8.3868	Adder	9.87
937311	AD2-172 C	3.4136	Adder	4.02
937312	AD2-172 E	4.7141	Adder	5.55
937531	AD2-214 C	4.1214	Adder	4.85
937532	AD2-214 E	2.7476	Adder	3.23
938861	AE1-114 C O1	4.8471	Adder	5.7
938862	AE1-114 E O1	16.5372	Adder	19.46
939051	AE1-134 1	1.3979	Adder	1.64
939061	AE1-134 2	1.3979	Adder	1.64
940501	AE2-035 C	3.4136	Adder	4.02
940502	AE2-035 E	4.7141	Adder	5.55
941131	AE2-107 C	4.2838	Adder	5.04
941132	AE2-107 E	2.8559	Adder	3.36
942991	AE2-321 C	14.2751	Adder	16.79
942992	AE2-321 E	7.0310	Adder	8.27
943411	AF1-012 C	11.0759	Adder	13.03
943412	AF1-012 E	7.3839	Adder	8.69
943801	AF1-048 C	6.6731	Adder	7.85
943802	AF1-048 E	4.4487	Adder	5.23
943921	AF1-060	1.6808	Adder	1.98
944041	AF1-072	5.3576	50/50	5.3576
945352	AF1-200 NFTW	160.5240	Merchant Transmission	160.5240
946151	AF1-280 C O1	18.6250	Adder	21.91
946152	AF1-280 E O1	8.5648	Adder	10.08
946161	AF1-281 C O1	0.4078	Adder	0.48
946162	AF1-281 E O1	2.3111	Adder	2.72
946321	AF1-296 C O1	3.5830	Adder	4.22
946322	AF1-296 E O1	16.7748	Adder	19.74
946501	AF1-314 C	6.0652	Adder	7.14
946502	AF1-314 E	28.3962	Adder	33.41
946661	AF1-330 C	3.5204	Adder	4.14
946662	AF1-330 E	0.7728	Adder	0.91
946671	AF1-331	1.7595	Adder	2.07
952381	J703	12.0901	PJM External (MISO)	12.0901
952391	J704	5.1683	PJM External (MISO)	5.1683
952431	J760	4.4037	PJM External (MISO)	4.4037
953151	J831	4.1304	PJM External (MISO)	4.1304
953491	J947	20.7780	PJM External (MISO)	20.7780
953681	J818	17.7638	PJM External (MISO)	17.7638
953891	J849	11.8100	PJM External (MISO)	11.8100
953901	J850	31.6400	PJM External (MISO)	31.6400
953921	J855 C	1.3711	PJM External (MISO)	1.3711
953922	J855 E	7.4179	PJM External (MISO)	7.4179

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954001	J864	4.8021	PJM External (MISO)	4.8021
954061	J870	18.6640	PJM External (MISO)	18.6640
954071	J871	9.3320	PJM External (MISO)	9.3320
954141	J878	21.7400	PJM External (MISO)	21.7400
954191	J886	14.5965	PJM External (MISO)	14.5965
954741	J928 C	1.1790	PJM External (MISO)	1.1790
954742	J928 E	6.3789	PJM External (MISO)	6.3789
955091	J986	13.1909	PJM External (MISO)	13.1909
955221	J1000	4.0525	PJM External (MISO)	4.0525
955241	J1002	9.6961	PJM External (MISO)	9.6961
955251	J1003	5.4075	PJM External (MISO)	5.4075
955582	J1042 E	21.3750	PJM External (MISO)	21.3750
956141	J1101	1.9462	PJM External (MISO)	1.9462
956571	J1153	15.3075	PJM External (MISO)	15.3075
956581	J1154	8.9423	PJM External (MISO)	8.9423
956731	J1171	10.3950	PJM External (MISO)	10.3950
956852	J1183 E	0.1275	PJM External (MISO)	0.1275
956901	J1188	6.1955	PJM External (MISO)	6.1955
957331	AF2-027 C	2.5644	Adder	3.02
957332	AF2-027 E	3.8467	Adder	4.53
957471	AF2-041 C	15.8309	Adder	18.62
957472	AF2-041 E	7.9155	Adder	9.31
958911	AF2-182 C	24.4708	Adder	28.79
958912	AF2-182 E	16.3139	Adder	19.19
958921	AF2-183 C	4.3504	Adder	5.12
958922	AF2-183 E	6.5256	Adder	7.68
959081	AF2-199 C	5.2770	Adder	6.21
959082	AF2-199 E	2.6385	Adder	3.1
959091	AF2-200 C O1	10.5539	Adder	12.42
959092	AF2-200 E O1	5.2770	Adder	6.21
959101	AF2-201 C O1	8.3553	Adder	9.83
959102	AF2-201 E O1	23.9930	Adder	28.23
960551	AF2-346 C	4.7468	Adder	5.58
960552	AF2-346 E	3.1646	Adder	3.72
960581	AF2-349 C	37.0459	Adder	43.58
960582	AF2-349 E	24.6973	Adder	29.06
960721	AF2-363 C O1	5.9801	Adder	7.04
960722	AF2-363 E O1	3.9867	Adder	4.69
960731	AF2-364 C O1	12.8042	Adder	15.06
960732	AF2-364 E O1	8.5361	Adder	10.04
960751	AF2-366 C	4.5785	Adder	5.39
960752	AF2-366 E	3.0524	Adder	3.59
961011	AF2-392 C O1	3.9761	Adder	4.68
961012	AF2-392 E O1	18.6152	Adder	21.9
961021	AF2-393 O1	6.7774	Adder	7.97
961031	AF2-394 O1	4.5183	Adder	5.32
962012	AG1-044 E	0.0316	Adder	0.07
962701	AG1-119 C	56.0682	50/50	56.0682
962702	AG1-119 E	37.3788	50/50	37.3788
962711	AG1-120 C O1	4.5727	Adder	10.15
962712	AG1-120 E O1	3.0485	Adder	6.77
962781	AG1-127 C	2.7193	Adder	6.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962782	AG1-127 E	1.8128	Adder	4.02
962791	AG1-128 C O1	2.4339	Adder	5.4
962792	AG1-128 E O1	11.3897	Adder	25.28
963681	AG1-220 C O1	3.6981	Adder	8.21
963682	AG1-220 E O1	2.4654	Adder	5.47
964461	AG1-309 FTIR	460.7444	Merchant Transmission	460.7444
965061	AG1-371	1.3984	Adder	3.1
965071	AG1-372	0.9323	Adder	2.07
965081	AG1-373	0.4661	Adder	1.03
965551	AG1-423 C O1	51.3480	50/50	51.3480
965552	AG1-423 E O1	34.2320	50/50	34.2320
965661	AG1-434 C O1	1.7646	Adder	3.92
965662	AG1-434 E O1	8.2617	Adder	18.34
965931	AG1-462 C O1	8.8785	Adder	19.71
965932	AG1-462 E O1	5.9190	Adder	13.14
966521	AG1-521 C O1	4.6373	Adder	10.29
966522	AG1-521 E O1	1.1593	Adder	2.57
966821	AG1-553 C O1	13.0219	Adder	28.91
966822	AG1-553 E O1	3.2555	Adder	7.23
WEC	WEC	4.7045	Confirmed LTF	4.7045
CBM-W2	CBM-W2	10.0352	Confirmed LTF	10.0352
NY	NY	0.4159	Confirmed LTF	0.4159
TVA	TVA	0.9912	Confirmed LTF	0.9912
O-066	O-066	4.9533	Confirmed LTF	4.9533
SIGE	SIGE	0.0407	Confirmed LTF	0.0407
CBM-S1	CBM-S1	0.1813	Confirmed LTF	0.1813
G-007	G-007	0.7718	Confirmed LTF	0.7718
HAMLET	HAMLET	0.1322	Confirmed LTF	0.1322
MEC	MEC	12.2957	Confirmed LTF	12.2957
GIBSON	GIBSON	0.2424	Confirmed LTF	0.2424
BLUEG	BLUEG	1.0468	Confirmed LTF	1.0468
TRIMBLE	TRIMBLE	0.3489	Confirmed LTF	0.3489
LAGN	LAGN	2.8682	Confirmed LTF	2.8682
CATAWBA	CATAWBA	0.0581	Confirmed LTF	0.0581
CBM-W1	CBM-W1	87.9194	Confirmed LTF	87.9194

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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
168538316	270828	NELSON ;B	CE	943410	AF1-012 TAP	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1656.0	108.06	110.13	DC	34.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274656	BYRON ;1U	26.2058	80/20	26.2058
274657	BYRON ;2U	25.5607	80/20	25.5607
274662	QUAD CITI;1U	27.2624	80/20	27.2624
274663	QUAD CITI;2U	27.3408	80/20	27.3408
274699	CORDOVA ;1C	4.7985	80/20	4.7985
274700	CORDOVA ;2C	4.7985	80/20	4.7985
274701	CORDOVA ;1S	5.3983	80/20	5.3983
274715	NELSON EC;1C	6.9650	80/20	6.9650
274716	NELSON EC;1S	5.0820	80/20	5.0820
274717	NELSON EC;2C	7.0188	80/20	7.0188
274718	NELSON EC;2S	5.1275	80/20	5.1275
274760	LEE CO EC;1U	2.8754	80/20	2.8754
274761	LEE CO EC;2U	2.8754	80/20	2.8754
274762	LEE CO EC;3U	2.8754	80/20	2.8754
274763	LEE CO EC;4U	2.8483	80/20	2.8483
274764	LEE CO EC;5U	2.8822	80/20	2.8822
274765	LEE CO EC;6U	2.8822	80/20	2.8822
274766	LEE CO EC;7U	2.8416	80/20	2.8416
274767	LEE CO EC;8U	2.8416	80/20	2.8416
274822	ROCKFORD ;11	2.0409	80/20	2.0409
274823	ROCKFORD ;21	2.0945	80/20	2.0945
274856	ECOGROVE ;U1	0.4177	80/20	0.4177
274857	BIG SKY ;U1	0.5148	80/20	0.5148
274858	BIG SKY ;U2	0.5148	80/20	0.5148
276156	O-029 C	0.3402	80/20	0.3402
276157	O-029 C	0.3678	80/20	0.3678
276158	O-029 C	0.6712	80/20	0.6712
276162	X1-087	0.2088	80/20	0.2088
293513	O-009 C1	0.6283	80/20	0.6283
293514	O-009 C2	0.3188	80/20	0.3188
293515	O-009 C3	0.3525	80/20	0.3525
295110	SUBLETTE C	0.0994	80/20	0.0994
919221	AA1-146	6.4974	80/20	6.4974
919581	AA2-030 C	41.1827	80/20	41.1827
925581	AC1-033 C	0.9655	Adder	1.14
926431	AC1-114	0.3402	80/20	0.3402
930482	AB1-089 CT	43.5394	80/20	43.5394
930483	AB1-089 ST	34.6156	80/20	34.6156
932921	AC2-116	0.1191	80/20	0.1191
934051	AD1-031 C O1	1.9610	Adder	2.31
934701	AD1-098 C O1	4.3804	Adder	5.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934971	AD1-129 C	0.5038	Adder	0.59
936791	AD2-102 C	13.8516	80/20	13.8516
937001	AD2-134 C	1.6135	Adder	1.9
937311	AD2-172 C	2.8661	80/20	2.8661
937531	AD2-214 C	8.3460	80/20	8.3460
938861	AE1-114 C O1	5.5916	80/20	5.5916
939051	AE1-134 1	3.2002	80/20	3.2002
939061	AE1-134 2	3.2002	80/20	3.2002
940501	AE2-035 C	2.8661	80/20	2.8661
943921	AF1-060	1.4112	80/20	1.4112
946151	AF1-280 C O1	31.4210	80/20	31.4210
946161	AF1-281 C O1	0.6881	80/20	0.6881
946321	AF1-296 C O1	7.0348	80/20	7.0348
946501	AF1-314 C	5.0923	80/20	5.0923
951381	J504	4.2105	PJM External (MISO)	4.2105
951421	J514	2.5047	PJM External (MISO)	2.5047
951511	J530 C	3.8900	PJM External (MISO)	3.8900
953921	J855 C	1.2293	PJM External (MISO)	1.2293
954091	J873 C	2.4529	PJM External (MISO)	2.4529
954861	J959 C	1.8170	PJM External (MISO)	1.8170
954901	J963	0.9142	PJM External (MISO)	0.9142
955051	J981 C	2.7103	PJM External (MISO)	2.7103
955221	J1000	4.1425	PJM External (MISO)	4.1425
955971	J1084	22.7625	PJM External (MISO)	22.7625
956411	J1131	11.9130	PJM External (MISO)	11.9130
958911	AF2-182 C	41.2830	80/20	41.2830
958921	AF2-183 C	7.3392	80/20	7.3392
959101	AF2-201 C O1	7.0151	80/20	7.0151
961011	AF2-392 C O1	7.7215	80/20	7.7215
961021	AF2-393 O1	13.1616	80/20	13.1616
961031	AF2-394 O1	8.7744	80/20	8.7744
962701	AG1-119 C	25.5618	80/20	25.5618
962791	AG1-128 C O1	1.9343	Adder	4.29
964461	AG1-309 FTIR	289.0514	80/20	289.0514
965931	AG1-462 C O1	34.3008	80/20	34.3008
966521	AG1-521 C O1	14.0032	80/20	14.0032
966821	AG1-553 C O1	50.3078	80/20	50.3078
WEC	WEC	0.8543	Confirmed LTF	0.8543
CPL	CPL	0.0853	Confirmed LTF	0.0853
CBM-W2	CBM-W2	17.0867	Confirmed LTF	17.0867
NY	NY	0.2461	Confirmed LTF	0.2461
TVA	TVA	1.9068	Confirmed LTF	1.9068
SIGE	SIGE	0.0587	Confirmed LTF	0.0587
CBM-S2	CBM-S2	3.1529	Confirmed LTF	3.1529
CBM-S1	CBM-S1	0.4123	Confirmed LTF	0.4123
MEC	MEC	14.8953	Confirmed LTF	14.8953
BLUEG	BLUEG	0.3715	Confirmed LTF	0.3715
TRIMBLE	TRIMBLE	0.1369	Confirmed LTF	0.1369
LAGN	LAGN	4.1965	Confirmed LTF	4.1965
CBM-W1	CBM-W1	58.5615	Confirmed LTF	58.5615

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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
168538384	270846	PLANO ; B	CE	275207	PLANO ;3M	CE	1	COMED_P1-3_TR94_PLANO_R-S	single	1379.0	109.29	109.68	DC	14.81

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.5804	80/20	2.5804
274658	DRESDEN ;2U	56.3914	Adder	66.34
274660	LASCO STA;1U	24.5983	80/20	24.5983
274661	LASCO STA;2U	24.7059	80/20	24.7059
274693	ROCKY RD ;1P	1.7863	80/20	1.7863
274695	ROCKY RD ;2P	1.8041	80/20	1.8041
274697	ROCKY RD ;3P	0.4901	80/20	0.4901
274737	AURORA EC;1P	2.9976	80/20	2.9976
274738	AURORA EC;3P	2.9756	80/20	2.9756
274739	AURORA EC;2P	2.9976	80/20	2.9976
274740	AURORA EC;4P	2.9756	80/20	2.9756
274741	AURORA EC;5P	0.7044	80/20	0.7044
274742	AURORA EC;6P	0.7044	80/20	0.7044
274743	AURORA EC;7P	0.7044	80/20	0.7044
274744	AURORA EC;8P	0.7044	80/20	0.7044
274745	AURORA EC;9P	0.7044	80/20	0.7044
274746	AURORA EC;0P	0.7044	80/20	0.7044
274818	ELGIN EC ;1P	2.2112	80/20	2.2112
274819	ELGIN EC ;3P	2.1932	80/20	2.1932
274820	ELGIN EC ;2P	2.2112	80/20	2.2112
274821	ELGIN EC ;4P	2.2097	80/20	2.2097
274847	GR RIDGE ;BU	0.5203	80/20	0.5203
274850	MENDOTA H;RU	0.2440	80/20	0.2440
274855	GSG-6 ;RU	0.4018	80/20	0.4018
274871	GR RIDGE ;2U	0.1937	80/20	0.1937
274872	LEE DEKAL;1U	0.7678	80/20	0.7678
295108	WESTBROOK C	0.1303	80/20	0.1303
915011	Y3-013 1	2.4544	Adder	2.89
915021	Y3-013 2	2.4544	Adder	2.89
915031	Y3-013 3	2.4544	Adder	2.89
919581	AA2-030 C	12.6150	Adder	14.84
924472	AB2-096 CT1	13.9064	Adder	16.36
924473	AB2-096 CT2	13.9064	Adder	16.36
924474	AB2-096 CT3	13.9064	Adder	16.36
925581	AC1-033 C	0.7985	Adder	0.94
926311	AC1-109 1	0.2959	80/20	0.2959
926321	AC1-109 2	0.2959	80/20	0.2959
926331	AC1-110 1	1.8612	80/20	1.8612
926341	AC1-110 2	1.8612	80/20	1.8612
926351	AC1-111 1	0.1167	80/20	0.1167
926361	AC1-111 2	0.1167	80/20	0.1167

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926371	AC1-111 3	0.1167	80/20	0.1167
926381	AC1-111 4	0.1167	80/20	0.1167
926391	AC1-111 5	0.1167	80/20	0.1167
926401	AC1-111 6	0.1167	80/20	0.1167
926821	AC1-168 C O1	0.6845	Adder	0.81
927451	AC1-142A 1	1.7683	Adder	2.08
927461	AC1-142A 2	1.7696	Adder	2.08
930482	AB1-089 CT	27.1847	Adder	31.98
930483	AB1-089 ST	21.6129	Adder	25.43
930501	AB1-091 CT	15.4858	Adder	18.22
930502	AB1-091 ST	12.3118	Adder	14.48
930771	AB1-122 CT2	35.7472	Adder	42.06
933411	AC2-154 C	0.9675	Adder	1.14
933431	AC2-156 C O1	1.1088	80/20	1.1088
933911	AD1-013 C	1.8124	80/20	1.8124
933931	AD1-016 C	0.6812	Adder	0.8
934051	AD1-031 C O1	1.6216	Adder	1.91
934111	AD1-039 2	3.5032	Adder	4.12
934431	AD1-067 C	0.0202	80/20	0.0202
934701	AD1-098 C O1	6.6614	80/20	6.6614
934971	AD1-129 C	0.6633	Adder	0.78
936371	AD2-047 C O1	1.7314	Adder	2.04
936461	AD2-060	1.0185	Adder	1.2
936511	AD2-066 C O1	4.2643	Adder	5.02
936791	AD2-102 C	10.1194	Adder	11.91
937001	AD2-134 C	2.6633	80/20	2.6633
937311	AD2-172 C	1.7841	Adder	2.1
937401	AD2-194 1	2.9162	Adder	3.43
937411	AD2-194 2	2.9243	Adder	3.44
937531	AD2-214 C	3.0421	Adder	3.58
938511	AE1-070 1	3.4361	Adder	4.04
938521	AE1-070 2	3.1349	Adder	3.69
938851	AE1-113 C O1	3.5135	Adder	4.13
938861	AE1-114 C O1	2.8484	Adder	3.35
939051	AE1-134 1	0.9803	Adder	1.15
939061	AE1-134 2	0.9803	Adder	1.15
939351	AE1-166 C O1	2.1066	Adder	4.68
940501	AE2-035 C	1.7841	Adder	2.1
941131	AE2-107 C	6.5696	80/20	6.5696
941551	AE2-152 C O1	2.4307	Adder	5.4
941561	AE2-153 C O1	2.1492	Adder	2.53
942421	AE2-255 C O1	1.3309	Adder	1.57
942991	AE2-321 C	6.0236	Adder	7.09
943121	AE2-341 C	15.4200	80/20	15.4200
943411	AF1-012 C	8.8875	Adder	10.46
943591	AF1-030 C O1	10.2544	80/20	10.2544
943801	AF1-048 C	2.8158	Adder	3.31
943921	AF1-060	0.8785	Adder	1.03
944041	AF1-072	1.9359	80/20	1.9359
944911	AF1-156 C	5.4950	Adder	6.46
945351	AF1-200 FTIR	489.1937	80/20	489.1937
946151	AF1-280 C O1	11.2409	Adder	13.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946161	AF1-281 C O1	0.2462	Adder	0.29
946321	AF1-296 C O1	2.6669	Adder	3.14
946501	AF1-314 C	3.1699	Adder	3.73
946541	AF1-318 C O1	3.1947	Adder	3.76
946661	AF1-330 C	1.4733	Adder	1.73
946671	AF1-331	2.3538	80/20	2.3538
952431	J760	1.9374	PJM External (MISO)	1.9374
954141	J878	12.1642	PJM External (MISO)	12.1642
957331	AF2-027 C	1.6362	Adder	1.92
957401	AF2-034 C	0.6583	Adder	0.77
957471	AF2-041 C	16.7260	Adder	19.68
957751	AF2-069 C	0.1337	Adder	0.16
957761	AF2-070 C	0.1884	Adder	0.22
958011	AF2-095 C O1	6.9256	Adder	8.15
958021	AF2-096 C	16.4058	Adder	19.3
958341	AF2-128 C O1	0.8458	Adder	1.0
958911	AF2-182 C	14.7691	Adder	17.38
958921	AF2-183 C	2.6256	Adder	3.09
959081	AF2-199 C	5.5753	Adder	6.56
959091	AF2-200 C O1	11.1506	Adder	13.12
959101	AF2-201 C O1	4.3668	Adder	5.14
960381	AF2-329	8.0012	80/20	8.0012
960551	AF2-346 C	3.8089	Adder	4.48
960581	AF2-349 C	15.8829	Adder	18.69
960591	AF2-350 C O1	3.0554	Adder	3.59
960601	AF2-351 C O1	0.4074	Adder	0.48
960721	AF2-363 C O1	5.6063	80/20	5.6063
960731	AF2-364 C O1	5.7011	80/20	5.7011
960751	AF2-366 C	7.0087	80/20	7.0087
961011	AF2-392 C O1	2.8550	Adder	3.36
961021	AF2-393 O1	4.8664	Adder	5.73
961031	AF2-394 O1	3.2443	Adder	3.82
961651	AG1-005 C O1	4.8086	Adder	10.67
962691	AG1-118 C O1	22.3020	80/20	22.3020
962701	AG1-119 C	8.7902	Adder	19.51
962711	AG1-120 C O1	8.1841	80/20	8.1841
962721	AG1-121 C O1	1.6958	Adder	3.76
962781	AG1-127 C	7.7469	80/20	7.7469
962791	AG1-128 C O1	6.0243	80/20	6.0243
963681	AG1-220 C O1	11.0403	80/20	11.0403
964461	AG1-309 FTIR	207.1834	Merchant Transmission	207.1834
965061	AG1-371	1.4775	Adder	3.28
965071	AG1-372	0.9850	Adder	2.19
965081	AG1-373	0.4925	Adder	1.09
965141	AG1-379 C	3.8711	Adder	8.59
965551	AG1-423 C O1	14.0556	80/20	14.0556
965661	AG1-434 C O1	1.6752	Adder	3.72
965671	AG1-435 C O1	1.1454	Adder	2.54
965931	AG1-462 C O1	6.6713	Adder	14.81
966081	AG1-477 C	0.5838	Adder	1.3
966091	AG1-478 C	0.4800	Adder	1.07
966101	AG1-479 C (Withdrawn : 12/03/2020)	0.5838	Adder	1.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966441	AG1-513 C	0.4930	80/20	0.4930
966521	AG1-521 C O1	3.6343	Adder	8.07
966821	AG1-553 C O1	9.7845	Adder	21.72
WEC	WEC	2.9109	Confirmed LTF	2.9109
CALDERWOOD	CALDERWOOD	0.0403	Confirmed LTF	0.0403
CBM-W2	CBM-W2	11.4957	Confirmed LTF	11.4957
NY	NY	0.6913	Confirmed LTF	0.6913
TVA	TVA	0.8176	Confirmed LTF	0.8176
SIGE	SIGE	0.1031	Confirmed LTF	0.1031
CHEOAH	CHEOAH	0.0465	Confirmed LTF	0.0465
CBM-S1	CBM-S1	0.1300	Confirmed LTF	0.1300
HAMLET	HAMLET	0.3448	Confirmed LTF	0.3448
MEC	MEC	9.4673	Confirmed LTF	9.4673
GIBSON	GIBSON	0.1431	Confirmed LTF	0.1431
BLUEG	BLUEG	1.3801	Confirmed LTF	1.3801
TRIMBLE	TRIMBLE	0.4663	Confirmed LTF	0.4663
LAGN	LAGN	2.4675	Confirmed LTF	2.4675
CATAWBA	CATAWBA	0.1809	Confirmed LTF	0.1809
CBM-W1	CBM-W1	55.3650	Confirmed LTF	55.3650

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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
168538370	270847	PLANO ; R	CE	275208	PLANO ;4M	CE	1	COMED_P1-3_TR93_PLANO_B-S	single	1379.0	111.97	112.36	DC	15.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.6409	80/20	2.6409
274658	DRESDEN ;2U	57.7492	Adder	67.94
274660	LASCO STA;1U	25.2069	80/20	25.2069
274661	LASCO STA;2U	25.3188	80/20	25.3188
274693	ROCKY RD ;1P	1.8300	80/20	1.8300
274695	ROCKY RD ;2P	1.8482	80/20	1.8482
274697	ROCKY RD ;3P	0.5021	80/20	0.5021
274737	AURORA EC;1P	3.0751	80/20	3.0751
274738	AURORA EC;3P	3.0458	80/20	3.0458
274739	AURORA EC;2P	3.0751	80/20	3.0751
274740	AURORA EC;4P	3.0458	80/20	3.0458
274741	AURORA EC;5P	0.7220	80/20	0.7220
274742	AURORA EC;6P	0.7220	80/20	0.7220
274743	AURORA EC;7P	0.7220	80/20	0.7220
274744	AURORA EC;8P	0.7220	80/20	0.7220
274745	AURORA EC;9P	0.7220	80/20	0.7220
274746	AURORA EC;0P	0.7220	80/20	0.7220
274818	ELGIN EC ;1P	2.2650	80/20	2.2650
274819	ELGIN EC ;3P	2.2471	80/20	2.2471
274820	ELGIN EC ;2P	2.2650	80/20	2.2650
274821	ELGIN EC ;4P	2.2639	80/20	2.2639
274847	GR RIDGE ;BU	0.5331	80/20	0.5331
274850	MENDOTA H;RU	0.2498	80/20	0.2498
274855	GSG-6 ;RU	0.4113	80/20	0.4113
274871	GR RIDGE ;2U	0.1985	80/20	0.1985
274872	LEE DEKAL;1U	0.7858	80/20	0.7858
295108	WESTBROOK C	0.1333	80/20	0.1333
915011	Y3-013 1	2.5146	Adder	2.96
915021	Y3-013 2	2.5146	Adder	2.96
915031	Y3-013 3	2.5146	Adder	2.96
919581	AA2-030 C	12.9180	Adder	15.2
924472	AB2-096 CT1	14.2440	Adder	16.76
924473	AB2-096 CT2	14.2440	Adder	16.76
924474	AB2-096 CT3	14.2440	Adder	16.76
925581	AC1-033 C	0.8179	Adder	0.96
926311	AC1-109 1	0.3035	80/20	0.3035
926321	AC1-109 2	0.3035	80/20	0.3035
926331	AC1-110 1	1.9052	80/20	1.9052
926341	AC1-110 2	1.9052	80/20	1.9052
926351	AC1-111 1	0.1196	80/20	0.1196
926361	AC1-111 2	0.1196	80/20	0.1196

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926371	AC1-111 3	0.1196	80/20	0.1196
926381	AC1-111 4	0.1196	80/20	0.1196
926391	AC1-111 5	0.1196	80/20	0.1196
926401	AC1-111 6	0.1196	80/20	0.1196
926821	AC1-168 C O1	0.7013	Adder	0.83
927451	AC1-142A 1	1.8118	Adder	2.13
927461	AC1-142A 2	1.8132	Adder	2.13
930482	AB1-089 CT	27.8462	Adder	32.76
930483	AB1-089 ST	22.1389	Adder	26.05
930501	AB1-091 CT	15.8686	Adder	18.67
930502	AB1-091 ST	12.6162	Adder	14.84
930771	AB1-122 CT2	36.6074	Adder	43.07
933411	AC2-154 C	0.9914	Adder	1.17
933431	AC2-156 C O1	1.1341	80/20	1.1341
933911	AD1-013 C	1.8549	80/20	1.8549
933931	AD1-016 C	0.6978	Adder	0.82
934051	AD1-031 C O1	1.6609	Adder	1.95
934111	AD1-039 2	3.5875	Adder	4.22
934431	AD1-067 C	0.0207	80/20	0.0207
934701	AD1-098 C O1	6.8181	80/20	6.8181
934971	AD1-129 C	0.6793	Adder	0.8
936371	AD2-047 C O1	1.7742	Adder	2.09
936461	AD2-060	1.0436	Adder	1.23
936511	AD2-066 C O1	4.3684	Adder	5.14
936791	AD2-102 C	10.3652	Adder	12.19
937001	AD2-134 C	2.7260	80/20	2.7260
937311	AD2-172 C	1.8271	Adder	2.15
937401	AD2-194 1	2.9876	Adder	3.51
937411	AD2-194 2	2.9957	Adder	3.52
937531	AD2-214 C	3.1153	Adder	3.67
938511	AE1-070 1	3.5200	Adder	4.14
938521	AE1-070 2	3.2116	Adder	3.78
938851	AE1-113 C O1	3.5994	Adder	4.23
938861	AE1-114 C O1	2.9169	Adder	3.43
939051	AE1-134 1	1.0038	Adder	1.18
939061	AE1-134 2	1.0038	Adder	1.18
939351	AE1-166 C O1	2.1586	Adder	4.79
940501	AE2-035 C	1.8271	Adder	2.15
941131	AE2-107 C	6.7235	80/20	6.7235
941551	AE2-152 C O1	2.4907	Adder	5.53
941561	AE2-153 C O1	2.2024	Adder	2.59
942421	AE2-255 C O1	1.3634	Adder	1.6
942991	AE2-321 C	6.1705	Adder	7.26
943121	AE2-341 C	15.7691	80/20	15.7691
943411	AF1-012 C	9.0990	Adder	10.7
943591	AF1-030 C O1	10.4866	80/20	10.4866
943801	AF1-048 C	2.8845	Adder	3.39
943921	AF1-060	0.8996	Adder	1.06
944041	AF1-072	1.9832	80/20	1.9832
944911	AF1-156 C	5.6312	Adder	6.62
945351	AF1-200 FTIR	501.3223	80/20	501.3223
946151	AF1-280 C O1	11.5111	Adder	13.54

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946161	AF1-281 C O1	0.2521	Adder	0.3
946321	AF1-296 C O1	2.7310	Adder	3.21
946501	AF1-314 C	3.2464	Adder	3.82
946541	AF1-318 C O1	3.2723	Adder	3.85
946661	AF1-330 C	1.5093	Adder	1.78
946671	AF1-331	2.4090	80/20	2.4090
952431	J760	1.9842	PJM External (MISO)	1.9842
954141	J878	12.4629	PJM External (MISO)	12.4629
957331	AF2-027 C	1.6764	Adder	1.97
957401	AF2-034 C	0.6742	Adder	0.79
957471	AF2-041 C	17.1207	Adder	20.14
957751	AF2-069 C	0.1370	Adder	0.16
957761	AF2-070 C	0.1930	Adder	0.23
958011	AF2-095 C O1	7.0967	Adder	8.35
958021	AF2-096 C	16.8111	Adder	19.78
958341	AF2-128 C O1	0.8665	Adder	1.02
958911	AF2-182 C	15.1240	Adder	17.79
958921	AF2-183 C	2.6887	Adder	3.16
959081	AF2-199 C	5.7069	Adder	6.71
959091	AF2-200 C O1	11.4138	Adder	13.43
959101	AF2-201 C O1	4.4721	Adder	5.26
960381	AF2-329	8.1823	80/20	8.1823
960551	AF2-346 C	3.8996	Adder	4.59
960581	AF2-349 C	16.2685	Adder	19.14
960591	AF2-350 C O1	3.1309	Adder	3.68
960601	AF2-351 C O1	0.4175	Adder	0.49
960721	AF2-363 C O1	5.7392	80/20	5.7392
960731	AF2-364 C O1	5.8413	80/20	5.8413
960751	AF2-366 C	7.1727	80/20	7.1727
961011	AF2-392 C O1	2.9235	Adder	3.44
961021	AF2-393 O1	4.9832	Adder	5.86
961031	AF2-394 O1	3.3221	Adder	3.91
961651	AG1-005 C O1	4.9262	Adder	10.93
962691	AG1-118 C O1	22.8600	80/20	22.8600
962701	AG1-119 C	9.0042	Adder	19.99
962711	AG1-120 C O1	8.3784	80/20	8.3784
962721	AG1-121 C O1	1.7372	Adder	3.86
962781	AG1-127 C	7.9279	80/20	7.9279
962791	AG1-128 C O1	6.1663	80/20	6.1663
963681	AG1-220 C O1	11.2986	80/20	11.2986
964461	AG1-309 FTIR	212.2098	Merchant Transmission	212.2098
965061	AG1-371	1.5123	Adder	3.36
965071	AG1-372	1.0082	Adder	2.24
965081	AG1-373	0.5041	Adder	1.12
965141	AG1-379 C	3.9656	Adder	8.8
965551	AG1-423 C O1	14.4012	80/20	14.4012
965661	AG1-434 C O1	1.7147	Adder	3.81
965671	AG1-435 C O1	1.1731	Adder	2.6
965931	AG1-462 C O1	6.8318	Adder	15.16
966081	AG1-477 C	0.5981	Adder	1.33
966091	AG1-478 C	0.4917	Adder	1.09
966101	AG1-479 C (Withdrawn : 12/03/2020)	0.5981	Adder	1.33

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966441	AG1-513 C	0.5054	80/20	0.5054
966521	AG1-521 C O1	3.7208	Adder	8.26
966821	AG1-553 C O1	10.0200	Adder	22.24
WEC	WEC	2.9821	Confirmed LTF	2.9821
CALDERWOOD	CALDERWOOD	0.0413	Confirmed LTF	0.0413
CBM-W2	CBM-W2	11.7824	Confirmed LTF	11.7824
NY	NY	0.7084	Confirmed LTF	0.7084
TVA	TVA	0.8372	Confirmed LTF	0.8372
SIGE	SIGE	0.1055	Confirmed LTF	0.1055
CHEOAH	CHEOAH	0.0475	Confirmed LTF	0.0475
CBM-S1	CBM-S1	0.1330	Confirmed LTF	0.1330
HAMLET	HAMLET	0.3529	Confirmed LTF	0.3529
MEC	MEC	9.6977	Confirmed LTF	9.6977
GIBSON	GIBSON	0.1463	Confirmed LTF	0.1463
BLUEG	BLUEG	1.4131	Confirmed LTF	1.4131
TRIMBLE	TRIMBLE	0.4775	Confirmed LTF	0.4775
LAGN	LAGN	2.5270	Confirmed LTF	2.5270
CATAWBA	CATAWBA	0.1851	Confirmed LTF	0.1851
CBM-W1	CBM-W1	56.7109	Confirmed LTF	56.7109

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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
162238634	270917	WAYNE ; R	CE	270751	ESS W407M;9T	CE	1	COMED_P2-2_111_EJ-345B__2	bus	1479.0	133.02	134.02	DC	32.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.9390	Adder	2.28
274693	ROCKY RD ;1P	4.9438	50/50	4.9438
274695	ROCKY RD ;2P	4.9930	50/50	4.9930
274697	ROCKY RD ;3P	1.3564	50/50	1.3564
274818	ELGIN EC ;1P	6.1193	50/50	6.1193
274819	ELGIN EC ;3P	5.9003	50/50	5.9003
274820	ELGIN EC ;2P	6.1193	50/50	6.1193
274821	ELGIN EC ;4P	5.9445	50/50	5.9445
274859	EASYR;U1 E	13.9642	Adder	16.43
274860	EASYR;U2 E	13.9642	Adder	16.43
276167	Z1-106 E2	1.4340	Adder	1.69
276168	Z1-106 E1	1.4417	Adder	1.7
276170	Z1-108 E	4.6211	Adder	5.44
276591	L-013 2	4.1587	Adder	4.89
290051	GSG-6; E	7.7662	Adder	9.14
290108	LEEDK;1U E	15.8661	Adder	18.67
293516	O-009 E1	7.7042	Adder	9.06
293517	O-009 E2	3.9131	Adder	4.6
293518	O-009 E3	4.3094	Adder	5.07
293715	O-029 E	8.2367	Adder	9.69
293716	O-029 E	4.5160	Adder	5.31
293717	O-029 E	4.1507	Adder	4.88
294763	P-046 E	13.0043	Adder	15.3
295109	WESTBROOK E	4.1579	Adder	4.89
295111	SUBLETTE E	2.6058	Adder	3.07
915011	Y3-013 1	3.8467	Adder	4.53
915021	Y3-013 2	3.8467	Adder	4.53
915031	Y3-013 3	3.8467	Adder	4.53
916221	Z1-073 E	4.0338	Adder	4.75
919581	AA2-030 C	17.9891	Adder	21.16
920272	AA2-123 E	4.2932	Adder	5.05
924472	AB2-096 CT1	32.4357	Adder	38.16
924473	AB2-096 CT2	32.4357	Adder	38.16
924474	AB2-096 CT3	32.4357	Adder	38.16
926331	AC1-110 1	1.1713	Adder	1.38
926341	AC1-110 2	1.1713	Adder	1.38
930482	AB1-089 CT	67.6128	Adder	79.54
930483	AB1-089 ST	53.7548	Adder	63.24
933911	AD1-013 C	1.3548	Adder	1.59
933912	AD1-013 E	2.1642	Adder	2.55
933931	AD1-016 C	1.6280	Adder	1.92

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933932	AD1-016 E	2.6562	Adder	3.12
934432	AD1-067 E	0.4100	Adder	0.48
934701	AD1-098 C O1	5.2058	Adder	6.12
934702	AD1-098 E O1	3.8008	Adder	4.47
934971	AD1-129 C	1.4858	Adder	1.75
934972	AD1-129 E	0.9905	Adder	1.17
936791	AD2-102 C	21.2711	Adder	25.02
936792	AD2-102 E	14.1807	Adder	16.68
937001	AD2-134 C	2.0302	Adder	2.39
937002	AD2-134 E	8.3868	Adder	9.87
937311	AD2-172 C	3.4136	Adder	4.02
937312	AD2-172 E	4.7141	Adder	5.55
937531	AD2-214 C	4.1214	Adder	4.85
937532	AD2-214 E	2.7476	Adder	3.23
938861	AE1-114 C O1	4.8471	Adder	5.7
938862	AE1-114 E O1	16.5372	Adder	19.46
939051	AE1-134 1	1.3979	Adder	1.64
939061	AE1-134 2	1.3979	Adder	1.64
940501	AE2-035 C	3.4136	Adder	4.02
940502	AE2-035 E	4.7141	Adder	5.55
941131	AE2-107 C	4.2838	Adder	5.04
941132	AE2-107 E	2.8559	Adder	3.36
942991	AE2-321 C	14.2751	Adder	16.79
942992	AE2-321 E	7.0310	Adder	8.27
943411	AF1-012 C	11.0759	Adder	13.03
943412	AF1-012 E	7.3839	Adder	8.69
943801	AF1-048 C	6.6731	Adder	7.85
943802	AF1-048 E	4.4487	Adder	5.23
943921	AF1-060	1.6808	Adder	1.98
944041	AF1-072	5.3576	50/50	5.3576
945352	AF1-200 NFTW	160.5240	Merchant Transmission	160.5240
946151	AF1-280 C O1	18.6250	Adder	21.91
946152	AF1-280 E O1	8.5648	Adder	10.08
946161	AF1-281 C O1	0.4078	Adder	0.48
946162	AF1-281 E O1	2.3111	Adder	2.72
946321	AF1-296 C O1	3.5830	Adder	4.22
946322	AF1-296 E O1	16.7748	Adder	19.74
946501	AF1-314 C	6.0652	Adder	7.14
946502	AF1-314 E	28.3962	Adder	33.41
946661	AF1-330 C	3.5204	Adder	4.14
946662	AF1-330 E	0.7728	Adder	0.91
946671	AF1-331	1.7595	Adder	2.07
952381	J703	12.0901	PJM External (MISO)	12.0901
952391	J704	5.1683	PJM External (MISO)	5.1683
952431	J760	4.4037	PJM External (MISO)	4.4037
953151	J831	4.1304	PJM External (MISO)	4.1304
953491	J947	20.7780	PJM External (MISO)	20.7780
953681	J818	17.7638	PJM External (MISO)	17.7638
953891	J849	11.8100	PJM External (MISO)	11.8100
953901	J850	31.6400	PJM External (MISO)	31.6400
953921	J855 C	1.3711	PJM External (MISO)	1.3711
953922	J855 E	7.4179	PJM External (MISO)	7.4179

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954001	J864	4.8021	PJM External (MISO)	4.8021
954061	J870	18.6640	PJM External (MISO)	18.6640
954071	J871	9.3320	PJM External (MISO)	9.3320
954141	J878	21.7400	PJM External (MISO)	21.7400
954191	J886	14.5965	PJM External (MISO)	14.5965
954741	J928 C	1.1790	PJM External (MISO)	1.1790
954742	J928 E	6.3789	PJM External (MISO)	6.3789
955091	J986	13.1909	PJM External (MISO)	13.1909
955221	J1000	4.0525	PJM External (MISO)	4.0525
955241	J1002	9.6961	PJM External (MISO)	9.6961
955251	J1003	5.4075	PJM External (MISO)	5.4075
955582	J1042 E	21.3750	PJM External (MISO)	21.3750
956141	J1101	1.9462	PJM External (MISO)	1.9462
956571	J1153	15.3075	PJM External (MISO)	15.3075
956581	J1154	8.9423	PJM External (MISO)	8.9423
956731	J1171	10.3950	PJM External (MISO)	10.3950
956852	J1183 E	0.1275	PJM External (MISO)	0.1275
956901	J1188	6.1955	PJM External (MISO)	6.1955
957331	AF2-027 C	2.5644	Adder	3.02
957332	AF2-027 E	3.8467	Adder	4.53
957471	AF2-041 C	15.8309	Adder	18.62
957472	AF2-041 E	7.9155	Adder	9.31
958911	AF2-182 C	24.4708	Adder	28.79
958912	AF2-182 E	16.3139	Adder	19.19
958921	AF2-183 C	4.3504	Adder	5.12
958922	AF2-183 E	6.5256	Adder	7.68
959081	AF2-199 C	5.2770	Adder	6.21
959082	AF2-199 E	2.6385	Adder	3.1
959091	AF2-200 C O1	10.5539	Adder	12.42
959092	AF2-200 E O1	5.2770	Adder	6.21
959101	AF2-201 C O1	8.3553	Adder	9.83
959102	AF2-201 E O1	23.9930	Adder	28.23
960551	AF2-346 C	4.7468	Adder	5.58
960552	AF2-346 E	3.1646	Adder	3.72
960581	AF2-349 C	37.0459	Adder	43.58
960582	AF2-349 E	24.6973	Adder	29.06
960721	AF2-363 C O1	5.9801	Adder	7.04
960722	AF2-363 E O1	3.9867	Adder	4.69
960731	AF2-364 C O1	12.8042	Adder	15.06
960732	AF2-364 E O1	8.5361	Adder	10.04
960751	AF2-366 C	4.5785	Adder	5.39
960752	AF2-366 E	3.0524	Adder	3.59
961011	AF2-392 C O1	3.9761	Adder	4.68
961012	AF2-392 E O1	18.6152	Adder	21.9
961021	AF2-393 O1	6.7774	Adder	7.97
961031	AF2-394 O1	4.5183	Adder	5.32
962012	AG1-044 E	0.0316	Adder	0.07
962701	AG1-119 C	56.0682	50/50	56.0682
962702	AG1-119 E	37.3788	50/50	37.3788
962711	AG1-120 C O1	4.5727	Adder	10.15
962712	AG1-120 E O1	3.0485	Adder	6.77
962781	AG1-127 C	2.7193	Adder	6.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962782	AG1-127 E	1.8128	Adder	4.02
962791	AG1-128 C O1	2.4339	Adder	5.4
962792	AG1-128 E O1	11.3897	Adder	25.28
963681	AG1-220 C O1	3.6981	Adder	8.21
963682	AG1-220 E O1	2.4654	Adder	5.47
964461	AG1-309 FTIR	460.7444	Merchant Transmission	460.7444
965061	AG1-371	1.3984	Adder	3.1
965071	AG1-372	0.9323	Adder	2.07
965081	AG1-373	0.4661	Adder	1.03
965551	AG1-423 C O1	51.3480	50/50	51.3480
965552	AG1-423 E O1	34.2320	50/50	34.2320
965661	AG1-434 C O1	1.7646	Adder	3.92
965662	AG1-434 E O1	8.2617	Adder	18.34
965931	AG1-462 C O1	8.8785	Adder	19.71
965932	AG1-462 E O1	5.9190	Adder	13.14
966521	AG1-521 C O1	4.6373	Adder	10.29
966522	AG1-521 E O1	1.1593	Adder	2.57
966821	AG1-553 C O1	13.0219	Adder	28.91
966822	AG1-553 E O1	3.2555	Adder	7.23
WEC	WEC	4.7045	Confirmed LTF	4.7045
CBM-W2	CBM-W2	10.0352	Confirmed LTF	10.0352
NY	NY	0.4159	Confirmed LTF	0.4159
TVA	TVA	0.9912	Confirmed LTF	0.9912
O-066	O-066	4.9533	Confirmed LTF	4.9533
SIGE	SIGE	0.0407	Confirmed LTF	0.0407
CBM-S1	CBM-S1	0.1813	Confirmed LTF	0.1813
G-007	G-007	0.7718	Confirmed LTF	0.7718
HAMLET	HAMLET	0.1322	Confirmed LTF	0.1322
MEC	MEC	12.2957	Confirmed LTF	12.2957
GIBSON	GIBSON	0.2424	Confirmed LTF	0.2424
BLUEG	BLUEG	1.0468	Confirmed LTF	1.0468
TRIMBLE	TRIMBLE	0.3489	Confirmed LTF	0.3489
LAGN	LAGN	2.8682	Confirmed LTF	2.8682
CATAWBA	CATAWBA	0.0581	Confirmed LTF	0.0581
CBM-W1	CBM-W1	87.9194	Confirmed LTF	87.9194

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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
162238605	274749	AURORA EC;RP	CE	270731	ELECT JCT;4R	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	139.28	140.27	DC	32.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.9061	Adder	2.24
274693	ROCKY RD ;1P	4.9159	50/50	4.9159
274695	ROCKY RD ;2P	4.9648	50/50	4.9648
274697	ROCKY RD ;3P	1.3487	50/50	1.3487
274737	AURORA EC;1P	18.4979	50/50	18.4979
274739	AURORA EC;2P	18.4979	50/50	18.4979
274818	ELGIN EC ;1P	6.0857	50/50	6.0857
274820	ELGIN EC ;2P	6.0857	50/50	6.0857
274859	EASYR;U1 E	13.8206	Adder	16.26
274860	EASYR;U2 E	13.8206	Adder	16.26
276167	Z1-106 E2	1.4191	Adder	1.67
276168	Z1-106 E1	1.4267	Adder	1.68
276170	Z1-108 E	4.5912	Adder	5.4
276591	L-013 2	4.1153	Adder	4.84
290051	GSG-6; E	7.6351	Adder	8.98
290108	LEEDK;1U E	15.5669	Adder	18.31
293516	O-009 E1	7.5822	Adder	8.92
293517	O-009 E2	3.8512	Adder	4.53
293518	O-009 E3	4.2412	Adder	4.99
293715	O-029 E	8.1062	Adder	9.54
293716	O-029 E	4.4445	Adder	5.23
293717	O-029 E	4.0850	Adder	4.81
294763	P-046 E	12.8846	Adder	15.16
295109	WESTBROOK E	4.0878	Adder	4.81
295111	SUBLETTE E	2.5719	Adder	3.03
915011	Y3-013 1	3.8018	Adder	4.47
915021	Y3-013 2	3.8018	Adder	4.47
915031	Y3-013 3	3.8018	Adder	4.47
916221	Z1-073 E	3.9657	Adder	4.67
919581	AA2-030 C	17.7542	Adder	20.89
920272	AA2-123 E	4.2633	Adder	5.02
924472	AB2-096 CT1	32.2000	Adder	37.88
924473	AB2-096 CT2	32.2000	Adder	37.88
924474	AB2-096 CT3	32.2000	Adder	37.88
926311	AC1-109 1	1.8257	50/50	1.8257
926321	AC1-109 2	1.8257	50/50	1.8257
930482	AB1-089 CT	67.1571	Adder	79.01
930483	AB1-089 ST	53.3925	Adder	62.81
933911	AD1-013 C	1.3318	Adder	1.57
933912	AD1-013 E	2.1274	Adder	2.5
933931	AD1-016 C	1.6166	Adder	1.9

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933932	AD1-016 E	2.6376	Adder	3.1
934432	AD1-067 E	0.4031	Adder	0.47
934701	AD1-098 C O1	5.1193	Adder	6.02
934702	AD1-098 E O1	3.7377	Adder	4.4
934971	AD1-129 C	1.4745	Adder	1.73
934972	AD1-129 E	0.9830	Adder	1.16
936791	AD2-102 C	21.0916	Adder	24.81
936792	AD2-102 E	14.0610	Adder	16.54
937001	AD2-134 C	1.9959	Adder	2.35
937002	AD2-134 E	8.2452	Adder	9.7
937311	AD2-172 C	3.3822	Adder	3.98
937312	AD2-172 E	4.6707	Adder	5.49
937531	AD2-214 C	4.0607	Adder	4.78
937532	AD2-214 E	2.7071	Adder	3.18
938861	AE1-114 C O1	4.7962	Adder	5.64
938862	AE1-114 E O1	16.3637	Adder	19.25
939051	AE1-134 1	1.3796	Adder	1.62
939061	AE1-134 2	1.3796	Adder	1.62
940501	AE2-035 C	3.3822	Adder	3.98
940502	AE2-035 E	4.6707	Adder	5.49
941131	AE2-107 C	4.2031	Adder	4.94
941132	AE2-107 E	2.8020	Adder	3.3
942991	AE2-321 C	14.1749	Adder	16.68
942992	AE2-321 E	6.9816	Adder	8.21
943411	AF1-012 C	10.9188	Adder	12.85
943412	AF1-012 E	7.2792	Adder	8.56
943801	AF1-048 C	6.6262	Adder	7.8
943802	AF1-048 E	4.4175	Adder	5.2
943921	AF1-060	1.6653	Adder	1.96
944041	AF1-072	5.3274	50/50	5.3274
946151	AF1-280 C O1	18.4201	Adder	21.67
946152	AF1-280 E O1	8.4705	Adder	9.97
946161	AF1-281 C O1	0.4034	Adder	0.47
946162	AF1-281 E O1	2.2857	Adder	2.69
946321	AF1-296 C O1	3.5272	Adder	4.15
946322	AF1-296 E O1	16.5133	Adder	19.43
946501	AF1-314 C	6.0094	Adder	7.07
946502	AF1-314 E	28.1349	Adder	33.1
946661	AF1-330 C	3.4959	Adder	4.11
946662	AF1-330 E	0.7674	Adder	0.9
946671	AF1-331	1.7296	Adder	2.03
952381	J703	12.0901	PJM External (MISO)	12.0901
952391	J704	5.1683	PJM External (MISO)	5.1683
952431	J760	4.4037	PJM External (MISO)	4.4037
953151	J831	4.1304	PJM External (MISO)	4.1304
953491	J947	20.7780	PJM External (MISO)	20.7780
953681	J818	17.7638	PJM External (MISO)	17.7638
953891	J849	11.8100	PJM External (MISO)	11.8100
953901	J850	31.6400	PJM External (MISO)	31.6400
954001	J864	4.8021	PJM External (MISO)	4.8021
954061	J870	18.6640	PJM External (MISO)	18.6640
954071	J871	9.3320	PJM External (MISO)	9.3320

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954141	J878	21.7400	PJM External (MISO)	21.7400
954191	J886	14.5965	PJM External (MISO)	14.5965
954741	J928 C	1.1790	PJM External (MISO)	1.1790
954742	J928 E	6.3789	PJM External (MISO)	6.3789
955241	J1002	9.6961	PJM External (MISO)	9.6961
955251	J1003	5.4075	PJM External (MISO)	5.4075
955582	J1042 E	21.3750	PJM External (MISO)	21.3750
956141	J1101	1.9462	PJM External (MISO)	1.9462
956571	J1153	15.3075	PJM External (MISO)	15.3075
956581	J1154	8.9423	PJM External (MISO)	8.9423
956731	J1171	10.3950	PJM External (MISO)	10.3950
956852	J1183 E	0.1275	PJM External (MISO)	0.1275
956901	J1188	6.1955	PJM External (MISO)	6.1955
957331	AF2-027 C	2.5345	Adder	2.98
957332	AF2-027 E	3.8018	Adder	4.47
957471	AF2-041 C	15.5616	Adder	18.31
957472	AF2-041 E	7.7808	Adder	9.15
958911	AF2-182 C	24.2015	Adder	28.47
958912	AF2-182 E	16.1344	Adder	18.98
958921	AF2-183 C	4.3025	Adder	5.06
958922	AF2-183 E	6.4537	Adder	7.59
959081	AF2-199 C	5.1872	Adder	6.1
959082	AF2-199 E	2.5936	Adder	3.05
959091	AF2-200 C O1	10.3744	Adder	12.21
959092	AF2-200 E O1	5.1872	Adder	6.1
959101	AF2-201 C O1	8.2784	Adder	9.74
959102	AF2-201 E O1	23.7722	Adder	27.97
960551	AF2-346 C	4.6795	Adder	5.51
960552	AF2-346 E	3.1197	Adder	3.67
960581	AF2-349 C	36.7766	Adder	43.27
960582	AF2-349 E	24.5177	Adder	28.84
960721	AF2-363 C O1	5.9070	Adder	6.95
960722	AF2-363 E O1	3.9380	Adder	4.63
960731	AF2-364 C O1	12.7311	Adder	14.98
960732	AF2-364 E O1	8.4874	Adder	9.99
960751	AF2-366 C	4.4934	Adder	5.29
960752	AF2-366 E	2.9956	Adder	3.52
961011	AF2-392 C O1	3.9234	Adder	4.62
961012	AF2-392 E O1	18.3687	Adder	21.61
961021	AF2-393 O1	6.6876	Adder	7.87
961031	AF2-394 O1	4.4584	Adder	5.25
962012	AG1-044 E	0.0312	Adder	0.07
962701	AG1-119 C	55.7514	50/50	55.7514
962702	AG1-119 E	37.1676	50/50	37.1676
962711	AG1-120 C O1	4.5163	Adder	10.03
962712	AG1-120 E O1	3.0108	Adder	6.68
962781	AG1-127 C	2.6693	Adder	5.93
962782	AG1-127 E	1.7795	Adder	3.95
962791	AG1-128 C O1	2.3929	Adder	5.31
962792	AG1-128 E O1	11.1975	Adder	24.86
964461	AG1-309 FTIR	457.1627	Merchant Transmission	457.1627
965061	AG1-371	1.3746	Adder	3.05

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965071	AG1-372	0.9164	Adder	2.03
965081	AG1-373	0.4582	Adder	1.02
965551	AG1-423 C O1	51.1368	50/50	51.1368
965552	AG1-423 E O1	34.0912	50/50	34.0912
965661	AG1-434 C O1	1.7367	Adder	3.86
965662	AG1-434 E O1	8.1310	Adder	18.05
965931	AG1-462 C O1	8.7358	Adder	19.39
965932	AG1-462 E O1	5.8239	Adder	12.93
966521	AG1-521 C O1	4.5738	Adder	10.15
966522	AG1-521 E O1	1.1435	Adder	2.54
966821	AG1-553 C O1	12.8125	Adder	28.44
966822	AG1-553 E O1	3.2031	Adder	7.11
WEC	WEC	4.6494	Confirmed LTF	4.6494
CALDERWOOD	CALDERWOOD	0.0060	Confirmed LTF	0.0060
CBM-W2	CBM-W2	8.4672	Confirmed LTF	8.4672
NY	NY	0.5126	Confirmed LTF	0.5126
TVA	TVA	0.7462	Confirmed LTF	0.7462
O-066	O-066	6.1310	Confirmed LTF	6.1310
SIGE	SIGE	0.0407	Confirmed LTF	0.0407
CHEOAH	CHEOAH	0.0105	Confirmed LTF	0.0105
CBM-S1	CBM-S1	0.1148	Confirmed LTF	0.1148
G-007	G-007	0.9555	Confirmed LTF	0.9555
HAMLET	HAMLET	0.2333	Confirmed LTF	0.2333
MEC	MEC	12.0176	Confirmed LTF	12.0176
GIBSON	GIBSON	0.3380	Confirmed LTF	0.3380
BLUEG	BLUEG	1.3506	Confirmed LTF	1.3506
TRIMBLE	TRIMBLE	0.4463	Confirmed LTF	0.4463
LAGN	LAGN	2.5620	Confirmed LTF	2.5620
CATAWBA	CATAWBA	0.1193	Confirmed LTF	0.1193
CBM-W1	CBM-W1	85.4659	Confirmed LTF	85.4659

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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
162238969	274768	LEE CO EC;BP	CE	270678	BYRON ; B	CE	1	COMED_P7-1_138-L11106_B-R+_345-L15502_B-R-A	tower	2084.0	114.16	115.83	DC	77.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274760	LEE CO EC;1U	7.0694	50/50	7.0694
274761	LEE CO EC;2U	7.0694	50/50	7.0694
274762	LEE CO EC;3U	7.0694	50/50	7.0694
274763	LEE CO EC;4U	7.0028	50/50	7.0028
274764	LEE CO EC;5U	7.0861	50/50	7.0861
274765	LEE CO EC;6U	7.0861	50/50	7.0861
274767	LEE CO EC;8U	6.9861	50/50	6.9861
274859	EASYR;U1 E	43.0668	Adder	50.67
274860	EASYR;U2 E	43.0668	Adder	50.67
293516	O-009 E1	18.3972	Adder	21.64
293517	O-009 E2	9.3444	Adder	10.99
293518	O-009 E3	10.2907	Adder	12.11
293715	O-029 E	19.6687	Adder	23.14
293716	O-029 E	10.7840	Adder	12.69
293717	O-029 E	9.9117	Adder	11.66
294401	BSHIL;1U E	8.2450	Adder	9.7
294410	BSHIL;2U E	8.2450	Adder	9.7
295111	SUBLETTE E	4.5086	Adder	5.3
919581	AA2-030 C	50.8778	Adder	59.86
920273	AA2-123 BAT	2.3854	Merchant Transmission	2.3854
925581	AC1-033 C	1.3505	Adder	1.59
925582	AC1-033 E	9.0408	Adder	10.64
934051	AD1-031 C O1	2.7430	Adder	3.23
934052	AD1-031 E O1	4.4755	Adder	5.27
937531	AD2-214 C	9.5401	Adder	11.22
937532	AD2-214 E	6.3601	Adder	7.48
939051	AE1-134 1	3.9536	Adder	4.65
939061	AE1-134 2	3.9536	Adder	4.65
943411	AF1-012 C	34.0239	Adder	40.03
943412	AF1-012 E	22.6826	Adder	26.69
943803	AF1-048 BAT	6.1601	Merchant Transmission	6.1601
946151	AF1-280 C O1	56.2046	Adder	66.12
946152	AF1-280 E O1	25.8459	Adder	30.41
946161	AF1-281 C O1	1.2308	Adder	1.45
946162	AF1-281 E O1	6.9743	Adder	8.21
946321	AF1-296 C O1	7.8777	Adder	9.27
946322	AF1-296 E O1	36.8816	Adder	43.39
951421	J514	3.3000	PJM External (MISO)	3.3000
951511	J530 C	5.6565	PJM External (MISO)	5.6565

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
951512	J530 E	22.6260	PJM External (MISO)	22.6260
954702	J844 E	16.1347	PJM External (MISO)	16.1347
954792	J952 E	7.3040	PJM External (MISO)	7.3040
954901	J963	1.3109	PJM External (MISO)	1.3109
955051	J981 C	4.0782	PJM External (MISO)	4.0782
955052	J981 E	22.0638	PJM External (MISO)	22.0638
955971	J1084	34.4835	PJM External (MISO)	34.4835
956411	J1131	18.0800	PJM External (MISO)	18.0800
957471	AF2-041 C	58.3190	Adder	68.61
957472	AF2-041 E	29.1595	Adder	34.31
958911	AF2-182 C	73.8455	Adder	86.88
958912	AF2-182 E	49.2303	Adder	57.92
958921	AF2-183 C	13.1281	Adder	15.44
958922	AF2-183 E	19.6921	Adder	23.17
959081	AF2-199 C	19.4397	Adder	22.87
959082	AF2-199 E	9.7198	Adder	11.44
959091	AF2-200 C O1	38.8793	Adder	45.74
959092	AF2-200 E O1	19.4397	Adder	22.87
960551	AF2-346 C	14.5817	Adder	17.15
960552	AF2-346 E	9.7211	Adder	11.44
961011	AF2-392 C O1	8.5580	Adder	10.07
961012	AF2-392 E O1	40.0671	Adder	47.14
961021	AF2-393 O1	14.5875	Adder	17.16
961031	AF2-394 O1	9.7250	Adder	11.44
962012	AG1-044 E	0.0773	Adder	0.17
964462	AG1-309 NFTW	522.6270	Merchant Transmission	522.6270
965061	AG1-371	5.1515	Adder	11.44
965071	AG1-372	3.4343	Adder	7.62
965081	AG1-373	1.7172	Adder	3.81
965661	AG1-434 C O1	6.0448	Adder	13.42
965662	AG1-434 E O1	28.3005	Adder	62.82
965931	AG1-462 C O1	20.9650	Adder	46.54
965932	AG1-462 E O1	13.9767	Adder	31.02
966521	AG1-521 C O1	7.2275	Adder	16.04
966522	AG1-521 E O1	1.8069	Adder	4.01
966821	AG1-553 C O1	30.7487	Adder	68.25
966822	AG1-553 E O1	7.6872	Adder	17.06
LGEE	LGEE	0.1564	Confirmed LTF	0.1564
CPL	CPL	0.3535	Confirmed LTF	0.3535
CBM-W2	CBM-W2	21.1008	Confirmed LTF	21.1008
NY	NY	0.0343	Confirmed LTF	0.0343
TVA	TVA	2.4906	Confirmed LTF	2.4906
O-066	O-066	0.2759	Confirmed LTF	0.2759
SIGE	SIGE	0.0646	Confirmed LTF	0.0646
CBM-S2	CBM-S2	7.2767	Confirmed LTF	7.2767
CBM-S1	CBM-S1	0.5704	Confirmed LTF	0.5704
G-007	G-007	0.0420	Confirmed LTF	0.0420
MEC	MEC	15.1718	Confirmed LTF	15.1718
LAGN	LAGN	4.8090	Confirmed LTF	4.8090
CBM-W1	CBM-W1	22.0254	Confirmed LTF	22.0254

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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
168538388	275207	PLANO ;3M	CE	270630	PLANO ;	CE	1	COMED_P1-3_TR94_PLANO_RS	single	1379.0	109.29	109.68	DC	14.81

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.5804	80/20	2.5804
274658	DRESDEN ;2U	56.3914	Adder	66.34
274660	LASCO STA;1U	24.5983	80/20	24.5983
274661	LASCO STA;2U	24.7059	80/20	24.7059
274693	ROCKY RD ;1P	1.7863	80/20	1.7863
274695	ROCKY RD ;2P	1.8041	80/20	1.8041
274697	ROCKY RD ;3P	0.4901	80/20	0.4901
274737	AURORA EC;1P	2.9976	80/20	2.9976
274738	AURORA EC;3P	2.9756	80/20	2.9756
274739	AURORA EC;2P	2.9976	80/20	2.9976
274740	AURORA EC;4P	2.9756	80/20	2.9756
274741	AURORA EC;5P	0.7044	80/20	0.7044
274742	AURORA EC;6P	0.7044	80/20	0.7044
274743	AURORA EC;7P	0.7044	80/20	0.7044
274744	AURORA EC;8P	0.7044	80/20	0.7044
274745	AURORA EC;9P	0.7044	80/20	0.7044
274746	AURORA EC;0P	0.7044	80/20	0.7044
274818	ELGIN EC ;1P	2.2112	80/20	2.2112
274819	ELGIN EC ;3P	2.1932	80/20	2.1932
274820	ELGIN EC ;2P	2.2112	80/20	2.2112
274821	ELGIN EC ;4P	2.2097	80/20	2.2097
274847	GR RIDGE ;BU	0.5203	80/20	0.5203
274850	MENDOTA H;RU	0.2440	80/20	0.2440
274855	GSG-6 ;RU	0.4018	80/20	0.4018
274871	GR RIDGE ;2U	0.1937	80/20	0.1937
274872	LEE DEKAL;1U	0.7678	80/20	0.7678
295108	WESTBROOK C	0.1303	80/20	0.1303
915011	Y3-013 1	2.4544	Adder	2.89
915021	Y3-013 2	2.4544	Adder	2.89
915031	Y3-013 3	2.4544	Adder	2.89
919581	AA2-030 C	12.6150	Adder	14.84
924472	AB2-096 CT1	13.9064	Adder	16.36
924473	AB2-096 CT2	13.9064	Adder	16.36
924474	AB2-096 CT3	13.9064	Adder	16.36
925581	AC1-033 C	0.7985	Adder	0.94
926311	AC1-109 1	0.2959	80/20	0.2959
926321	AC1-109 2	0.2959	80/20	0.2959
926331	AC1-110 1	1.8612	80/20	1.8612
926341	AC1-110 2	1.8612	80/20	1.8612
926351	AC1-111 1	0.1167	80/20	0.1167
926361	AC1-111 2	0.1167	80/20	0.1167

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926371	AC1-111 3	0.1167	80/20	0.1167
926381	AC1-111 4	0.1167	80/20	0.1167
926391	AC1-111 5	0.1167	80/20	0.1167
926401	AC1-111 6	0.1167	80/20	0.1167
926821	AC1-168 C O1	0.6845	Adder	0.81
927451	AC1-142A 1	1.7683	Adder	2.08
927461	AC1-142A 2	1.7696	Adder	2.08
930482	AB1-089 CT	27.1847	Adder	31.98
930483	AB1-089 ST	21.6129	Adder	25.43
930501	AB1-091 CT	15.4858	Adder	18.22
930502	AB1-091 ST	12.3118	Adder	14.48
930771	AB1-122 CT2	35.7472	Adder	42.06
933411	AC2-154 C	0.9675	Adder	1.14
933431	AC2-156 C O1	1.1088	80/20	1.1088
933911	AD1-013 C	1.8124	80/20	1.8124
933931	AD1-016 C	0.6812	Adder	0.8
934051	AD1-031 C O1	1.6216	Adder	1.91
934111	AD1-039 2	3.5032	Adder	4.12
934431	AD1-067 C	0.0202	80/20	0.0202
934701	AD1-098 C O1	6.6614	80/20	6.6614
934971	AD1-129 C	0.6633	Adder	0.78
936371	AD2-047 C O1	1.7314	Adder	2.04
936461	AD2-060	1.0185	Adder	1.2
936511	AD2-066 C O1	4.2643	Adder	5.02
936791	AD2-102 C	10.1194	Adder	11.91
937001	AD2-134 C	2.6633	80/20	2.6633
937311	AD2-172 C	1.7841	Adder	2.1
937401	AD2-194 1	2.9162	Adder	3.43
937411	AD2-194 2	2.9243	Adder	3.44
937531	AD2-214 C	3.0421	Adder	3.58
938511	AE1-070 1	3.4361	Adder	4.04
938521	AE1-070 2	3.1349	Adder	3.69
938851	AE1-113 C O1	3.5135	Adder	4.13
938861	AE1-114 C O1	2.8484	Adder	3.35
939051	AE1-134 1	0.9803	Adder	1.15
939061	AE1-134 2	0.9803	Adder	1.15
939351	AE1-166 C O1	2.1066	Adder	4.68
940501	AE2-035 C	1.7841	Adder	2.1
941131	AE2-107 C	6.5696	80/20	6.5696
941551	AE2-152 C O1	2.4307	Adder	5.4
941561	AE2-153 C O1	2.1492	Adder	2.53
942421	AE2-255 C O1	1.3309	Adder	1.57
942991	AE2-321 C	6.0236	Adder	7.09
943121	AE2-341 C	15.4200	80/20	15.4200
943411	AF1-012 C	8.8875	Adder	10.46
943591	AF1-030 C O1	10.2544	80/20	10.2544
943801	AF1-048 C	2.8158	Adder	3.31
943921	AF1-060	0.8785	Adder	1.03
944041	AF1-072	1.9359	80/20	1.9359
944911	AF1-156 C	5.4950	Adder	6.46
945351	AF1-200 FTIR	489.1937	80/20	489.1937
946151	AF1-280 C O1	11.2409	Adder	13.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946161	AF1-281 C O1	0.2462	Adder	0.29
946321	AF1-296 C O1	2.6669	Adder	3.14
946501	AF1-314 C	3.1699	Adder	3.73
946541	AF1-318 C O1	3.1947	Adder	3.76
946661	AF1-330 C	1.4733	Adder	1.73
946671	AF1-331	2.3538	80/20	2.3538
952431	J760	1.9374	PJM External (MISO)	1.9374
954141	J878	12.1642	PJM External (MISO)	12.1642
957331	AF2-027 C	1.6362	Adder	1.92
957401	AF2-034 C	0.6583	Adder	0.77
957471	AF2-041 C	16.7260	Adder	19.68
957751	AF2-069 C	0.1337	Adder	0.16
957761	AF2-070 C	0.1884	Adder	0.22
958011	AF2-095 C O1	6.9256	Adder	8.15
958021	AF2-096 C	16.4058	Adder	19.3
958341	AF2-128 C O1	0.8458	Adder	1.0
958911	AF2-182 C	14.7691	Adder	17.38
958921	AF2-183 C	2.6256	Adder	3.09
959081	AF2-199 C	5.5753	Adder	6.56
959091	AF2-200 C O1	11.1506	Adder	13.12
959101	AF2-201 C O1	4.3668	Adder	5.14
960381	AF2-329	8.0012	80/20	8.0012
960551	AF2-346 C	3.8089	Adder	4.48
960581	AF2-349 C	15.8829	Adder	18.69
960591	AF2-350 C O1	3.0554	Adder	3.59
960601	AF2-351 C O1	0.4074	Adder	0.48
960721	AF2-363 C O1	5.6063	80/20	5.6063
960731	AF2-364 C O1	5.7011	80/20	5.7011
960751	AF2-366 C	7.0087	80/20	7.0087
961011	AF2-392 C O1	2.8550	Adder	3.36
961021	AF2-393 O1	4.8664	Adder	5.73
961031	AF2-394 O1	3.2443	Adder	3.82
961651	AG1-005 C O1	4.8086	Adder	10.67
962691	AG1-118 C O1	22.3020	80/20	22.3020
962701	AG1-119 C	8.7902	Adder	19.51
962711	AG1-120 C O1	8.1841	80/20	8.1841
962721	AG1-121 C O1	1.6958	Adder	3.76
962781	AG1-127 C	7.7469	80/20	7.7469
962791	AG1-128 C O1	6.0243	80/20	6.0243
963681	AG1-220 C O1	11.0403	80/20	11.0403
964461	AG1-309 FTIR	207.1834	Merchant Transmission	207.1834
965061	AG1-371	1.4775	Adder	3.28
965071	AG1-372	0.9850	Adder	2.19
965081	AG1-373	0.4925	Adder	1.09
965141	AG1-379 C	3.8711	Adder	8.59
965551	AG1-423 C O1	14.0556	80/20	14.0556
965661	AG1-434 C O1	1.6752	Adder	3.72
965671	AG1-435 C O1	1.1454	Adder	2.54
965931	AG1-462 C O1	6.6713	Adder	14.81
966081	AG1-477 C	0.5838	Adder	1.3
966091	AG1-478 C	0.4800	Adder	1.07
966101	AG1-479 C (Withdrawn : 12/03/2020)	0.5838	Adder	1.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966441	AG1-513 C	0.4930	80/20	0.4930
966521	AG1-521 C O1	3.6343	Adder	8.07
966821	AG1-553 C O1	9.7845	Adder	21.72
WEC	WEC	2.9109	Confirmed LTF	2.9109
CALDERWOOD	CALDERWOOD	0.0403	Confirmed LTF	0.0403
CBM-W2	CBM-W2	11.4957	Confirmed LTF	11.4957
NY	NY	0.6913	Confirmed LTF	0.6913
TVA	TVA	0.8176	Confirmed LTF	0.8176
SIGE	SIGE	0.1031	Confirmed LTF	0.1031
CHEOAH	CHEOAH	0.0465	Confirmed LTF	0.0465
CBM-S1	CBM-S1	0.1300	Confirmed LTF	0.1300
HAMLET	HAMLET	0.3448	Confirmed LTF	0.3448
MEC	MEC	9.4673	Confirmed LTF	9.4673
GIBSON	GIBSON	0.1431	Confirmed LTF	0.1431
BLUEG	BLUEG	1.3801	Confirmed LTF	1.3801
TRIMBLE	TRIMBLE	0.4663	Confirmed LTF	0.4663
LAGN	LAGN	2.4675	Confirmed LTF	2.4675
CATAWBA	CATAWBA	0.1809	Confirmed LTF	0.1809
CBM-W1	CBM-W1	55.3650	Confirmed LTF	55.3650

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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
168538366	275208	PLANO ;4M	CE	270630	PLANO ;	CE	1	COMED_P1-3_TR93_PLANO_B-S	single	1379.0	111.97	112.36	DC	15.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.6409	80/20	2.6409
274658	DRESDEN ;2U	57.7492	Adder	67.94
274660	LASCO STA;1U	25.2069	80/20	25.2069
274661	LASCO STA;2U	25.3188	80/20	25.3188
274693	ROCKY RD ;1P	1.8300	80/20	1.8300
274695	ROCKY RD ;2P	1.8482	80/20	1.8482
274697	ROCKY RD ;3P	0.5021	80/20	0.5021
274737	AURORA EC;1P	3.0751	80/20	3.0751
274738	AURORA EC;3P	3.0458	80/20	3.0458
274739	AURORA EC;2P	3.0751	80/20	3.0751
274740	AURORA EC;4P	3.0458	80/20	3.0458
274741	AURORA EC;5P	0.7220	80/20	0.7220
274742	AURORA EC;6P	0.7220	80/20	0.7220
274743	AURORA EC;7P	0.7220	80/20	0.7220
274744	AURORA EC;8P	0.7220	80/20	0.7220
274745	AURORA EC;9P	0.7220	80/20	0.7220
274746	AURORA EC;0P	0.7220	80/20	0.7220
274818	ELGIN EC ;1P	2.2650	80/20	2.2650
274819	ELGIN EC ;3P	2.2471	80/20	2.2471
274820	ELGIN EC ;2P	2.2650	80/20	2.2650
274821	ELGIN EC ;4P	2.2639	80/20	2.2639
274847	GR RIDGE ;BU	0.5331	80/20	0.5331
274850	MENDOTA H;RU	0.2498	80/20	0.2498
274855	GSG-6 ;RU	0.4113	80/20	0.4113
274871	GR RIDGE ;2U	0.1985	80/20	0.1985
274872	LEE DEKAL;1U	0.7858	80/20	0.7858
295108	WESTBROOK C	0.1333	80/20	0.1333
915011	Y3-013 1	2.5146	Adder	2.96
915021	Y3-013 2	2.5146	Adder	2.96
915031	Y3-013 3	2.5146	Adder	2.96
919581	AA2-030 C	12.9180	Adder	15.2
924472	AB2-096 CT1	14.2440	Adder	16.76
924473	AB2-096 CT2	14.2440	Adder	16.76
924474	AB2-096 CT3	14.2440	Adder	16.76
925581	AC1-033 C	0.8179	Adder	0.96
926311	AC1-109 1	0.3035	80/20	0.3035
926321	AC1-109 2	0.3035	80/20	0.3035
926331	AC1-110 1	1.9052	80/20	1.9052
926341	AC1-110 2	1.9052	80/20	1.9052
926351	AC1-111 1	0.1196	80/20	0.1196
926361	AC1-111 2	0.1196	80/20	0.1196

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926371	AC1-111 3	0.1196	80/20	0.1196
926381	AC1-111 4	0.1196	80/20	0.1196
926391	AC1-111 5	0.1196	80/20	0.1196
926401	AC1-111 6	0.1196	80/20	0.1196
926821	AC1-168 C O1	0.7013	Adder	0.83
927451	AC1-142A 1	1.8118	Adder	2.13
927461	AC1-142A 2	1.8132	Adder	2.13
930482	AB1-089 CT	27.8462	Adder	32.76
930483	AB1-089 ST	22.1389	Adder	26.05
930501	AB1-091 CT	15.8686	Adder	18.67
930502	AB1-091 ST	12.6162	Adder	14.84
930771	AB1-122 CT2	36.6074	Adder	43.07
933411	AC2-154 C	0.9914	Adder	1.17
933431	AC2-156 C O1	1.1341	80/20	1.1341
933911	AD1-013 C	1.8549	80/20	1.8549
933931	AD1-016 C	0.6978	Adder	0.82
934051	AD1-031 C O1	1.6609	Adder	1.95
934111	AD1-039 2	3.5875	Adder	4.22
934431	AD1-067 C	0.0207	80/20	0.0207
934701	AD1-098 C O1	6.8181	80/20	6.8181
934971	AD1-129 C	0.6793	Adder	0.8
936371	AD2-047 C O1	1.7742	Adder	2.09
936461	AD2-060	1.0436	Adder	1.23
936511	AD2-066 C O1	4.3684	Adder	5.14
936791	AD2-102 C	10.3652	Adder	12.19
937001	AD2-134 C	2.7260	80/20	2.7260
937311	AD2-172 C	1.8271	Adder	2.15
937401	AD2-194 1	2.9876	Adder	3.51
937411	AD2-194 2	2.9957	Adder	3.52
937531	AD2-214 C	3.1153	Adder	3.67
938511	AE1-070 1	3.5200	Adder	4.14
938521	AE1-070 2	3.2116	Adder	3.78
938851	AE1-113 C O1	3.5994	Adder	4.23
938861	AE1-114 C O1	2.9169	Adder	3.43
939051	AE1-134 1	1.0038	Adder	1.18
939061	AE1-134 2	1.0038	Adder	1.18
939351	AE1-166 C O1	2.1586	Adder	4.79
940501	AE2-035 C	1.8271	Adder	2.15
941131	AE2-107 C	6.7235	80/20	6.7235
941551	AE2-152 C O1	2.4907	Adder	5.53
941561	AE2-153 C O1	2.2024	Adder	2.59
942421	AE2-255 C O1	1.3634	Adder	1.6
942991	AE2-321 C	6.1705	Adder	7.26
943121	AE2-341 C	15.7691	80/20	15.7691
943411	AF1-012 C	9.0990	Adder	10.7
943591	AF1-030 C O1	10.4866	80/20	10.4866
943801	AF1-048 C	2.8845	Adder	3.39
943921	AF1-060	0.8996	Adder	1.06
944041	AF1-072	1.9832	80/20	1.9832
944911	AF1-156 C	5.6312	Adder	6.62
945351	AF1-200 FTIR	501.3223	80/20	501.3223
946151	AF1-280 C O1	11.5111	Adder	13.54

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946161	AF1-281 C O1	0.2521	Adder	0.3
946321	AF1-296 C O1	2.7310	Adder	3.21
946501	AF1-314 C	3.2464	Adder	3.82
946541	AF1-318 C O1	3.2723	Adder	3.85
946661	AF1-330 C	1.5093	Adder	1.78
946671	AF1-331	2.4090	80/20	2.4090
952431	J760	1.9842	PJM External (MISO)	1.9842
954141	J878	12.4629	PJM External (MISO)	12.4629
957331	AF2-027 C	1.6764	Adder	1.97
957401	AF2-034 C	0.6742	Adder	0.79
957471	AF2-041 C	17.1207	Adder	20.14
957751	AF2-069 C	0.1370	Adder	0.16
957761	AF2-070 C	0.1930	Adder	0.23
958011	AF2-095 C O1	7.0967	Adder	8.35
958021	AF2-096 C	16.8111	Adder	19.78
958341	AF2-128 C O1	0.8665	Adder	1.02
958911	AF2-182 C	15.1240	Adder	17.79
958921	AF2-183 C	2.6887	Adder	3.16
959081	AF2-199 C	5.7069	Adder	6.71
959091	AF2-200 C O1	11.4138	Adder	13.43
959101	AF2-201 C O1	4.4721	Adder	5.26
960381	AF2-329	8.1823	80/20	8.1823
960551	AF2-346 C	3.8996	Adder	4.59
960581	AF2-349 C	16.2685	Adder	19.14
960591	AF2-350 C O1	3.1309	Adder	3.68
960601	AF2-351 C O1	0.4175	Adder	0.49
960721	AF2-363 C O1	5.7392	80/20	5.7392
960731	AF2-364 C O1	5.8413	80/20	5.8413
960751	AF2-366 C	7.1727	80/20	7.1727
961011	AF2-392 C O1	2.9235	Adder	3.44
961021	AF2-393 O1	4.9832	Adder	5.86
961031	AF2-394 O1	3.3221	Adder	3.91
961651	AG1-005 C O1	4.9262	Adder	10.93
962691	AG1-118 C O1	22.8600	80/20	22.8600
962701	AG1-119 C	9.0042	Adder	19.99
962711	AG1-120 C O1	8.3784	80/20	8.3784
962721	AG1-121 C O1	1.7372	Adder	3.86
962781	AG1-127 C	7.9279	80/20	7.9279
962791	AG1-128 C O1	6.1663	80/20	6.1663
963681	AG1-220 C O1	11.2986	80/20	11.2986
964461	AG1-309 FTIR	212.2098	Merchant Transmission	212.2098
965061	AG1-371	1.5123	Adder	3.36
965071	AG1-372	1.0082	Adder	2.24
965081	AG1-373	0.5041	Adder	1.12
965141	AG1-379 C	3.9656	Adder	8.8
965551	AG1-423 C O1	14.4012	80/20	14.4012
965661	AG1-434 C O1	1.7147	Adder	3.81
965671	AG1-435 C O1	1.1731	Adder	2.6
965931	AG1-462 C O1	6.8318	Adder	15.16
966081	AG1-477 C	0.5981	Adder	1.33
966091	AG1-478 C	0.4917	Adder	1.09
966101	AG1-479 C (Withdrawn : 12/03/2020)	0.5981	Adder	1.33

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966441	AG1-513 C	0.5054	80/20	0.5054
966521	AG1-521 C O1	3.7208	Adder	8.26
966821	AG1-553 C O1	10.0200	Adder	22.24
WEC	WEC	2.9821	Confirmed LTF	2.9821
CALDERWOOD	CALDERWOOD	0.0413	Confirmed LTF	0.0413
CBM-W2	CBM-W2	11.7824	Confirmed LTF	11.7824
NY	NY	0.7084	Confirmed LTF	0.7084
TVA	TVA	0.8372	Confirmed LTF	0.8372
SIGE	SIGE	0.1055	Confirmed LTF	0.1055
CHEOAH	CHEOAH	0.0475	Confirmed LTF	0.0475
CBM-S1	CBM-S1	0.1330	Confirmed LTF	0.1330
HAMLET	HAMLET	0.3529	Confirmed LTF	0.3529
MEC	MEC	9.6977	Confirmed LTF	9.6977
GIBSON	GIBSON	0.1463	Confirmed LTF	0.1463
BLUEG	BLUEG	1.4131	Confirmed LTF	1.4131
TRIMBLE	TRIMBLE	0.4775	Confirmed LTF	0.4775
LAGN	LAGN	2.5270	Confirmed LTF	2.5270
CATAWBA	CATAWBA	0.1851	Confirmed LTF	0.1851
CBM-W1	CBM-W1	56.7109	Confirmed LTF	56.7109

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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
162238865	349662	7TAZEWELL	AMIL	930760	AB1-122 TAP1	CE	1	COMED_P7-1_345-L9806_R-S_+345-L19601_B-S	tower	1479.0	184.2	185.11	DC	29.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274677	POWERTON ;5U	59.5206	50/50	59.5206
274678	POWERTON ;6U	59.6905	50/50	59.6905
274848	CAMPGROVE;RU	0.9151	50/50	0.9151
274849	CRESCENT ;1U	0.2820	50/50	0.2820
274851	PROVIDENC;RU	0.2905	50/50	0.2905
274861	TOP CROP ;1U	1.4232	50/50	1.4232
274862	TOP CROP ;2U	2.7150	50/50	2.7150
274877	BISHOP HL;1U	0.6239	50/50	0.6239
274878	BISHOP HL;2U	0.6239	50/50	0.6239
274879	MINONK ;1U	1.6816	50/50	1.6816
274891	OTTER CRK;1U	1.5126	50/50	1.5126
290021	O50 E	42.6352	50/50	42.6352
293516	O-009 E1	6.6087	Adder	7.77
293517	O-009 E2	3.3567	Adder	3.95
293518	O-009 E3	3.6966	Adder	4.35
293644	O22 E1	40.0060	50/50	40.0060
293645	O22 E2	77.6588	50/50	77.6588
293715	O-029 E	7.0654	Adder	8.31
293716	O-029 E	3.8739	Adder	4.56
293717	O-029 E	3.5605	Adder	4.19
293771	O-035 E	10.5832	50/50	10.5832
294401	BSHL;1U E	15.8184	50/50	15.8184
294410	BSHL;2U E	15.8184	50/50	15.8184
916211	Z1-072 E	8.0089	50/50	8.0089
918052	AA1-018 E OP	64.1629	50/50	64.1629
925581	AC1-033 C	2.5901	50/50	2.5901
925582	AC1-033 E	17.3400	50/50	17.3400
926821	AC1-168 C O1	1.4830	50/50	1.4830
926822	AC1-168 E O1	9.9519	50/50	9.9519
926841	AC1-171 C O1	3.2764	50/50	3.2764
926842	AC1-171 E O1	21.8853	50/50	21.8853
927201	AC1-214 C O1	0.5359	50/50	0.5359
927202	AC1-214 E O1	10.7977	50/50	10.7977
934051	AD1-031 C O1	5.2572	50/50	5.2572
934052	AD1-031 E O1	8.5776	50/50	8.5776
934871	AD1-116 C	3.7367	50/50	3.7367
934872	AD1-116 E	6.0967	50/50	6.0967
936291	AD2-038 C O1	9.5893	50/50	9.5893
936292	AD2-038 E O1	64.1747	50/50	64.1747
937531	AD2-214 C	2.8538	Adder	3.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937532	AD2-214 E	1.9025	Adder	2.24
938851	AE1-113 C O1	17.5870	50/50	17.5870
938852	AE1-113 E O1	62.3540	50/50	62.3540
939321	AE1-163 C O1	24.0962	50/50	24.0962
939322	AE1-163 E O1	148.0198	50/50	148.0198
942421	AE2-255 C O1	6.6617	50/50	6.6617
942422	AE2-255 E O1	19.9852	50/50	19.9852
942651	AE2-281 C O1	3.4423	50/50	3.4423
942652	AE2-281 E O1	21.1457	50/50	21.1457
946321	AF1-296 C O1	2.9008	Adder	3.41
946322	AF1-296 E O1	13.5809	Adder	15.98
946541	AF1-318 C O1	8.0475	50/50	8.0475
946542	AF1-318 E O1	37.6769	50/50	37.6769
951631	J456 C	4.2649	PJM External (MISO)	4.2649
951632	J456 E	23.0741	PJM External (MISO)	23.0741
951821	J541 C	5.0157	PJM External (MISO)	5.0157
951822	J541 E	27.1363	PJM External (MISO)	27.1363
952651	J756 C	3.9462	PJM External (MISO)	3.9462
952652	J756 E	21.3498	PJM External (MISO)	21.3498
952871	J757 C	5.0345	PJM External (MISO)	5.0345
952872	J757 E	27.2381	PJM External (MISO)	27.2381
953201	J715 C	1.6953	PJM External (MISO)	1.6953
953202	J715 E	9.1717	PJM External (MISO)	9.1717
953951	J859	25.6712	PJM External (MISO)	25.6712
954702	J844 E	29.2589	PJM External (MISO)	29.2589
954792	J952 E	4.6597	PJM External (MISO)	4.6597
954901	J963	0.7214	PJM External (MISO)	0.7214
954981	J974 C	16.6308	PJM External (MISO)	16.6308
954982	J974 E	89.9767	PJM External (MISO)	89.9767
955051	J981 C	2.8467	PJM External (MISO)	2.8467
955052	J981 E	15.4013	PJM External (MISO)	15.4013
955431	J1025 C	4.1638	PJM External (MISO)	4.1638
955432	J1025 E	22.5272	PJM External (MISO)	22.5272
955441	J1026 C	5.0613	PJM External (MISO)	5.0613
955442	J1026 E	27.3827	PJM External (MISO)	27.3827
955711	J1055 C	4.8810	PJM External (MISO)	4.8810
955712	J1055 E	26.4073	PJM External (MISO)	26.4073
956151	J1102	6.9972	PJM External (MISO)	6.9972
956411	J1131	8.7360	PJM External (MISO)	8.7360
956431	J1135	5.4335	PJM External (MISO)	5.4335
956841	J1182	20.8350	PJM External (MISO)	20.8350
957751	AF2-069 C	0.3933	50/50	0.3933
957752	AF2-069 E	1.2693	50/50	1.2693
957761	AF2-070 C	0.5542	50/50	0.5542
957762	AF2-070 E	2.6905	50/50	2.6905
958341	AF2-128 C O1	2.0568	50/50	2.0568
958342	AF2-128 E O1	9.6297	50/50	9.6297
958481	AF2-142 C	44.2503	50/50	44.2503
958482	AF2-142 E	29.5002	50/50	29.5002
958491	AF2-143 C	44.2584	50/50	44.2584
958492	AF2-143 E	29.5056	50/50	29.5056
959351	AF2-226 C	9.8054	50/50	9.8054

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959352	AF2-226 E	14.7081	50/50	14.7081
960281	AF2-319 C	9.8054	50/50	9.8054
960282	AF2-319 E	14.7081	50/50	14.7081
961651	AG1-005 C O1	22.5810	50/50	22.5810
961652	AG1-005 E O1	15.0540	50/50	15.0540
962721	AG1-121 C O1	9.5091	50/50	9.5091
962722	AG1-121 E O1	44.4858	50/50	44.4858
965141	AG1-379 C	36.5597	50/50	36.5597
965142	AG1-379 E	16.7343	50/50	16.7343
965671	AG1-435 C O1	6.6419	50/50	6.6419
965672	AG1-435 E O1	31.0961	50/50	31.0961
965931	AG1-462 C O1	8.0368	Adder	17.84
965932	AG1-462 E O1	5.3579	Adder	11.89
966821	AG1-553 C O1	11.7873	Adder	26.16
966822	AG1-553 E O1	2.9468	Adder	6.54
990901	L-005 E	27.6619	50/50	27.6619
LGEE	LGEE	0.3085	Confirmed LTF	0.3085
CPL	CPL	0.4900	Confirmed LTF	0.4900
CBM-W2	CBM-W2	37.6589	Confirmed LTF	37.6589
NY	NY	0.1427	Confirmed LTF	0.1427
TVA	TVA	3.9592	Confirmed LTF	3.9592
O-066	O-066	1.4941	Confirmed LTF	1.4941
SIGE	SIGE	0.1520	Confirmed LTF	0.1520
CBM-S2	CBM-S2	10.5757	Confirmed LTF	10.5757
CBM-S1	CBM-S1	0.9131	Confirmed LTF	0.9131
G-007	G-007	0.2310	Confirmed LTF	0.2310
MEC	MEC	14.5584	Confirmed LTF	14.5584
LAGN	LAGN	7.0735	Confirmed LTF	7.0735
CBM-W1	CBM-W1	36.3679	Confirmed LTF	36.3679

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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
169766357	924470	GARDEN PR; R	CE	270883	SILVER LK; R	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1479.0	172.31	172.86	DC	18.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.8330	Adder	2.16
274656	BYRON ;1U	47.1816	80/20	47.1816
274657	BYRON ;2U	46.1202	80/20	46.1202
274715	NELSON EC;1C	3.3801	80/20	3.3801
274717	NELSON EC;2C	3.4063	80/20	3.4063
274760	LEE CO EC;1U	2.3883	80/20	2.3883
274761	LEE CO EC;2U	2.3883	80/20	2.3883
274762	LEE CO EC;3U	2.3883	80/20	2.3883
274763	LEE CO EC;4U	2.3658	80/20	2.3658
274764	LEE CO EC;5U	2.3939	80/20	2.3939
274765	LEE CO EC;6U	2.3939	80/20	2.3939
274766	LEE CO EC;7U	2.3601	80/20	2.3601
274767	LEE CO EC;8U	2.3601	80/20	2.3601
274822	ROCKFORD ;11	4.7229	80/20	4.7229
274823	ROCKFORD ;21	4.8469	80/20	4.8469
274824	ROCKFORD ;12	4.6818	80/20	4.6818
274856	ECOGROVE ;U1	0.6543	80/20	0.6543
274857	BIG SKY ;U1	0.4276	80/20	0.4276
274858	BIG SKY ;U2	0.4276	80/20	0.4276
276162	X1-087	0.3256	80/20	0.3256
276590	R-018	0.2553	80/20	0.2553
295110	SUBLETTE C	0.0679	80/20	0.0679
919581	AA2-030 C	16.9882	Adder	19.99
924472	AB2-096 CT1	78.2862	80/20	78.2862
924473	AB2-096 CT2	78.2862	80/20	78.2862
924474	AB2-096 CT3	78.2862	80/20	78.2862
926431	AC1-114	0.7872	80/20	0.7872
927511	AC1-113 1	0.3936	80/20	0.3936
927521	AC1-113 2	0.3936	80/20	0.3936
930482	AB1-089 CT	78.4047	80/20	78.4047
930483	AB1-089 ST	62.3348	80/20	62.3348
932881	AC2-115 1	0.7871	80/20	0.7871
932891	AC2-115 2	0.7871	80/20	0.7871
932921	AC2-116	0.2755	80/20	0.2755
933911	AD1-013 C	1.2814	Adder	1.51
933931	AD1-016 C	0.4443	Adder	0.52
934701	AD1-098 C O1	4.9381	Adder	5.81
934971	AD1-129 C	1.3325	80/20	1.3325
936791	AD2-102 C	28.4124	80/20	28.4124
937001	AD2-134 C	1.9179	Adder	2.26
937311	AD2-172 C	4.4892	80/20	4.4892

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937531	AD2-214 C	3.8738	Adder	4.56
938861	AE1-114 C O1	6.1414	80/20	6.1414
939051	AE1-134 1	1.3201	Adder	1.55
939061	AE1-134 2	1.3201	Adder	1.55
940501	AE2-035 C	4.4892	80/20	4.4892
941131	AE2-107 C	3.8937	Adder	4.58
943411	AF1-012 C	9.3097	Adder	10.95
943921	AF1-060	2.2104	80/20	2.2104
946151	AF1-280 C O1	22.2748	80/20	22.2748
946161	AF1-281 C O1	0.4878	80/20	0.4878
946321	AF1-296 C O1	3.3031	Adder	3.89
946501	AF1-314 C	7.9762	80/20	7.9762
946671	AF1-331	1.6641	Adder	1.96
952431	J760	5.1186	PJM External (MISO)	5.1186
953681	J818	13.1403	PJM External (MISO)	13.1403
953901	J850	21.7525	PJM External (MISO)	21.7525
953921	J855 C	1.2775	PJM External (MISO)	1.2775
954001	J864	4.2268	PJM External (MISO)	4.2268
954061	J870	16.8860	PJM External (MISO)	16.8860
954071	J871	8.4430	PJM External (MISO)	8.4430
955221	J1000	3.7820	PJM External (MISO)	3.7820
955971	J1084	11.0760	PJM External (MISO)	11.0760
956581	J1154	6.6187	PJM External (MISO)	6.6187
956901	J1188	5.5035	PJM External (MISO)	5.5035
958911	AF2-182 C	29.2662	80/20	29.2662
958921	AF2-183 C	5.2029	80/20	5.2029
959101	AF2-201 C O1	10.9878	80/20	10.9878
960551	AF2-346 C	3.9899	Adder	4.69
960581	AF2-349 C	89.4132	80/20	89.4132
960721	AF2-363 C O1	7.7099	80/20	7.7099
960751	AF2-366 C	4.1928	Adder	4.93
961011	AF2-392 C O1	4.5764	80/20	4.5764
961021	AF2-393 O1	7.8006	80/20	7.8006
961031	AF2-394 O1	5.2004	80/20	5.2004
962701	AG1-119 C	46.0494	80/20	46.0494
962711	AG1-120 C O1	11.0882	80/20	11.0882
962781	AG1-127 C	2.5017	Adder	5.55
962791	AG1-128 C O1	2.2993	Adder	5.1
963681	AG1-220 C O1	3.3316	Adder	7.4
964461	AG1-309 FTIR	520.9803	80/20	520.9803
965661	AG1-434 C O1	1.2169	Adder	2.7
965931	AG1-462 C O1	8.1277	Adder	18.04
966521	AG1-521 C O1	10.2112	80/20	10.2112
966821	AG1-553 C O1	11.9206	Adder	26.46
WEC	WEC	0.4867	Confirmed LTF	0.4867
CBM-W2	CBM-W2	9.3632	Confirmed LTF	9.3632
NY	NY	0.2616	Confirmed LTF	0.2616
TVA	TVA	0.9814	Confirmed LTF	0.9814
SIGE	SIGE	0.0358	Confirmed LTF	0.0358
CBM-S2	CBM-S2	0.1357	Confirmed LTF	0.1357
CBM-S1	CBM-S1	0.1972	Confirmed LTF	0.1972
HAMLET	HAMLET	0.0295	Confirmed LTF	0.0295

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MEC	MEC	9.6881	Confirmed LTF	9.6881
GIBSON	GIBSON	0.1048	Confirmed LTF	0.1048
BLUEG	BLUEG	0.5816	Confirmed LTF	0.5816
TRIMBLE	TRIMBLE	0.1976	Confirmed LTF	0.1976
LAGN	LAGN	2.4640	Confirmed LTF	2.4640
CATAWBA	CATAWBA	0.0003	Confirmed LTF	0.0003
CBM-W1	CBM-W1	47.1493	Confirmed LTF	47.1493

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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
162238880	930760	AB1-122 TAP1	CE	270717	DRESDEN ; R	CE	1	COMED_P7-1_345-L9806_R-S+_345-L19601_B-S	tower	1768.0	173.35	174.12	DC	29.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274677	POWERTON ;5U	59.5206	50/50	59.5206
274678	POWERTON ;6U	59.6905	50/50	59.6905
274848	CAMPGROVE;RU	0.9151	50/50	0.9151
274849	CRESCENT ;1U	0.2820	50/50	0.2820
274851	PROVIDENC;RU	0.2905	50/50	0.2905
274861	TOP CROP ;1U	1.4232	50/50	1.4232
274862	TOP CROP ;2U	2.7150	50/50	2.7150
274877	BISHOP HL;1U	0.6239	50/50	0.6239
274878	BISHOP HL;2U	0.6239	50/50	0.6239
274879	MINONK ;1U	1.6816	50/50	1.6816
274891	OTTER CRK;1U	1.5126	50/50	1.5126
290021	O50 E	42.6352	50/50	42.6352
293516	O-009 E1	6.6087	Adder	7.77
293517	O-009 E2	3.3567	Adder	3.95
293518	O-009 E3	3.6966	Adder	4.35
293644	O22 E1	40.0060	50/50	40.0060
293645	O22 E2	77.6588	50/50	77.6588
293715	O-029 E	7.0654	Adder	8.31
293716	O-029 E	3.8739	Adder	4.56
293717	O-029 E	3.5605	Adder	4.19
293771	O-035 E	10.5832	50/50	10.5832
294401	BSHIL;1U E	15.8184	50/50	15.8184
294410	BSHIL;2U E	15.8184	50/50	15.8184
916211	Z1-072 E	8.0089	50/50	8.0089
918052	AA1-018 E OP	64.1629	50/50	64.1629
925581	AC1-033 C	2.5901	50/50	2.5901
925582	AC1-033 E	17.3400	50/50	17.3400
926821	AC1-168 C O1	1.4830	50/50	1.4830
926822	AC1-168 E O1	9.9519	50/50	9.9519
926841	AC1-171 C O1	3.2764	50/50	3.2764
926842	AC1-171 E O1	21.8853	50/50	21.8853
927201	AC1-214 C O1	0.5359	50/50	0.5359
927202	AC1-214 E O1	10.7977	50/50	10.7977
930761	AB1-122 CT1	394.5247	50/50	394.5247
934051	AD1-031 C O1	5.2572	50/50	5.2572
934052	AD1-031 E O1	8.5776	50/50	8.5776
934101	AD1-039 1	38.6634	50/50	38.6634
934871	AD1-116 C	3.7367	50/50	3.7367
934872	AD1-116 E	6.0967	50/50	6.0967
936291	AD2-038 C O1	9.5893	50/50	9.5893

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936292	AD2-038 E O1	64.1747	50/50	64.1747
938851	AE1-113 C O1	17.5870	50/50	17.5870
938852	AE1-113 E O1	62.3540	50/50	62.3540
939321	AE1-163 C O1	24.0962	50/50	24.0962
939322	AE1-163 E O1	148.0198	50/50	148.0198
942421	AE2-255 C O1	6.6617	50/50	6.6617
942422	AE2-255 E O1	19.9852	50/50	19.9852
942651	AE2-281 C O1	3.4423	50/50	3.4423
942652	AE2-281 E O1	21.1457	50/50	21.1457
946321	AF1-296 C O1	2.9008	Adder	3.41
946322	AF1-296 E O1	13.5809	Adder	15.98
946541	AF1-318 C O1	8.0475	50/50	8.0475
946542	AF1-318 E O1	37.6769	50/50	37.6769
951631	J456 C	4.2649	PJM External (MISO)	4.2649
951632	J456 E	23.0741	PJM External (MISO)	23.0741
952651	J756 C	3.9462	PJM External (MISO)	3.9462
952652	J756 E	21.3498	PJM External (MISO)	21.3498
952871	J757 C	5.0345	PJM External (MISO)	5.0345
952872	J757 E	27.2381	PJM External (MISO)	27.2381
953201	J715 C	1.6953	PJM External (MISO)	1.6953
953202	J715 E	9.1717	PJM External (MISO)	9.1717
953951	J859	25.6712	PJM External (MISO)	25.6712
954702	J844 E	29.2589	PJM External (MISO)	29.2589
954792	J952 E	4.6597	PJM External (MISO)	4.6597
954981	J974 C	16.6308	PJM External (MISO)	16.6308
954982	J974 E	89.9767	PJM External (MISO)	89.9767
955051	J981 C	2.8467	PJM External (MISO)	2.8467
955052	J981 E	15.4013	PJM External (MISO)	15.4013
955431	J1025 C	4.1638	PJM External (MISO)	4.1638
955432	J1025 E	22.5272	PJM External (MISO)	22.5272
955711	J1055 C	4.8810	PJM External (MISO)	4.8810
955712	J1055 E	26.4073	PJM External (MISO)	26.4073
956151	J1102	6.9972	PJM External (MISO)	6.9972
956411	J1131	8.7360	PJM External (MISO)	8.7360
956431	J1135	5.4335	PJM External (MISO)	5.4335
957751	AF2-069 C	0.3933	50/50	0.3933
957752	AF2-069 E	1.2693	50/50	1.2693
957761	AF2-070 C	0.5542	50/50	0.5542
957762	AF2-070 E	2.6905	50/50	2.6905
958341	AF2-128 C O1	2.0568	50/50	2.0568
958342	AF2-128 E O1	9.6297	50/50	9.6297
958481	AF2-142 C	44.2503	50/50	44.2503
958482	AF2-142 E	29.5002	50/50	29.5002
958491	AF2-143 C	44.2584	50/50	44.2584
958492	AF2-143 E	29.5056	50/50	29.5056
959351	AF2-226 C	9.8054	50/50	9.8054
959352	AF2-226 E	14.7081	50/50	14.7081
960281	AF2-319 C	9.8054	50/50	9.8054
960282	AF2-319 E	14.7081	50/50	14.7081
961651	AG1-005 C O1	22.5810	50/50	22.5810
961652	AG1-005 E O1	15.0540	50/50	15.0540
962721	AG1-121 C O1	9.5091	50/50	9.5091

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962722	AG1-121 E O1	44.4858	50/50	44.4858
965141	AG1-379 C	36.5597	50/50	36.5597
965142	AG1-379 E	16.7343	50/50	16.7343
965671	AG1-435 C O1	6.6419	50/50	6.6419
965672	AG1-435 E O1	31.0961	50/50	31.0961
965931	AG1-462 C O1	8.0368	Adder	17.84
965932	AG1-462 E O1	5.3579	Adder	11.89
966821	AG1-553 C O1	11.7873	Adder	26.16
966822	AG1-553 E O1	2.9468	Adder	6.54
990901	L-005 E	27.6619	50/50	27.6619
LGEE	LGEE	0.3085	Confirmed LTF	0.3085
CPL	CPL	0.4900	Confirmed LTF	0.4900
CBM-W2	CBM-W2	37.6589	Confirmed LTF	37.6589
NY	NY	0.1427	Confirmed LTF	0.1427
TVA	TVA	3.9592	Confirmed LTF	3.9592
O-066	O-066	1.4941	Confirmed LTF	1.4941
SIGE	SIGE	0.1520	Confirmed LTF	0.1520
CBM-S2	CBM-S2	10.5757	Confirmed LTF	10.5757
CBM-S1	CBM-S1	0.9131	Confirmed LTF	0.9131
G-007	G-007	0.2310	Confirmed LTF	0.2310
MEC	MEC	14.5584	Confirmed LTF	14.5584
LAGN	LAGN	7.0735	Confirmed LTF	7.0735
CBM-W1	CBM-W1	36.3679	Confirmed LTF	36.3679

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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
169766569	943410	AF1-012 TAP	CE	965660	AG1-434 TAP	CE	1	COMED_P1-2_345-L18905_B-R-A	single	1656.0	111.48	113.55	DC	34.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.4262	Adder	1.68
274656	BYRON ;1U	26.2058	80/20	26.2058
274657	BYRON ;2U	25.5607	80/20	25.5607
274662	QUAD CITI;1U	27.2624	80/20	27.2624
274663	QUAD CITI;2U	27.3408	80/20	27.3408
274699	CORDOVA ;1C	4.7985	80/20	4.7985
274700	CORDOVA ;2C	4.7985	80/20	4.7985
274701	CORDOVA ;1S	5.3983	80/20	5.3983
274715	NELSON EC;1C	6.9650	80/20	6.9650
274716	NELSON EC;1S	5.0820	80/20	5.0820
274717	NELSON EC;2C	7.0188	80/20	7.0188
274718	NELSON EC;2S	5.1275	80/20	5.1275
274760	LEE CO EC;1U	2.8754	80/20	2.8754
274761	LEE CO EC;2U	2.8754	80/20	2.8754
274762	LEE CO EC;3U	2.8754	80/20	2.8754
274763	LEE CO EC;4U	2.8483	80/20	2.8483
274764	LEE CO EC;5U	2.8822	80/20	2.8822
274765	LEE CO EC;6U	2.8822	80/20	2.8822
274766	LEE CO EC;7U	2.8416	80/20	2.8416
274767	LEE CO EC;8U	2.8416	80/20	2.8416
274822	ROCKFORD ;11	2.0409	80/20	2.0409
274823	ROCKFORD ;21	2.0945	80/20	2.0945
274856	ECOGROVE ;U1	0.4177	80/20	0.4177
274857	BIG SKY ;U1	0.5148	80/20	0.5148
274858	BIG SKY ;U2	0.5148	80/20	0.5148
276156	O-029 C	0.3402	80/20	0.3402
276157	O-029 C	0.3678	80/20	0.3678
276158	O-029 C	0.6712	80/20	0.6712
276162	X1-087	0.2088	80/20	0.2088
293513	O-009 C1	0.6283	80/20	0.6283
293514	O-009 C2	0.3188	80/20	0.3188
293515	O-009 C3	0.3525	80/20	0.3525
295110	SUBLETTE C	0.0994	80/20	0.0994
919221	AA1-146	6.4974	80/20	6.4974
919581	AA2-030 C	41.1827	80/20	41.1827
925581	AC1-033 C	0.9655	Adder	1.14
926431	AC1-114	0.3402	80/20	0.3402
930482	AB1-089 CT	43.5394	80/20	43.5394
930483	AB1-089 ST	34.6156	80/20	34.6156
932921	AC2-116	0.1191	80/20	0.1191
933911	AD1-013 C	0.9626	Adder	1.13

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934051	AD1-031 C O1	1.9610	Adder	2.31
934701	AD1-098 C O1	4.3804	Adder	5.15
934971	AD1-129 C	0.5038	Adder	0.59
936791	AD2-102 C	13.8516	80/20	13.8516
937001	AD2-134 C	1.6135	Adder	1.9
937311	AD2-172 C	2.8661	80/20	2.8661
937531	AD2-214 C	8.3460	80/20	8.3460
938861	AE1-114 C O1	5.5916	80/20	5.5916
939051	AE1-134 1	3.2002	80/20	3.2002
939061	AE1-134 2	3.2002	80/20	3.2002
940501	AE2-035 C	2.8661	80/20	2.8661
943411	AF1-012 C	37.8976	80/20	37.8976
943921	AF1-060	1.4112	80/20	1.4112
946151	AF1-280 C O1	31.4210	80/20	31.4210
946161	AF1-281 C O1	0.6881	80/20	0.6881
946321	AF1-296 C O1	7.0348	80/20	7.0348
946501	AF1-314 C	5.0923	80/20	5.0923
946671	AF1-331	1.2502	Adder	1.47
951381	J504	4.2105	PJM External (MISO)	4.2105
951421	J514	2.5047	PJM External (MISO)	2.5047
951511	J530 C	3.8900	PJM External (MISO)	3.8900
953921	J855 C	1.2293	PJM External (MISO)	1.2293
954061	J870	14.6480	PJM External (MISO)	14.6480
954071	J871	7.3240	PJM External (MISO)	7.3240
954091	J873 C	2.4529	PJM External (MISO)	2.4529
954861	J959 C	1.8170	PJM External (MISO)	1.8170
954901	J963	0.9142	PJM External (MISO)	0.9142
955051	J981 C	2.7103	PJM External (MISO)	2.7103
955221	J1000	4.1425	PJM External (MISO)	4.1425
955971	J1084	22.7625	PJM External (MISO)	22.7625
956411	J1131	11.9130	PJM External (MISO)	11.9130
956831	J1181 C	2.3388	PJM External (MISO)	2.3388
958911	AF2-182 C	41.2830	80/20	41.2830
958921	AF2-183 C	7.3392	80/20	7.3392
959101	AF2-201 C O1	7.0151	80/20	7.0151
960551	AF2-346 C	16.2418	80/20	16.2418
961011	AF2-392 C O1	7.7215	80/20	7.7215
961021	AF2-393 O1	13.1616	80/20	13.1616
961031	AF2-394 O1	8.7744	80/20	8.7744
962791	AG1-128 C O1	1.9343	Adder	4.29
964461	AG1-309 FTIR	289.0514	80/20	289.0514
965671	AG1-435 C O1	1.1709	Adder	2.6
965931	AG1-462 C O1	34.3008	80/20	34.3008
966521	AG1-521 C O1	14.0032	80/20	14.0032
966821	AG1-553 C O1	50.3078	80/20	50.3078
WEC	WEC	0.8543	Confirmed LTF	0.8543
CPL	CPL	0.0853	Confirmed LTF	0.0853
CBM-W2	CBM-W2	17.0867	Confirmed LTF	17.0867
NY	NY	0.2461	Confirmed LTF	0.2461
TVA	TVA	1.9068	Confirmed LTF	1.9068
SIGE	SIGE	0.0587	Confirmed LTF	0.0587
CBM-S2	CBM-S2	3.1529	Confirmed LTF	3.1529

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S1	CBM-S1	0.4123	Confirmed LTF	0.4123
MEC	MEC	14.8953	Confirmed LTF	14.8953
BLUEG	BLUEG	0.3715	Confirmed LTF	0.3715
TRIMBLE	TRIMBLE	0.1369	Confirmed LTF	0.1369
LAGN	LAGN	4.1965	Confirmed LTF	4.1965
CBM-W1	CBM-W1	58.5615	Confirmed LTF	58.5615

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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
162238920	946150	AF1-280 TAP	CE	274768	LEE CO EC;BP	CE	1	COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A	tower	1768.0	117.37	121.78	DC	77.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274662	QUAD CITI;1U	37.0988	50/50	37.0988
274663	QUAD CITI;2U	37.2081	50/50	37.2081
274699	CORDOVA ;1C	6.5438	50/50	6.5438
274700	CORDOVA ;2C	6.5438	50/50	6.5438
274701	CORDOVA ;1S	7.3617	50/50	7.3617
274715	NELSON EC;1C	10.1476	50/50	10.1476
274716	NELSON EC;1S	7.4042	50/50	7.4042
274717	NELSON EC;2C	10.2260	50/50	10.2260
274718	NELSON EC;2S	7.4705	50/50	7.4705
274848	CAMP GROVE;RU	0.4467	50/50	0.4467
274849	CRESCENT ;1U	0.1623	50/50	0.1623
274851	PROVIDENC;RU	0.1672	50/50	0.1672
274877	BISHOP HL;1U	0.3896	50/50	0.3896
274878	BISHOP HL;2U	0.3896	50/50	0.3896
276156	O-029 C	0.4634	50/50	0.4634
276157	O-029 C	0.5010	50/50	0.5010
276158	O-029 C	0.9143	50/50	0.9143
293513	O-009 C1	0.8558	50/50	0.8558
293514	O-009 C2	0.4342	50/50	0.4342
293515	O-009 C3	0.4801	50/50	0.4801
293516	O-009 E1	21.7086	50/50	21.7086
293517	O-009 E2	11.0263	50/50	11.0263
293518	O-009 E3	12.1430	50/50	12.1430
293715	O-029 E	23.2089	50/50	23.2089
293716	O-029 E	12.7251	50/50	12.7251
293717	O-029 E	11.6958	50/50	11.6958
293771	O-035 E	6.0917	50/50	6.0917
294401	BSHIL;1U E	9.8776	50/50	9.8776
294410	BSHIL;2U E	9.8776	50/50	9.8776
295110	SUBLETTE C	0.1171	50/50	0.1171
295111	SUBLETTE E	5.2875	50/50	5.2875
916211	Z1-072 E	4.6099	50/50	4.6099
919221	AA1-146	9.4663	50/50	9.4663
919581	AA2-030 C	60.0007	50/50	60.0007
920273	AA2-123 BAT	2.3628	50/50	2.3628
925581	AC1-033 C	1.6178	50/50	1.6178
925582	AC1-033 E	10.8309	50/50	10.8309
927201	AC1-214 C O1	0.3085	50/50	0.3085
927202	AC1-214 E O1	6.2152	50/50	6.2152

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934051	AD1-031 C O1	3.2862	50/50	3.2862
934052	AD1-031 E O1	5.3616	50/50	5.3616
937531	AD2-214 C	11.2632	50/50	11.2632
937532	AD2-214 E	7.5088	50/50	7.5088
939051	AE1-134 1	4.6625	50/50	4.6625
939061	AE1-134 2	4.6625	50/50	4.6625
943411	AF1-012 C	40.1257	50/50	40.1257
943412	AF1-012 E	26.7505	50/50	26.7505
943803	AF1-048 BAT	6.1058	50/50	6.1058
946151	AF1-280 C O1	66.2518	50/50	66.2518
946152	AF1-280 E O1	30.4662	50/50	30.4662
946161	AF1-281 C O1	1.4508	50/50	1.4508
946162	AF1-281 E O1	8.2210	50/50	8.2210
946321	AF1-296 C O1	9.3131	50/50	9.3131
946322	AF1-296 E O1	43.6016	50/50	43.6016
951381	J504	5.2420	PJM External (MISO)	5.2420
951421	J514	3.2700	PJM External (MISO)	3.2700
951511	J530 C	5.6125	PJM External (MISO)	5.6125
951512	J530 E	22.4500	PJM External (MISO)	22.4500
954702	J844 E	16.0230	PJM External (MISO)	16.0230
954792	J952 E	7.2495	PJM External (MISO)	7.2495
954901	J963	1.3009	PJM External (MISO)	1.3009
955051	J981 C	4.0485	PJM External (MISO)	4.0485
955052	J981 E	21.9035	PJM External (MISO)	21.9035
955971	J1084	34.2570	PJM External (MISO)	34.2570
956411	J1131	17.9560	PJM External (MISO)	17.9560
957471	AF2-041 C	68.7780	50/50	68.7780
957472	AF2-041 E	34.3890	50/50	34.3890
957751	AF2-069 C	0.2264	50/50	0.2264
957752	AF2-069 E	0.7306	50/50	0.7306
957761	AF2-070 C	0.3190	50/50	0.3190
957762	AF2-070 E	1.5486	50/50	1.5486
958911	AF2-182 C	87.0462	50/50	87.0462
958912	AF2-182 E	58.0308	50/50	58.0308
958921	AF2-183 C	15.4749	50/50	15.4749
958922	AF2-183 E	23.2123	50/50	23.2123
959081	AF2-199 C	22.9260	50/50	22.9260
959082	AF2-199 E	11.4630	50/50	11.4630
959091	AF2-200 C O1	45.8520	50/50	45.8520
959092	AF2-200 E O1	22.9260	50/50	22.9260
960551	AF2-346 C	17.1967	50/50	17.1967
960552	AF2-346 E	11.4645	50/50	11.4645
961011	AF2-392 C O1	10.0683	50/50	10.0683
961012	AF2-392 E O1	47.1377	50/50	47.1377
961021	AF2-393 O1	17.1618	50/50	17.1618
961031	AF2-394 O1	11.4412	50/50	11.4412
962012	AG1-044 E	0.1720	50/50	0.1720
964462	AG1-309 NFTW	520.5480	50/50	520.5480
965061	AG1-371	11.4630	50/50	11.4630
965071	AG1-372	7.6420	50/50	7.6420
965081	AG1-373	3.8210	50/50	3.8210
965661	AG1-434 C O1	13.4506	50/50	13.4506

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965662	AG1-434 E O1	62.9734	50/50	62.9734
965671	AG1-435 C O1	3.7752	50/50	3.7752
965672	AG1-435 E O1	17.6748	50/50	17.6748
965931	AG1-462 C O1	46.7928	50/50	46.7928
965932	AG1-462 E O1	31.1952	50/50	31.1952
966521	AG1-521 C O1	15.8456	50/50	15.8456
966522	AG1-521 E O1	3.9614	50/50	3.9614
966821	AG1-553 C O1	68.6294	50/50	68.6294
966822	AG1-553 E O1	17.1574	50/50	17.1574
990901	L-005 E	13.5036	50/50	13.5036
LGEE	LGEE	0.3946	Confirmed LTF	0.3946
CPL	CPL	0.6095	Confirmed LTF	0.6095
G-007A	G-007A	0.8295	Confirmed LTF	0.8295
VFT	VFT	2.2252	Confirmed LTF	2.2252
CBM-W2	CBM-W2	24.1293	Confirmed LTF	24.1293
TVA	TVA	2.9806	Confirmed LTF	2.9806
SIGE	SIGE	0.0630	Confirmed LTF	0.0630
CBM-S2	CBM-S2	11.1499	Confirmed LTF	11.1499
CBM-S1	CBM-S1	0.7057	Confirmed LTF	0.7057
CBM-N	CBM-N	0.4128	Confirmed LTF	0.4128
MEC	MEC	15.5229	Confirmed LTF	15.5229
LAGN	LAGN	5.3900	Confirmed LTF	5.3900
CBM-W1	CBM-W1	25.8949	Confirmed LTF	25.8949

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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
170047206	957470	AF2-041 TAP	CE	270730	ELECT JCT; B	CE	1	COMED_P1-2_345-L18905__B-R-B	single	1656.0	125.06	127.12	DC	34.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274656	BYRON ;1U	26.2058	80/20	26.2058
274657	BYRON ;2U	25.5607	80/20	25.5607
274662	QUAD CITI;1U	27.2624	80/20	27.2624
274663	QUAD CITI;2U	27.3408	80/20	27.3408
274699	CORDOVA ;1C	4.7985	80/20	4.7985
274700	CORDOVA ;2C	4.7985	80/20	4.7985
274701	CORDOVA ;1S	5.3983	80/20	5.3983
274715	NELSON EC;1C	6.9650	80/20	6.9650
274716	NELSON EC;1S	5.0820	80/20	5.0820
274717	NELSON EC;2C	7.0188	80/20	7.0188
274718	NELSON EC;2S	5.1275	80/20	5.1275
274760	LEE CO EC;1U	2.8754	80/20	2.8754
274761	LEE CO EC;2U	2.8754	80/20	2.8754
274762	LEE CO EC;3U	2.8754	80/20	2.8754
274763	LEE CO EC;4U	2.8483	80/20	2.8483
274764	LEE CO EC;5U	2.8822	80/20	2.8822
274765	LEE CO EC;6U	2.8822	80/20	2.8822
274766	LEE CO EC;7U	2.8416	80/20	2.8416
274767	LEE CO EC;8U	2.8416	80/20	2.8416
274823	ROCKFORD ;21	2.0945	80/20	2.0945
274856	ECOGROVE ;U1	0.4177	80/20	0.4177
274857	BIG SKY ;U1	0.5148	80/20	0.5148
274858	BIG SKY ;U2	0.5148	80/20	0.5148
276156	O-029 C	0.3402	80/20	0.3402
276157	O-029 C	0.3678	80/20	0.3678
276158	O-029 C	0.6712	80/20	0.6712
276162	X1-087	0.2088	80/20	0.2088
293513	O-009 C1	0.6283	80/20	0.6283
293514	O-009 C2	0.3188	80/20	0.3188
293515	O-009 C3	0.3525	80/20	0.3525
295110	SUBLETTE C	0.0994	80/20	0.0994
919221	AA1-146	6.4974	80/20	6.4974
919581	AA2-030 C	41.1827	80/20	41.1827
925581	AC1-033 C	0.9655	Adder	1.14
926431	AC1-114	0.3402	80/20	0.3402
930482	AB1-089 CT	43.5394	80/20	43.5394
930483	AB1-089 ST	34.6156	80/20	34.6156
932921	AC2-116	0.1191	80/20	0.1191
934051	AD1-031 C O1	1.9610	Adder	2.31
934701	AD1-098 C O1	4.3804	Adder	5.15
936791	AD2-102 C	13.8516	80/20	13.8516

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937001	AD2-134 C	1.6135	Adder	1.9
937311	AD2-172 C	2.8661	80/20	2.8661
937531	AD2-214 C	8.3460	80/20	8.3460
938861	AE1-114 C O1	5.5916	80/20	5.5916
939051	AE1-134 1	3.2002	80/20	3.2002
939061	AE1-134 2	3.2002	80/20	3.2002
940501	AE2-035 C	2.8661	80/20	2.8661
943411	AF1-012 C	37.8976	80/20	37.8976
943921	AF1-060	1.4112	80/20	1.4112
946151	AF1-280 C O1	31.4210	80/20	31.4210
946161	AF1-281 C O1	0.6881	80/20	0.6881
946321	AF1-296 C O1	7.0348	80/20	7.0348
946501	AF1-314 C	5.0923	80/20	5.0923
951381	J504	4.2105	PJM External (MISO)	4.2105
951421	J514	2.5047	PJM External (MISO)	2.5047
954901	J963	0.9142	PJM External (MISO)	0.9142
955051	J981 C	2.7103	PJM External (MISO)	2.7103
955221	J1000	4.1425	PJM External (MISO)	4.1425
955971	J1084	22.7625	PJM External (MISO)	22.7625
956411	J1131	11.9130	PJM External (MISO)	11.9130
957471	AF2-041 C	99.2052	80/20	99.2052
958911	AF2-182 C	41.2830	80/20	41.2830
958921	AF2-183 C	7.3392	80/20	7.3392
959081	AF2-199 C	33.0684	80/20	33.0684
959091	AF2-200 C O1	66.1368	80/20	66.1368
959101	AF2-201 C O1	7.0151	80/20	7.0151
960551	AF2-346 C	16.2418	80/20	16.2418
961011	AF2-392 C O1	7.7215	80/20	7.7215
961021	AF2-393 O1	13.1616	80/20	13.1616
961031	AF2-394 O1	8.7744	80/20	8.7744
962701	AG1-119 C	25.5618	80/20	25.5618
962791	AG1-128 C O1	1.9343	Adder	4.29
964461	AG1-309 FTIR	289.0514	80/20	289.0514
965061	AG1-371	16.5342	80/20	16.5342
965071	AG1-372	11.0228	80/20	11.0228
965081	AG1-373	5.5114	80/20	5.5114
965661	AG1-434 C O1	16.8661	80/20	16.8661
965931	AG1-462 C O1	34.3008	80/20	34.3008
966521	AG1-521 C O1	14.0032	80/20	14.0032
966821	AG1-553 C O1	50.3078	80/20	50.3078
WEC	WEC	0.8543	Confirmed LTF	0.8543
CPL	CPL	0.0853	Confirmed LTF	0.0853
CBM-W2	CBM-W2	17.0867	Confirmed LTF	17.0867
NY	NY	0.2461	Confirmed LTF	0.2461
TVA	TVA	1.9068	Confirmed LTF	1.9068
SIGE	SIGE	0.0587	Confirmed LTF	0.0587
CBM-S2	CBM-S2	3.1529	Confirmed LTF	3.1529
CBM-S1	CBM-S1	0.4123	Confirmed LTF	0.4123
MEC	MEC	14.8953	Confirmed LTF	14.8953
BLUEG	BLUEG	0.3715	Confirmed LTF	0.3715
TRIMBLE	TRIMBLE	0.1369	Confirmed LTF	0.1369
LAGN	LAGN	4.1965	Confirmed LTF	4.1965

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-W1	CBM-W1	58.5615	Confirmed LTF	58.5615

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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
170047225	965660	AG1-434 TAP	CE	957470	AF2-041 TAP	CE	1	COMED_P1-2_345-L18905_B-R-A	single	1656.0	112.42	114.49	DC	34.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.4262	Adder	1.68
274656	BYRON ;1U	26.2058	80/20	26.2058
274657	BYRON ;2U	25.5607	80/20	25.5607
274662	QUAD CITI;1U	27.2624	80/20	27.2624
274663	QUAD CITI;2U	27.3408	80/20	27.3408
274699	CORDOVA ;1C	4.7985	80/20	4.7985
274700	CORDOVA ;2C	4.7985	80/20	4.7985
274701	CORDOVA ;1S	5.3983	80/20	5.3983
274715	NELSON EC;1C	6.9650	80/20	6.9650
274716	NELSON EC;1S	5.0820	80/20	5.0820
274717	NELSON EC;2C	7.0188	80/20	7.0188
274718	NELSON EC;2S	5.1275	80/20	5.1275
274760	LEE CO EC;1U	2.8754	80/20	2.8754
274761	LEE CO EC;2U	2.8754	80/20	2.8754
274762	LEE CO EC;3U	2.8754	80/20	2.8754
274763	LEE CO EC;4U	2.8483	80/20	2.8483
274764	LEE CO EC;5U	2.8822	80/20	2.8822
274765	LEE CO EC;6U	2.8822	80/20	2.8822
274766	LEE CO EC;7U	2.8416	80/20	2.8416
274767	LEE CO EC;8U	2.8416	80/20	2.8416
274822	ROCKFORD ;11	2.0409	80/20	2.0409
274823	ROCKFORD ;21	2.0945	80/20	2.0945
274856	ECOGROVE ;U1	0.4177	80/20	0.4177
274857	BIG SKY ;U1	0.5148	80/20	0.5148
274858	BIG SKY ;U2	0.5148	80/20	0.5148
276156	O-029 C	0.3402	80/20	0.3402
276157	O-029 C	0.3678	80/20	0.3678
276158	O-029 C	0.6712	80/20	0.6712
276162	X1-087	0.2088	80/20	0.2088
293513	O-009 C1	0.6283	80/20	0.6283
293514	O-009 C2	0.3188	80/20	0.3188
293515	O-009 C3	0.3525	80/20	0.3525
295110	SUBLETTE C	0.0994	80/20	0.0994
919221	AA1-146	6.4974	80/20	6.4974
919581	AA2-030 C	41.1827	80/20	41.1827
925581	AC1-033 C	0.9655	Adder	1.14
926431	AC1-114	0.3402	80/20	0.3402
930482	AB1-089 CT	43.5394	80/20	43.5394
930483	AB1-089 ST	34.6156	80/20	34.6156
932921	AC2-116	0.1191	80/20	0.1191
933911	AD1-013 C	0.9626	Adder	1.13

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934051	AD1-031 C O1	1.9610	Adder	2.31
934701	AD1-098 C O1	4.3804	Adder	5.15
934971	AD1-129 C	0.5038	Adder	0.59
936791	AD2-102 C	13.8516	80/20	13.8516
937001	AD2-134 C	1.6135	Adder	1.9
937311	AD2-172 C	2.8661	80/20	2.8661
937531	AD2-214 C	8.3460	80/20	8.3460
938861	AE1-114 C O1	5.5916	80/20	5.5916
939051	AE1-134 1	3.2002	80/20	3.2002
939061	AE1-134 2	3.2002	80/20	3.2002
940501	AE2-035 C	2.8661	80/20	2.8661
943411	AF1-012 C	37.8976	80/20	37.8976
943921	AF1-060	1.4112	80/20	1.4112
946151	AF1-280 C O1	31.4210	80/20	31.4210
946161	AF1-281 C O1	0.6881	80/20	0.6881
946321	AF1-296 C O1	7.0348	80/20	7.0348
946501	AF1-314 C	5.0923	80/20	5.0923
946671	AF1-331	1.2502	Adder	1.47
951381	J504	4.2105	PJM External (MISO)	4.2105
951421	J514	2.5047	PJM External (MISO)	2.5047
951511	J530 C	3.8900	PJM External (MISO)	3.8900
953921	J855 C	1.2293	PJM External (MISO)	1.2293
954061	J870	14.6480	PJM External (MISO)	14.6480
954071	J871	7.3240	PJM External (MISO)	7.3240
954091	J873 C	2.4529	PJM External (MISO)	2.4529
954861	J959 C	1.8170	PJM External (MISO)	1.8170
954901	J963	0.9142	PJM External (MISO)	0.9142
955051	J981 C	2.7103	PJM External (MISO)	2.7103
955221	J1000	4.1425	PJM External (MISO)	4.1425
955971	J1084	22.7625	PJM External (MISO)	22.7625
956411	J1131	11.9130	PJM External (MISO)	11.9130
956831	J1181 C	2.3388	PJM External (MISO)	2.3388
958911	AF2-182 C	41.2830	80/20	41.2830
958921	AF2-183 C	7.3392	80/20	7.3392
959101	AF2-201 C O1	7.0151	80/20	7.0151
960551	AF2-346 C	16.2418	80/20	16.2418
961011	AF2-392 C O1	7.7215	80/20	7.7215
961021	AF2-393 O1	13.1616	80/20	13.1616
961031	AF2-394 O1	8.7744	80/20	8.7744
962791	AG1-128 C O1	1.9343	Adder	4.29
964461	AG1-309 FTIR	289.0514	80/20	289.0514
965661	AG1-434 C O1	16.8661	80/20	16.8661
965671	AG1-435 C O1	1.1709	Adder	2.6
965931	AG1-462 C O1	34.3008	80/20	34.3008
966521	AG1-521 C O1	14.0032	80/20	14.0032
966821	AG1-553 C O1	50.3078	80/20	50.3078
WEC	WEC	0.8543	Confirmed LTF	0.8543
CPL	CPL	0.0853	Confirmed LTF	0.0853
CBM-W2	CBM-W2	17.0867	Confirmed LTF	17.0867
NY	NY	0.2461	Confirmed LTF	0.2461
TVA	TVA	1.9068	Confirmed LTF	1.9068
SIG	SIG	0.0587	Confirmed LTF	0.0587

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S2	CBM-S2	3.1529	Confirmed LTF	3.1529
CBM-S1	CBM-S1	0.4123	Confirmed LTF	0.4123
MEC	MEC	14.8953	Confirmed LTF	14.8953
BLUEG	BLUEG	0.3715	Confirmed LTF	0.3715
TRIMBLE	TRIMBLE	0.1369	Confirmed LTF	0.1369
LAGN	LAGN	4.1965	Confirmed LTF	4.1965
CBM-W1	CBM-W1	58.5615	Confirmed LTF	58.5615

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
AA1-018	Powerton-Goodings Grove	In Service
AA1-146	Nelson	Active
AA2-030	Nelson	Active
AA2-123	Marengo 34kV	In Service
AB1-089	Byron-Wayne 345kV #1	Active
AB1-091	Davis Creek 345kV	Active
AB1-122	Kendall-Tazewell & Dresden-Mole Creek	Engineering and Procurement
AB2-096	Silver Lake-Cherry Valley	Active
AC1-033	Kewanee	Active
AC1-109	Aurora 345kV	In Service
AC1-110	Aurora 138kV	Active
AC1-111	Aurora 138kV	In Service
AC1-113	Rockford	Partially in Service - Under Construction
AC1-114	Rockford II	Partially in Service - Under Construction
AC1-142A	Joliet	In Service
AC1-168	Kewanee-Streator	Active
AC1-171	Powerton	Active
AC1-214	Crescent Ridge	In Service
AC2-115	Rockford	Partially in Service - Under Construction
AC2-116	Rockford II	Partially in Service - Under Construction
AC2-154	Davis Creek 138kV	Active
AC2-156	Sandwich 34.5kV	Active
AD1-013	Twombly Road 138kV	Active
AD1-016	Marengo	Active
AD1-031	Kewanee 138 kV	Active
AD1-039	Kendall-Tazewell & Dresden-Mole Creek	Active
AD1-067	Mendota Hills	In Service
AD1-098	Dixon-McGirr	Active
AD1-116	Nevada 345 kV	Active
AD1-129	Belvidere 34 kV	Active
AD2-038	Powerton	Active
AD2-047	Davis Creek 138 kV	Active
AD2-060	Davis Creek 138kV	Active
AD2-066	Mazon-Crescent Ridge	Active
AD2-102	Wempletown 345 kV	Active
AD2-134	Shady Oaks	Active
AD2-172	Lena 138kV	Active
AD2-194	Elwood	Active
AD2-214	Rock Falls-Garden Plains	Active

Queue Number	Project Name	Status
AE1-070	Elwood 345 kV	Active
AE1-113	Mole Creek 345 kV	Active
AE1-114	Maryland-Lancaster 138 kV	Active
AE1-134	Nelson 345 kV	Active
AE1-163	Powerton-Nevada 345 kV	Active
AE1-166	Loretto-Wilton & Braidwood-Davis Creek	Active
AE2-035	Lena 138 kV	Active
AE2-062	Romeoville 12 kV	Engineering and Procurement
AE2-107	Haumesser Road 138 kV	Active
AE2-152	Loretto-Wilton & Braidwood-Davis Creek	Active
AE2-153	Braidwood-Davis Creek	Active
AE2-255	Molecreek 345 kV	Active
AE2-281	Powerton-Nevada 345 kV	Active
AE2-321	Belvidere-Marengo 138 kV	Active
AE2-341	Sandwich-Plano	Active
AF1-012	Electric Junc-Nelson	Active
AF1-030	Plano-R 138 kV	Active
AF1-048	Belvidere-Marengo	Active
AF1-060	Lena 138 kV	Active
AF1-072	Rocky Road	Active
AF1-156	Braidwood-Davis Creek	Active
AF1-200	Plano 345 kV	Active
AF1-280	Nelson-Lee County	Active
AF1-281	Nelson-Lee County	Active
AF1-296	Garden Plain 138 kV	Active
AF1-314	Lena 138 kV	Active
AF1-318	Crescent Ridge-Corbin	Active
AF1-330	Marengo	Active
AF1-331	Twombly Road	Active
AF2-027	Zion Energy Center 345 kV	Active
AF2-034	Kendall	Active
AF2-041	Nelson-Electric Junction 345 kV	Active
AF2-069	Crescent Ridge 138 kV	Active
AF2-070	Crescent Ridge 138 kV	Active
AF2-095	Wilmington-Davis Creek	Active
AF2-096	Braidwood-East Frankfort 345 kV	Active
AF2-128	Crescent Ridge-Corbin 138 kV	Active
AF2-142	Nevada 345 kV	Active
AF2-143	Powerton-Nevada 345 kV	Active
AF2-182	Nelson-Lee County 345 kV II	Active
AF2-183	Nelson-Lee County 345 kV	Active
AF2-199	Nelson-Electric Junction 345 kV	Active
AF2-200	Nelson-Electric Junction 345 kV	Active
AF2-201	Lena-Ecogrove 138 kV	Active
AF2-226	Katydid Road 345 kV	Active
AF2-319	Katydid Road 345 kV	Active
AF2-329	Sandwich-Plano 138 kV	Active
AF2-346	Electric Junction-Nelson 345 kV	Active
AF2-349	Garden Prairie-Silver Lake 345 kV	Active
AF2-350	Kensington 138 kV	Active
AF2-351	Kensington 138 kV	Active
AF2-363	Glidden 138 kV	Active

Queue Number	Project Name	Status
AF2-364	Wayne Red 138 kV	Active
AF2-366	Glidden-Waterman 138 kV	Active
AF2-392	Nelson-Dixon 138 kV	Active
AF2-393	Nelson-Dixon 138 kV	Active
AF2-394	Nelson-Dixon 138 kV	Active
AG1-005	Corbin-Crescent Ridge 138 kV	Active
AG1-044	Whiteside County	Active
AG1-118	Sugar Grove 138 kV	Active
AG1-119	Wayne-Byron 345 kV	Active
AG1-120	Glidden-Cherry Valley 138 kV	Active
AG1-121	Crescent Ridge 138 kV	Active
AG1-127	Glidden-Waterman 138 kV	Active
AG1-128	Shady Oaks 138 kV	Active
AG1-220	West Dekalb 138 kV	Active
AG1-309	Byron 345 kV	Active
AG1-371	Nelson-Electric Junction 345 kV	Active
AG1-372	Nelson-Electric Junction 345 kV	Active
AG1-373	Nelson-Electric Junction 345 kV	Active
AG1-379	Minonk 345 kV	Active
AG1-423	Wayne 345 kV	Active
AG1-434	Electric Junction-Nelson 345 kV	Active
AG1-435	Kewanee-Hennepin 138 kV	Active
AG1-462	Quad Cities-Sterling Steel 345 kV	Active
AG1-477	Grundy County 34.5 kV	Active
AG1-478	Will County 34.5 kV	Active
AG1-479	Grundy County 34.5 kV II	Withdrawn
AG1-513	Aurora 138 kV	Active
AG1-521	Dixon-McGirr Road 138 kV	Active
AG1-553	Cordova 345 kV	Active
X1-087	Stillman Valley	In Service
Y3-013	Zion Energy Center	In Service
Z1-072	Crescent Ridge	In Service
Z1-073	Mendota Hills	In Service
Z1-106	West Chicago 34kV	In Service
Z1-108	McHenry 34kV	In Service
J1000	MISO	MISO
J1002	MISO	MISO
J1003	MISO	MISO
J1025	MISO	MISO
J1026	MISO	MISO
J1042	MISO	MISO
J1055	MISO	MISO
J1084	MISO	MISO
J1101	MISO	MISO
J1102	MISO	MISO
J1131	MISO	MISO
J1135	MISO	MISO
J1153	MISO	MISO
J1154	MISO	MISO
J1171	MISO	MISO
J1181	MISO	MISO
J1182	MISO	MISO

Queue Number	Project Name	Status
J1183	MISO	MISO
J1188	MISO	MISO
J456	MISO	MISO
J504	MISO	MISO
J514	MISO	MISO
J530	MISO	MISO
J541	MISO	MISO
J703	MISO	MISO
J704	MISO	MISO
J715	MISO	MISO
J732	MISO	MISO
J756	MISO	MISO
J757	MISO	MISO
J760	MISO	MISO
J818	MISO	MISO
J831	MISO	MISO
J844	MISO	MISO
J849	MISO	MISO
J850	MISO	MISO
J855	MISO	MISO
J859	MISO	MISO
J864	MISO	MISO
J870	MISO	MISO
J871	MISO	MISO
J873	MISO	MISO
J878	MISO	MISO
J886	MISO	MISO
J928	MISO	MISO
J947	MISO	MISO
J952	MISO	MISO
J959	MISO	MISO
J963	MISO	MISO
J974	MISO	MISO
J981	MISO	MISO
J986	MISO	MISO

11.8 Contingency Descriptions - Primary POI

Contingency Name	Contingency Definition
COMED_P2-1_154-CB_13__	CONTINGENCY 'COMED_P2-1_154-CB_13__' / CONTINGENCY # 215 TRIP BRANCH FROM BUS 270857 TO BUS 270807 CKT 1 / P HTS 117; R 345 LIBERTYVI; R 345 END
COMED_P7-1_345-L13821_R-R+_345-L18502AB-N	CONTINGENCY 'COMED_P7-1_345-L13821_R-R+_345-L18502AB-N' / CONTINGENCY # 127 TRIP BRANCH FROM BUS 270883 TO BUS 270807 CKT 1 / SILVER LK; R 345 LIBERTYVI; R 345 TRIP BRANCH FROM BUS 270900 TO BUS 270806 CKT 1 / TOLLWAY ; B 345 LIBERTYVI; B 345 END
COMED_P1-2_345-L11620_B-S	CONTINGENCY 'COMED_P1-2_345-L11620_B-S' / CONTINGENCY # 230 TRIP BRANCH FROM BUS 270736 TO BUS 270770 CKT 1 / ELWOOD ; B 345 GOODINGS ;4B 345 END
COMED_P1-2_345-L0621__B-R	CONTINGENCY 'COMED_P1-2_345-L0621__B-R' / CONTINGENCY # 138 TRIP BRANCH FROM BUS 270678 TO BUS 270694 CKT 1 / BYRON ; B 345 CHERRY VA; B 345 END
COMED_P7-1_345-L0301__B-S+_345-L0303__R-S-B	CONTINGENCY 'COMED_P7-1_345-L0301__B-S+_345-L0303__R-S-B' / CONTINGENCY # 4 TRIP BRANCH FROM BUS 270854 TO BUS 270790 CKT 1 / POWERTON ; B 345 KATYDID ; B 345 TRIP BRANCH FROM BUS 936290 TO BUS 270827 CKT 1 / AD2-038 TAP 345 NEVADA ; 345 REMOVE SWSHUNT FROM BUS 270827 / NEVADA ; 345 END
COMED_P2-1_111-L11120__	CONTINGENCY 'COMED_P2-1_111-L11120__' / CONTINGENCY # 134 TRIP BRANCH FROM BUS 270733 TO BUS 270747 CKT 1 / ELECT JCT;3R 345 ESS W407K;OT 345 END
COMED_P1-2_345-L15502_B-R-D	CONTINGENCY 'COMED_P1-2_345-L15502_B-R-D' / CONTINGENCY # 347 TRIP BRANCH FROM BUS 957470 TO BUS 270730 CKT 1 / AF2-041 TAP 345 ELECT JCT; B 345 END

Contingency Name	Contingency Definition
COMED_P1-2_345-L13821_R-R	CONTINGENCY 'COMED_P1-2_345-L13821_R-R' / CONTINGENCY # 300 TRIP BRANCH FROM BUS 270883 TO BUS 270807 CKT 1 / SILVER LK; R 345 LIBERTYVI; R 345 END
COMED_P1-2_345-L2221__R-N	CONTINGENCY 'COMED_P1-2_345-L2221__R-N' / CONTINGENCY # 446 TRIP BRANCH FROM BUS 270941 TO BUS 699432 CKT 1 / ZION STA ; R 345 PLS PR1 345 END
COMED_P7-1_138-L11106_B-R+_345-L15502_B-R-A	CONTINGENCY 'COMED_P7-1_138-L11106_B-R+_345-L15502_B-R-A' / CONTINGENCY # 58 TRIP BRANCH FROM BUS 271390 TO BUS 271586 CKT 1 / ELECT JCT; B 138 ESS W541 ; B 138 TRIP BRANCH FROM BUS 271560 TO BUS 272948 CKT 1 / GLIDDEN ;BT 138 CHI W CTR 138 TRIP BRANCH FROM BUS 272948 TO BUS 271558 CKT 1 / CHI W CTR 138 GLIDDEN ; B 138 TRIP BRANCH FROM BUS 271560 TO BUS 272728 CKT 1 / GLIDDEN ;BT 138 WATERMAN ; B 138 TRIP BRANCH FROM BUS 271586 TO BUS 272114 CKT 1 / ESS W541 ; B 138 N AURORA ; B 138 TRIP BRANCH FROM BUS 272114 TO BUS 272522 CKT 1 / N AURORA ; B 138 SUGAR GRV; B 138 TRIP BRANCH FROM BUS 272522 TO BUS 271560 CKT 1 / SUGAR GRV; B 138 GLIDDEN ;BT 138 MOVE 100 PERCENT LOAD FROM BUS 271586 TO BUS 271587 / ESS W541 ; B 138 ESS W541 ; R 138 MOVE 100 PERCENT LOAD FROM BUS 272522 TO BUS 272523 / SUGAR GRV; B 138 SUGAR GRV; R 138 CLOSE LINE FROM BUS 272114 TO BUS 272115 CKT 1 / N AURORA ; B 138 N AURORA ; R 138 TRIP BRANCH FROM BUS 957470 TO BUS 270730 CKT 1 / AF2-041 TAP 345 ELECT JCT; B 345 END
COMED_P1-3_TR93_PLANO_B-S	CONTINGENCY 'COMED_P1-3_TR93_PLANO_B-S' / CONTINGENCY # 646 TRIP BRANCH FROM BUS 275207 TO BUS 270630 CKT 1 / PLANO ;3M 345 PLANO ; 765 TRIP BRANCH FROM BUS 275207 TO BUS 270846 CKT 1 / PLANO ;3M 345 PLANO ; B 345 TRIP BRANCH FROM BUS 275207 TO BUS 275307 CKT 1 / PLANO ;3M 345 PLANO ;3C 33 END
COMED_P1-2_345-L0622__R-R	CONTINGENCY 'COMED_P1-2_345-L0622__R-R' / CONTINGENCY # 139 TRIP BRANCH FROM BUS 270679 TO BUS 270695 CKT 1 / BYRON ; R 345 CHERRY VA; R 345 END

Contingency Name	Contingency Definition
COMED_P2-2_144_WN-345B__7	CONTINGENCY 'COMED_P2-2_144_WN-345B__7' / CONTINGENCY # 147 TRIP BRANCH FROM BUS 270916 TO BUS 270900 CKT 1 / WAYNE ; B 345 TOLLWA COMED_P2-2 ; B 345 DISCONNECT BUS 275228 / WAYNE ;1M 138 END
COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A	CONTINGENCY 'COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A' / CONTINGENCY # 136 TRIP BRANCH FROM BUS 957470 TO BUS 270730 CKT 1 / AF2-041 TAP 345 ELECT JCT; B 345 TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 TRIP BRANCH FROM BUS 270847 TO BUS 270733 CKT 1 / PLANO ; R 345 ELECT JCT;3R 345 END
COMED_P2-2_111_EJ-345R__3	CONTINGENCY 'COMED_P2-2_111_EJ-345R__3' / CONTINGENCY # 103 DISCONNECT BUS 270733 / ELECT JCT;3R 345 DISCONNECT BUS 275183 / ELECT JCT;3M 138 END
COMED_P2-2_111_EJ-345R__4	CONTINGENCY 'COMED_P2-2_111_EJ-345R__4' / CONTINGENCY # 104 DISCONNECT BUS 270731 / ELECT JCT;4R 345 DISCONNECT BUS 275184 / ELECT JCT;4M 138 END
COMED_P1-3_TR94_PLANO_R-S	CONTINGENCY 'COMED_P1-3_TR94_PLANO_R-S' / CONTINGENCY # 648 TRIP BRANCH FROM BUS 275208 TO BUS 270630 CKT 1 / PLANO ;4M 345 PLANO ; 765 TRIP BRANCH FROM BUS 275208 TO BUS 270847 CKT 1 / PLANO ;4M 345 PLANO ; R 345 TRIP BRANCH FROM BUS 275208 TO BUS 275308 CKT 1 / PLANO ;4M 345 PLANO ;4C 33 END
COMED_P1-2_345-L11723TR-N	CONTINGENCY 'COMED_P1-2_345-L11723TR-N' / CONTINGENCY # 238 TRIP BRANCH FROM BUS 270807 TO BUS 274817 CKT 1 / LIBERTYVI; R 345 ZION EC ;RP 345 TRIP BRANCH FROM BUS 270857 TO BUS 270807 CKT 1 / P HTS 117; R 345 LIBERTYVI; R 345 TRIP BRANCH FROM BUS 275211 TO BUS 270857 CKT 1 / P HTS 117;1M 138 P HTS 117; R 345 TRIP BRANCH FROM BUS 275211 TO BUS 272273 CKT 1 / P HTS 117;1M 138 P HTS 117; R 138 TRIP BRANCH FROM BUS 275211 TO BUS 275311 CKT 1 / P HTS 117;1M 138 P HTS 117;1C 34.5 END
Base Case	

Contingency Name	Contingency Definition
COMED_P1-2_345-L18905__B-R-B	CONTINGENCY 'COMED_P1-2_345-L18905__B-R-B' / CONTINGENCY # 141B TRIP BRANCH FROM BUS 962700 TO BUS 270916 CKT 1 / AG1-119 TAP 345 WAYNE ; B 345 END
COMED_P1-2_345-L18905__B-R-A	CONTINGENCY 'COMED_P1-2_345-L18905__B-R-A' / CONTINGENCY # 141B TRIP BRANCH FROM BUS 930480 TO BUS 962700 CKT 1 / AB1-089 ; B 345 AG1-119 TAP 345 END
COMED_P7-1_345-L9806__R-S_+_345-L19601_B-S	CONTINGENCY 'COMED_P7-1_345-L9806__R-S_+_345-L19601_B-S' / CONTINGENCY # 238 TRIP BRANCH FROM BUS 270827 TO BUS 270769 CKT 1 / NEVADA ; 345 GOODINGS ;2R 345 TRIP BRANCH FROM BUS 270790 TO BUS 270770 CKT 1 / KATYDID ; B 345 GOODINGS ;4B 345 END
COMED_P1-2_345-L16704TB-S	CONTINGENCY 'COMED_P1-2_345-L16704TB-S' / CONTINGENCY # 378 TRIP BRANCH FROM BUS 270846 TO BUS 270730 CKT 1 / PLANO ; B 345 ELECT JCT; B 345 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 2 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 1 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 270846 TO BUS 272278 TO BUS 275354 CKT 1 / PLANO ; B 345 PLANO;1I 138 PLANO;1C 34.5 END
COMED_P1-2_345-L97104__R	CONTINGENCY 'COMED_P1-2_345-L97104__R' / CONTINGENCY # 356B TRIP BRANCH FROM BUS 924470 TO BUS 270883 CKT 1 / GARDEN PR 345 SILVER LK; R 345 END
COMED_P1-2_345-L1202__B-S	CONTINGENCY 'COMED_P1-2_345-L1202__B-S' / CONTINGENCY # 254 TRIP BRANCH FROM BUS 270716 TO BUS 930770 CKT 1 / DRESDEN ; B 345 AB1-122 345 END

Contingency Name	Contingency Definition
COMED_P2-2_111_EJ-345B__2	CONTINGENCY 'COMED_P2-2_111_EJ-345B__2' / CONTINGENCY # 102 TRIP BRANCH FROM BUS 270730 TO BUS 270846 CKT 1 / ELECT JCT; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / ELECT JCT; B 345 WAYNE ; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270928 CKT 1 / ELECT JCT; B 345 WOLFS ; B 345 TRIP BRANCH FROM BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1 / WOLFS ; B 345 WOLFS ; B 138 WOLFS ;1C 34.5 DISCONNECT BUS 275239 / ELECT JCT;2M 138 END
COMED_P1-2_345-L11119_R-N	CONTINGENCY 'COMED_P1-2_345-L11119_R-N' / CONTINGENCY # 194 TRIP BRANCH FROM BUS 270731 TO BUS 274749 CKT 1 / ELECT JCT;4R 345 AURORA EC;RP 345 END
EXT_P12:345:MEC:CORDOVA:SUB 39	CONTINGENCY 'EXT_P12:345:MEC:CORDOVA:SUB 39' / 13918 OPEN BRANCH FROM BUS 636600 TO BUS 636605 CKT 1 / 636600 SB 39 3 345 636605 MECCORD3 345 1 END

12 Short Circuit Analysis - Primary POI

No breakers were identified as over-dutied as part of this analysis.

13 Summer Peak - Load Flow Analysis - Secondary POI

The Queue Project AG1-462 was evaluated as a 300.0 MW (Capacity 180.0 MW) injection tapping the Quad Cities to Sterling Steel 345 kV line in the ComEd area. Project AG1-462 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-462 was studied with a commercial probability of 53%. Potential network impacts were as follows:

13.1 Generation Deliverability

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

None

13.2 Multiple Facility Contingency

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

None

13.3 Contribution to Previously Identified Overloads

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPACT
168538281	270678	BYRON ; B	345.0	CE	930480	AB1-089 POI	345.0	CE	1	COMED_P1-2_345-L97104__R	single	2058.0	117.37	117.82	DC	20.8
174486004	270678	BYRON ; B	345.0	CE	270694	CHERRY VA; B	345.0	CE	1	COMED_P4_156-45-BT10-11	breaker	1441.0	115.21	115.8	DC	18.62
168538128	270694	CHERRY VA; B	345.0	CE	924470	GARDEN PR; R	345.0	CE	1	COMED_P1-2_345-L18905__B-R-B	single	1479.0	153.76	155.01	DC	18.57
168538131	270694	CHERRY VA; B	345.0	CE	924470	GARDEN PR; R	345.0	CE	1	Base Case	single	1201.0	134.55	135.66	DC	13.28
162238665	270730	ELECT JCT; B	345.0	CE	270812	LOMBARD ; B	345.0	CE	1	COMED_P2-2_111_EJ-345R__3	bus	1479.0	124.47	125.02	DC	17.74
162238667	270730	ELECT JCT; B	345.0	CE	270812	LOMBARD ; B	345.0	CE	1	COMED_P2-2_120_LO-345R__2	bus	1479.0	124.31	124.87	DC	18.32
162238690	270730	ELECT JCT; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P2-2_111_EJ-345R__4	bus	1341.0	119.48	120.53	DC	31.63
162238691	270730	ELECT JCT; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P2-2_111_EJ-345R__3	bus	1341.0	120.56	121.46	DC	33.13
162238978	270730	ELECT JCT; B	345.0	CE	270812	LOMBARD ; B	345.0	CE	1	COMED_P7-1_345-L13821_R-R_+ 345-L18502AB-N	tower	1768.0	116.38	116.87	DC	20.25
174313728	270730	ELECT JCT; B	345.0	CE	270812	LOMBARD ; B	345.0	CE	1	COMED_P4_111-45-L11120	breaker	1479.0	124.22	124.76	DC	17.74
174558143	270730	ELECT JCT; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P4_111-45-L16703	breaker	1341.0	128.23	129.17	DC	35.27
174558144	270730	ELECT JCT; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P4_111-45-L11120	breaker	1341.0	120.5	121.4	DC	33.13
162238717	270731	ELECT JCT;4R	345.0	CE	270733	ELECT JCT;3R	345.0	CE	1	COMED_P2-2_111_EJ-345B__2	bus	1656.0	117.94	118.62	DC	24.74
162239040	270731	ELECT JCT;4R	345.0	CE	270733	ELECT JCT;3R	345.0	CE	1	COMED_P7-1_138-L11104_R-R_+ 345-L16704TB-S	tower	1912.0	106.2	106.83	DC	26.61
162239041	270731	ELECT JCT;4R	345.0	CE	270733	ELECT JCT;3R	345.0	CE	1	COMED_P7-1_345-L13821_R-R_+ 345-L18502AB-N	tower	1912.0	104.13	104.63	DC	21.05
174485949	270731	ELECT JCT;4R	345.0	CE	270733	ELECT JCT;3R	345.0	CE	1	COMED_P4_111-45-L16704T	breaker	1656.0	125.89	126.61	DC	26.38
162238640	270743	ESS W407K;9T	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P2-2_111_EJ-345B__2	bus	1479.0	126.54	127.57	DC	33.65
162238641	270743	ESS W407K;9T	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P2-2_144_WN-345B__7	bus	1479.0	107.72	108.53	DC	26.33
162239106	270743	ESS W407K;9T	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P7-1_138-L11104_R-R_+ 345-L16704TB-S	tower	1768.0	100.32	101.17	DC	33.23

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
174485900	270743	ESS W407K;9T	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	139.41	140.46	DC	34.43
174485901	270743	ESS W407K;9T	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P4_111-45-L14321T	breaker	1479.0	126.56	127.59	DC	33.67
162238629	270751	ESS W407M;9T	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	127.5	128.53	DC	33.65
162238630	270751	ESS W407M;9T	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P2-2_144_WN-345B_7	bus	1479.0	108.68	109.49	DC	26.33
162239091	270751	ESS W407M;9T	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P7-1_138-L11104_R-R+_345-L16704TB-S	tower	1768.0	101.12	101.97	DC	33.23
162239092	270751	ESS W407M;9T	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P7-1_345-L13821_R-R+_345-L18502AB-N	tower	1768.0	100.01	100.78	DC	30.09
174485892	270751	ESS W407M;9T	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	140.37	141.42	DC	34.43
174485893	270751	ESS W407M;9T	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P4_111-45-L14321T	breaker	1479.0	127.52	128.55	DC	33.67
174558166	270807	LIBERTYVI;R	345.0	CE	270857	P HTS 117;R	345.0	CE	1	COMED_P4_016-45-BT6-11_	breaker	1479.0	112.56	113.07	DC	16.6
174558167	270807	LIBERTYVI;R	345.0	CE	270857	P HTS 117;R	345.0	CE	1	COMED_P4_144-45-BT6-9_	breaker	1479.0	104.18	104.74	DC	18.14
162238780	270828	NELSON;B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	COMED_P2-2_156_CV-345R_10	bus	1656.0	105.6	107.09	DC	54.3
162238781	270828	NELSON;B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	COMED_P2-2_900_EL-345B_10	bus	1656.0	103.83	105.31	DC	53.91
162239050	270828	NELSON;B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	COMED_P7-1_345-L13817TR-R+_345-L97104_-R	tower	1912.0	106.37	107.72	DC	56.89
168538318	270828	NELSON;B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	Base Case	single	1334.0	105.96	108.39	DC	32.37
171077806	270828	NELSON;B	345.0	CE	946150	AF1-280 TAP	345.0	CE	1	COMED_P7-1_138-L11106_B-R+_345-L15502_B-R	tower	1768.0	101.09	105.71	DC	81.69
171077813	270828	NELSON;B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	COMED_P7-1_345-L15616_-R+_138-L15627_R-R-B	tower	1912.0	101.9	103.25	DC	57.04
174313696	270828	NELSON;B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	COMED_P4_144-45-BT7-8_	breaker	1656.0	128.64	130.26	DC	59.16
162239101	270916	WAYNE;B	345.0	CE	270730	ELECT JCT;B	345.0	CE	1	COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A	tower	1768.0	100.01	100.78	DC	30.11
174486010	270916	WAYNE;B	345.0	CE	270900	TOLLWAY;B	345.0	CE	1	COMED_P4_144-45-BT6-9_	breaker	1201.0	112.71	113.29	DC	15.35
162238634	270917	WAYNE;R	345.0	CE	270751	ESS W407M;9T	345.0	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	127.5	128.53	DC	33.65

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECTIONS LOADIN G %	POST PROJECTIONS LOADIN G %	AC/DC	MW IMPACT
162238635	270917	WAYNE ; R	345.0	CE	270751	ESS W407M; 9T	345.0	CE	1	COMED_P2-2_144_WN-345B_7	bus	1479.0	108.68	109.49	DC	26.33
162239096	270917	WAYNE ; R	345.0	CE	270751	ESS W407M; 9T	345.0	CE	1	COMED_P7-1_138-L11104_R-R+_345-L16704TB-S	tower	1768.0	101.12	101.97	DC	33.23
162239097	270917	WAYNE ; R	345.0	CE	270751	ESS W407M; 9T	345.0	CE	1	COMED_P7-1_345-L13821_R-R+_345-L18502AB-N	tower	1768.0	100.01	100.78	DC	30.09
174485890	270917	WAYNE ; R	345.0	CE	270751	ESS W407M; 9T	345.0	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	140.37	141.43	DC	34.43
174485891	270917	WAYNE ; R	345.0	CE	270751	ESS W407M; 9T	345.0	CE	1	COMED_P4_111-45-L14321T	breaker	1479.0	127.52	128.55	DC	33.67
162238605	274749	AURORA EC;RP	345.0	CE	270731	ELECT JCT;4R	345.0	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	142.56	143.57	DC	33.12
168538340	274749	AURORA EC;RP	345.0	CE	270731	ELECT JCT;4R	345.0	CE	1	Base Case	single	1201.0	105.9	106.46	DC	15.15
168538341	274749	AURORA EC;RP	345.0	CE	270731	ELECT JCT;4R	345.0	CE	1	COMED_P1-2_345-L13821_R-R	single	1479.0	100.19	100.69	DC	16.65
174485870	274749	AURORA EC;RP	345.0	CE	270731	ELECT JCT;4R	345.0	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	146.23	147.27	DC	33.9
174485871	274749	AURORA EC;RP	345.0	CE	270731	ELECT JCT;4R	345.0	CE	1	COMED_P4_111-45-L14321T	breaker	1479.0	142.57	143.59	DC	33.14
171077763	274768	LEE CO EC;BP	345.0	CE	270678	BYRON ; B	345.0	CE	1	COMED_P7-1_138-L11106_B-R+_345-L15502_B-R	tower	2084.0	113.05	114.79	DC	80.57
162238865	349662	7TAZEWE LL	345.0	AMIL	930760	AB1-122 TAP1	345.0	CE	1	COMED_P7-1_345-L9806_R-S+_345-L19601_B-S	tower	1479.0	183.99	184.86	DC	28.46
162238866	349662	7TAZEWE LL	345.0	AMIL	930760	AB1-122 TAP1	345.0	CE	1	COMED_P7-1_345-L0301_B-S+_345-L0303_R-S-B	tower	1479.0	168.13	169.01	DC	28.52
169766430	349662	7TAZEWE LL	345.0	AMIL	930760	AB1-122 TAP1	345.0	CE	1	COMED_P1-2_345-L1202_B-S	single	1479.0	101.02	102.02	DC	14.82
169766357	924470	GARDEN PR; R	345.0	CE	270883	SILVER LK; R	345.0	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1479.0	172.14	172.71	DC	18.57
169766359	924470	GARDEN PR; R	345.0	CE	270883	SILVER LK; R	345.0	CE	1	Base Case	single	1201.0	155.48	155.98	DC	13.28
175737845	930480	AB1-089 POI	345.0	CE	965550	AG1-423 TAP	345.0	CE	1	COMED_P1-2_345-L97104_R-R	single	2058.0	127.63	128.09	DC	20.8
162238545	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P2-2_116_GG-345R_2	bus	1479.0	174.65	175.42	DC	25.12
162238546	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P2-2_111_EJ-345B_1	bus	1479.0	169.49	170.4	DC	29.71

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECTIONS LOADIN G %	POST PROJECTIONS LOADIN G %	AC/DC	MW IMPACT
162238880	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P7-1_345-L9806_R-S_+ 345-L19601_B-S	tower	1768.0	173.18	173.91	DC	28.46
162238881	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P7-1_345-L0301_B-S_+ 345-L0303_R-S-B	tower	1768.0	160.84	161.57	DC	28.52
169766373	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	Base Case	single	1201.0	116.64	117.82	DC	14.19
174313559	930760	AB1-122 TAP1	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P4_012-45-BT4-5	breaker	1479.0	189.73	190.49	DC	24.72
171077500	943410	AF1-012 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	COMED_P2-2_156_CV-345R_10	bus	1656.0	113.0	114.49	DC	54.3
171077501	943410	AF1-012 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	COMED_P2-2_900_EL-345B_10	bus	1656.0	112.3	113.78	DC	53.91
171077770	943410	AF1-012 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	COMED_P7-1_345-L13817TR-R_+ 345-L97104_R	tower	1912.0	112.26	113.61	DC	56.89
171077771	943410	AF1-012 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	COMED_P7-1_345-L15616_R_+ 138-L15627_R-R-B	tower	1912.0	108.2	109.56	DC	57.04
174313660	943410	AF1-012 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	COMED_P4_144-45-BT7-8	breaker	1656.0	139.55	141.17	DC	59.16
175563932	943410	AF1-012 TAP	345.0	CE	957470	AF2-041 TAP	345.0	CE	1	Base Case	single	1334.0	110.42	112.85	DC	32.37
162238920	946150	AF1-280 TAP	345.0	CE	274768	LEE CO EC;BP	345.0	CE	1	COMED_P7-1_345-L15502_B-R_+ 345-L16703_R-S-A	tower	1768.0	114.69	119.27	DC	80.95
171077713	946150	AF1-280 TAP	345.0	CE	274768	LEE CO EC;BP	345.0	CE	1	COMED_P7-1_138-L11106_B-R_+ 345-L15502_B-R	tower	1768.0	114.68	119.3	DC	81.69
162238655	957470	AF2-041 TAP	345.0	CE	270730	ELECT JCT; B	345.0	CE	1	COMED_P2-2_156_CV-345R_10	bus	1656.0	123.23	124.69	DC	54.3
162238656	957470	AF2-041 TAP	345.0	CE	270730	ELECT JCT; B	345.0	CE	1	COMED_P2-2_900_EL-345B_10	bus	1656.0	120.26	121.71	DC	53.91
162238914	957470	AF2-041 TAP	345.0	CE	270730	ELECT JCT; B	345.0	CE	1	COMED_P7-1_345-L13817TR-R_+ 345-L97104_R	tower	1912.0	120.92	122.25	DC	56.89
171077724	957470	AF2-041 TAP	345.0	CE	270730	ELECT JCT; B	345.0	CE	1	COMED_P7-1_345-L15616_R_+ 138-L15627_R-R-B	tower	1912.0	116.71	118.04	DC	57.04
174313635	957470	AF2-041 TAP	345.0	CE	270730	ELECT JCT; B	345.0	CE	1	COMED_P4_144-45-BT7-8	breaker	1656.0	146.36	147.96	DC	59.16
175737833	965550	AG1-423 TAP	345.0	CE	270916	WAYNE ; B	345.0	CE	1	COMED_P1-2_345-L97104_R	single	2058.0	130.77	131.22	DC	20.8

13.4 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS ARE A	TO BUS#	TO BUS	kV	TO BUS ARE A	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
168538 278	2706 78	BYRON ; B	345 .0	CE	9304 80	AB1-089 POI	345 .0	CE	1	COMED_P1-2_345-L97104__R	operati on	2058 .0	134.23	134.99	DC	34.67
168538 280	2706 78	BYRON ; B	345 .0	CE	9304 80	AB1-089 POI	345 .0	CE	1	Base Case	operati on	1679 .0	124.3	125.05	DC	27.88
168538 436	2706 78	BYRON ; B	345 .0	CE	2706 94	CHERRY VA; B	345 .0	CE	1	COMED_P1-2_345-L0622__R-R	operati on	1441 .0	112.53	113.02	DC	15.63
168538 407	2706 79	BYRON ; R	345 .0	CE	2706 95	CHERRY VA; R	345 .0	CE	1	COMED_P1-2_345-L0621__B-R	operati on	1479 .0	115.52	116.02	DC	16.33
168538 126	2706 94	CHERRY VA; B	345 .0	CE	9244 70	GARDEN PR; R	345 .0	CE	1	COMED_P1-2_345-L18905__B-R-B	operati on	1479 .0	175.98	176.93	DC	30.95
168538 130	2706 94	CHERRY VA; B	345 .0	CE	9244 70	GARDEN PR; R	345 .0	CE	1	Base Case	operati on	1201 .0	153.52	154.36	DC	22.14
168538 309	2707 30	ELECT JCT; B	345 .0	CE	2708 12	LOMBA RD ; B	345 .0	CE	1	Base Case	operati on	1201 .0	131.02	131.66	DC	17.03
168538 380	2707 30	ELECT JCT; B	345 .0	CE	2708 46	PLANO ; B	345 .0	CE	1	COMED_P1-2_345-L11119__R-N	operati on	1341 .0	117.49	118.54	DC	31.52
168538 382	2707 30	ELECT JCT; B	345 .0	CE	2708 46	PLANO ; B	345 .0	CE	1	Base Case	operati on	1245 .0	99.71	100.67	DC	26.95
168538 374	2707 31	ELECT JCT;4R	345 .0	CE	2707 33	ELECT JCT;3R	345 .0	CE	1	Base Case	operati on	1334 .0	117.36	117.95	DC	17.41
175950 936	2707 31	ELECT JCT;4R	345 .0	CE	2707 33	ELECT JCT;3R	345 .0	CE	1	COMED_P1-2_345-L13821__R-R	operati on	1656 .0	107.59	108.13	DC	19.58
168538 427	2707 43	ESS W407K; 9T	345 .0	CE	2747 49	AUROR A EC;RP	345 .0	CE	1	Base Case	operati on	1201 .0	116.91	117.88	DC	25.77
175950 929	2707 43	ESS W407K; 9T	345 .0	CE	2747 49	AUROR A EC;RP	345 .0	CE	1	COMED_P1-2_345-L11124__B-N	operati on	1479 .0	105.52	106.36	DC	27.65
168538 412	2707 51	ESS W407M; 9T	345 .0	CE	2707 43	ESS W407K; 9T	345 .0	CE	1	Base Case	operati on	1201 .0	118.1	119.07	DC	25.77
175950 925	2707 51	ESS W407M; 9T	345 .0	CE	2707 43	ESS W407K; 9T	345 .0	CE	1	COMED_P1-2_345-L11124__B-N	operati on	1479 .0	106.48	107.32	DC	27.65
168538 345	2707 70	GOODIN GS;4B	345 .0	CE	2707 66	GOODIN GS;3B	345 .0	CE	1	Base Case	operati on	1560 .0	118.64	118.82	DC	20.99
168538 266	2708 28	NELSON ; B	345 .0	CE	9461 50	AF1-280 TAP	345 .0	CE	1	COMED_P1-2_345-L15502__B-R-D	operati on	1479 .0	120.41	125.91	DC	81.32
168538 315	2708 28	NELSON ; B	345 .0	CE	9434 10	AF1-012 TAP	345 .0	CE	1	Base Case	operati on	1334 .0	127.78	129.62	DC	53.94
168538 249	2708 66	QUAD 6-7	345 .0	CE	6366 10	SUB 91 3	345 .0	ME C	1	EXT_P12:345:MEC:CORD OVA:SUB 39	operati on	1471 .0	130.11	136.0	DC	84.29
168538 434	2709 16	WAYNE ; B	345 .0	CE	2709 00	TOLLWA Y; B	345 .0	CE	1	COMED_P1-2_345-L11126__B-N	operati on	1201 .0	112.18	112.75	DC	15.2
168538 507	2709 16	WAYNE ; B	345 .0	CE	2707 30	ELECT JCT; B	345 .0	CE	1	COMED_P1-2_345-L15502__B-R-D	operati on	1479 .0	101.82	102.62	DC	26.28

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADING %	POST PROJE CT LOADING %	AC/DC	MW IMPACT
168538 416	2709 17	WAYNE ; R	345 .0	CE	2707 51	ESS W407M; 9T	345 .0	CE	1	Base Case	operation	1201 .0	118.1	119.07	DC	25.77
175950 922	2709 17	WAYNE ; R	345 .0	CE	2707 51	ESS W407M; 9T	345 .0	CE	1	COMED_P1-2_345-L11124_B-N	operation	1479 .0	106.48	107.32	DC	27.65
168538 338	2747 49	AURORA EC;RP	345 .0	CE	2707 31	ELECT JCT;4R	345 .0	CE	1	Base Case	operation	1201 .0	128.45	129.41	DC	25.25
168538 339	2747 49	AURORA EC;RP	345 .0	CE	2707 31	ELECT JCT;4R	345 .0	CE	1	COMED_P1-2_345-L13821_R-R	operation	1479 .0	118.21	119.06	DC	27.75
168538 254	2747 68	LEE CO EC;BP	345 .0	CE	2706 78	BYRON ; B	345 .0	CE	1	COMED_P1-2_345-L15502_B-R-D	operation	1726 .0	136.15	138.23	DC	80.2
168538 255	2747 68	LEE CO EC;BP	345 .0	CE	2706 78	BYRON ; B	345 .0	CE	1	Base Case	operation	1334 .0	130.75	132.66	DC	56.96
169766 428	3496 62	7TAZEWE L	345 .0	AMI L	9307 60	AB1-122 TAP1	345 .0	CE	1	COMED_P1-2_345-L1202_B-S	operation	1479 .0	168.35	169.11	DC	24.71
169766 429	3496 62	7TAZEWE L	345 .0	AMI L	9307 60	AB1-122 TAP1	345 .0	CE	1	Base Case	operation	1201 .0	155.38	156.27	DC	23.65
169766 806	6994 32	PLS PR1	345 .0	WEC	2748 17	ZION EC ;RP	345 .0	CE	1	COMED_P1-2_345-L2221_R-N	operation	1526 .0	99.72	100.17	DC	15.2
169766 354	9244 70	GARDEN PR; R	345 .0	CE	2708 83	SILVER LK; R	345 .0	CE	1	COMED_P1-2_345-L18905_B-R-B	operation	1479 .0	201.17	202.11	DC	30.95
169766 356	9244 70	GARDEN PR; R	345 .0	CE	2708 83	SILVER LK; R	345 .0	CE	1	Base Case	operation	1201 .0	182.03	182.86	DC	22.14
175737 843	9304 80	AB1-089 POI	345 .0	CE	9655 50	AG1-423 TAP	345 .0	CE	1	COMED_P1-2_345-L97104__R	operation	2058 .0	144.8	145.56	DC	34.67
175737 844	9304 80	AB1-089 POI	345 .0	CE	9655 50	AG1-423 TAP	345 .0	CE	1	Base Case	operation	1679 .0	137.56	138.31	DC	27.88
169766 371	9307 60	AB1-122 TAP1	345 .0	CE	2707 17	DRESDE N ; R	345 .0	CE	1	Base Case	operation	1201 .0	184.42	185.31	DC	23.65
175563 931	9434 10	AF1-012 TAP	345 .0	CE	9574 70	AF2-041 TAP	345 .0	CE	1	Base Case	operation	1334 .0	138.31	140.14	DC	53.94
168538 210	9461 50	AF1-280 TAP	345 .0	CE	2747 68	LEE CO EC;BP	345 .0	CE	1	COMED_P1-2_345-L15502_B-R-D	operation	1479 .0	136.58	142.08	DC	81.32
170047 203	9574 70	AF2-041 TAP	345 .0	CE	2707 30	ELECT JCT; B	345 .0	CE	1	Base Case	operation	1334 .0	148.18	149.98	DC	53.94
175737 831	9655 50	AG1-423 TAP	345 .0	CE	2709 16	WAYNE ; B	345 .0	CE	1	COMED_P1-2_345-L97104__R	operation	2058 .0	150.13	150.89	DC	34.67
175737 832	9655 50	AG1-423 TAP	345 .0	CE	2709 16	WAYNE ; B	345 .0	CE	1	Base Case	operation	1679 .0	142.66	143.42	DC	27.88

13.5 Flow Gate Details - Secondary POI

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

rules such as commercial probability of each project as well as the ramping impact of "Adder" contributions. The MW Impact found and used in the analysis is shown in the indices column named "Gendeliv MW Impact".

13.5.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
168538281	270678	BYRON ;B	CE	930480	AB1-089 POI	CE	1	COMED_P1-2_345-L97104__R	single	2058.0	117.37	117.82	DC	20.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.7004	Adder	2.0
274656	BYRON ;1U	55.9973	80/20	55.9973
274657	BYRON ;2U	54.6314	80/20	54.6314
274715	NELSON EC;1C	3.8228	80/20	3.8228
274716	NELSON EC;1S	2.7893	80/20	2.7893
274717	NELSON EC;2C	3.8523	80/20	3.8523
274718	NELSON EC;2S	2.8143	80/20	2.8143
274760	LEE CO EC;1U	2.7770	80/20	2.7770
274761	LEE CO EC;2U	2.7770	80/20	2.7770
274762	LEE CO EC;3U	2.7770	80/20	2.7770
274763	LEE CO EC;4U	2.7508	80/20	2.7508
274764	LEE CO EC;5U	2.7835	80/20	2.7835
274765	LEE CO EC;6U	2.7835	80/20	2.7835
274766	LEE CO EC;7U	2.7443	80/20	2.7443
274767	LEE CO EC;8U	2.7443	80/20	2.7443
274822	ROCKFORD ;11	4.2327	80/20	4.2327
274823	ROCKFORD ;21	4.3430	80/20	4.3430
274824	ROCKFORD ;12	4.1958	80/20	4.1958
274856	ECOGROVE ;U1	0.6217	80/20	0.6217
274857	BIG SKY ;U1	0.4972	80/20	0.4972
274858	BIG SKY ;U2	0.4972	80/20	0.4972
276162	X1-087	0.2945	80/20	0.2945
276590	R-018	0.2263	80/20	0.2263
919221	AA1-146	3.5661	80/20	3.5661
919581	AA2-030 C	19.2128	Adder	22.6
924472	AB2-096 CT1	41.1305	80/20	41.1305
924473	AB2-096 CT2	41.1305	80/20	41.1305
924474	AB2-096 CT3	41.1305	80/20	41.1305
926431	AC1-114	0.7053	80/20	0.7053
927511	AC1-113 1	0.3527	80/20	0.3527
927521	AC1-113 2	0.3527	80/20	0.3527
932881	AC2-115 1	0.7054	80/20	0.7054
932891	AC2-115 2	0.7054	80/20	0.7054
932921	AC2-116	0.2469	80/20	0.2469
933911	AD1-013 C	1.1901	Adder	1.4
933931	AD1-016 C	0.5645	Adder	0.66
934701	AD1-098 C O1	4.6172	Adder	5.43
934971	AD1-129 C	1.2485	80/20	1.2485
936791	AD2-102 C	28.6296	80/20	28.6296
937001	AD2-134 C	1.7772	Adder	2.09
937311	AD2-172 C	4.2653	80/20	4.2653

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937531	AD2-214 C	4.2878	Adder	5.04
938861	AE1-114 C O1	6.0251	80/20	6.0251
939051	AE1-134 1	1.4930	Adder	1.76
939061	AE1-134 2	1.4930	Adder	1.76
940501	AE2-035 C	4.2653	80/20	4.2653
941131	AE2-107 C	3.2984	Adder	3.88
942991	AE2-321 C	4.7377	Adder	5.57
943411	AF1-012 C	10.4190	Adder	12.26
943801	AF1-048 C	2.2147	Adder	2.61
943921	AF1-060	2.1002	80/20	2.1002
946151	AF1-280 C O1	25.7300	80/20	25.7300
946161	AF1-281 C O1	0.5634	80/20	0.5634
946321	AF1-296 C O1	3.6719	Adder	4.32
946501	AF1-314 C	7.5784	80/20	7.5784
946661	AF1-330 C	1.1212	Adder	1.32
946671	AF1-331	1.5456	Adder	1.82
952431	J760	5.1261	PJM External (MISO)	5.1261
953681	J818	14.1088	PJM External (MISO)	14.1088
953901	J850	23.5925	PJM External (MISO)	23.5925
953921	J855 C	1.3605	PJM External (MISO)	1.3605
954001	J864	4.4957	PJM External (MISO)	4.4957
954061	J870	17.9560	PJM External (MISO)	17.9560
954071	J871	8.9780	PJM External (MISO)	8.9780
955221	J1000	4.0580	PJM External (MISO)	4.0580
955251	J1003	3.4320	PJM External (MISO)	3.4320
955971	J1084	12.2415	PJM External (MISO)	12.2415
956581	J1154	7.1055	PJM External (MISO)	7.1055
956901	J1188	5.7410	PJM External (MISO)	5.7410
958911	AF2-182 C	33.8058	80/20	33.8058
958921	AF2-183 C	6.0099	80/20	6.0099
959101	AF2-201 C O1	10.4399	80/20	10.4399
960551	AF2-346 C	4.4653	Adder	5.25
960581	AF2-349 C	46.9764	80/20	46.9764
960721	AF2-363 C O1	5.9066	Adder	6.95
960751	AF2-366 C	3.6696	Adder	4.32
961011	AF2-392 C O1	4.1831	Adder	4.92
961021	AF2-393 O1	7.1303	Adder	8.39
961031	AF2-394 O1	4.7535	Adder	5.59
962781	AG1-127 C O2	2.1539	Adder	4.78
962791	AG1-128 C O2	2.1306	Adder	4.73
963681	AG1-220 C O2	17.2800	80/20	17.2800
964461	AG1-309 FTIR	617.7243	80/20	617.7243
965661	AG1-434 C O2	1.4478	Adder	3.21
965931	AG1-462 C O2	9.3716	Adder	20.8
966521	AG1-521 C O2	11.6576	80/20	11.6576
966821	AG1-553 C O2	13.4512	Adder	29.86
WEC	WEC	1.1110	Confirmed LTF	1.1110
CBM-W2	CBM-W2	10.2861	Confirmed LTF	10.2861
NY	NY	0.3097	Confirmed LTF	0.3097
TVA	TVA	1.0668	Confirmed LTF	1.0668
SIGE	SIGE	0.0401	Confirmed LTF	0.0401
CBM-S1	CBM-S1	0.2113	Confirmed LTF	0.2113

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
HAMLET	HAMLET	0.0497	Confirmed LTF	0.0497
MEC	MEC	10.8926	Confirmed LTF	10.8926
GIBSON	GIBSON	0.1343	Confirmed LTF	0.1343
BLUEG	BLUEG	0.7048	Confirmed LTF	0.7048
TRIMBLE	TRIMBLE	0.2387	Confirmed LTF	0.2387
LAGN	LAGN	2.7318	Confirmed LTF	2.7318
CATAWBA	CATAWBA	0.0101	Confirmed LTF	0.0101
CBM-W1	CBM-W1	55.7856	Confirmed LTF	55.7856

13.5.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
174486004	270678	BYRON ; B	CE	270694	CHERRY VA; B	CE	1	COMED_P4_156-45-BT10-11	breaker	1441.0	115.21	115.8	DC	18.62

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274656	BYRON ;1U	37.3555	50/50	37.3555
274657	BYRON ;2U	36.4095	50/50	36.4095
274760	LEE CO EC;1U	1.7434	50/50	1.7434
274761	LEE CO EC;2U	1.7434	50/50	1.7434
274762	LEE CO EC;3U	1.7434	50/50	1.7434
274763	LEE CO EC;4U	1.7270	50/50	1.7270
274764	LEE CO EC;5U	1.7476	50/50	1.7476
274765	LEE CO EC;6U	1.7476	50/50	1.7476
274859	EASYSR;U1 E	10.6211	Adder	12.5
274860	EASYSR;U2 E	10.6211	Adder	12.5
276172	Z1-108 BAT	1.7856	Merchant Transmission	1.7856
293516	O-009 E1	3.8988	Adder	4.59
293517	O-009 E2	1.9803	Adder	2.33
293518	O-009 E3	2.1809	Adder	2.57
293715	O-029 E	4.1683	Adder	4.9
293716	O-029 E	2.2854	Adder	2.69
293717	O-029 E	2.1005	Adder	2.47
919581	AA2-030 C	11.0163	Adder	12.96
920273	AA2-123 BAT	2.4144	Merchant Transmission	2.4144
930482	AB1-089 CT	50.6755	50/50	50.6755
930483	AB1-089 ST	40.2890	50/50	40.2890
936791	AD2-102 C	7.3073	Adder	8.6
936792	AD2-102 E	4.8715	Adder	5.73
937531	AD2-214 C	2.1384	Adder	2.52
937532	AD2-214 E	1.4256	Adder	1.68
939051	AE1-134 1	0.8560	Adder	1.01
939061	AE1-134 2	0.8560	Adder	1.01
943411	AF1-012 C	6.1243	Adder	7.21
943412	AF1-012 E	4.0829	Adder	4.8
943803	AF1-048 BAT	4.5132	Merchant Transmission	4.5132
946151	AF1-280 C O1	13.4488	Adder	15.82
946152	AF1-280 E O1	6.1845	Adder	7.28
946161	AF1-281 C O1	0.2945	Adder	0.35
946162	AF1-281 E O1	1.6688	Adder	1.96
946321	AF1-296 C O1	1.8375	Adder	2.16
946322	AF1-296 E O1	8.6028	Adder	10.12
952431	J760	1.5039	PJM External (MISO)	1.5039
955971	J1084	7.5030	PJM External (MISO)	7.5030
958911	AF2-182 C	17.6700	Adder	20.79
958912	AF2-182 E	11.7800	Adder	13.86
958921	AF2-183 C	3.1413	Adder	3.7
958922	AF2-183 E	4.7120	Adder	5.54

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960551	AF2-346 C	2.6247	Adder	3.09
960552	AF2-346 E	1.7498	Adder	2.06
961011	AF2-392 C O1	1.7967	Adder	2.11
961012	AF2-392 E O1	8.4118	Adder	9.9
961021	AF2-393 O1	3.0626	Adder	3.6
961031	AF2-394 O1	2.0417	Adder	2.4
962012	AG1-044 E	0.0165	Adder	0.04
964461	AG1-309 FTIR	411.8840	50/50	411.8840
965551	AG1-423 C O2	5.7920	Adder	12.86
965552	AG1-423 E O2	3.8613	Adder	8.57
965931	AG1-462 C O2	5.0341	Adder	11.17
965932	AG1-462 E O2	3.3560	Adder	7.45
966821	AG1-553 C O2	7.1882	Adder	15.96
966822	AG1-553 E O2	1.7971	Adder	3.99
CBM-W2	CBM-W2	4.3277	Confirmed LTF	4.3277
NY	NY	0.1543	Confirmed LTF	0.1543
TVA	TVA	0.4312	Confirmed LTF	0.4312
O-066	O-066	1.8306	Confirmed LTF	1.8306
SIGE	SIGE	0.0187	Confirmed LTF	0.0187
CBM-S1	CBM-S1	0.0825	Confirmed LTF	0.0825
G-007	G-007	0.2856	Confirmed LTF	0.2856
HAMLET	HAMLET	0.0393	Confirmed LTF	0.0393
MEC	MEC	4.6653	Confirmed LTF	4.6653
GIBSON	GIBSON	0.0704	Confirmed LTF	0.0704
BLUEG	BLUEG	0.3576	Confirmed LTF	0.3576
TRIMBLE	TRIMBLE	0.1202	Confirmed LTF	0.1202
LAGN	LAGN	1.1305	Confirmed LTF	1.1305
CATAWBA	CATAWBA	0.0150	Confirmed LTF	0.0150
CBM-W1	CBM-W1	15.3239	Confirmed LTF	15.3239

13.5.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
168538128	270694	CHERRY VA; B	CE	924470	GARDEN PR; R	CE	1	COMED_P1-2_345-L18905__B-R-B	single	1479.0	153.76	155.01	DC	18.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.2213	80/20	2.2213
274656	BYRON ;1U	47.3438	80/20	47.3438
274657	BYRON ;2U	46.2787	80/20	46.2787
274662	QUAD CITI;1U	14.4405	80/20	14.4405
274663	QUAD CITI;2U	14.4816	80/20	14.4816
274700	CORDOVA ;2C	2.5357	80/20	2.5357
274701	CORDOVA ;1S	2.8526	80/20	2.8526
274715	NELSON EC;1C	3.3940	80/20	3.3940
274716	NELSON EC;1S	2.4764	80/20	2.4764
274717	NELSON EC;2C	3.4202	80/20	3.4202
274718	NELSON EC;2S	2.4986	80/20	2.4986
274760	LEE CO EC;1U	2.3971	80/20	2.3971
274761	LEE CO EC;2U	2.3971	80/20	2.3971
274762	LEE CO EC;3U	2.3971	80/20	2.3971
274763	LEE CO EC;4U	2.3745	80/20	2.3745
274764	LEE CO EC;5U	2.4027	80/20	2.4027
274765	LEE CO EC;6U	2.4027	80/20	2.4027
274766	LEE CO EC;7U	2.3689	80/20	2.3689
274767	LEE CO EC;8U	2.3689	80/20	2.3689
274822	ROCKFORD ;11	4.7466	80/20	4.7466
274823	ROCKFORD ;21	4.8710	80/20	4.8710
274824	ROCKFORD ;12	4.7052	80/20	4.7052
274856	ECOGROVE ;U1	0.6574	80/20	0.6574
274857	BIG SKY ;U1	0.4292	80/20	0.4292
274858	BIG SKY ;U2	0.4292	80/20	0.4292
276156	O-029 C	0.1894	80/20	0.1894
276157	O-029 C	0.2047	80/20	0.2047
276158	O-029 C	0.3736	80/20	0.3736
276162	X1-087	0.3277	80/20	0.3277
276590	R-018	0.2567	80/20	0.2567
293513	O-009 C1	0.3497	80/20	0.3497
293514	O-009 C2	0.1774	80/20	0.1774
293515	O-009 C3	0.1962	80/20	0.1962
295110	SUBLETTE C	0.0683	80/20	0.0683
919221	AA1-146	3.1661	80/20	3.1661
919581	AA2-030 C	20.0677	80/20	20.0677
926431	AC1-114	0.7911	80/20	0.7911
927511	AC1-113 1	0.3955	80/20	0.3955
927521	AC1-113 2	0.3955	80/20	0.3955
930482	AB1-089 CT	78.6774	80/20	78.6774
930483	AB1-089 ST	62.5516	80/20	62.5516

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
932881	AC2-115 1	0.7911	80/20	0.7911
932891	AC2-115 2	0.7911	80/20	0.7911
932921	AC2-116	0.2769	80/20	0.2769
933911	AD1-013 C	1.5628	80/20	1.5628
933931	AD1-016 C	0.4486	Adder	0.53
934701	AD1-098 C O1	5.8996	80/20	5.8996
934971	AD1-129 C	1.3406	80/20	1.3406
936791	AD2-102 C	28.5168	80/20	28.5168
937001	AD2-134 C	1.9490	Adder	2.29
937311	AD2-172 C	4.5106	80/20	4.5106
937531	AD2-214 C	4.5778	80/20	4.5778
938861	AE1-114 C O1	6.1724	80/20	6.1724
939051	AE1-134 1	1.5594	80/20	1.5594
939061	AE1-134 2	1.5594	80/20	1.5594
940501	AE2-035 C	4.5106	80/20	4.5106
941131	AE2-107 C	3.8157	Adder	4.49
943411	AF1-012 C	10.9956	80/20	10.9956
943921	AF1-060	2.2209	80/20	2.2209
946151	AF1-280 C O1	22.3598	80/20	22.3598
946161	AF1-281 C O1	0.4896	80/20	0.4896
946321	AF1-296 C O1	3.9032	80/20	3.9032
946501	AF1-314 C	8.0142	80/20	8.0142
946671	AF1-331	2.0296	80/20	2.0296
952431	J760	5.1372	PJM External (MISO)	5.1372
953681	J818	13.1969	PJM External (MISO)	13.1969
953901	J850	21.8500	PJM External (MISO)	21.8500
953921	J855 C	1.2825	PJM External (MISO)	1.2825
954001	J864	4.2443	PJM External (MISO)	4.2443
954061	J870	16.9540	PJM External (MISO)	16.9540
954071	J871	8.4770	PJM External (MISO)	8.4770
955221	J1000	3.7970	PJM External (MISO)	3.7970
955971	J1084	11.1195	PJM External (MISO)	11.1195
956581	J1154	6.6472	PJM External (MISO)	6.6472
956901	J1188	5.5255	PJM External (MISO)	5.5255
958911	AF2-182 C	29.3778	80/20	29.3778
958921	AF2-183 C	5.2227	80/20	5.2227
959101	AF2-201 C O1	11.0402	80/20	11.0402
960551	AF2-346 C	4.7124	80/20	4.7124
960721	AF2-363 C O1	8.1094	80/20	8.1094
960751	AF2-366 C	4.3574	Adder	5.13
961011	AF2-392 C O1	4.6003	80/20	4.6003
961021	AF2-393 O1	7.8414	80/20	7.8414
961031	AF2-394 O1	5.2276	80/20	5.2276
962781	AG1-127 C O2	2.5576	Adder	5.68
962791	AG1-128 C O2	2.3366	Adder	5.19
963681	AG1-220 C O2	20.1402	80/20	20.1402
964461	AG1-309 FTIR	522.7711	80/20	522.7711
965551	AG1-423 C O2	30.8064	80/20	30.8064
965661	AG1-434 C O2	1.5878	Adder	3.52
965931	AG1-462 C O2	18.5670	80/20	18.5670
966521	AG1-521 C O2	11.4992	80/20	11.4992
966821	AG1-553 C O2	26.6614	80/20	26.6614

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
WEC	WEC	0.4945	Confirmed LTF	0.4945
CBM-W2	CBM-W2	9.3990	Confirmed LTF	9.3990
NY	NY	0.2627	Confirmed LTF	0.2627
TVA	TVA	0.9856	Confirmed LTF	0.9856
SIGE	SIGE	0.0359	Confirmed LTF	0.0359
CBM-S2	CBM-S2	0.1357	Confirmed LTF	0.1357
CBM-S1	CBM-S1	0.1980	Confirmed LTF	0.1980
HAMLET	HAMLET	0.0300	Confirmed LTF	0.0300
MEC	MEC	9.7310	Confirmed LTF	9.7310
GIBSON	GIBSON	0.1054	Confirmed LTF	0.1054
BLUEG	BLUEG	0.5850	Confirmed LTF	0.5850
TRIMBLE	TRIMBLE	0.1987	Confirmed LTF	0.1987
LAGN	LAGN	2.4745	Confirmed LTF	2.4745
CATAWBA	CATAWBA	0.0003	Confirmed LTF	0.0003
CBM-W1	CBM-W1	47.3876	Confirmed LTF	47.3876

13.5.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
162238665	270730	ELECT JCT; B	CE	270812	LOMBARD ; B	CE	1	COMED_P2-2_111_EJ-345R_3	bus	1479.0	124.47	125.02	DC	17.74

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.7804	Adder	2.09
274738	AURORA EC;3P	4.0573	50/50	4.0573
274740	AURORA EC;4P	4.0573	50/50	4.0573
274859	EASYR;U1 E	5.9095	Adder	6.95
274860	EASYR;U2 E	5.9095	Adder	6.95
274872	LEE DEKAL;1U	0.6447	50/50	0.6447
276167	Z1-106 E2	1.1176	50/50	1.1176
276168	Z1-106 E1	1.1241	50/50	1.1241
276591	L-013 2	3.2410	50/50	3.2410
290051	GSG-6; E	7.0588	Adder	8.3
290108	LEEDK;1U E	20.4320	50/50	20.4320
293516	O-009 E1	4.5446	Adder	5.35
293517	O-009 E2	2.3083	Adder	2.72
293518	O-009 E3	2.5421	Adder	2.99
293715	O-029 E	4.8587	Adder	5.72
293716	O-029 E	2.6639	Adder	3.13
293717	O-029 E	2.4484	Adder	2.88
294763	P-046 E	3.8678	Adder	4.55
295109	WESTBROOK E	3.7792	Adder	4.45
295111	SUBLETTE E	1.4457	Adder	1.7
916221	Z1-073 E	3.6664	Adder	4.31
919581	AA2-030 C	10.7534	Adder	12.65
926331	AC1-110 1	2.5379	50/50	2.5379
926341	AC1-110 2	2.5379	50/50	2.5379
930482	AB1-089 CT	17.0562	Adder	20.07
930483	AB1-089 ST	13.5604	Adder	15.95
933431	AC2-156 C O1	0.8095	50/50	0.8095
933432	AC2-156 E O1	1.3207	50/50	1.3207
933911	AD1-013 C	1.2479	Adder	1.47
933912	AD1-013 E	1.9934	Adder	2.35
934432	AD1-067 E	0.3727	Adder	0.44
934701	AD1-098 C O1	4.6030	Adder	5.42
934702	AD1-098 E O1	3.3607	Adder	3.95
937001	AD2-134 C	1.8453	Adder	2.17
937002	AD2-134 E	7.6229	Adder	8.97
937311	AD2-172 C	1.0153	Adder	1.19
937312	AD2-172 E	1.4021	Adder	1.65
937531	AD2-214 C	2.2400	Adder	2.64
937532	AD2-214 E	1.4933	Adder	1.76
938861	AE1-114 C O1	1.8583	Adder	2.19
938862	AE1-114 E O1	6.3400	Adder	7.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939051	AE1-134 1	0.8356	Adder	0.98
939061	AE1-134 2	0.8356	Adder	0.98
940501	AE2-035 C	1.0153	Adder	1.19
940502	AE2-035 E	1.4021	Adder	1.65
941131	AE2-107 C	5.5166	50/50	5.5166
941132	AE2-107 E	3.6778	50/50	3.6778
943121	AE2-341 C	10.7089	50/50	10.7089
943122	AE2-341 E	5.2586	50/50	5.2586
943411	AF1-012 C	10.8685	50/50	10.8685
943412	AF1-012 E	7.2457	50/50	7.2457
943591	AF1-030 C O1	7.1215	50/50	7.1215
943592	AF1-030 E O1	3.5235	50/50	3.5235
943921	AF1-060	0.4999	Adder	0.59
944041	AF1-072	0.9092	Adder	1.07
945351	AF1-200 FTIR	175.1931	Merchant Transmission	175.1931
946151	AF1-280 C O1	8.7256	Adder	10.27
946152	AF1-280 E O1	4.0125	Adder	4.72
946161	AF1-281 C O1	0.1911	Adder	0.22
946162	AF1-281 E O1	1.0827	Adder	1.27
946321	AF1-296 C O1	1.8404	Adder	2.17
946322	AF1-296 E O1	8.6162	Adder	10.14
946501	AF1-314 C	1.8040	Adder	2.12
946502	AF1-314 E	8.4458	Adder	9.94
946671	AF1-331	1.6206	Adder	1.91
955971	J1084	7.8960	PJM External (MISO)	7.8960
957333	AF2-027 BAT	3.0665	Merchant Transmission	3.0665
957471	AF2-041 C	26.5914	50/50	26.5914
957472	AF2-041 E	13.2957	50/50	13.2957
958911	AF2-182 C	11.4643	Adder	13.49
958912	AF2-182 E	7.6429	Adder	8.99
958921	AF2-183 C	2.0381	Adder	2.4
958922	AF2-183 E	3.0571	Adder	3.6
959081	AF2-199 C	8.8638	50/50	8.8638
959082	AF2-199 E	4.4319	50/50	4.4319
959091	AF2-200 C O1	17.7276	50/50	17.7276
959092	AF2-200 E O1	8.8638	50/50	8.8638
959101	AF2-201 C O1	2.4851	Adder	2.92
959102	AF2-201 E O1	7.1362	Adder	8.4
960381	AF2-329	5.5567	50/50	5.5567
960551	AF2-346 C	4.6579	50/50	4.6579
960552	AF2-346 E	3.1053	50/50	3.1053
960721	AF2-363 C O1	3.3381	Adder	3.93
960722	AF2-363 E O1	2.2254	Adder	2.62
960731	AF2-364 C O1	3.5125	Adder	4.13
960732	AF2-364 E O1	2.3417	Adder	2.75
960751	AF2-366 C	5.7766	50/50	5.7766
960752	AF2-366 E	3.8510	50/50	3.8510
961011	AF2-392 C O1	2.2631	Adder	2.66
961012	AF2-392 E O1	10.5957	Adder	12.47
961021	AF2-393 O1	3.8576	Adder	4.54
961031	AF2-394 O1	2.5718	Adder	3.03
962012	AG1-044 E	0.0184	Adder	0.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962691	AG1-118 C O2	20.4336	50/50	20.4336
962692	AG1-118 E O2	13.6224	50/50	13.6224
962701	AG1-119 C O2	7.4327	Adder	16.5
962702	AG1-119 E O2	4.9551	Adder	11.0
962711	AG1-120 C O2	2.9384	Adder	6.52
962712	AG1-120 E O2	1.9589	Adder	4.35
962781	AG1-127 C O2	6.3974	50/50	6.3974
962782	AG1-127 E O2	4.2650	50/50	4.2650
962791	AG1-128 C O2	2.2122	Adder	4.91
962792	AG1-128 E O2	10.3523	Adder	22.98
963681	AG1-220 C O2	2.6306	Adder	5.84
963682	AG1-220 E O2	1.7537	Adder	3.89
964461	AG1-309 FTIR	121.9779	Merchant Transmission	121.9779
965061	AG1-371	4.4319	50/50	4.4319
965071	AG1-372	2.9546	50/50	2.9546
965081	AG1-373	1.4773	50/50	1.4773
965551	AG1-423 C O2	4.0064	Adder	8.89
965552	AG1-423 E O2	2.6709	Adder	5.93
965661	AG1-434 C O2	1.5033	Adder	3.34
965662	AG1-434 E O2	7.0382	Adder	15.62
965931	AG1-462 C O2	4.7949	Adder	10.64
965932	AG1-462 E O2	3.1966	Adder	7.1
966441	AG1-513 C	0.1761	Adder	0.39
966442	AG1-513 E	0.2642	Adder	0.59
966521	AG1-521 C O2	2.6407	Adder	5.86
966522	AG1-521 E O2	0.6602	Adder	1.47
966651	AG1-535 O2	11.1410	50/50	11.1410
966821	AG1-553 C O2	6.8338	Adder	15.17
966822	AG1-553 E O2	1.7085	Adder	3.79
CBM-W2	CBM-W2	4.1126	Confirmed LTF	4.1126
NY	NY	0.1029	Confirmed LTF	0.1029
TVA	TVA	0.4298	Confirmed LTF	0.4298
O-066	O-066	1.2047	Confirmed LTF	1.2047
SIGE	SIGE	0.0160	Confirmed LTF	0.0160
CBM-S2	CBM-S2	0.2192	Confirmed LTF	0.2192
CBM-S1	CBM-S1	0.0882	Confirmed LTF	0.0882
G-007	G-007	0.1880	Confirmed LTF	0.1880
HAMLET	HAMLET	0.0035	Confirmed LTF	0.0035
MEC	MEC	3.7802	Confirmed LTF	3.7802
GIBSON	GIBSON	0.0311	Confirmed LTF	0.0311
BLUEG	BLUEG	0.2066	Confirmed LTF	0.2066
TRIMBLE	TRIMBLE	0.0707	Confirmed LTF	0.0707
LAGN	LAGN	0.9993	Confirmed LTF	0.9993
CBM-W1	CBM-W1	3.1825	Confirmed LTF	3.1825

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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
174558143	270730	ELECT JCT; B	CE	270846	PLANO ; B	CE	1	COMED_P4_111-45-L16703_	breaker	1341.0	128.23	129.17	DC	35.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.1954	Adder	2.58
274658	DRESDEN ;2U	65.3207	Adder	76.85
274737	AURORA EC;1P	4.3885	50/50	4.3885
274738	AURORA EC;3P	4.6734	50/50	4.6734
274739	AURORA EC;2P	4.3885	50/50	4.3885
274740	AURORA EC;4P	4.6734	50/50	4.6734
274820	ELGIN EC ;2P	3.3870	50/50	3.3870
274859	EASYR;U1 E	11.7382	Adder	13.81
274860	EASYR;U2 E	11.7382	Adder	13.81
276167	Z1-106 E2	1.4469	Adder	1.7
276168	Z1-106 E1	1.4513	Adder	1.71
276170	Z1-108 E	2.6875	Adder	3.16
276591	L-013 2	4.1959	Adder	4.94
290051	GSG-6; E	8.7602	Adder	10.31
290108	LEEDK;1U E	19.1522	Adder	22.53
293516	O-009 E1	8.1324	Adder	9.57
293517	O-009 E2	4.1306	Adder	4.86
293518	O-009 E3	4.5489	Adder	5.35
293715	O-029 E	8.6944	Adder	10.23
293716	O-029 E	4.7670	Adder	5.61
293717	O-029 E	4.3814	Adder	5.15
294763	P-046 E	9.6132	Adder	11.31
295109	WESTBROOK E	4.6901	Adder	5.52
295111	SUBLETTE E	2.5430	Adder	2.99
915011	Y3-013 1	3.3775	Adder	3.97
915021	Y3-013 2	3.3775	Adder	3.97
915031	Y3-013 3	3.3775	Adder	3.97
916221	Z1-073 E	4.5501	Adder	5.35
919581	AA2-030 C	18.6963	Adder	22.0
920272	AA2-123 E	2.6168	Adder	3.08
924472	AB2-096 CT1	20.2615	Adder	23.84
924473	AB2-096 CT2	20.2615	Adder	23.84
924474	AB2-096 CT3	20.2615	Adder	23.84
926311	AC1-109 1	0.4331	50/50	0.4331
926321	AC1-109 2	0.4331	50/50	0.4331
926331	AC1-110 1	2.9232	50/50	2.9232
926341	AC1-110 2	2.9232	50/50	2.9232
930482	AB1-089 CT	40.5167	Adder	47.67
930483	AB1-089 ST	32.2123	Adder	37.9
930771	AB1-122 CT2	41.2212	Adder	48.5
933911	AD1-013 C	1.5357	Adder	1.81
933912	AD1-013 E	2.4532	Adder	2.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933931	AD1-016 C	0.9937	Adder	1.17
933932	AD1-016 E	1.6213	Adder	1.91
934111	AD1-039 2	4.0397	Adder	4.75
934432	AD1-067 E	0.4625	Adder	0.54
934701	AD1-098 C O1	5.8170	Adder	6.84
934702	AD1-098 E O1	4.2470	Adder	5.0
934971	AD1-129 C	0.9542	Adder	1.12
934972	AD1-129 E	0.6361	Adder	0.75
936791	AD2-102 C	14.6074	Adder	17.19
936792	AD2-102 E	9.7383	Adder	11.46
937001	AD2-134 C	2.2901	Adder	2.69
937002	AD2-134 E	9.4602	Adder	11.13
937311	AD2-172 C	2.5235	Adder	2.97
937312	AD2-172 E	3.4848	Adder	4.1
937531	AD2-214 C	4.2521	Adder	5.0
937532	AD2-214 E	2.8347	Adder	3.33
938861	AE1-114 C O1	3.9732	Adder	4.67
938862	AE1-114 E O1	13.5555	Adder	15.95
939051	AE1-134 1	1.4528	Adder	1.71
939061	AE1-134 2	1.4528	Adder	1.71
940501	AE2-035 C	2.5235	Adder	2.97
940502	AE2-035 E	3.4848	Adder	4.1
940752	AE2-062 E	0.0326	Adder	0.07
941131	AE2-107 C	5.1711	Adder	6.08
941132	AE2-107 E	3.4474	Adder	4.06
942991	AE2-321 C	8.7424	Adder	10.29
942992	AE2-321 E	4.3060	Adder	5.07
943411	AF1-012 C	13.9168	Adder	16.37
943412	AF1-012 E	9.2778	Adder	10.92
943801	AF1-048 C	4.0867	Adder	4.81
943802	AF1-048 E	2.7245	Adder	3.21
943921	AF1-060	1.2425	Adder	1.46
944041	AF1-072	2.4766	Adder	2.91
945352	AF1-200 NFTW	574.2450	50/50	574.2450
946151	AF1-280 C O1	16.6174	Adder	19.55
946152	AF1-280 E O1	7.6416	Adder	8.99
946161	AF1-281 C O1	0.3639	Adder	0.43
946162	AF1-281 E O1	2.0620	Adder	2.43
946321	AF1-296 C O1	3.7061	Adder	4.36
946322	AF1-296 E O1	17.3512	Adder	20.41
946501	AF1-314 C	4.4836	Adder	5.27
946502	AF1-314 E	20.9913	Adder	24.7
946661	AF1-330 C	2.1458	Adder	2.52
946662	AF1-330 E	0.4710	Adder	0.55
946671	AF1-331	1.9944	Adder	2.35
952381	J703	9.8086	PJM External (MISO)	9.8086
952391	J704	4.1949	PJM External (MISO)	4.1949
952431	J760	2.8383	PJM External (MISO)	2.8383
953151	J831	3.3608	PJM External (MISO)	3.3608
953331	J801	4.2809	PJM External (MISO)	4.2809
953491	J947	17.2860	PJM External (MISO)	17.2860
953681	J818	12.8214	PJM External (MISO)	12.8214

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
953891	J849	9.5813	PJM External (MISO)	9.5813
953901	J850	22.5225	PJM External (MISO)	22.5225
953921	J855 C	1.1213	PJM External (MISO)	1.1213
953922	J855 E	6.0667	PJM External (MISO)	6.0667
954001	J864	3.7475	PJM External (MISO)	3.7475
954061	J870	14.8260	PJM External (MISO)	14.8260
954071	J871	7.4130	PJM External (MISO)	7.4130
954141	J878	17.6340	PJM External (MISO)	17.6340
954191	J886	11.8380	PJM External (MISO)	11.8380
954511	J926 C	0.9137	PJM External (MISO)	0.9137
954512	J926 E	4.9433	PJM External (MISO)	4.9433
954691	J732	34.0381	PJM External (MISO)	34.0381
954741	J928 C	0.9564	PJM External (MISO)	0.9564
954742	J928 E	5.1744	PJM External (MISO)	5.1744
954861	J959 C	0.3764	PJM External (MISO)	0.3764
954862	J959 E	2.0367	PJM External (MISO)	2.0367
955091	J986	10.7078	PJM External (MISO)	10.7078
955221	J1000	3.4515	PJM External (MISO)	3.4515
955241	J1002	7.5814	PJM External (MISO)	7.5814
955251	J1003	4.0990	PJM External (MISO)	4.0990
955582	J1042 E	16.0776	PJM External (MISO)	16.0776
955971	J1084	10.6920	PJM External (MISO)	10.6920
956051	J1092	5.6370	PJM External (MISO)	5.6370
956141	J1101	1.5784	PJM External (MISO)	1.5784
956411	J1131	5.7540	PJM External (MISO)	5.7540
956571	J1153	12.4365	PJM External (MISO)	12.4365
956581	J1154	6.4537	PJM External (MISO)	6.4537
956731	J1171	8.1870	PJM External (MISO)	8.1870
956852	J1183 E	0.1035	PJM External (MISO)	0.1035
956901	J1188	4.3570	PJM External (MISO)	4.3570
957331	AF2-027 C	2.2516	Adder	2.65
957332	AF2-027 E	3.3775	Adder	3.97
957401	AF2-034 C	0.7380	Adder	0.87
957402	AF2-034 E	0.6286	Adder	0.74
957471	AF2-041 C	33.5646	50/50	33.5646
957472	AF2-041 E	16.7823	50/50	16.7823
958911	AF2-182 C	21.8331	Adder	25.69
958912	AF2-182 E	14.5554	Adder	17.12
958921	AF2-183 C	3.8814	Adder	4.57
958922	AF2-183 E	5.8222	Adder	6.85
959081	AF2-199 C	11.1882	50/50	11.1882
959082	AF2-199 E	5.5941	50/50	5.5941
959091	AF2-200 C O1	22.3764	50/50	22.3764
959092	AF2-200 E O1	11.1882	50/50	11.1882
959101	AF2-201 C O1	6.1765	Adder	7.27
959102	AF2-201 E O1	17.7363	Adder	20.87
960551	AF2-346 C	5.9643	Adder	7.02
960552	AF2-346 E	3.9762	Adder	4.68
960581	AF2-349 C	23.1413	Adder	27.23
960582	AF2-349 E	15.4275	Adder	18.15
960721	AF2-363 C O1	5.3038	Adder	6.24
960722	AF2-363 E O1	3.5359	Adder	4.16

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960731	AF2-364 C O1	7.1454	Adder	8.41
960732	AF2-364 E O1	4.7636	Adder	5.6
960751	AF2-366 C	5.4788	Adder	6.45
960752	AF2-366 E	3.6525	Adder	4.3
961011	AF2-392 C O1	3.9844	Adder	4.69
961012	AF2-392 E O1	18.6545	Adder	21.95
961021	AF2-393 O1	6.7917	Adder	7.99
961031	AF2-394 O1	4.5278	Adder	5.33
962012	AG1-044 E	0.0326	Adder	0.07
962691	AG1-118 C O2	9.5970	Adder	21.3
962692	AG1-118 E O2	6.3980	Adder	14.2
962701	AG1-119 C O2	33.2694	50/50	33.2694
962702	AG1-119 E O2	22.1796	50/50	22.1796
962711	AG1-120 C O2	13.1525	50/50	13.1525
962712	AG1-120 E O2	8.7683	50/50	8.7683
962781	AG1-127 C O2	3.2158	Adder	7.14
962782	AG1-127 E O2	2.1439	Adder	4.76
962791	AG1-128 C O2	2.7455	Adder	6.09
962792	AG1-128 E O2	12.8475	Adder	28.52
963681	AG1-220 C O2	5.6167	Adder	12.47
963682	AG1-220 E O2	3.7445	Adder	8.31
964461	AG1-309 FTIR	304.3546	Merchant Transmission	304.3546
965061	AG1-371	5.5941	50/50	5.5941
965071	AG1-372	3.7294	50/50	3.7294
965081	AG1-373	1.8647	50/50	1.8647
965551	AG1-423 C O2	8.9167	Adder	19.79
965552	AG1-423 E O2	5.9444	Adder	13.2
965661	AG1-434 C O2	1.8656	Adder	4.14
965662	AG1-434 E O2	8.7346	Adder	19.39
965931	AG1-462 C O2	9.5338	Adder	21.16
965932	AG1-462 E O2	6.3558	Adder	14.11
966441	AG1-513 C	0.2430	Adder	0.54
966442	AG1-513 E	0.3645	Adder	0.81
966521	AG1-521 C O2	4.7638	Adder	10.57
966522	AG1-521 E O2	1.1909	Adder	2.64
966651	AG1-535 O2	15.7616	50/50	15.7616
966821	AG1-553 C O2	13.7533	Adder	30.53
966822	AG1-553 E O2	3.4383	Adder	7.63
WEC	WEC	4.0279	Confirmed LTF	4.0279
CBM-W2	CBM-W2	14.0582	Confirmed LTF	14.0582
NY	NY	0.4723	Confirmed LTF	0.4723
TVA	TVA	1.3426	Confirmed LTF	1.3426
O-066	O-066	5.6195	Confirmed LTF	5.6195
SIGE	SIGE	0.0754	Confirmed LTF	0.0754
CBM-S1	CBM-S1	0.2645	Confirmed LTF	0.2645
G-007	G-007	0.8757	Confirmed LTF	0.8757
HAMLET	HAMLET	0.1190	Confirmed LTF	0.1190
MEC	MEC	12.5038	Confirmed LTF	12.5038
GIBSON	GIBSON	0.1016	Confirmed LTF	0.1016
BLUEG	BLUEG	0.9374	Confirmed LTF	0.9374
TRIMBLE	TRIMBLE	0.3205	Confirmed LTF	0.3205
LAGN	LAGN	3.3845	Confirmed LTF	3.3845

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CATAWBA	CATAWBA	0.0448	Confirmed LTF	0.0448
CBM-W1	CBM-W1	78.4840	Confirmed LTF	78.4840

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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
174485949	270731	ELECT JCT;4R	CE	270733	ELECT JCT;3R	CE	1	COMED_P4_111-45-L16704T	breaker	1656.0	125.89	126.61	DC	26.38

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.8199	Adder	2.14
274659	DRESDEN ;3U	70.5533	Adder	83.0
274695	ROCKY RD ;2P	3.3920	50/50	3.3920
274737	AURORA EC;1P	12.6528	50/50	12.6528
274739	AURORA EC;2P	12.6528	50/50	12.6528
274818	ELGIN EC ;1P	4.2523	50/50	4.2523
274819	ELGIN EC ;3P	4.2387	50/50	4.2387
274820	ELGIN EC ;2P	4.2523	50/50	4.2523
274821	ELGIN EC ;4P	4.2705	50/50	4.2705
274859	EASYR;U1 E	9.8255	Adder	11.56
274860	EASYR;U2 E	9.8255	Adder	11.56
276167	Z1-106 E2	1.3081	Adder	1.54
276168	Z1-106 E1	1.3076	Adder	1.54
276170	Z1-108 E	2.9769	Adder	3.5
276591	L-013 2	3.7934	Adder	4.46
290051	GSG-6; E	7.2040	Adder	8.48
290108	LEEDK;1U E	15.8202	Adder	18.61
293516	O-009 E1	6.1994	Adder	7.29
293517	O-009 E2	3.1488	Adder	3.7
293518	O-009 E3	3.4677	Adder	4.08
293715	O-029 E	6.6278	Adder	7.8
293716	O-029 E	3.6339	Adder	4.28
293717	O-029 E	3.3400	Adder	3.93
294763	P-046 E	8.9835	Adder	10.57
295109	WESTBROOK E	3.8569	Adder	4.54
295111	SUBLETTE E	1.9754	Adder	2.32
915011	Y3-013 1	1.8447	Adder	2.17
915021	Y3-013 2	1.8447	Adder	2.17
915031	Y3-013 3	1.8447	Adder	2.17
916221	Z1-073 E	3.7418	Adder	4.4
919581	AA2-030 C	13.1448	Adder	15.46
920272	AA2-123 E	2.8320	Adder	3.33
924472	AB2-096 CT1	21.3264	Adder	25.09
924473	AB2-096 CT2	21.3264	Adder	25.09
924474	AB2-096 CT3	21.3264	Adder	25.09
926311	AC1-109 1	1.2488	50/50	1.2488
926321	AC1-109 2	1.2488	50/50	1.2488
926331	AC1-110 1	1.1123	Adder	1.31
926341	AC1-110 2	1.1123	Adder	1.31
930482	AB1-089 CT	45.8739	Adder	53.97
930483	AB1-089 ST	36.4715	Adder	42.91
930761	AB1-122 CT1	38.4060	Adder	45.18

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933431	AC2-156 C O1	0.4666	Adder	0.55
933432	AC2-156 E O1	0.7613	Adder	0.9
933911	AD1-013 C	1.2777	Adder	1.5
933912	AD1-013 E	2.0410	Adder	2.4
933931	AD1-016 C	1.0735	Adder	1.26
933932	AD1-016 E	1.7515	Adder	2.06
934101	AD1-039 1	3.7638	Adder	4.43
934432	AD1-067 E	0.3803	Adder	0.45
934701	AD1-098 C O1	4.7676	Adder	5.61
934702	AD1-098 E O1	3.4808	Adder	4.1
934971	AD1-129 C	0.9945	Adder	1.17
934972	AD1-129 E	0.6630	Adder	0.78
936791	AD2-102 C	14.2474	Adder	16.76
936792	AD2-102 E	9.4982	Adder	11.17
937001	AD2-134 C	1.8832	Adder	2.22
937002	AD2-134 E	7.7797	Adder	9.15
937311	AD2-172 C	2.3582	Adder	2.77
937312	AD2-172 E	3.2565	Adder	3.83
937531	AD2-214 C	3.1777	Adder	3.74
937532	AD2-214 E	2.1185	Adder	2.49
938861	AE1-114 C O1	3.4512	Adder	4.06
938862	AE1-114 E O1	11.7748	Adder	13.85
939051	AE1-134 1	1.0214	Adder	1.2
939061	AE1-134 2	1.0214	Adder	1.2
940501	AE2-035 C	2.3582	Adder	2.77
940502	AE2-035 E	3.2565	Adder	3.83
941131	AE2-107 C	4.2715	Adder	5.03
941132	AE2-107 E	2.8476	Adder	3.35
942991	AE2-321 C	9.4372	Adder	11.1
942992	AE2-321 E	4.6482	Adder	5.47
943411	AF1-012 C	7.9192	Adder	9.32
943412	AF1-012 E	5.2794	Adder	6.21
943801	AF1-048 C	4.4115	Adder	5.19
943802	AF1-048 E	2.9410	Adder	3.46
943921	AF1-060	1.1611	Adder	1.37
944041	AF1-072	3.0937	Adder	3.64
945352	AF1-200 NFTW	374.4930	Merchant Transmission	374.4930
946151	AF1-280 C O1	13.2357	Adder	15.57
946152	AF1-280 E O1	6.0865	Adder	7.16
946161	AF1-281 C O1	0.2898	Adder	0.34
946162	AF1-281 E O1	1.6424	Adder	1.93
946321	AF1-296 C O1	2.8069	Adder	3.3
946322	AF1-296 E O1	13.1411	Adder	15.46
946501	AF1-314 C	4.1899	Adder	4.93
946502	AF1-314 E	19.6163	Adder	23.08
946661	AF1-330 C	2.3223	Adder	2.73
946662	AF1-330 E	0.5098	Adder	0.6
946671	AF1-331	1.6594	Adder	1.95
952431	J760	2.8251	PJM External (MISO)	2.8251
953681	J818	10.5164	PJM External (MISO)	10.5164
953901	J850	18.2150	PJM External (MISO)	18.2150
956581	J1154	5.2950	PJM External (MISO)	5.2950

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
956901	J1188	3.8050	PJM External (MISO)	3.8050
957331	AF2-027 C	1.2298	Adder	1.45
957332	AF2-027 E	1.8447	Adder	2.17
957471	AF2-041 C	10.6901	Adder	12.58
957472	AF2-041 E	5.3451	Adder	6.29
958911	AF2-182 C	17.3900	Adder	20.46
958912	AF2-182 E	11.5933	Adder	13.64
958921	AF2-183 C	3.0916	Adder	3.64
958922	AF2-183 E	4.6373	Adder	5.46
959081	AF2-199 C	3.5634	Adder	4.19
959082	AF2-199 E	1.7817	Adder	2.1
959091	AF2-200 C O1	7.1267	Adder	8.38
959092	AF2-200 E O1	3.5634	Adder	4.19
959101	AF2-201 C O1	5.7719	Adder	6.79
959102	AF2-201 E O1	16.5745	Adder	19.5
960551	AF2-346 C	3.3939	Adder	3.99
960552	AF2-346 E	2.2626	Adder	2.66
960581	AF2-349 C	24.3576	Adder	28.66
960582	AF2-349 E	16.2384	Adder	19.1
960721	AF2-363 C O1	4.9032	Adder	5.77
960722	AF2-363 E O1	3.2688	Adder	3.85
960731	AF2-364 C O1	11.0540	50/50	11.0540
960732	AF2-364 E O1	7.3693	50/50	7.3693
960751	AF2-366 C	4.6318	Adder	5.45
960752	AF2-366 E	3.0879	Adder	3.63
961011	AF2-392 C O1	2.9845	Adder	3.51
961012	AF2-392 E O1	13.9730	Adder	16.44
961021	AF2-393 O1	5.0873	Adder	5.99
961031	AF2-394 O1	3.3915	Adder	3.99
962012	AG1-044 E	0.0240	Adder	0.05
962691	AG1-118 C O2	7.2089	Adder	16.0
962692	AG1-118 E O2	4.8059	Adder	10.67
962701	AG1-119 C O2	52.1478	50/50	52.1478
962702	AG1-119 E O2	34.7652	50/50	34.7652
962711	AG1-120 C O2	20.6158	50/50	20.6158
962712	AG1-120 E O2	13.7438	50/50	13.7438
962781	AG1-127 C O2	2.7187	Adder	6.03
962782	AG1-127 E O2	1.8125	Adder	4.02
962791	AG1-128 C O2	2.2577	Adder	5.01
962792	AG1-128 E O2	10.5652	Adder	23.45
963681	AG1-220 C O2	5.4882	Adder	12.18
963682	AG1-220 E O2	3.6588	Adder	8.12
964461	AG1-309 FTIR	312.8406	Merchant Transmission	312.8406
965061	AG1-371	0.9443	Adder	2.1
965071	AG1-372	0.6295	Adder	1.4
965081	AG1-373	0.3148	Adder	0.7
965551	AG1-423 C O2	11.4137	Adder	25.34
965552	AG1-423 E O2	7.6091	Adder	16.89
965661	AG1-434 C O2	1.5342	Adder	3.41
965662	AG1-434 E O2	7.1830	Adder	15.94
965931	AG1-462 C O2	7.1311	Adder	15.83
965932	AG1-462 E O2	4.7540	Adder	10.55

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966441	AG1-513 C	0.1473	Adder	0.33
966442	AG1-513 E	0.2209	Adder	0.49
966521	AG1-521 C O2	3.7806	Adder	8.39
966522	AG1-521 E O2	0.9451	Adder	2.1
966651	AG1-535 O2	5.8293	Adder	12.94
966821	AG1-553 C O2	10.3507	Adder	22.98
966822	AG1-553 E O2	2.5877	Adder	5.74
WEC	WEC	2.5559	Confirmed LTF	2.5559
CBM-W2	CBM-W2	14.3987	Confirmed LTF	14.3987
NY	NY	0.3943	Confirmed LTF	0.3943
TVA	TVA	1.3818	Confirmed LTF	1.3818
O-066	O-066	4.6639	Confirmed LTF	4.6639
SIGE	SIGE	0.0827	Confirmed LTF	0.0827
CBM-S1	CBM-S1	0.2858	Confirmed LTF	0.2858
G-007	G-007	0.7266	Confirmed LTF	0.7266
HAMLET	HAMLET	0.0578	Confirmed LTF	0.0578
MEC	MEC	10.1791	Confirmed LTF	10.1791
BLUEG	BLUEG	0.6059	Confirmed LTF	0.6059
TRIMBLE	TRIMBLE	0.2143	Confirmed LTF	0.2143
LAGN	LAGN	3.1517	Confirmed LTF	3.1517
CATAWBA	CATAWBA	0.0091	Confirmed LTF	0.0091
CBM-W1	CBM-W1	57.0894	Confirmed LTF	57.0894

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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
174485900	270743	ESS W407K;9T	CE	274749	AURORA EC;RP	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	139.41	140.46	DC	34.43

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.2059	Adder	2.6
274693	ROCKY RD ;1P	4.9878	50/50	4.9878
274695	ROCKY RD ;2P	5.0374	50/50	5.0374
274697	ROCKY RD ;3P	1.3684	50/50	1.3684
274818	ELGIN EC ;1P	6.1779	50/50	6.1779
274819	ELGIN EC ;3P	5.9544	50/50	5.9544
274820	ELGIN EC ;2P	6.1779	50/50	6.1779
274821	ELGIN EC ;4P	5.9991	50/50	5.9991
274859	EASYR;U1 E	14.2425	Adder	16.76
274860	EASYR;U2 E	14.2425	Adder	16.76
276167	Z1-106 E2	1.4705	Adder	1.73
276168	Z1-106 E1	1.4783	Adder	1.74
276170	Z1-108 E	4.6675	Adder	5.49
276591	L-013 2	4.2644	Adder	5.02
290051	GSG-6; E	8.7423	Adder	10.29
290108	LEEDK;1U E	18.1458	Adder	21.35
293516	O-009 E1	7.9413	Adder	9.34
293517	O-009 E2	4.0336	Adder	4.75
293518	O-009 E3	4.4421	Adder	5.23
293715	O-029 E	8.4902	Adder	9.99
293716	O-029 E	4.6550	Adder	5.48
293717	O-029 E	4.2785	Adder	5.03
294763	P-046 E	13.2872	Adder	15.63
295109	WESTBROOK E	4.6805	Adder	5.51
295111	SUBLETTE E	2.7014	Adder	3.18
915011	Y3-013 1	3.9030	Adder	4.59
915021	Y3-013 2	3.9030	Adder	4.59
915031	Y3-013 3	3.9030	Adder	4.59
916221	Z1-073 E	4.5408	Adder	5.34
919581	AA2-030 C	18.4375	Adder	21.69
920272	AA2-123 E	4.3515	Adder	5.12
924472	AB2-096 CT1	32.8885	Adder	38.69
924473	AB2-096 CT2	32.8885	Adder	38.69
924474	AB2-096 CT3	32.8885	Adder	38.69
926331	AC1-110 1	1.2550	Adder	1.48
926341	AC1-110 2	1.2550	Adder	1.48
930482	AB1-089 CT	68.4671	Adder	80.55
930483	AB1-089 ST	54.4340	Adder	64.04
933911	AD1-013 C	1.5484	Adder	1.82
933912	AD1-013 E	2.4734	Adder	2.91
933931	AD1-016 C	1.6497	Adder	1.94
933932	AD1-016 E	2.6916	Adder	3.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934432	AD1-067 E	0.4616	Adder	0.54
934701	AD1-098 C O1	5.8278	Adder	6.86
934702	AD1-098 E O1	4.2549	Adder	5.01
934971	AD1-129 C	1.5109	Adder	1.78
934972	AD1-129 E	1.0073	Adder	1.19
936791	AD2-102 C	21.6250	Adder	25.44
936792	AD2-102 E	14.4167	Adder	16.96
937001	AD2-134 C	2.2854	Adder	2.69
937002	AD2-134 E	9.4409	Adder	11.11
937311	AD2-172 C	3.4879	Adder	4.1
937312	AD2-172 E	4.8166	Adder	5.67
937531	AD2-214 C	4.2341	Adder	4.98
937532	AD2-214 E	2.8227	Adder	3.32
938861	AE1-114 C O1	4.9737	Adder	5.85
938862	AE1-114 E O1	16.9691	Adder	19.96
939051	AE1-134 1	1.4327	Adder	1.69
939061	AE1-134 2	1.4327	Adder	1.69
940501	AE2-035 C	3.4879	Adder	4.1
940502	AE2-035 E	4.8166	Adder	5.67
941131	AE2-107 C	4.8994	Adder	5.76
941132	AE2-107 E	3.2662	Adder	3.84
942991	AE2-321 C	14.4790	Adder	17.03
942992	AE2-321 E	7.1314	Adder	8.39
943411	AF1-012 C	11.3794	Adder	13.39
943412	AF1-012 E	7.5862	Adder	8.92
943801	AF1-048 C	6.7684	Adder	7.96
943802	AF1-048 E	4.5123	Adder	5.31
943921	AF1-060	1.7174	Adder	2.02
944041	AF1-072	5.4053	50/50	5.4053
945352	AF1-200 NFTW	174.1740	Merchant Transmission	174.1740
946151	AF1-280 C O1	19.0198	Adder	22.38
946152	AF1-280 E O1	8.7463	Adder	10.29
946161	AF1-281 C O1	0.4165	Adder	0.49
946162	AF1-281 E O1	2.3601	Adder	2.78
946321	AF1-296 C O1	3.6776	Adder	4.33
946322	AF1-296 E O1	17.2175	Adder	20.26
946501	AF1-314 C	6.1972	Adder	7.29
946502	AF1-314 E	29.0139	Adder	34.13
946661	AF1-330 C	3.5682	Adder	4.2
946662	AF1-330 E	0.7833	Adder	0.92
946671	AF1-331	2.0109	Adder	2.37
952381	J703	12.2771	PJM External (MISO)	12.2771
952391	J704	5.2484	PJM External (MISO)	5.2484
952431	J760	4.4730	PJM External (MISO)	4.4730
953151	J831	4.1888	PJM External (MISO)	4.1888
953491	J947	21.0560	PJM External (MISO)	21.0560
953681	J818	18.0409	PJM External (MISO)	18.0409
953891	J849	11.9925	PJM External (MISO)	11.9925
953901	J850	32.1175	PJM External (MISO)	32.1175
953921	J855 C	1.3974	PJM External (MISO)	1.3974
953922	J855 E	7.5606	PJM External (MISO)	7.5606
954001	J864	4.8880	PJM External (MISO)	4.8880

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954061	J870	19.0080	PJM External (MISO)	19.0080
954071	J871	9.5040	PJM External (MISO)	9.5040
954141	J878	22.0320	PJM External (MISO)	22.0320
954191	J886	14.8170	PJM External (MISO)	14.8170
954741	J928 C	1.1973	PJM External (MISO)	1.1973
954742	J928 E	6.4775	PJM External (MISO)	6.4775
955091	J986	13.4095	PJM External (MISO)	13.4095
955221	J1000	4.1340	PJM External (MISO)	4.1340
955241	J1002	9.8525	PJM External (MISO)	9.8525
955251	J1003	5.4920	PJM External (MISO)	5.4920
955582	J1042 E	21.6846	PJM External (MISO)	21.6846
956141	J1101	1.9756	PJM External (MISO)	1.9756
956571	J1153	15.5265	PJM External (MISO)	15.5265
956581	J1154	9.0818	PJM External (MISO)	9.0818
956731	J1171	10.5520	PJM External (MISO)	10.5520
956852	J1183 E	0.1295	PJM External (MISO)	0.1295
956901	J1188	6.2940	PJM External (MISO)	6.2940
957331	AF2-027 C	2.6020	Adder	3.06
957332	AF2-027 E	3.9030	Adder	4.59
957471	AF2-041 C	16.3618	Adder	19.25
957472	AF2-041 E	8.1809	Adder	9.62
958911	AF2-182 C	24.9895	Adder	29.4
958912	AF2-182 E	16.6597	Adder	19.6
958921	AF2-183 C	4.4426	Adder	5.23
958922	AF2-183 E	6.6639	Adder	7.84
959081	AF2-199 C	5.4539	Adder	6.42
959082	AF2-199 E	2.7270	Adder	3.21
959091	AF2-200 C O1	10.9079	Adder	12.83
959092	AF2-200 E O1	5.4539	Adder	6.42
959101	AF2-201 C O1	8.5370	Adder	10.04
959102	AF2-201 E O1	24.5149	Adder	28.84
960551	AF2-346 C	4.8769	Adder	5.74
960552	AF2-346 E	3.2513	Adder	3.83
960581	AF2-349 C	37.5630	Adder	44.19
960582	AF2-349 E	25.0420	Adder	29.46
960721	AF2-363 C O1	6.6061	Adder	7.77
960722	AF2-363 E O1	4.4041	Adder	5.18
960731	AF2-364 C O1	12.9241	Adder	15.2
960732	AF2-364 E O1	8.6161	Adder	10.14
960751	AF2-366 C	5.3786	Adder	6.33
960752	AF2-366 E	3.5857	Adder	4.22
961011	AF2-392 C O1	4.1026	Adder	4.83
961012	AF2-392 E O1	19.2078	Adder	22.6
961021	AF2-393 O1	6.9931	Adder	8.23
961031	AF2-394 O1	4.6621	Adder	5.48
962012	AG1-044 E	0.0325	Adder	0.07
962691	AG1-118 C O2	7.8357	Adder	17.39
962692	AG1-118 E O2	5.2238	Adder	11.6
962701	AG1-119 C O2	77.4324	50/50	77.4324
962702	AG1-119 E O2	51.6216	50/50	51.6216
962711	AG1-120 C O2	30.6116	50/50	30.6116
962712	AG1-120 E O2	20.4077	50/50	20.4077

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962781	AG1-127 C O2	3.1570	Adder	7.01
962782	AG1-127 E O2	2.1047	Adder	4.67
962791	AG1-128 C O2	2.7399	Adder	6.08
962792	AG1-128 E O2	12.8213	Adder	28.46
963681	AG1-220 C O2	7.9310	Adder	17.6
963682	AG1-220 E O2	5.2873	Adder	11.74
964461	AG1-309 FTIR	467.8058	Merchant Transmission	467.8058
965061	AG1-371	1.4453	Adder	3.21
965071	AG1-372	0.9635	Adder	2.14
965081	AG1-373	0.4818	Adder	1.07
965551	AG1-423 C O2	37.7352	50/50	37.7352
965552	AG1-423 E O2	25.1568	50/50	25.1568
965661	AG1-434 C O2	1.8618	Adder	4.13
965662	AG1-434 E O2	8.7168	Adder	19.35
965931	AG1-462 C O2	9.3059	Adder	20.66
965932	AG1-462 E O2	6.2039	Adder	13.77
966521	AG1-521 C O2	5.2157	Adder	11.58
966522	AG1-521 E O2	1.3039	Adder	2.89
966651	AG1-535 O2	7.6677	Adder	17.02
966821	AG1-553 C O2	13.3882	Adder	29.72
966822	AG1-553 E O2	3.3470	Adder	7.43
WEC	WEC	4.7795	Confirmed LTF	4.7795
CBM-W2	CBM-W2	10.3757	Confirmed LTF	10.3757
NY	NY	0.4264	Confirmed LTF	0.4264
TVA	TVA	1.0234	Confirmed LTF	1.0234
O-066	O-066	5.0812	Confirmed LTF	5.0812
SIGE	SIGE	0.0426	Confirmed LTF	0.0426
CBM-S1	CBM-S1	0.1877	Confirmed LTF	0.1877
G-007	G-007	0.7928	Confirmed LTF	0.7928
HAMLET	HAMLET	0.1351	Confirmed LTF	0.1351
MEC	MEC	12.5865	Confirmed LTF	12.5865
GIBSON	GIBSON	0.2441	Confirmed LTF	0.2441
BLUEG	BLUEG	1.0659	Confirmed LTF	1.0659
TRIMBLE	TRIMBLE	0.3562	Confirmed LTF	0.3562
LAGN	LAGN	2.9470	Confirmed LTF	2.9470
CATAWBA	CATAWBA	0.0591	Confirmed LTF	0.0591
CBM-W1	CBM-W1	89.6018	Confirmed LTF	89.6018

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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
174485892	270751	ESS W407M;9T	CE	270743	ESS W407K;9T	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	140.37	141.42	DC	34.43

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.2059	Adder	2.6
274693	ROCKY RD ;1P	4.9878	50/50	4.9878
274695	ROCKY RD ;2P	5.0374	50/50	5.0374
274697	ROCKY RD ;3P	1.3684	50/50	1.3684
274818	ELGIN EC ;1P	6.1779	50/50	6.1779
274819	ELGIN EC ;3P	5.9544	50/50	5.9544
274820	ELGIN EC ;2P	6.1779	50/50	6.1779
274821	ELGIN EC ;4P	5.9991	50/50	5.9991
274859	EASYR;U1 E	14.2425	Adder	16.76
274860	EASYR;U2 E	14.2425	Adder	16.76
276167	Z1-106 E2	1.4705	Adder	1.73
276168	Z1-106 E1	1.4783	Adder	1.74
276170	Z1-108 E	4.6675	Adder	5.49
276591	L-013 2	4.2644	Adder	5.02
290051	GSG-6; E	8.7423	Adder	10.29
290108	LEEDK;1U E	18.1458	Adder	21.35
293516	O-009 E1	7.9413	Adder	9.34
293517	O-009 E2	4.0336	Adder	4.75
293518	O-009 E3	4.4421	Adder	5.23
293715	O-029 E	8.4902	Adder	9.99
293716	O-029 E	4.6550	Adder	5.48
293717	O-029 E	4.2785	Adder	5.03
294763	P-046 E	13.2872	Adder	15.63
295109	WESTBROOK E	4.6805	Adder	5.51
295111	SUBLETTE E	2.7014	Adder	3.18
915011	Y3-013 1	3.9030	Adder	4.59
915021	Y3-013 2	3.9030	Adder	4.59
915031	Y3-013 3	3.9030	Adder	4.59
916221	Z1-073 E	4.5408	Adder	5.34
919581	AA2-030 C	18.4375	Adder	21.69
920272	AA2-123 E	4.3515	Adder	5.12
924472	AB2-096 CT1	32.8885	Adder	38.69
924473	AB2-096 CT2	32.8885	Adder	38.69
924474	AB2-096 CT3	32.8885	Adder	38.69
926331	AC1-110 1	1.2550	Adder	1.48
926341	AC1-110 2	1.2550	Adder	1.48
930482	AB1-089 CT	68.4671	Adder	80.55
930483	AB1-089 ST	54.4340	Adder	64.04
933911	AD1-013 C	1.5484	Adder	1.82
933912	AD1-013 E	2.4734	Adder	2.91
933931	AD1-016 C	1.6497	Adder	1.94
933932	AD1-016 E	2.6916	Adder	3.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934432	AD1-067 E	0.4616	Adder	0.54
934701	AD1-098 C O1	5.8278	Adder	6.86
934702	AD1-098 E O1	4.2549	Adder	5.01
934971	AD1-129 C	1.5109	Adder	1.78
934972	AD1-129 E	1.0073	Adder	1.19
936791	AD2-102 C	21.6250	Adder	25.44
936792	AD2-102 E	14.4167	Adder	16.96
937001	AD2-134 C	2.2854	Adder	2.69
937002	AD2-134 E	9.4409	Adder	11.11
937311	AD2-172 C	3.4879	Adder	4.1
937312	AD2-172 E	4.8166	Adder	5.67
937531	AD2-214 C	4.2341	Adder	4.98
937532	AD2-214 E	2.8227	Adder	3.32
938861	AE1-114 C O1	4.9737	Adder	5.85
938862	AE1-114 E O1	16.9691	Adder	19.96
939051	AE1-134 1	1.4327	Adder	1.69
939061	AE1-134 2	1.4327	Adder	1.69
940501	AE2-035 C	3.4879	Adder	4.1
940502	AE2-035 E	4.8166	Adder	5.67
941131	AE2-107 C	4.8994	Adder	5.76
941132	AE2-107 E	3.2662	Adder	3.84
942991	AE2-321 C	14.4790	Adder	17.03
942992	AE2-321 E	7.1314	Adder	8.39
943411	AF1-012 C	11.3794	Adder	13.39
943412	AF1-012 E	7.5862	Adder	8.92
943801	AF1-048 C	6.7684	Adder	7.96
943802	AF1-048 E	4.5123	Adder	5.31
943921	AF1-060	1.7174	Adder	2.02
944041	AF1-072	5.4053	50/50	5.4053
945352	AF1-200 NFTW	174.1740	Merchant Transmission	174.1740
946151	AF1-280 C O1	19.0198	Adder	22.38
946152	AF1-280 E O1	8.7463	Adder	10.29
946161	AF1-281 C O1	0.4165	Adder	0.49
946162	AF1-281 E O1	2.3601	Adder	2.78
946321	AF1-296 C O1	3.6776	Adder	4.33
946322	AF1-296 E O1	17.2175	Adder	20.26
946501	AF1-314 C	6.1972	Adder	7.29
946502	AF1-314 E	29.0139	Adder	34.13
946661	AF1-330 C	3.5682	Adder	4.2
946662	AF1-330 E	0.7833	Adder	0.92
946671	AF1-331	2.0109	Adder	2.37
952381	J703	12.2771	PJM External (MISO)	12.2771
952391	J704	5.2484	PJM External (MISO)	5.2484
952431	J760	4.4730	PJM External (MISO)	4.4730
953151	J831	4.1888	PJM External (MISO)	4.1888
953491	J947	21.0560	PJM External (MISO)	21.0560
953681	J818	18.0409	PJM External (MISO)	18.0409
953891	J849	11.9925	PJM External (MISO)	11.9925
953901	J850	32.1175	PJM External (MISO)	32.1175
953921	J855 C	1.3974	PJM External (MISO)	1.3974
953922	J855 E	7.5606	PJM External (MISO)	7.5606
954001	J864	4.8880	PJM External (MISO)	4.8880

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954061	J870	19.0080	PJM External (MISO)	19.0080
954071	J871	9.5040	PJM External (MISO)	9.5040
954141	J878	22.0320	PJM External (MISO)	22.0320
954191	J886	14.8170	PJM External (MISO)	14.8170
954741	J928 C	1.1973	PJM External (MISO)	1.1973
954742	J928 E	6.4775	PJM External (MISO)	6.4775
955091	J986	13.4095	PJM External (MISO)	13.4095
955221	J1000	4.1340	PJM External (MISO)	4.1340
955241	J1002	9.8525	PJM External (MISO)	9.8525
955251	J1003	5.4920	PJM External (MISO)	5.4920
955582	J1042 E	21.6846	PJM External (MISO)	21.6846
956141	J1101	1.9756	PJM External (MISO)	1.9756
956571	J1153	15.5265	PJM External (MISO)	15.5265
956581	J1154	9.0818	PJM External (MISO)	9.0818
956731	J1171	10.5520	PJM External (MISO)	10.5520
956852	J1183 E	0.1295	PJM External (MISO)	0.1295
956901	J1188	6.2940	PJM External (MISO)	6.2940
957331	AF2-027 C	2.6020	Adder	3.06
957332	AF2-027 E	3.9030	Adder	4.59
957471	AF2-041 C	16.3618	Adder	19.25
957472	AF2-041 E	8.1809	Adder	9.62
958911	AF2-182 C	24.9895	Adder	29.4
958912	AF2-182 E	16.6597	Adder	19.6
958921	AF2-183 C	4.4426	Adder	5.23
958922	AF2-183 E	6.6639	Adder	7.84
959081	AF2-199 C	5.4539	Adder	6.42
959082	AF2-199 E	2.7270	Adder	3.21
959091	AF2-200 C O1	10.9079	Adder	12.83
959092	AF2-200 E O1	5.4539	Adder	6.42
959101	AF2-201 C O1	8.5370	Adder	10.04
959102	AF2-201 E O1	24.5149	Adder	28.84
960551	AF2-346 C	4.8769	Adder	5.74
960552	AF2-346 E	3.2513	Adder	3.83
960581	AF2-349 C	37.5630	Adder	44.19
960582	AF2-349 E	25.0420	Adder	29.46
960721	AF2-363 C O1	6.6061	Adder	7.77
960722	AF2-363 E O1	4.4041	Adder	5.18
960731	AF2-364 C O1	12.9241	Adder	15.2
960732	AF2-364 E O1	8.6161	Adder	10.14
960751	AF2-366 C	5.3786	Adder	6.33
960752	AF2-366 E	3.5857	Adder	4.22
961011	AF2-392 C O1	4.1026	Adder	4.83
961012	AF2-392 E O1	19.2078	Adder	22.6
961021	AF2-393 O1	6.9931	Adder	8.23
961031	AF2-394 O1	4.6621	Adder	5.48
962012	AG1-044 E	0.0325	Adder	0.07
962691	AG1-118 C O2	7.8357	Adder	17.39
962692	AG1-118 E O2	5.2238	Adder	11.6
962701	AG1-119 C O2	77.4324	50/50	77.4324
962702	AG1-119 E O2	51.6216	50/50	51.6216
962711	AG1-120 C O2	30.6116	50/50	30.6116
962712	AG1-120 E O2	20.4077	50/50	20.4077

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962781	AG1-127 C O2	3.1570	Adder	7.01
962782	AG1-127 E O2	2.1047	Adder	4.67
962791	AG1-128 C O2	2.7399	Adder	6.08
962792	AG1-128 E O2	12.8213	Adder	28.46
963681	AG1-220 C O2	7.9310	Adder	17.6
963682	AG1-220 E O2	5.2873	Adder	11.74
964461	AG1-309 FTIR	467.8058	Merchant Transmission	467.8058
965061	AG1-371	1.4453	Adder	3.21
965071	AG1-372	0.9635	Adder	2.14
965081	AG1-373	0.4818	Adder	1.07
965551	AG1-423 C O2	37.7352	50/50	37.7352
965552	AG1-423 E O2	25.1568	50/50	25.1568
965661	AG1-434 C O2	1.8618	Adder	4.13
965662	AG1-434 E O2	8.7168	Adder	19.35
965931	AG1-462 C O2	9.3059	Adder	20.66
965932	AG1-462 E O2	6.2039	Adder	13.77
966521	AG1-521 C O2	5.2157	Adder	11.58
966522	AG1-521 E O2	1.3039	Adder	2.89
966651	AG1-535 O2	7.6677	Adder	17.02
966821	AG1-553 C O2	13.3882	Adder	29.72
966822	AG1-553 E O2	3.3470	Adder	7.43
WEC	WEC	4.7795	Confirmed LTF	4.7795
CBM-W2	CBM-W2	10.3757	Confirmed LTF	10.3757
NY	NY	0.4264	Confirmed LTF	0.4264
TVA	TVA	1.0234	Confirmed LTF	1.0234
O-066	O-066	5.0812	Confirmed LTF	5.0812
SIGE	SIGE	0.0426	Confirmed LTF	0.0426
CBM-S1	CBM-S1	0.1877	Confirmed LTF	0.1877
G-007	G-007	0.7928	Confirmed LTF	0.7928
HAMLET	HAMLET	0.1351	Confirmed LTF	0.1351
MEC	MEC	12.5865	Confirmed LTF	12.5865
GIBSON	GIBSON	0.2441	Confirmed LTF	0.2441
BLUEG	BLUEG	1.0659	Confirmed LTF	1.0659
TRIMBLE	TRIMBLE	0.3562	Confirmed LTF	0.3562
LAGN	LAGN	2.9470	Confirmed LTF	2.9470
CATAWBA	CATAWBA	0.0591	Confirmed LTF	0.0591
CBM-W1	CBM-W1	89.6018	Confirmed LTF	89.6018

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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
174558166	270807	LIBERTYVI; R	CE	270857	P HTS 117; R	CE	1	COMED_P4_016-45-BT6-11_	breaker	1479.0	112.56	113.07	DC	16.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	0.9657	Adder	1.14
274725	ZION EC ;1P	6.0485	50/50	6.0485
274726	ZION EC ;2P	6.0485	50/50	6.0485
274727	ZION EC ;3P	6.0485	50/50	6.0485
274859	EASYR;U1 E	5.9584	Adder	7.01
274860	EASYR;U2 E	5.9584	Adder	7.01
276170	Z1-108 E	2.3581	Adder	2.77
290051	GSG-6; E	3.8228	Adder	4.5
293516	O-009 E1	3.5355	Adder	4.16
293517	O-009 E2	1.7958	Adder	2.11
293518	O-009 E3	1.9776	Adder	2.33
293715	O-029 E	3.7799	Adder	4.45
293716	O-029 E	2.0724	Adder	2.44
293717	O-029 E	1.9048	Adder	2.24
294763	P-046 E	6.3029	Adder	7.42
295109	WESTBROOK E	2.0467	Adder	2.41
295111	SUBLETTE E	1.2041	Adder	1.42
915011	Y3-013 1	6.9705	50/50	6.9705
915021	Y3-013 2	6.9705	50/50	6.9705
915031	Y3-013 3	6.9705	50/50	6.9705
916221	Z1-073 E	1.9856	Adder	2.34
919581	AA2-030 C	7.9776	Adder	9.39
920272	AA2-123 E	2.1243	Adder	2.5
924472	AB2-096 CT1	17.4577	Adder	20.54
924473	AB2-096 CT2	17.4577	Adder	20.54
924474	AB2-096 CT3	17.4577	Adder	20.54
930482	AB1-089 CT	22.8354	Adder	26.87
930483	AB1-089 ST	18.1550	Adder	21.36
933911	AD1-013 C	0.6783	Adder	0.8
933912	AD1-013 E	1.0836	Adder	1.27
933931	AD1-016 C	0.8048	Adder	0.95
933932	AD1-016 E	1.3131	Adder	1.54
934432	AD1-067 E	0.2018	Adder	0.24
934701	AD1-098 C O1	2.5513	Adder	3.0
934702	AD1-098 E O1	1.8627	Adder	2.19
934971	AD1-129 C	0.7248	Adder	0.85
934972	AD1-129 E	0.4832	Adder	0.57
936791	AD2-102 C	10.7151	Adder	12.61
936792	AD2-102 E	7.1434	Adder	8.4
937001	AD2-134 C	0.9993	Adder	1.18
937002	AD2-134 E	4.1282	Adder	4.86

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937311	AD2-172 C	1.6545	Adder	1.95
937312	AD2-172 E	2.2848	Adder	2.69
937531	AD2-214 C	1.9799	Adder	2.33
937532	AD2-214 E	1.3199	Adder	1.55
938861	AE1-114 C O1	2.3103	Adder	2.72
938862	AE1-114 E O1	7.8821	Adder	9.27
939051	AE1-134 1	0.6199	Adder	0.73
939061	AE1-134 2	0.6199	Adder	0.73
940501	AE2-035 C	1.6545	Adder	1.95
940502	AE2-035 E	2.2848	Adder	2.69
942991	AE2-321 C	7.0595	Adder	8.31
942992	AE2-321 E	3.4771	Adder	4.09
943411	AF1-012 C	4.7302	Adder	5.56
943412	AF1-012 E	3.1535	Adder	3.71
943801	AF1-048 C	3.3001	Adder	3.88
943802	AF1-048 E	2.2000	Adder	2.59
943921	AF1-060	0.8147	Adder	0.96
944041	AF1-072	1.3595	Adder	1.6
946151	AF1-280 C O1	8.0281	Adder	9.44
946152	AF1-280 E O1	3.6917	Adder	4.34
946161	AF1-281 C O1	0.1758	Adder	0.21
946162	AF1-281 E O1	0.9962	Adder	1.17
946321	AF1-296 C O1	1.7969	Adder	2.11
946322	AF1-296 E O1	8.4126	Adder	9.9
946501	AF1-314 C	2.9397	Adder	3.46
946502	AF1-314 E	13.7631	Adder	16.19
946661	AF1-330 C	1.7419	Adder	2.05
946662	AF1-330 E	0.3824	Adder	0.45
946671	AF1-331	0.8809	Adder	1.04
952381	J703	12.8625	PJM External (MISO)	12.8625
952391	J704	5.4878	PJM External (MISO)	5.4878
952431	J760	2.1264	PJM External (MISO)	2.1264
953151	J831	5.1668	PJM External (MISO)	5.1668
953331	J801	3.7333	PJM External (MISO)	3.7333
953491	J947	29.7820	PJM External (MISO)	29.7820
953681	J818	13.2655	PJM External (MISO)	13.2655
953891	J849	12.5812	PJM External (MISO)	12.5812
953901	J850	24.5750	PJM External (MISO)	24.5750
953921	J855 C	0.7828	PJM External (MISO)	0.7828
953922	J855 E	4.2352	PJM External (MISO)	4.2352
954001	J864	2.9958	PJM External (MISO)	2.9958
954061	J870	11.2000	PJM External (MISO)	11.2000
954071	J871	5.6000	PJM External (MISO)	5.6000
954141	J878	28.4560	PJM External (MISO)	28.4560
954191	J886	16.3080	PJM External (MISO)	16.3080
954511	J926 C	0.8107	PJM External (MISO)	0.8107
954512	J926 E	4.3860	PJM External (MISO)	4.3860
954691	J732	33.9539	PJM External (MISO)	33.9539
954741	J928 C	1.2558	PJM External (MISO)	1.2558
954742	J928 E	6.7941	PJM External (MISO)	6.7941
955091	J986	12.0946	PJM External (MISO)	12.0946
955241	J1002	8.4793	PJM External (MISO)	8.4793

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
955251	J1003	4.6540	PJM External (MISO)	4.6540
955582	J1042 E	21.2634	PJM External (MISO)	21.2634
956141	J1101	2.1744	PJM External (MISO)	2.1744
956571	J1153	18.6555	PJM External (MISO)	18.6555
956581	J1154	6.6758	PJM External (MISO)	6.6758
956731	J1171	10.8060	PJM External (MISO)	10.8060
956852	J1183 E	0.1359	PJM External (MISO)	0.1359
956901	J1188	4.0110	PJM External (MISO)	4.0110
957331	AF2-027 C	4.6470	50/50	4.6470
957332	AF2-027 E	6.9705	50/50	6.9705
958911	AF2-182 C	10.5478	Adder	12.41
958912	AF2-182 E	7.0319	Adder	8.27
958921	AF2-183 C	1.8752	Adder	2.21
958922	AF2-183 E	2.8128	Adder	3.31
959101	AF2-201 C O1	4.0496	Adder	4.76
959102	AF2-201 E O1	11.6289	Adder	13.68
960551	AF2-346 C	2.0272	Adder	2.38
960552	AF2-346 E	1.3515	Adder	1.59
960581	AF2-349 C	19.9390	Adder	23.46
960582	AF2-349 E	13.2926	Adder	15.64
960721	AF2-363 C O1	3.0147	Adder	3.55
960722	AF2-363 E O1	2.0098	Adder	2.36
960731	AF2-364 C O1	2.6087	Adder	3.07
960732	AF2-364 E O1	1.7392	Adder	2.05
961011	AF2-392 C O1	1.8140	Adder	2.13
961012	AF2-392 E O1	8.4931	Adder	9.99
961021	AF2-393 O1	3.0921	Adder	3.64
961031	AF2-394 O1	2.0614	Adder	2.43
962012	AG1-044 E	0.0144	Adder	0.03
962701	AG1-119 C O2	4.9230	Adder	10.93
962702	AG1-119 E O2	3.2820	Adder	7.29
962711	AG1-120 C O2	1.9462	Adder	4.32
962712	AG1-120 E O2	1.2975	Adder	2.88
962791	AG1-128 C O2	1.1981	Adder	2.66
962792	AG1-128 E O2	5.6064	Adder	12.44
963681	AG1-220 C O2	3.6949	Adder	8.2
963682	AG1-220 E O2	2.4632	Adder	5.47
964461	AG1-309 FTIR	189.7231	Merchant Transmission	189.7231
965551	AG1-423 C O2	4.2740	Adder	9.49
965552	AG1-423 E O2	2.8493	Adder	6.32
965661	AG1-434 C O2	0.8141	Adder	1.81
965662	AG1-434 E O2	3.8116	Adder	8.46
965931	AG1-462 C O2	4.4867	Adder	9.96
965932	AG1-462 E O2	2.9911	Adder	6.64
966521	AG1-521 C O2	2.3379	Adder	5.19
966522	AG1-521 E O2	0.5845	Adder	1.3
966821	AG1-553 C O2	6.5080	Adder	14.45
966822	AG1-553 E O2	1.6270	Adder	3.61
WEC	WEC	5.4933	Confirmed LTF	5.4933
CBM-W2	CBM-W2	8.0192	Confirmed LTF	8.0192
NY	NY	0.1775	Confirmed LTF	0.1775
TVA	TVA	0.8778	Confirmed LTF	0.8778

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	2.0863	Confirmed LTF	2.0863
SIGE	SIGE	0.0266	Confirmed LTF	0.0266
CBM-S2	CBM-S2	0.7621	Confirmed LTF	0.7621
CBM-S1	CBM-S1	0.1816	Confirmed LTF	0.1816
G-007	G-007	0.3255	Confirmed LTF	0.3255
MEC	MEC	8.1357	Confirmed LTF	8.1357
GIBSON	GIBSON	0.0655	Confirmed LTF	0.0655
BLUEG	BLUEG	0.3854	Confirmed LTF	0.3854
TRIMBLE	TRIMBLE	0.1319	Confirmed LTF	0.1319
LAGN	LAGN	2.1717	Confirmed LTF	2.1717
CBM-W1	CBM-W1	75.9604	Confirmed LTF	75.9604

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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
174313696	270828	NELSON ; B	CE	943410	AF1-012 TAP	CE	1	COMED_P4_144-45-BT7-8__	breaker	1656.0	128.64	130.26	DC	59.16

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.4642	Adder	1.72
274715	NELSON EC;1C	6.9788	50/50	6.9788
274716	NELSON EC;1S	5.0921	50/50	5.0921
274717	NELSON EC;2C	7.0327	50/50	7.0327
274718	NELSON EC;2S	5.1377	50/50	5.1377
274762	LEE CO EC;3U	2.8860	50/50	2.8860
274764	LEE CO EC;5U	2.8928	50/50	2.8928
274765	LEE CO EC;6U	2.8928	50/50	2.8928
274859	EASYR;U1 E	17.5815	Adder	20.68
274860	EASYR;U2 E	17.5815	Adder	20.68
290051	GSG-6; E	6.2599	Adder	7.36
293516	O-009 E1	13.5821	Adder	15.98
293517	O-009 E2	6.8987	Adder	8.12
293518	O-009 E3	7.5973	Adder	8.94
293715	O-029 E	14.5208	Adder	17.08
293716	O-029 E	7.9615	Adder	9.37
293717	O-029 E	7.3175	Adder	8.61
294401	BSHIL;1U E	5.9058	Adder	6.95
294410	BSHIL;2U E	5.9058	Adder	6.95
294763	P-046 E	9.3690	Adder	11.02
295109	WESTBROOK E	3.3515	Adder	3.94
295111	SUBLETTE E	3.8316	Adder	4.51
916221	Z1-073 E	3.2514	Adder	3.83
919221	AA1-146	6.5102	50/50	6.5102
919581	AA2-030 C	41.2643	50/50	41.2643
925581	AC1-033 C	0.9673	Adder	1.14
925582	AC1-033 E	6.4757	Adder	7.62
930482	AB1-089 CT	37.3158	Adder	43.9
930483	AB1-089 ST	29.6676	Adder	34.9
933911	AD1-013 C	0.9944	Adder	1.17
933912	AD1-013 E	1.5885	Adder	1.87
934051	AD1-031 C O1	1.9648	Adder	2.31
934052	AD1-031 E O1	3.2057	Adder	3.77
934432	AD1-067 E	0.3305	Adder	0.39
934701	AD1-098 C O1	4.4374	Adder	5.22
934702	AD1-098 E O1	3.2398	Adder	3.81
934971	AD1-129 C	0.5157	Adder	0.61
934972	AD1-129 E	0.3438	Adder	0.4
936791	AD2-102 C	11.9136	Adder	14.02
936792	AD2-102 E	7.9424	Adder	9.34
937001	AD2-134 C	1.6364	Adder	1.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937002	AD2-134 E	6.7601	Adder	7.95
937311	AD2-172 C	2.4594	Adder	2.89
937312	AD2-172 E	3.3963	Adder	4.0
937531	AD2-214 C	7.1136	Adder	8.37
937532	AD2-214 E	4.7424	Adder	5.58
938861	AE1-114 C O1	4.7835	Adder	5.63
938862	AE1-114 E O1	16.3203	Adder	19.2
939051	AE1-134 1	3.2065	50/50	3.2065
939061	AE1-134 2	3.2065	50/50	3.2065
940501	AE2-035 C	2.4594	Adder	2.89
940502	AE2-035 E	3.3963	Adder	4.0
943921	AF1-060	1.2109	Adder	1.42
946151	AF1-280 C O1	31.5168	50/50	31.5168
946152	AF1-280 E O1	14.4931	50/50	14.4931
946161	AF1-281 C O1	0.6901	50/50	0.6901
946162	AF1-281 E O1	3.9108	50/50	3.9108
946321	AF1-296 C O1	5.9977	Adder	7.06
946322	AF1-296 E O1	28.0798	Adder	33.04
946501	AF1-314 C	4.3697	Adder	5.14
946502	AF1-314 E	20.4582	Adder	24.07
946671	AF1-331	1.2915	Adder	1.52
951381	J504	4.2190	PJM External (MISO)	4.2190
951421	J514	2.5083	PJM External (MISO)	2.5083
951511	J530 C	3.8905	PJM External (MISO)	3.8905
951512	J530 E	15.5620	PJM External (MISO)	15.5620
953921	J855 C	1.2390	PJM External (MISO)	1.2390
953922	J855 E	6.7030	PJM External (MISO)	6.7030
954091	J873 C	2.4617	PJM External (MISO)	2.4617
954092	J873 E	13.3183	PJM External (MISO)	13.3183
954792	J952 E	4.9480	PJM External (MISO)	4.9480
954861	J959 C	1.8250	PJM External (MISO)	1.8250
954862	J959 E	9.8735	PJM External (MISO)	9.8735
954901	J963	0.9148	PJM External (MISO)	0.9148
955051	J981 C	2.7097	PJM External (MISO)	2.7097
955052	J981 E	14.6603	PJM External (MISO)	14.6603
955221	J1000	4.1695	PJM External (MISO)	4.1695
955971	J1084	22.7715	PJM External (MISO)	22.7715
956411	J1131	11.9140	PJM External (MISO)	11.9140
958911	AF2-182 C	41.4090	50/50	41.4090
958912	AF2-182 E	27.6060	50/50	27.6060
958921	AF2-183 C	7.3616	50/50	7.3616
958922	AF2-183 E	11.0424	50/50	11.0424
959101	AF2-201 C O1	6.0196	Adder	7.08
959102	AF2-201 E O1	17.2859	Adder	20.34
961011	AF2-392 C O1	7.7447	50/50	7.7447
961012	AF2-392 E O1	36.2593	50/50	36.2593
961021	AF2-393 O1	13.2012	50/50	13.2012
961031	AF2-394 O1	8.8008	50/50	8.8008
962012	AG1-044 E	0.1252	50/50	0.1252
962791	AG1-128 C O2	1.9618	Adder	4.35
962792	AG1-128 E O2	9.1805	Adder	20.38
963681	AG1-220 C O2	3.7597	Adder	8.35

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963682	AG1-220 E O2	2.5065	Adder	5.56
964461	AG1-309 FTIR	291.4731	Merchant Transmission	291.4731
965062	AG1-371 BAT	33.6810	50/50	33.6810
965072	AG1-372 BAT	22.4540	50/50	22.4540
965082	AG1-373 BAT	11.2270	50/50	11.2270
965551	AG1-423 C O2	7.7409	Adder	17.18
965552	AG1-423 E O2	5.1606	Adder	11.46
965661	AG1-434 C O2	1.3331	Adder	2.96
965662	AG1-434 E O2	6.2416	Adder	13.85
965931	AG1-462 C O2	15.9901	Adder	35.49
965932	AG1-462 E O2	10.6601	Adder	23.66
966521	AG1-521 C O2	6.9074	Adder	15.33
966522	AG1-521 E O2	1.7269	Adder	3.83
966821	AG1-553 C O2	22.8314	Adder	50.68
966822	AG1-553 E O2	5.7078	Adder	12.67
990901	L-005 E	7.9883	Adder	9.4
WEC	WEC	0.9267	Confirmed LTF	0.9267
CPLE	CPLE	0.0833	Confirmed LTF	0.0833
CBM-W2	CBM-W2	17.1405	Confirmed LTF	17.1405
NY	NY	0.2500	Confirmed LTF	0.2500
TVA	TVA	1.9110	Confirmed LTF	1.9110
O-066	O-066	2.9074	Confirmed LTF	2.9074
SIGE	SIGE	0.0590	Confirmed LTF	0.0590
CBM-S2	CBM-S2	3.1216	Confirmed LTF	3.1216
CBM-S1	CBM-S1	0.4131	Confirmed LTF	0.4131
G-007	G-007	0.4526	Confirmed LTF	0.4526
MEC	MEC	14.9859	Confirmed LTF	14.9859
BLUEG	BLUEG	0.3819	Confirmed LTF	0.3819
TRIMBLE	TRIMBLE	0.1402	Confirmed LTF	0.1402
LAGN	LAGN	4.2157	Confirmed LTF	4.2157
CBM-W1	CBM-W1	59.5149	Confirmed LTF	59.5149

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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
171077806	270828	NELSON ; B	CE	946150	AF1-280 TAP	CE	1	COMED_P7-1_138-L11106_B-R+_345-L15502_B-R	tower	1768.0	101.09	105.71	DC	81.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274662	QUAD CITI;1U	37.4294	50/50	37.4294
274663	QUAD CITI;2U	37.5404	50/50	37.5404
274699	CORDOVA ;1C	6.6018	50/50	6.6018
274700	CORDOVA ;2C	6.6018	50/50	6.6018
274701	CORDOVA ;1S	7.4271	50/50	7.4271
274715	NELSON EC;1C	10.2222	50/50	10.2222
274716	NELSON EC;1S	7.4586	50/50	7.4586
274717	NELSON EC;2C	10.3012	50/50	10.3012
274718	NELSON EC;2S	7.5254	50/50	7.5254
274848	CAMPGROVE;RU	0.4525	50/50	0.4525
274849	CRESCENT ;1U	0.1643	50/50	0.1643
274851	PROVIDENC;RU	0.1692	50/50	0.1692
274877	BISHOP HL;1U	0.3944	50/50	0.3944
274878	BISHOP HL;2U	0.3944	50/50	0.3944
276156	O-029 C	0.4685	50/50	0.4685
276157	O-029 C	0.5065	50/50	0.5065
276158	O-029 C	0.9244	50/50	0.9244
293513	O-009 C1	0.8653	50/50	0.8653
293514	O-009 C2	0.4390	50/50	0.4390
293515	O-009 C3	0.4854	50/50	0.4854
293516	O-009 E1	21.9498	50/50	21.9498
293517	O-009 E2	11.1488	50/50	11.1488
293518	O-009 E3	12.2779	50/50	12.2779
293715	O-029 E	23.4668	50/50	23.4668
293716	O-029 E	12.8665	50/50	12.8665
293717	O-029 E	11.8257	50/50	11.8257
293771	O-035 E	6.1657	50/50	6.1657
294401	BSHIL;1U E	9.9984	50/50	9.9984
294410	BSHIL;2U E	9.9984	50/50	9.9984
295110	SUBLETTE C	0.1193	50/50	0.1193
295111	SUBLETTE E	5.3890	50/50	5.3890
916211	Z1-072 E	4.6659	50/50	4.6659
919221	AA1-146	9.5359	50/50	9.5359
919581	AA2-030 C	60.4419	50/50	60.4419
920273	AA2-123 BAT	2.3106	50/50	2.3106
925581	AC1-033 C	1.6375	50/50	1.6375
925582	AC1-033 E	10.9625	50/50	10.9625
927201	AC1-214 C O1	0.3122	50/50	0.3122
927202	AC1-214 E O1	6.2907	50/50	6.2907
934051	AD1-031 C O1	3.3261	50/50	3.3261

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934052	AD1-031 E O1	5.4267	50/50	5.4267
937531	AD2-214 C	11.3759	50/50	11.3759
937532	AD2-214 E	7.5839	50/50	7.5839
939051	AE1-134 1	4.6968	50/50	4.6968
939061	AE1-134 2	4.6968	50/50	4.6968
943411	AF1-012 C	40.4197	50/50	40.4197
943412	AF1-012 E	26.9465	50/50	26.9465
943803	AF1-048 BAT	5.9649	50/50	5.9649
946163	AF1-281 BAT	10.2724	50/50	10.2724
946321	AF1-296 C O1	9.4072	50/50	9.4072
946322	AF1-296 E O1	44.0420	50/50	44.0420
951381	J504	5.2940	PJM External (MISO)	5.2940
951421	J514	3.3000	PJM External (MISO)	3.3000
951511	J530 C	5.6565	PJM External (MISO)	5.6565
951512	J530 E	22.6260	PJM External (MISO)	22.6260
954702	J844 E	16.1362	PJM External (MISO)	16.1362
954792	J952 E	7.3040	PJM External (MISO)	7.3040
954901	J963	1.3110	PJM External (MISO)	1.3110
955051	J981 C	4.0782	PJM External (MISO)	4.0782
955052	J981 E	22.0638	PJM External (MISO)	22.0638
955971	J1084	34.4835	PJM External (MISO)	34.4835
956411	J1131	18.0800	PJM External (MISO)	18.0800
957471	AF2-041 C	69.2820	50/50	69.2820
957472	AF2-041 E	34.6410	50/50	34.6410
957751	AF2-069 C	0.2291	50/50	0.2291
957752	AF2-069 E	0.7395	50/50	0.7395
957761	AF2-070 C	0.3229	50/50	0.3229
957762	AF2-070 E	1.5675	50/50	1.5675
958923	AF2-183 BAT	41.0896	50/50	41.0896
959081	AF2-199 C	23.0940	50/50	23.0940
959082	AF2-199 E	11.5470	50/50	11.5470
959091	AF2-200 C O1	46.1880	50/50	46.1880
959092	AF2-200 E O1	23.0940	50/50	23.0940
960551	AF2-346 C	17.3228	50/50	17.3228
960552	AF2-346 E	11.5485	50/50	11.5485
961011	AF2-392 C O1	10.1996	50/50	10.1996
961012	AF2-392 E O1	47.7524	50/50	47.7524
961021	AF2-393 O1	17.3856	50/50	17.3856
961031	AF2-394 O1	11.5904	50/50	11.5904
962012	AG1-044 E	0.1737	50/50	0.1737
962721	AG1-121 C O2	5.4054	50/50	5.4054
962722	AG1-121 E O2	25.2876	50/50	25.2876
964462	AG1-309 NFTW	514.7730	50/50	514.7730
965061	AG1-371	11.5470	50/50	11.5470
965071	AG1-372	7.6980	50/50	7.6980
965081	AG1-373	3.8490	50/50	3.8490
965671	AG1-435 C O2	3.6661	50/50	3.6661
965672	AG1-435 E O2	17.1639	50/50	17.1639
965931	AG1-462 C O2	49.0140	50/50	49.0140
965932	AG1-462 E O2	32.6760	50/50	32.6760
966521	AG1-521 C O2	16.9064	50/50	16.9064
966522	AG1-521 E O2	4.2266	50/50	4.2266

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966821	AG1-553 C O2	69.6432	50/50	69.6432
966822	AG1-553 E O2	17.4108	50/50	17.4108
990901	L-005 E	13.6772	50/50	13.6772
LGEE	LGEE	0.3902	Confirmed LTF	0.3902
CPLE	CPLE	0.6074	Confirmed LTF	0.6074
G-007A	G-007A	0.7960	Confirmed LTF	0.7960
VFT	VFT	2.1350	Confirmed LTF	2.1350
CBM-W2	CBM-W2	24.4339	Confirmed LTF	24.4339
TVA	TVA	3.0114	Confirmed LTF	3.0114
SIGE	SIGE	0.0646	Confirmed LTF	0.0646
CBM-S2	CBM-S2	11.1604	Confirmed LTF	11.1604
CBM-S1	CBM-S1	0.7117	Confirmed LTF	0.7117
CBM-N	CBM-N	0.3960	Confirmed LTF	0.3960
MEC	MEC	15.7629	Confirmed LTF	15.7629
LAGN	LAGN	5.4600	Confirmed LTF	5.4600
CBM-W1	CBM-W1	27.2409	Confirmed LTF	27.2409

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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
162239101	270916	WAYNE ; B	CE	270730	ELECT JCT; B	CE	1	COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A	tower	1768.0	100.01	100.78	DC	30.11

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274693	ROCKY RD ;1P	3.6778	50/50	3.6778
274695	ROCKY RD ;2P	3.7143	50/50	3.7143
274696	ROCKY RD ;4P	3.7957	50/50	3.7957
274697	ROCKY RD ;3P	1.0090	50/50	1.0090
274819	ELGIN EC ;3P	4.5688	50/50	4.5688
274820	ELGIN EC ;2P	4.3115	50/50	4.3115
274821	ELGIN EC ;4P	4.6030	50/50	4.6030
274859	EASYR;U1 E	11.6484	Adder	13.7
274860	EASYR;U2 E	11.6484	Adder	13.7
276167	Z1-106 E2	1.0086	Adder	1.19
276168	Z1-106 E1	0.9948	Adder	1.17
276170	Z1-108 E	3.4556	Adder	4.07
276591	L-013 2	2.9250	Adder	3.44
293516	O-009 E1	6.7426	Adder	7.93
293517	O-009 E2	3.4247	Adder	4.03
293518	O-009 E3	3.7715	Adder	4.44
293715	O-029 E	7.2086	Adder	8.48
293716	O-029 E	3.9523	Adder	4.65
293717	O-029 E	3.6326	Adder	4.27
294763	P-046 E	10.1612	Adder	11.95
295111	SUBLETTE E	2.1190	Adder	2.49
915011	Y3-013 1	2.8853	Adder	3.39
915021	Y3-013 2	2.8853	Adder	3.39
915031	Y3-013 3	2.8853	Adder	3.39
919581	AA2-030 C	16.0434	Adder	18.87
920272	AA2-123 E	3.2387	Adder	3.81
924472	AB2-096 CT1	24.7317	Adder	29.1
924473	AB2-096 CT2	24.7317	Adder	29.1
924474	AB2-096 CT3	24.7317	Adder	29.1
930482	AB1-089 CT	52.3380	Adder	61.57
930483	AB1-089 ST	41.6108	Adder	48.95
933931	AD1-016 C	1.2301	Adder	1.45
933932	AD1-016 E	2.0070	Adder	2.36
934971	AD1-129 C	1.1297	Adder	1.33
934972	AD1-129 E	0.7531	Adder	0.89
936791	AD2-102 C	16.5434	Adder	19.46
936792	AD2-102 E	11.0289	Adder	12.98
937311	AD2-172 C	2.6673	Adder	3.14
937312	AD2-172 E	3.6834	Adder	4.33

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937531	AD2-214 C	3.6199	Adder	4.26
937532	AD2-214 E	2.4133	Adder	2.84
938861	AE1-114 C O1	3.8555	Adder	4.54
938862	AE1-114 E O1	13.1542	Adder	15.48
939051	AE1-134 1	1.2467	Adder	1.47
939061	AE1-134 2	1.2467	Adder	1.47
940501	AE2-035 C	2.6673	Adder	3.14
940502	AE2-035 E	3.6834	Adder	4.33
942991	AE2-321 C	10.7579	Adder	12.66
942992	AE2-321 E	5.2986	Adder	6.23
943411	AF1-012 C	10.7180	Adder	12.61
943412	AF1-012 E	7.1454	Adder	8.41
943801	AF1-048 C	5.0289	Adder	5.92
943802	AF1-048 E	3.3526	Adder	3.94
943921	AF1-060	1.3133	Adder	1.55
944041	AF1-072	3.9856	50/50	3.9856
945352	AF1-200 NFTW	192.7380	Merchant Transmission	192.7380
946151	AF1-280 C O1	15.8151	Adder	18.61
946152	AF1-280 E O1	7.2726	Adder	8.56
946161	AF1-281 C O1	0.3463	Adder	0.41
946162	AF1-281 E O1	1.9625	Adder	2.31
946321	AF1-296 C O1	3.1651	Adder	3.72
946322	AF1-296 E O1	14.8183	Adder	17.43
946501	AF1-314 C	4.7392	Adder	5.58
946502	AF1-314 E	22.1881	Adder	26.1
946661	AF1-330 C	2.6557	Adder	3.12
946662	AF1-330 E	0.5830	Adder	0.69
952381	J703	9.1233	PJM External (MISO)	9.1233
952391	J704	3.9017	PJM External (MISO)	3.9017
952431	J760	3.3585	PJM External (MISO)	3.3585
953151	J831	3.0340	PJM External (MISO)	3.0340
953491	J947	15.0180	PJM External (MISO)	15.0180
953681	J818	13.4890	PJM External (MISO)	13.4890
953891	J849	8.9100	PJM External (MISO)	8.9100
953901	J850	23.7950	PJM External (MISO)	23.7950
953921	J855 C	1.1110	PJM External (MISO)	1.1110
953922	J855 E	6.0110	PJM External (MISO)	6.0110
954001	J864	3.8050	PJM External (MISO)	3.8050
954061	J870	14.9200	PJM External (MISO)	14.9200
954071	J871	7.4600	PJM External (MISO)	7.4600
954141	J878	15.7600	PJM External (MISO)	15.7600
954191	J886	10.9245	PJM External (MISO)	10.9245
954741	J928 C	0.8895	PJM External (MISO)	0.8895
954742	J928 E	4.8125	PJM External (MISO)	4.8125
955091	J986	10.1777	PJM External (MISO)	10.1777
955221	J1000	3.3360	PJM External (MISO)	3.3360
955241	J1002	7.4250	PJM External (MISO)	7.4250
955251	J1003	4.1040	PJM External (MISO)	4.1040
955582	J1042 E	15.8364	PJM External (MISO)	15.8364
956141	J1101	1.4566	PJM External (MISO)	1.4566
956571	J1153	11.2920	PJM External (MISO)	11.2920
956581	J1154	6.7905	PJM External (MISO)	6.7905

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
956731	J1171	7.7870	PJM External (MISO)	7.7870
956852	J1183 E	0.0962	PJM External (MISO)	0.0962
956901	J1188	4.7330	PJM External (MISO)	4.7330
957331	AF2-027 C	1.9236	Adder	2.26
957332	AF2-027 E	2.8853	Adder	3.39
957471	AF2-041 C	18.3355	Adder	21.57
957472	AF2-041 E	9.1678	Adder	10.79
958911	AF2-182 C	20.7789	Adder	24.45
958912	AF2-182 E	13.8526	Adder	16.3
958921	AF2-183 C	3.6940	Adder	4.35
958922	AF2-183 E	5.5410	Adder	6.52
959081	AF2-199 C	6.1118	Adder	7.19
959082	AF2-199 E	3.0559	Adder	3.6
959091	AF2-200 C O1	12.2237	Adder	14.38
959092	AF2-200 E O1	6.1118	Adder	7.19
959101	AF2-201 C O1	6.5286	Adder	7.68
959102	AF2-201 E O1	18.7475	Adder	22.06
960551	AF2-346 C	4.5934	Adder	5.4
960552	AF2-346 E	3.0623	Adder	3.6
960581	AF2-349 C	28.2469	Adder	33.23
960582	AF2-349 E	18.8312	Adder	22.15
960721	AF2-363 C O1	3.6985	Adder	4.35
960722	AF2-363 E O1	2.4657	Adder	2.9
960731	AF2-364 C O1	11.9008	50/50	11.9008
960732	AF2-364 E O1	7.9339	50/50	7.9339
961011	AF2-392 C O1	3.3627	Adder	3.96
961012	AF2-392 E O1	15.7436	Adder	18.52
961021	AF2-393 O1	5.7319	Adder	6.74
961031	AF2-394 O1	3.8213	Adder	4.5
962012	AG1-044 E	0.0275	Adder	0.06
962701	AG1-119 C O2	56.6622	50/50	56.6622
962702	AG1-119 E O2	37.7748	50/50	37.7748
962711	AG1-120 C O2	22.4005	50/50	22.4005
962712	AG1-120 E O2	14.9336	50/50	14.9336
963681	AG1-220 C O2	5.4225	Adder	12.04
963682	AG1-220 E O2	3.6150	Adder	8.02
964461	AG1-309 FTIR	360.2153	Merchant Transmission	360.2153
965061	AG1-371	1.6196	Adder	3.6
965071	AG1-372	1.0798	Adder	2.4
965081	AG1-373	0.5399	Adder	1.2
965551	AG1-423 C O2	28.6032	50/50	28.6032
965552	AG1-423 E O2	19.0688	50/50	19.0688
965931	AG1-462 C O2	8.1390	Adder	18.07
965932	AG1-462 E O2	5.4260	Adder	12.04
966441	AG1-513 C	0.1682	Adder	0.37
966442	AG1-513 E	0.2524	Adder	0.56
966521	AG1-521 C O2	4.0704	Adder	9.04
966522	AG1-521 E O2	1.0176	Adder	2.26
966651	AG1-535 O2	2.7054	Adder	6.01
966821	AG1-553 C O2	11.7255	Adder	26.03
966822	AG1-553 E O2	2.9314	Adder	6.51
WEC	WEC	3.5913	Confirmed LTF	3.5913

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-W2	CBM-W2	11.2448	Confirmed LTF	11.2448
NY	NY	0.3462	Confirmed LTF	0.3462
TVA	TVA	1.1298	Confirmed LTF	1.1298
O-066	O-066	4.1053	Confirmed LTF	4.1053
SIGE	SIGE	0.0512	Confirmed LTF	0.0512
CBM-S1	CBM-S1	0.2250	Confirmed LTF	0.2250
G-007	G-007	0.6394	Confirmed LTF	0.6394
HAMLET	HAMLET	0.0641	Confirmed LTF	0.0641
MEC	MEC	10.8497	Confirmed LTF	10.8497
GIBSON	GIBSON	0.1059	Confirmed LTF	0.1059
BLUEG	BLUEG	0.7274	Confirmed LTF	0.7274
TRIMBLE	TRIMBLE	0.2476	Confirmed LTF	0.2476
LAGN	LAGN	2.8578	Confirmed LTF	2.8578
CATAWBA	CATAWBA	0.0172	Confirmed LTF	0.0172
CBM-W1	CBM-W1	70.8991	Confirmed LTF	70.8991

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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
174486010	270916	WAYNE ; B	CE	270900	TOLLWAY ; B	CE	1	COMED_P4_144-45-BT6-9__	breaker	1201.0	112.71	113.29	DC	15.35

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274656	BYRON ;1U	25.0831	50/50	25.0831
274657	BYRON ;2U	24.4513	50/50	24.4513
274818	ELGIN EC ;1P	2.2309	50/50	2.2309
274820	ELGIN EC ;2P	2.2309	50/50	2.2309
274859	EASYSR;U1 E	7.6688	Adder	9.02
274860	EASYSR;U2 E	7.6688	Adder	9.02
276167	Z1-106 E2	0.4321	Adder	0.51
276168	Z1-106 E1	0.4481	Adder	0.53
276591	L-013 2	1.2532	Adder	1.47
293516	O-009 E1	3.7343	Adder	4.39
293517	O-009 E2	1.8967	Adder	2.23
293518	O-009 E3	2.0888	Adder	2.46
293715	O-029 E	3.9923	Adder	4.7
293716	O-029 E	2.1889	Adder	2.58
293717	O-029 E	2.0119	Adder	2.37
294763	P-046 E	5.5406	Adder	6.52
295111	SUBLETTE E	1.2198	Adder	1.44
919581	AA2-030 C	8.8531	Adder	10.42
924472	AB2-096 CT1	8.4368	Adder	9.93
924473	AB2-096 CT2	8.4368	Adder	9.93
924474	AB2-096 CT3	8.4368	Adder	9.93
930482	AB1-089 CT	61.1513	50/50	61.1513
930483	AB1-089 ST	48.6177	50/50	48.6177
934971	AD1-129 C	0.3984	Adder	0.47
934972	AD1-129 E	0.2656	Adder	0.31
936791	AD2-102 C	9.7257	Adder	11.44
936792	AD2-102 E	6.4838	Adder	7.63
937311	AD2-172 C	1.4544	Adder	1.71
937312	AD2-172 E	2.0085	Adder	2.36
937531	AD2-214 C	1.9154	Adder	2.25
937532	AD2-214 E	1.2769	Adder	1.5
938861	AE1-114 C O1	2.1366	Adder	2.51
938862	AE1-114 E O1	7.2895	Adder	8.58
939051	AE1-134 1	0.6879	Adder	0.81
939061	AE1-134 2	0.6879	Adder	0.81
940501	AE2-035 C	1.4544	Adder	1.71
940502	AE2-035 E	2.0085	Adder	2.36
943411	AF1-012 C	5.0596	Adder	5.95
943412	AF1-012 E	3.3731	Adder	3.97
943921	AF1-060	0.7161	Adder	0.84
946151	AF1-280 C O1	9.9530	Adder	11.71
946152	AF1-280 E O1	4.5769	Adder	5.38

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946161	AF1-281 C O1	0.2179	Adder	0.26
946162	AF1-281 E O1	1.2350	Adder	1.45
946321	AF1-296 C O1	1.6125	Adder	1.9
946322	AF1-296 E O1	7.5495	Adder	8.88
946501	AF1-314 C	2.5842	Adder	3.04
946502	AF1-314 E	12.0985	Adder	14.23
952431	J760	2.0691	PJM External (MISO)	2.0691
958911	AF2-182 C	13.0769	Adder	15.38
958912	AF2-182 E	8.7179	Adder	10.26
958921	AF2-183 C	2.3248	Adder	2.74
958922	AF2-183 E	3.4872	Adder	4.1
959101	AF2-201 C O1	3.5599	Adder	4.19
959102	AF2-201 E O1	10.2225	Adder	12.03
960551	AF2-346 C	2.1684	Adder	2.55
960552	AF2-346 E	1.4456	Adder	1.7
960581	AF2-349 C	9.6359	Adder	11.34
960582	AF2-349 E	6.4240	Adder	7.56
960721	AF2-363 C O1	2.5859	Adder	3.04
960722	AF2-363 E O1	1.7239	Adder	2.03
961011	AF2-392 C O1	1.8960	Adder	2.23
961012	AF2-392 E O1	8.8769	Adder	10.44
961021	AF2-393 O1	3.2319	Adder	3.8
961031	AF2-394 O1	2.1546	Adder	2.53
962012	AG1-044 E	0.0153	Adder	0.03
963681	AG1-220 C O2	3.1001	Adder	6.88
963682	AG1-220 E O2	2.0667	Adder	4.59
964461	AG1-309 FTIR	276.5769	50/50	276.5769
965551	AG1-423 C O2	35.8692	50/50	35.8692
965552	AG1-423 E O2	23.9128	50/50	23.9128
965931	AG1-462 C O2	4.1502	Adder	9.21
965932	AG1-462 E O2	2.7668	Adder	6.14
966521	AG1-521 C O2	2.3231	Adder	5.16
966522	AG1-521 E O2	0.5808	Adder	1.29
966651	AG1-535 O2	9.0568	50/50	9.0568
CBM-W2	CBM-W2	3.6826	Confirmed LTF	3.6826
NY	NY	0.1399	Confirmed LTF	0.1399
TVA	TVA	0.3612	Confirmed LTF	0.3612
O-066	O-066	1.6690	Confirmed LTF	1.6690
SIGE	SIGE	0.0163	Confirmed LTF	0.0163
CBM-S1	CBM-S1	0.0684	Confirmed LTF	0.0684
G-007	G-007	0.2593	Confirmed LTF	0.2593
HAMLET	HAMLET	0.0404	Confirmed LTF	0.0404
MEC	MEC	4.0647	Confirmed LTF	4.0647
GIBSON	GIBSON	0.0677	Confirmed LTF	0.0677
BLUEG	BLUEG	0.3298	Confirmed LTF	0.3298
TRIMBLE	TRIMBLE	0.1107	Confirmed LTF	0.1107
LAGN	LAGN	0.9712	Confirmed LTF	0.9712
CATAWBA	CATAWBA	0.0164	Confirmed LTF	0.0164
CBM-W1	CBM-W1	12.7442	Confirmed LTF	12.7442

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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
174485890	270917	WAYNE ; R	CE	270751	ESS W407M;9T	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	140.37	141.43	DC	34.43

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.2059	Adder	2.6
274693	ROCKY RD ;1P	4.9878	50/50	4.9878
274695	ROCKY RD ;2P	5.0374	50/50	5.0374
274697	ROCKY RD ;3P	1.3684	50/50	1.3684
274818	ELGIN EC ;1P	6.1779	50/50	6.1779
274819	ELGIN EC ;3P	5.9544	50/50	5.9544
274820	ELGIN EC ;2P	6.1779	50/50	6.1779
274821	ELGIN EC ;4P	5.9991	50/50	5.9991
274859	EASYR;U1 E	14.2425	Adder	16.76
274860	EASYR;U2 E	14.2425	Adder	16.76
276167	Z1-106 E2	1.4705	Adder	1.73
276168	Z1-106 E1	1.4783	Adder	1.74
276170	Z1-108 E	4.6675	Adder	5.49
276591	L-013 2	4.2644	Adder	5.02
290051	GSG-6; E	8.7423	Adder	10.29
290108	LEEDK;1U E	18.1458	Adder	21.35
293516	O-009 E1	7.9413	Adder	9.34
293517	O-009 E2	4.0336	Adder	4.75
293518	O-009 E3	4.4421	Adder	5.23
293715	O-029 E	8.4902	Adder	9.99
293716	O-029 E	4.6550	Adder	5.48
293717	O-029 E	4.2785	Adder	5.03
294763	P-046 E	13.2872	Adder	15.63
295109	WESTBROOK E	4.6805	Adder	5.51
295111	SUBLETTE E	2.7014	Adder	3.18
915011	Y3-013 1	3.9030	Adder	4.59
915021	Y3-013 2	3.9030	Adder	4.59
915031	Y3-013 3	3.9030	Adder	4.59
916221	Z1-073 E	4.5408	Adder	5.34
919581	AA2-030 C	18.4375	Adder	21.69
920272	AA2-123 E	4.3515	Adder	5.12
924472	AB2-096 CT1	32.8885	Adder	38.69
924473	AB2-096 CT2	32.8885	Adder	38.69
924474	AB2-096 CT3	32.8885	Adder	38.69
926331	AC1-110 1	1.2550	Adder	1.48
926341	AC1-110 2	1.2550	Adder	1.48
930482	AB1-089 CT	68.4671	Adder	80.55
930483	AB1-089 ST	54.4340	Adder	64.04
933911	AD1-013 C	1.5484	Adder	1.82
933912	AD1-013 E	2.4734	Adder	2.91
933931	AD1-016 C	1.6497	Adder	1.94
933932	AD1-016 E	2.6916	Adder	3.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934432	AD1-067 E	0.4616	Adder	0.54
934701	AD1-098 C O1	5.8278	Adder	6.86
934702	AD1-098 E O1	4.2549	Adder	5.01
934971	AD1-129 C	1.5109	Adder	1.78
934972	AD1-129 E	1.0073	Adder	1.19
936791	AD2-102 C	21.6250	Adder	25.44
936792	AD2-102 E	14.4167	Adder	16.96
937001	AD2-134 C	2.2854	Adder	2.69
937002	AD2-134 E	9.4409	Adder	11.11
937311	AD2-172 C	3.4879	Adder	4.1
937312	AD2-172 E	4.8166	Adder	5.67
937531	AD2-214 C	4.2341	Adder	4.98
937532	AD2-214 E	2.8227	Adder	3.32
938861	AE1-114 C O1	4.9737	Adder	5.85
938862	AE1-114 E O1	16.9691	Adder	19.96
939051	AE1-134 1	1.4327	Adder	1.69
939061	AE1-134 2	1.4327	Adder	1.69
940501	AE2-035 C	3.4879	Adder	4.1
940502	AE2-035 E	4.8166	Adder	5.67
941131	AE2-107 C	4.8994	Adder	5.76
941132	AE2-107 E	3.2662	Adder	3.84
942991	AE2-321 C	14.4790	Adder	17.03
942992	AE2-321 E	7.1314	Adder	8.39
943411	AF1-012 C	11.3794	Adder	13.39
943412	AF1-012 E	7.5862	Adder	8.92
943801	AF1-048 C	6.7684	Adder	7.96
943802	AF1-048 E	4.5123	Adder	5.31
943921	AF1-060	1.7174	Adder	2.02
944041	AF1-072	5.4053	50/50	5.4053
945352	AF1-200 NFTW	174.1740	Merchant Transmission	174.1740
946151	AF1-280 C O1	19.0198	Adder	22.38
946152	AF1-280 E O1	8.7463	Adder	10.29
946161	AF1-281 C O1	0.4165	Adder	0.49
946162	AF1-281 E O1	2.3601	Adder	2.78
946321	AF1-296 C O1	3.6776	Adder	4.33
946322	AF1-296 E O1	17.2175	Adder	20.26
946501	AF1-314 C	6.1972	Adder	7.29
946502	AF1-314 E	29.0139	Adder	34.13
946661	AF1-330 C	3.5682	Adder	4.2
946662	AF1-330 E	0.7833	Adder	0.92
946671	AF1-331	2.0109	Adder	2.37
952381	J703	12.2771	PJM External (MISO)	12.2771
952391	J704	5.2484	PJM External (MISO)	5.2484
952431	J760	4.4730	PJM External (MISO)	4.4730
953151	J831	4.1888	PJM External (MISO)	4.1888
953491	J947	21.0560	PJM External (MISO)	21.0560
953681	J818	18.0409	PJM External (MISO)	18.0409
953891	J849	11.9925	PJM External (MISO)	11.9925
953901	J850	32.1175	PJM External (MISO)	32.1175
953921	J855 C	1.3974	PJM External (MISO)	1.3974
953922	J855 E	7.5606	PJM External (MISO)	7.5606
954001	J864	4.8880	PJM External (MISO)	4.8880

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954061	J870	19.0080	PJM External (MISO)	19.0080
954071	J871	9.5040	PJM External (MISO)	9.5040
954141	J878	22.0320	PJM External (MISO)	22.0320
954191	J886	14.8170	PJM External (MISO)	14.8170
954741	J928 C	1.1973	PJM External (MISO)	1.1973
954742	J928 E	6.4775	PJM External (MISO)	6.4775
955091	J986	13.4095	PJM External (MISO)	13.4095
955221	J1000	4.1340	PJM External (MISO)	4.1340
955241	J1002	9.8525	PJM External (MISO)	9.8525
955251	J1003	5.4920	PJM External (MISO)	5.4920
955582	J1042 E	21.6846	PJM External (MISO)	21.6846
956141	J1101	1.9756	PJM External (MISO)	1.9756
956571	J1153	15.5265	PJM External (MISO)	15.5265
956581	J1154	9.0818	PJM External (MISO)	9.0818
956731	J1171	10.5520	PJM External (MISO)	10.5520
956852	J1183 E	0.1295	PJM External (MISO)	0.1295
956901	J1188	6.2940	PJM External (MISO)	6.2940
957331	AF2-027 C	2.6020	Adder	3.06
957332	AF2-027 E	3.9030	Adder	4.59
957471	AF2-041 C	16.3618	Adder	19.25
957472	AF2-041 E	8.1809	Adder	9.62
958911	AF2-182 C	24.9895	Adder	29.4
958912	AF2-182 E	16.6597	Adder	19.6
958921	AF2-183 C	4.4426	Adder	5.23
958922	AF2-183 E	6.6639	Adder	7.84
959081	AF2-199 C	5.4539	Adder	6.42
959082	AF2-199 E	2.7270	Adder	3.21
959091	AF2-200 C O1	10.9079	Adder	12.83
959092	AF2-200 E O1	5.4539	Adder	6.42
959101	AF2-201 C O1	8.5370	Adder	10.04
959102	AF2-201 E O1	24.5149	Adder	28.84
960551	AF2-346 C	4.8769	Adder	5.74
960552	AF2-346 E	3.2513	Adder	3.83
960581	AF2-349 C	37.5630	Adder	44.19
960582	AF2-349 E	25.0420	Adder	29.46
960721	AF2-363 C O1	6.6061	Adder	7.77
960722	AF2-363 E O1	4.4041	Adder	5.18
960731	AF2-364 C O1	12.9241	Adder	15.2
960732	AF2-364 E O1	8.6161	Adder	10.14
960751	AF2-366 C	5.3786	Adder	6.33
960752	AF2-366 E	3.5857	Adder	4.22
961011	AF2-392 C O1	4.1026	Adder	4.83
961012	AF2-392 E O1	19.2078	Adder	22.6
961021	AF2-393 O1	6.9931	Adder	8.23
961031	AF2-394 O1	4.6621	Adder	5.48
962012	AG1-044 E	0.0325	Adder	0.07
962691	AG1-118 C O2	7.8357	Adder	17.39
962692	AG1-118 E O2	5.2238	Adder	11.6
962701	AG1-119 C O2	77.4324	50/50	77.4324
962702	AG1-119 E O2	51.6216	50/50	51.6216
962711	AG1-120 C O2	30.6116	50/50	30.6116
962712	AG1-120 E O2	20.4077	50/50	20.4077

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962781	AG1-127 C O2	3.1570	Adder	7.01
962782	AG1-127 E O2	2.1047	Adder	4.67
962791	AG1-128 C O2	2.7399	Adder	6.08
962792	AG1-128 E O2	12.8213	Adder	28.46
963681	AG1-220 C O2	7.9310	Adder	17.6
963682	AG1-220 E O2	5.2873	Adder	11.74
964461	AG1-309 FTIR	467.8058	Merchant Transmission	467.8058
965061	AG1-371	1.4453	Adder	3.21
965071	AG1-372	0.9635	Adder	2.14
965081	AG1-373	0.4818	Adder	1.07
965551	AG1-423 C O2	37.7352	50/50	37.7352
965552	AG1-423 E O2	25.1568	50/50	25.1568
965661	AG1-434 C O2	1.8618	Adder	4.13
965662	AG1-434 E O2	8.7168	Adder	19.35
965931	AG1-462 C O2	9.3059	Adder	20.66
965932	AG1-462 E O2	6.2039	Adder	13.77
966521	AG1-521 C O2	5.2157	Adder	11.58
966522	AG1-521 E O2	1.3039	Adder	2.89
966651	AG1-535 O2	7.6677	Adder	17.02
966821	AG1-553 C O2	13.3882	Adder	29.72
966822	AG1-553 E O2	3.3470	Adder	7.43
WEC	WEC	4.7795	Confirmed LTF	4.7795
CBM-W2	CBM-W2	10.3757	Confirmed LTF	10.3757
NY	NY	0.4264	Confirmed LTF	0.4264
TVA	TVA	1.0234	Confirmed LTF	1.0234
O-066	O-066	5.0812	Confirmed LTF	5.0812
SIGE	SIGE	0.0426	Confirmed LTF	0.0426
CBM-S1	CBM-S1	0.1877	Confirmed LTF	0.1877
G-007	G-007	0.7928	Confirmed LTF	0.7928
HAMLET	HAMLET	0.1351	Confirmed LTF	0.1351
MEC	MEC	12.5865	Confirmed LTF	12.5865
GIBSON	GIBSON	0.2441	Confirmed LTF	0.2441
BLUEG	BLUEG	1.0659	Confirmed LTF	1.0659
TRIMBLE	TRIMBLE	0.3562	Confirmed LTF	0.3562
LAGN	LAGN	2.9470	Confirmed LTF	2.9470
CATAWBA	CATAWBA	0.0591	Confirmed LTF	0.0591
CBM-W1	CBM-W1	89.6018	Confirmed LTF	89.6018

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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
174485870	274749	AURORA EC;RP	CE	270731	ELECT JCT;4R	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	146.23	147.27	DC	33.9

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	2.1729	Adder	2.56
274693	ROCKY RD ;1P	4.9600	50/50	4.9600
274695	ROCKY RD ;2P	5.0093	50/50	5.0093
274697	ROCKY RD ;3P	1.3608	50/50	1.3608
274737	AURORA EC;1P	18.5238	50/50	18.5238
274739	AURORA EC;2P	18.5238	50/50	18.5238
274818	ELGIN EC ;1P	6.1443	50/50	6.1443
274820	ELGIN EC ;2P	6.1443	50/50	6.1443
274859	EASYR;U1 E	14.0988	Adder	16.59
274860	EASYR;U2 E	14.0988	Adder	16.59
276167	Z1-106 E2	1.4556	Adder	1.71
276168	Z1-106 E1	1.4634	Adder	1.72
276170	Z1-108 E	4.6378	Adder	5.46
276591	L-013 2	4.2213	Adder	4.97
290051	GSG-6; E	8.6113	Adder	10.13
290108	LEEDK;1U E	17.8466	Adder	21.0
293516	O-009 E1	7.8186	Adder	9.2
293517	O-009 E2	3.9712	Adder	4.67
293518	O-009 E3	4.3734	Adder	5.15
293715	O-029 E	8.3589	Adder	9.83
293716	O-029 E	4.5831	Adder	5.39
293717	O-029 E	4.2123	Adder	4.96
294763	P-046 E	13.1682	Adder	15.49
295109	WESTBROOK E	4.6104	Adder	5.42
295111	SUBLETTE E	2.6673	Adder	3.14
915011	Y3-013 1	3.8582	Adder	4.54
915021	Y3-013 2	3.8582	Adder	4.54
915031	Y3-013 3	3.8582	Adder	4.54
916221	Z1-073 E	4.4728	Adder	5.26
919581	AA2-030 C	18.2039	Adder	21.42
920272	AA2-123 E	4.3216	Adder	5.08
924472	AB2-096 CT1	32.6528	Adder	38.42
924473	AB2-096 CT2	32.6528	Adder	38.42
924474	AB2-096 CT3	32.6528	Adder	38.42
926311	AC1-109 1	1.8282	50/50	1.8282
926321	AC1-109 2	1.8282	50/50	1.8282
926331	AC1-110 1	1.2325	Adder	1.45
926341	AC1-110 2	1.2325	Adder	1.45
930482	AB1-089 CT	68.0087	Adder	80.01
930483	AB1-089 ST	54.0696	Adder	63.61
933911	AD1-013 C	1.5254	Adder	1.79
933912	AD1-013 E	2.4366	Adder	2.87

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933931	AD1-016 C	1.6383	Adder	1.93
933932	AD1-016 E	2.6730	Adder	3.14
934432	AD1-067 E	0.4546	Adder	0.53
934701	AD1-098 C O1	5.7413	Adder	6.75
934702	AD1-098 E O1	4.1918	Adder	4.93
934971	AD1-129 C	1.4998	Adder	1.76
934972	AD1-129 E	0.9999	Adder	1.18
936791	AD2-102 C	21.4455	Adder	25.23
936792	AD2-102 E	14.2970	Adder	16.82
937001	AD2-134 C	2.2511	Adder	2.65
937002	AD2-134 E	9.2994	Adder	10.94
937311	AD2-172 C	3.4567	Adder	4.07
937312	AD2-172 E	4.7735	Adder	5.62
937531	AD2-214 C	4.1730	Adder	4.91
937532	AD2-214 E	2.7820	Adder	3.27
938861	AE1-114 C O1	4.9228	Adder	5.79
938862	AE1-114 E O1	16.7955	Adder	19.76
939051	AE1-134 1	1.4146	Adder	1.66
939061	AE1-134 2	1.4146	Adder	1.66
940501	AE2-035 C	3.4567	Adder	4.07
940502	AE2-035 E	4.7735	Adder	5.62
941131	AE2-107 C	4.8186	Adder	5.67
941132	AE2-107 E	3.2124	Adder	3.78
942991	AE2-321 C	14.3793	Adder	16.92
942992	AE2-321 E	7.0823	Adder	8.33
943411	AF1-012 C	11.2223	Adder	13.2
943412	AF1-012 E	7.4815	Adder	8.8
943801	AF1-048 C	6.7218	Adder	7.91
943802	AF1-048 E	4.4812	Adder	5.27
943921	AF1-060	1.7020	Adder	2.0
944041	AF1-072	5.3752	50/50	5.3752
946151	AF1-280 C O1	18.8160	Adder	22.14
946152	AF1-280 E O1	8.6526	Adder	10.18
946161	AF1-281 C O1	0.4120	Adder	0.48
946162	AF1-281 E O1	2.3348	Adder	2.75
946321	AF1-296 C O1	3.6217	Adder	4.26
946322	AF1-296 E O1	16.9560	Adder	19.95
946501	AF1-314 C	6.1416	Adder	7.23
946502	AF1-314 E	28.7541	Adder	33.83
946661	AF1-330 C	3.5437	Adder	4.17
946662	AF1-330 E	0.7779	Adder	0.92
946671	AF1-331	1.9810	Adder	2.33
952381	J703	12.2771	PJM External (MISO)	12.2771
952391	J704	5.2484	PJM External (MISO)	5.2484
952431	J760	4.4730	PJM External (MISO)	4.4730
953151	J831	4.1888	PJM External (MISO)	4.1888
953491	J947	21.0560	PJM External (MISO)	21.0560
953681	J818	18.0409	PJM External (MISO)	18.0409
953891	J849	11.9925	PJM External (MISO)	11.9925
953901	J850	32.1175	PJM External (MISO)	32.1175
954001	J864	4.8880	PJM External (MISO)	4.8880
954061	J870	19.0080	PJM External (MISO)	19.0080

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954071	J871	9.5040	PJM External (MISO)	9.5040
954141	J878	22.0320	PJM External (MISO)	22.0320
954191	J886	14.8170	PJM External (MISO)	14.8170
954741	J928 C	1.1973	PJM External (MISO)	1.1973
954742	J928 E	6.4775	PJM External (MISO)	6.4775
955241	J1002	9.8525	PJM External (MISO)	9.8525
955251	J1003	5.4920	PJM External (MISO)	5.4920
955582	J1042 E	21.6846	PJM External (MISO)	21.6846
956141	J1101	1.9756	PJM External (MISO)	1.9756
956571	J1153	15.5265	PJM External (MISO)	15.5265
956581	J1154	9.0818	PJM External (MISO)	9.0818
956731	J1171	10.5520	PJM External (MISO)	10.5520
956852	J1183 E	0.1295	PJM External (MISO)	0.1295
956901	J1188	6.2940	PJM External (MISO)	6.2940
957331	AF2-027 C	2.5721	Adder	3.03
957332	AF2-027 E	3.8582	Adder	4.54
957471	AF2-041 C	16.0925	Adder	18.93
957472	AF2-041 E	8.0463	Adder	9.47
958911	AF2-182 C	24.7217	Adder	29.08
958912	AF2-182 E	16.4812	Adder	19.39
958921	AF2-183 C	4.3950	Adder	5.17
958922	AF2-183 E	6.5925	Adder	7.76
959081	AF2-199 C	5.3642	Adder	6.31
959082	AF2-199 E	2.6821	Adder	3.16
959091	AF2-200 C O1	10.7284	Adder	12.62
959092	AF2-200 E O1	5.3642	Adder	6.31
959101	AF2-201 C O1	8.4606	Adder	9.95
959102	AF2-201 E O1	24.2953	Adder	28.58
960551	AF2-346 C	4.8096	Adder	5.66
960552	AF2-346 E	3.2064	Adder	3.77
960581	AF2-349 C	37.2938	Adder	43.88
960582	AF2-349 E	24.8625	Adder	29.25
960721	AF2-363 C O1	6.5331	Adder	7.69
960722	AF2-363 E O1	4.3554	Adder	5.12
960731	AF2-364 C O1	12.8511	Adder	15.12
960732	AF2-364 E O1	8.5674	Adder	10.08
960751	AF2-366 C	5.2934	Adder	6.23
960752	AF2-366 E	3.5289	Adder	4.15
961011	AF2-392 C O1	4.0500	Adder	4.76
961012	AF2-392 E O1	18.9612	Adder	22.31
961021	AF2-393 O1	6.9034	Adder	8.12
961031	AF2-394 O1	4.6022	Adder	5.41
962012	AG1-044 E	0.0321	Adder	0.07
962691	AG1-118 C O2	7.6930	Adder	17.08
962692	AG1-118 E O2	5.1287	Adder	11.38
962701	AG1-119 C O2	77.1156	50/50	77.1156
962702	AG1-119 E O2	51.4104	50/50	51.4104
962711	AG1-120 C O2	30.4864	50/50	30.4864
962712	AG1-120 E O2	20.3242	50/50	20.3242
962781	AG1-127 C O2	3.1070	Adder	6.9
962782	AG1-127 E O2	2.0714	Adder	4.6
962791	AG1-128 C O2	2.6988	Adder	5.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
962792	AG1-128 E O2	12.6291	Adder	28.03
963681	AG1-220 C O2	7.8596	Adder	17.45
963682	AG1-220 E O2	5.2398	Adder	11.63
964461	AG1-309 FTIR	464.2242	Merchant Transmission	464.2242
965061	AG1-371	1.4215	Adder	3.16
965071	AG1-372	0.9477	Adder	2.1
965081	AG1-373	0.4738	Adder	1.05
965551	AG1-423 C O2	37.5240	50/50	37.5240
965552	AG1-423 E O2	25.0160	50/50	25.0160
965661	AG1-434 C O2	1.8339	Adder	4.07
965662	AG1-434 E O2	8.5861	Adder	19.06
965931	AG1-462 C O2	9.1632	Adder	20.34
965932	AG1-462 E O2	6.1088	Adder	13.56
966521	AG1-521 C O2	5.1523	Adder	11.44
966522	AG1-521 E O2	1.2881	Adder	2.86
966651	AG1-535 O2	7.6003	Adder	16.87
966821	AG1-553 C O2	13.1800	Adder	29.26
966822	AG1-553 E O2	3.2950	Adder	7.31
WEC	WEC	4.7241	Confirmed LTF	4.7241
CALDERWOOD	CALDERWOOD	0.0025	Confirmed LTF	0.0025
CBM-W2	CBM-W2	8.7987	Confirmed LTF	8.7987
NY	NY	0.5237	Confirmed LTF	0.5237
TVA	TVA	0.7770	Confirmed LTF	0.7770
O-066	O-066	6.2656	Confirmed LTF	6.2656
SIGE	SIGE	0.0426	Confirmed LTF	0.0426
CHEOAH	CHEOAH	0.0070	Confirmed LTF	0.0070
CBM-S1	CBM-S1	0.1208	Confirmed LTF	0.1208
G-007	G-007	0.9775	Confirmed LTF	0.9775
HAMLET	HAMLET	0.2368	Confirmed LTF	0.2368
MEC	MEC	12.3068	Confirmed LTF	12.3068
GIBSON	GIBSON	0.3402	Confirmed LTF	0.3402
BLUEG	BLUEG	1.3714	Confirmed LTF	1.3714
TRIMBLE	TRIMBLE	0.4541	Confirmed LTF	0.4541
LAGN	LAGN	2.6390	Confirmed LTF	2.6390
CATAWBA	CATAWBA	0.1207	Confirmed LTF	0.1207
CBM-W1	CBM-W1	87.1343	Confirmed LTF	87.1343

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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
171077763	274768	LEE CO EC;BP	CE	270678	BYRON ; B	CE	1	COMED_P7-1_138-L11106_B-R+_345-L15502_B-R	tower	2084.0	113.05	114.79	DC	80.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274760	LEE CO EC;1U	7.0695	50/50	7.0695
274761	LEE CO EC;2U	7.0695	50/50	7.0695
274762	LEE CO EC;3U	7.0695	50/50	7.0695
274763	LEE CO EC;4U	7.0029	50/50	7.0029
274764	LEE CO EC;5U	7.0862	50/50	7.0862
274765	LEE CO EC;6U	7.0862	50/50	7.0862
274767	LEE CO EC;8U	6.9863	50/50	6.9863
274859	EASYR;U1 E	43.0677	Adder	50.67
274860	EASYR;U2 E	43.0677	Adder	50.67
293516	O-009 E1	18.3979	Adder	21.64
293517	O-009 E2	9.3447	Adder	10.99
293518	O-009 E3	10.2911	Adder	12.11
293715	O-029 E	19.6695	Adder	23.14
293716	O-029 E	10.7844	Adder	12.69
293717	O-029 E	9.9121	Adder	11.66
294401	BSHIL;1U E	8.2450	Adder	9.7
294410	BSHIL;2U E	8.2450	Adder	9.7
295111	SUBLETTE E	4.5086	Adder	5.3
919581	AA2-030 C	50.8791	Adder	59.86
920273	AA2-123 BAT	2.3850	Merchant Transmission	2.3850
925581	AC1-033 C	1.3505	Adder	1.59
925582	AC1-033 E	9.0408	Adder	10.64
934051	AD1-031 C O1	2.7430	Adder	3.23
934052	AD1-031 E O1	4.4755	Adder	5.27
937531	AD2-214 C	9.5405	Adder	11.22
937532	AD2-214 E	6.3603	Adder	7.48
939051	AE1-134 1	3.9537	Adder	4.65
939061	AE1-134 2	3.9537	Adder	4.65
943411	AF1-012 C	34.0248	Adder	40.03
943412	AF1-012 E	22.6832	Adder	26.69
943803	AF1-048 BAT	6.1591	Merchant Transmission	6.1591
946151	AF1-280 C O1	56.2058	Adder	66.12
946152	AF1-280 E O1	25.8464	Adder	30.41
946161	AF1-281 C O1	1.2308	Adder	1.45
946162	AF1-281 E O1	6.9744	Adder	8.21
946321	AF1-296 C O1	7.8780	Adder	9.27
946322	AF1-296 E O1	36.8831	Adder	43.39
951421	J514	3.3000	PJM External (MISO)	3.3000
951511	J530 C	5.6565	PJM External (MISO)	5.6565
951512	J530 E	22.6260	PJM External (MISO)	22.6260

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
954702	J844 E	16.1362	PJM External (MISO)	16.1362
954792	J952 E	7.3040	PJM External (MISO)	7.3040
954901	J963	1.3110	PJM External (MISO)	1.3110
955051	J981 C	4.0782	PJM External (MISO)	4.0782
955052	J981 E	22.0638	PJM External (MISO)	22.0638
955971	J1084	34.4835	PJM External (MISO)	34.4835
956411	J1131	18.0800	PJM External (MISO)	18.0800
957471	AF2-041 C	58.3205	Adder	68.61
957472	AF2-041 E	29.1603	Adder	34.31
958911	AF2-182 C	73.8470	Adder	86.88
958912	AF2-182 E	49.2313	Adder	57.92
958921	AF2-183 C	13.1284	Adder	15.45
958922	AF2-183 E	19.6925	Adder	23.17
959081	AF2-199 C	19.4402	Adder	22.87
959082	AF2-199 E	9.7201	Adder	11.44
959091	AF2-200 C O1	38.8804	Adder	45.74
959092	AF2-200 E O1	19.4402	Adder	22.87
960551	AF2-346 C	14.5820	Adder	17.16
960552	AF2-346 E	9.7214	Adder	11.44
961011	AF2-392 C O1	8.5583	Adder	10.07
961012	AF2-392 E O1	40.0685	Adder	47.14
961021	AF2-393 O1	14.5880	Adder	17.16
961031	AF2-394 O1	9.7254	Adder	11.44
962012	AG1-044 E	0.0773	Adder	0.17
964462	AG1-309 NFTW	522.5850	Merchant Transmission	522.5850
965061	AG1-371	5.1516	Adder	11.44
965071	AG1-372	3.4344	Adder	7.62
965081	AG1-373	1.7172	Adder	3.81
965931	AG1-462 C O2	21.7783	Adder	48.34
965932	AG1-462 E O2	14.5189	Adder	32.23
966521	AG1-521 C O2	7.4823	Adder	16.61
966522	AG1-521 E O2	1.8706	Adder	4.15
966821	AG1-553 C O2	30.9318	Adder	68.66
966822	AG1-553 E O2	7.7330	Adder	17.17
990901	L-005 E	11.2335	Adder	13.22
LGEE	LGEE	0.1564	Confirmed LTF	0.1564
CPL	CPL	0.3535	Confirmed LTF	0.3535
CBM-W2	CBM-W2	21.1008	Confirmed LTF	21.1008
NY	NY	0.0343	Confirmed LTF	0.0343
TVA	TVA	2.4906	Confirmed LTF	2.4906
O-066	O-066	0.2759	Confirmed LTF	0.2759
SIGE	SIGE	0.0646	Confirmed LTF	0.0646
CBM-S2	CBM-S2	7.2767	Confirmed LTF	7.2767
CBM-S1	CBM-S1	0.5704	Confirmed LTF	0.5704
G-007	G-007	0.0420	Confirmed LTF	0.0420
MEC	MEC	15.1718	Confirmed LTF	15.1718
LAGN	LAGN	4.8090	Confirmed LTF	4.8090
CBM-W1	CBM-W1	22.0254	Confirmed LTF	22.0254

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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
162238865	349662	7TAZEWELL	AMIL	930760	AB1-122 TAP1	CE	1	COMED_P7-1_345-L9806_R-S_+345-L19601_B-S	tower	1479.0	183.99	184.86	DC	28.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274677	POWERTON ;5U	59.5206	50/50	59.5206
274678	POWERTON ;6U	59.6905	50/50	59.6905
274848	CAMPGROVE;RU	0.9152	50/50	0.9152
274849	CRESCENT ;1U	0.2821	50/50	0.2821
274851	PROVIDENC;RU	0.2906	50/50	0.2906
274861	TOP CROP ;1U	1.4232	50/50	1.4232
274862	TOP CROP ;2U	2.7150	50/50	2.7150
274877	BISHOP HL;1U	0.6240	50/50	0.6240
274878	BISHOP HL;2U	0.6240	50/50	0.6240
274879	MINONK ;1U	1.6816	50/50	1.6816
274891	OTTER CRK;1U	1.5126	50/50	1.5126
290021	O50 E	42.6336	50/50	42.6336
293516	O-009 E1	6.6143	Adder	7.78
293517	O-009 E2	3.3595	Adder	3.95
293518	O-009 E3	3.6998	Adder	4.35
293644	O22 E1	40.0060	50/50	40.0060
293645	O22 E2	77.6588	50/50	77.6588
293715	O-029 E	7.0714	Adder	8.32
293716	O-029 E	3.8771	Adder	4.56
293717	O-029 E	3.5635	Adder	4.19
293771	O-035 E	10.5850	50/50	10.5850
294401	BSHIL;1U E	15.8216	50/50	15.8216
294410	BSHIL;2U E	15.8216	50/50	15.8216
916211	Z1-072 E	8.0102	50/50	8.0102
918052	AA1-018 E OP	64.1629	50/50	64.1629
925581	AC1-033 C	2.5905	50/50	2.5905
925582	AC1-033 E	17.3427	50/50	17.3427
926821	AC1-168 C O1	1.4831	50/50	1.4831
926822	AC1-168 E O1	9.9526	50/50	9.9526
926841	AC1-171 C O1	3.2766	50/50	3.2766
926842	AC1-171 E O1	21.8867	50/50	21.8867
927201	AC1-214 C O1	0.5360	50/50	0.5360
927202	AC1-214 E O1	10.7995	50/50	10.7995
934051	AD1-031 C O1	5.2580	50/50	5.2580
934052	AD1-031 E O1	8.5789	50/50	8.5789
934871	AD1-116 C	3.7367	50/50	3.7367
934872	AD1-116 E	6.0967	50/50	6.0967
936291	AD2-038 C O1	9.5893	50/50	9.5893
936292	AD2-038 E O1	64.1747	50/50	64.1747
937531	AD2-214 C	2.8566	Adder	3.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937532	AD2-214 E	1.9044	Adder	2.24
938851	AE1-113 C O1	17.5864	50/50	17.5864
938852	AE1-113 E O1	62.3516	50/50	62.3516
939321	AE1-163 C O1	24.0962	50/50	24.0962
939322	AE1-163 E O1	148.0198	50/50	148.0198
942421	AE2-255 C O1	6.6615	50/50	6.6615
942422	AE2-255 E O1	19.9845	50/50	19.9845
942651	AE2-281 C O1	3.4423	50/50	3.4423
942652	AE2-281 E O1	21.1457	50/50	21.1457
946321	AF1-296 C O1	2.9030	Adder	3.42
946322	AF1-296 E O1	13.5913	Adder	15.99
946541	AF1-318 C O1	8.0486	50/50	8.0486
946542	AF1-318 E O1	37.6818	50/50	37.6818
951631	J456 C	4.2649	PJM External (MISO)	4.2649
951632	J456 E	23.0741	PJM External (MISO)	23.0741
951821	J541 C	5.0163	PJM External (MISO)	5.0163
951822	J541 E	27.1397	PJM External (MISO)	27.1397
952651	J756 C	3.9459	PJM External (MISO)	3.9459
952652	J756 E	21.3481	PJM External (MISO)	21.3481
952871	J757 C	5.0341	PJM External (MISO)	5.0341
952872	J757 E	27.2356	PJM External (MISO)	27.2356
953201	J715 C	1.6953	PJM External (MISO)	1.6953
953202	J715 E	9.1717	PJM External (MISO)	9.1717
953951	J859	25.6697	PJM External (MISO)	25.6697
954702	J844 E	29.2603	PJM External (MISO)	29.2603
954792	J952 E	4.6607	PJM External (MISO)	4.6607
954901	J963	0.7217	PJM External (MISO)	0.7217
954981	J974 C	16.6304	PJM External (MISO)	16.6304
954982	J974 E	89.9746	PJM External (MISO)	89.9746
955051	J981 C	2.8476	PJM External (MISO)	2.8476
955052	J981 E	15.4064	PJM External (MISO)	15.4064
955431	J1025 C	4.1638	PJM External (MISO)	4.1638
955432	J1025 E	22.5272	PJM External (MISO)	22.5272
955441	J1026 C	5.0619	PJM External (MISO)	5.0619
955442	J1026 E	27.3861	PJM External (MISO)	27.3861
955711	J1055 C	4.8805	PJM External (MISO)	4.8805
955712	J1055 E	26.4049	PJM External (MISO)	26.4049
956151	J1102	6.9958	PJM External (MISO)	6.9958
956411	J1131	8.7390	PJM External (MISO)	8.7390
956431	J1135	5.4345	PJM External (MISO)	5.4345
956841	J1182	20.8375	PJM External (MISO)	20.8375
957751	AF2-069 C	0.3934	50/50	0.3934
957752	AF2-069 E	1.2695	50/50	1.2695
957761	AF2-070 C	0.5543	50/50	0.5543
957762	AF2-070 E	2.6909	50/50	2.6909
958341	AF2-128 C O1	2.0571	50/50	2.0571
958342	AF2-128 E O1	9.6310	50/50	9.6310
958481	AF2-142 C	44.2503	50/50	44.2503
958482	AF2-142 E	29.5002	50/50	29.5002
958491	AF2-143 C	44.2584	50/50	44.2584
958492	AF2-143 E	29.5056	50/50	29.5056
959351	AF2-226 C	9.8054	50/50	9.8054

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959352	AF2-226 E	14.7081	50/50	14.7081
960281	AF2-319 C	9.8054	50/50	9.8054
960282	AF2-319 E	14.7081	50/50	14.7081
961651	AG1-005 C O1	22.5840	50/50	22.5840
961652	AG1-005 E O1	15.0560	50/50	15.0560
962721	AG1-121 C O2	9.2797	50/50	9.2797
962722	AG1-121 E O2	43.4126	50/50	43.4126
965141	AG1-379 C	36.5583	50/50	36.5583
965142	AG1-379 E	16.7337	50/50	16.7337
965671	AG1-435 C O2	6.2938	50/50	6.2938
965672	AG1-435 E O2	29.4662	50/50	29.4662
965931	AG1-462 C O2	7.6930	Adder	17.08
965932	AG1-462 E O2	5.1287	Adder	11.38
966821	AG1-553 C O2	11.7350	Adder	26.05
966822	AG1-553 E O2	2.9338	Adder	6.51
990901	L-005 E	27.6656	50/50	27.6656
LGEE	LGEE	0.3085	Confirmed LTF	0.3085
CPL	CPL	0.4900	Confirmed LTF	0.4900
CBM-W2	CBM-W2	37.6678	Confirmed LTF	37.6678
NY	NY	0.1427	Confirmed LTF	0.1427
TVA	TVA	3.9606	Confirmed LTF	3.9606
O-066	O-066	1.4941	Confirmed LTF	1.4941
SIGE	SIGE	0.1521	Confirmed LTF	0.1521
CBM-S2	CBM-S2	10.5862	Confirmed LTF	10.5862
CBM-S1	CBM-S1	0.9135	Confirmed LTF	0.9135
G-007	G-007	0.2310	Confirmed LTF	0.2310
MEC	MEC	14.5664	Confirmed LTF	14.5664
LAGN	LAGN	7.0770	Confirmed LTF	7.0770
CBM-W1	CBM-W1	36.4240	Confirmed LTF	36.4240

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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
169766357	924470	GARDEN PR; R	CE	270883	SILVER LK; R	CE	1	COMED_P1-2_345-L18905_B-R-B	single	1479.0	172.14	172.71	DC	18.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.8881	Adder	2.22
274656	BYRON ;1U	47.3438	80/20	47.3438
274657	BYRON ;2U	46.2787	80/20	46.2787
274715	NELSON EC;1C	3.3940	80/20	3.3940
274717	NELSON EC;2C	3.4202	80/20	3.4202
274760	LEE CO EC;1U	2.3971	80/20	2.3971
274761	LEE CO EC;2U	2.3971	80/20	2.3971
274762	LEE CO EC;3U	2.3971	80/20	2.3971
274763	LEE CO EC;4U	2.3745	80/20	2.3745
274764	LEE CO EC;5U	2.4027	80/20	2.4027
274765	LEE CO EC;6U	2.4027	80/20	2.4027
274766	LEE CO EC;7U	2.3689	80/20	2.3689
274767	LEE CO EC;8U	2.3689	80/20	2.3689
274822	ROCKFORD ;11	4.7466	80/20	4.7466
274823	ROCKFORD ;21	4.8710	80/20	4.8710
274824	ROCKFORD ;12	4.7052	80/20	4.7052
274856	ECOGROVE ;U1	0.6574	80/20	0.6574
274857	BIG SKY ;U1	0.4292	80/20	0.4292
274858	BIG SKY ;U2	0.4292	80/20	0.4292
276162	X1-087	0.3277	80/20	0.3277
276590	R-018	0.2567	80/20	0.2567
295110	SUBLETTE C	0.0683	80/20	0.0683
919581	AA2-030 C	17.0576	Adder	20.07
924472	AB2-096 CT1	78.4060	80/20	78.4060
924473	AB2-096 CT2	78.4060	80/20	78.4060
924474	AB2-096 CT3	78.4060	80/20	78.4060
926431	AC1-114	0.7911	80/20	0.7911
927511	AC1-113 1	0.3955	80/20	0.3955
927521	AC1-113 2	0.3955	80/20	0.3955
930482	AB1-089 CT	78.6774	80/20	78.6774
930483	AB1-089 ST	62.5516	80/20	62.5516
932881	AC2-115 1	0.7911	80/20	0.7911
932891	AC2-115 2	0.7911	80/20	0.7911
932921	AC2-116	0.2769	80/20	0.2769
933911	AD1-013 C	1.3284	Adder	1.56
933931	AD1-016 C	0.4486	Adder	0.53
934701	AD1-098 C O1	5.0147	Adder	5.9
934971	AD1-129 C	1.3406	80/20	1.3406
936791	AD2-102 C	28.5168	80/20	28.5168
937001	AD2-134 C	1.9490	Adder	2.29
937311	AD2-172 C	4.5106	80/20	4.5106

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937531	AD2-214 C	3.8911	Adder	4.58
938861	AE1-114 C O1	6.1724	80/20	6.1724
939051	AE1-134 1	1.3255	Adder	1.56
939061	AE1-134 2	1.3255	Adder	1.56
940501	AE2-035 C	4.5106	80/20	4.5106
941131	AE2-107 C	3.8157	Adder	4.49
943411	AF1-012 C	9.3463	Adder	11.0
943921	AF1-060	2.2209	80/20	2.2209
946151	AF1-280 C O1	22.3598	80/20	22.3598
946161	AF1-281 C O1	0.4896	80/20	0.4896
946321	AF1-296 C O1	3.3177	Adder	3.9
946501	AF1-314 C	8.0142	80/20	8.0142
946671	AF1-331	1.7252	Adder	2.03
952431	J760	5.1372	PJM External (MISO)	5.1372
953681	J818	13.1969	PJM External (MISO)	13.1969
953901	J850	21.8500	PJM External (MISO)	21.8500
953921	J855 C	1.2825	PJM External (MISO)	1.2825
954001	J864	4.2443	PJM External (MISO)	4.2443
954061	J870	16.9540	PJM External (MISO)	16.9540
954071	J871	8.4770	PJM External (MISO)	8.4770
955221	J1000	3.7970	PJM External (MISO)	3.7970
955971	J1084	11.1195	PJM External (MISO)	11.1195
956581	J1154	6.6472	PJM External (MISO)	6.6472
956901	J1188	5.5255	PJM External (MISO)	5.5255
958911	AF2-182 C	29.3778	80/20	29.3778
958921	AF2-183 C	5.2227	80/20	5.2227
959101	AF2-201 C O1	11.0402	80/20	11.0402
960551	AF2-346 C	4.0055	Adder	4.71
960581	AF2-349 C	89.5500	80/20	89.5500
960721	AF2-363 C O1	8.1094	80/20	8.1094
960751	AF2-366 C	4.3574	Adder	5.13
961011	AF2-392 C O1	4.6003	80/20	4.6003
961021	AF2-393 O1	7.8414	80/20	7.8414
961031	AF2-394 O1	5.2276	80/20	5.2276
962781	AG1-127 C O2	2.5576	Adder	5.68
962791	AG1-128 C O2	2.3366	Adder	5.19
963681	AG1-220 C O2	20.1402	80/20	20.1402
964461	AG1-309 FTIR	522.7711	80/20	522.7711
965551	AG1-423 C O2	30.8064	80/20	30.8064
965661	AG1-434 C O2	1.5878	Adder	3.52
965931	AG1-462 C O2	8.3644	Adder	18.57
966521	AG1-521 C O2	11.4992	80/20	11.4992
966821	AG1-553 C O2	12.0109	Adder	26.66
WEC	WEC	0.4945	Confirmed LTF	0.4945
CBM-W2	CBM-W2	9.3990	Confirmed LTF	9.3990
NY	NY	0.2627	Confirmed LTF	0.2627
TVA	TVA	0.9856	Confirmed LTF	0.9856
SIGE	SIGE	0.0359	Confirmed LTF	0.0359
CBM-S2	CBM-S2	0.1357	Confirmed LTF	0.1357
CBM-S1	CBM-S1	0.1980	Confirmed LTF	0.1980
HAMLET	HAMLET	0.0300	Confirmed LTF	0.0300
MEC	MEC	9.7310	Confirmed LTF	9.7310

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
GIBSON	GIBSON	0.1054	Confirmed LTF	0.1054
BLUEG	BLUEG	0.5850	Confirmed LTF	0.5850
TRIMBLE	TRIMBLE	0.1987	Confirmed LTF	0.1987
LAGN	LAGN	2.4745	Confirmed LTF	2.4745
CATAWBA	CATAWBA	0.0003	Confirmed LTF	0.0003
CBM-W1	CBM-W1	47.3876	Confirmed LTF	47.3876

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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
175737845	930480	AB1-089 POI	CE	965550	AG1-423 TAP	CE	1	COMED_P1-2_345-L97104__R	single	2058.0	127.63	128.09	DC	20.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.7004	Adder	2.0
274656	BYRON ;1U	55.9973	80/20	55.9973
274657	BYRON ;2U	54.6314	80/20	54.6314
274715	NELSON EC;1C	3.8228	80/20	3.8228
274717	NELSON EC;2C	3.8523	80/20	3.8523
274760	LEE CO EC;1U	2.7770	80/20	2.7770
274761	LEE CO EC;2U	2.7770	80/20	2.7770
274762	LEE CO EC;3U	2.7770	80/20	2.7770
274763	LEE CO EC;4U	2.7508	80/20	2.7508
274764	LEE CO EC;5U	2.7835	80/20	2.7835
274765	LEE CO EC;6U	2.7835	80/20	2.7835
274766	LEE CO EC;7U	2.7443	80/20	2.7443
274767	LEE CO EC;8U	2.7443	80/20	2.7443
274822	ROCKFORD ;11	4.2327	80/20	4.2327
274823	ROCKFORD ;21	4.3430	80/20	4.3430
274824	ROCKFORD ;12	4.1958	80/20	4.1958
274856	ECOGROVE ;U1	0.6217	80/20	0.6217
274857	BIG SKY ;U1	0.4972	80/20	0.4972
274858	BIG SKY ;U2	0.4972	80/20	0.4972
276162	X1-087	0.2945	80/20	0.2945
276590	R-018	0.2263	80/20	0.2263
919581	AA2-030 C	19.2128	Adder	22.6
924472	AB2-096 CT1	41.1305	80/20	41.1305
924473	AB2-096 CT2	41.1305	80/20	41.1305
924474	AB2-096 CT3	41.1305	80/20	41.1305
926431	AC1-114	0.7053	80/20	0.7053
927511	AC1-113 1	0.3527	80/20	0.3527
927521	AC1-113 2	0.3527	80/20	0.3527
930482	AB1-089 CT	124.0736	80/20	124.0736
930483	AB1-089 ST	98.6434	80/20	98.6434
932881	AC2-115 1	0.7054	80/20	0.7054
932891	AC2-115 2	0.7054	80/20	0.7054
932921	AC2-116	0.2469	80/20	0.2469
933911	AD1-013 C	1.1901	Adder	1.4
933931	AD1-016 C	0.5645	Adder	0.66
934701	AD1-098 C O1	4.6172	Adder	5.43
934971	AD1-129 C	1.2485	80/20	1.2485
936791	AD2-102 C	28.6296	80/20	28.6296
937001	AD2-134 C	1.7772	Adder	2.09
937311	AD2-172 C	4.2653	80/20	4.2653
937531	AD2-214 C	4.2878	Adder	5.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938861	AE1-114 C O1	6.0251	80/20	6.0251
939051	AE1-134 1	1.4930	Adder	1.76
939061	AE1-134 2	1.4930	Adder	1.76
940501	AE2-035 C	4.2653	80/20	4.2653
941131	AE2-107 C	3.2984	Adder	3.88
942991	AE2-321 C	4.7377	Adder	5.57
943411	AF1-012 C	10.4190	Adder	12.26
943801	AF1-048 C	2.2147	Adder	2.61
943921	AF1-060	2.1002	80/20	2.1002
946151	AF1-280 C O1	25.7300	80/20	25.7300
946161	AF1-281 C O1	0.5634	80/20	0.5634
946321	AF1-296 C O1	3.6719	Adder	4.32
946501	AF1-314 C	7.5784	80/20	7.5784
946661	AF1-330 C	1.1212	Adder	1.32
946671	AF1-331	1.5456	Adder	1.82
952431	J760	5.1261	PJM External (MISO)	5.1261
953681	J818	14.1088	PJM External (MISO)	14.1088
953901	J850	23.5925	PJM External (MISO)	23.5925
953921	J855 C	1.3605	PJM External (MISO)	1.3605
954001	J864	4.4957	PJM External (MISO)	4.4957
954061	J870	17.9560	PJM External (MISO)	17.9560
954071	J871	8.9780	PJM External (MISO)	8.9780
955221	J1000	4.0580	PJM External (MISO)	4.0580
955251	J1003	3.4320	PJM External (MISO)	3.4320
955971	J1084	12.2415	PJM External (MISO)	12.2415
956581	J1154	7.1055	PJM External (MISO)	7.1055
956901	J1188	5.7410	PJM External (MISO)	5.7410
958911	AF2-182 C	33.8058	80/20	33.8058
958921	AF2-183 C	6.0099	80/20	6.0099
959101	AF2-201 C O1	10.4399	80/20	10.4399
960551	AF2-346 C	4.4653	Adder	5.25
960581	AF2-349 C	46.9764	80/20	46.9764
960721	AF2-363 C O1	5.9066	Adder	6.95
960751	AF2-366 C	3.6696	Adder	4.32
961011	AF2-392 C O1	4.1831	Adder	4.92
961021	AF2-393 O1	7.1303	Adder	8.39
961031	AF2-394 O1	4.7535	Adder	5.59
962781	AG1-127 C O2	2.1539	Adder	4.78
962791	AG1-128 C O2	2.1306	Adder	4.73
963681	AG1-220 C O2	17.2800	80/20	17.2800
964461	AG1-309 FTIR	617.7243	80/20	617.7243
965661	AG1-434 C O2	1.4478	Adder	3.21
965931	AG1-462 C O2	9.3716	Adder	20.8
966521	AG1-521 C O2	11.6576	80/20	11.6576
966821	AG1-553 C O2	13.4512	Adder	29.86
WEC	WEC	1.1110	Confirmed LTF	1.1110
CBM-W2	CBM-W2	10.2861	Confirmed LTF	10.2861
NY	NY	0.3097	Confirmed LTF	0.3097
TVA	TVA	1.0668	Confirmed LTF	1.0668
SIGE	SIGE	0.0401	Confirmed LTF	0.0401
CBM-S1	CBM-S1	0.2113	Confirmed LTF	0.2113
HAMLET	HAMLET	0.0497	Confirmed LTF	0.0497

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MEC	MEC	10.8926	Confirmed LTF	10.8926
GIBSON	GIBSON	0.1343	Confirmed LTF	0.1343
BLUEG	BLUEG	0.7048	Confirmed LTF	0.7048
TRIMBLE	TRIMBLE	0.2387	Confirmed LTF	0.2387
LAGN	LAGN	2.7318	Confirmed LTF	2.7318
CATAWBA	CATAWBA	0.0101	Confirmed LTF	0.0101
CBM-W1	CBM-W1	55.7856	Confirmed LTF	55.7856

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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
174313559	930760	AB1-122 TAP1	CE	270717	DRESDEN ; R	CE	1	COMED_P4_012-45-BT4-5__	breaker	1479.0	189.73	190.49	DC	24.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274677	POWERTON ;5U	51.3373	50/50	51.3373
274678	POWERTON ;6U	51.4598	50/50	51.4598
274848	CAMPGROVE;RU	0.8155	50/50	0.8155
274849	CRESCENT ;1U	0.2490	50/50	0.2490
274851	PROVIDENC;RU	0.2565	50/50	0.2565
274861	TOP CROP ;1U	0.4832	50/50	0.4832
274862	TOP CROP ;2U	0.9217	50/50	0.9217
274877	BISHOP HL;1U	0.5541	50/50	0.5541
274878	BISHOP HL;2U	0.5541	50/50	0.5541
274879	MINONK ;1U	2.6702	50/50	2.6702
274891	OTTER CRK;1U	0.5023	50/50	0.5023
290021	O50 E	67.6976	50/50	67.6976
293516	O-009 E1	5.7168	Adder	6.73
293517	O-009 E2	2.9037	Adder	3.42
293518	O-009 E3	3.1978	Adder	3.76
293644	O22 E1	13.5815	50/50	13.5815
293645	O22 E2	26.3641	50/50	26.3641
293715	O-029 E	6.1119	Adder	7.19
293716	O-029 E	3.3511	Adder	3.94
293717	O-029 E	3.0800	Adder	3.62
293771	O-035 E	9.3429	50/50	9.3429
294401	BSHIL;1U E	14.0496	50/50	14.0496
294410	BSHIL;2U E	14.0496	50/50	14.0496
916211	Z1-072 E	7.0703	50/50	7.0703
918052	AA1-018 E OP	21.3080	50/50	21.3080
925581	AC1-033 C	2.3004	50/50	2.3004
925582	AC1-033 E	15.4001	50/50	15.4001
926821	AC1-168 C O1	1.2990	50/50	1.2990
926822	AC1-168 E O1	8.7171	50/50	8.7171
926841	AC1-171 C O1	2.9434	50/50	2.9434
926842	AC1-171 E O1	19.6610	50/50	19.6610
927201	AC1-214 C O1	0.4731	50/50	0.4731
927202	AC1-214 E O1	9.5323	50/50	9.5323
930761	AB1-122 CT1	371.1510	50/50	371.1510
930771	AB1-122 CT2	243.2653	50/50	243.2653
934051	AD1-031 C O1	4.6691	50/50	4.6691
934052	AD1-031 E O1	7.6180	50/50	7.6180
934101	AD1-039 1	36.3728	50/50	36.3728
934111	AD1-039 2	23.8400	50/50	23.8400
934871	AD1-116 C	1.2409	50/50	1.2409
934872	AD1-116 E	2.0247	50/50	2.0247

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936291	AD2-038 C O1	4.6898	50/50	4.6898
936292	AD2-038 E O1	31.3853	50/50	31.3853
937531	AD2-214 C	2.4567	Adder	2.89
937532	AD2-214 E	1.6378	Adder	1.93
938851	AE1-113 C O1	27.9253	50/50	27.9253
938852	AE1-113 E O1	99.0077	50/50	99.0077
939321	AE1-163 C O1	11.7845	50/50	11.7845
939322	AE1-163 E O1	72.3905	50/50	72.3905
942421	AE2-255 C O1	10.5778	50/50	10.5778
942422	AE2-255 E O1	31.7333	50/50	31.7333
942651	AE2-281 C O1	1.6835	50/50	1.6835
942652	AE2-281 E O1	10.3415	50/50	10.3415
946321	AF1-296 C O1	2.5153	Adder	2.96
946322	AF1-296 E O1	11.7759	Adder	13.85
946541	AF1-318 C O1	7.0265	50/50	7.0265
946542	AF1-318 E O1	32.8965	50/50	32.8965
951631	J456 C	3.8275	PJM External (MISO)	3.8275
951632	J456 E	20.7080	PJM External (MISO)	20.7080
951821	J541 C	4.4379	PJM External (MISO)	4.4379
951822	J541 E	24.0101	PJM External (MISO)	24.0101
952651	J756 C	3.4542	PJM External (MISO)	3.4542
952652	J756 E	18.6883	PJM External (MISO)	18.6883
952871	J757 C	4.4127	PJM External (MISO)	4.4127
952872	J757 E	23.8737	PJM External (MISO)	23.8737
953201	J715 C	1.4709	PJM External (MISO)	1.4709
953202	J715 E	7.9581	PJM External (MISO)	7.9581
953951	J859	22.9678	PJM External (MISO)	22.9678
954702	J844 E	26.3159	PJM External (MISO)	26.3159
954792	J952 E	4.1218	PJM External (MISO)	4.1218
954901	J963	0.6363	PJM External (MISO)	0.6363
954981	J974 C	15.1059	PJM External (MISO)	15.1059
954982	J974 E	81.7266	PJM External (MISO)	81.7266
955051	J981 C	2.5228	PJM External (MISO)	2.5228
955052	J981 E	13.6492	PJM External (MISO)	13.6492
955431	J1025 C	3.6921	PJM External (MISO)	3.6921
955432	J1025 E	19.9749	PJM External (MISO)	19.9749
955441	J1026 C	4.4834	PJM External (MISO)	4.4834
955442	J1026 E	24.2566	PJM External (MISO)	24.2566
955711	J1055 C	4.3679	PJM External (MISO)	4.3679
955712	J1055 E	23.6315	PJM External (MISO)	23.6315
956151	J1102	6.0340	PJM External (MISO)	6.0340
956411	J1131	7.7170	PJM External (MISO)	7.7170
956431	J1135	4.8350	PJM External (MISO)	4.8350
956841	J1182	18.4525	PJM External (MISO)	18.4525
957751	AF2-069 C	0.3472	50/50	0.3472
957752	AF2-069 E	1.1205	50/50	1.1205
957761	AF2-070 C	0.4892	50/50	0.4892
957762	AF2-070 E	2.3752	50/50	2.3752
958341	AF2-128 C O1	1.7908	50/50	1.7908
958342	AF2-128 E O1	8.3844	50/50	8.3844
958481	AF2-142 C	14.6952	50/50	14.6952
958482	AF2-142 E	9.7968	50/50	9.7968

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958491	AF2-143 C	21.6450	50/50	21.6450
958492	AF2-143 E	14.4300	50/50	14.4300
959351	AF2-226 C	3.3288	50/50	3.3288
959352	AF2-226 E	4.9932	50/50	4.9932
960281	AF2-319 C	3.3288	50/50	3.3288
960282	AF2-319 E	4.9932	50/50	4.9932
961651	AG1-005 C O1	19.6980	50/50	19.6980
961652	AG1-005 E O1	13.1320	50/50	13.1320
962721	AG1-121 C O2	8.1909	50/50	8.1909
962722	AG1-121 E O2	38.3187	50/50	38.3187
965141	AG1-379 C	58.0507	50/50	58.0507
965142	AG1-379 E	26.5713	50/50	26.5713
965671	AG1-435 C O2	5.5553	50/50	5.5553
965672	AG1-435 E O2	26.0087	50/50	26.0087
965931	AG1-462 C O2	6.6810	Adder	14.83
965932	AG1-462 E O2	4.4540	Adder	9.89
966821	AG1-553 C O2	10.2127	Adder	22.67
966822	AG1-553 E O2	2.5532	Adder	5.67
990901	L-005 E	24.6524	50/50	24.6524
LGEE	LGEE	0.2739	Confirmed LTF	0.2739
CPL	CPL	0.4457	Confirmed LTF	0.4457
CBM-W2	CBM-W2	32.6861	Confirmed LTF	32.6861
NY	NY	0.1001	Confirmed LTF	0.1001
TVA	TVA	3.4524	Confirmed LTF	3.4524
O-066	O-066	1.0162	Confirmed LTF	1.0162
SIGE	SIGE	0.1259	Confirmed LTF	0.1259
CBM-S2	CBM-S2	9.4691	Confirmed LTF	9.4691
CBM-S1	CBM-S1	0.7969	Confirmed LTF	0.7969
G-007	G-007	0.1565	Confirmed LTF	0.1565
MEC	MEC	12.7390	Confirmed LTF	12.7390
LAGN	LAGN	6.1688	Confirmed LTF	6.1688
CBM-W1	CBM-W1	31.7833	Confirmed LTF	31.7833

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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
174313660	943410	AF1-012 TAP	CE	957470	AF2-041 TAP	CE	1	COMED_P4_144-45-BT7-8__	breaker	1656.0	139.55	141.17	DC	59.16

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.4642	Adder	1.72
274715	NELSON EC;1C	6.9788	50/50	6.9788
274716	NELSON EC;1S	5.0921	50/50	5.0921
274717	NELSON EC;2C	7.0327	50/50	7.0327
274718	NELSON EC;2S	5.1377	50/50	5.1377
274762	LEE CO EC;3U	2.8860	50/50	2.8860
274764	LEE CO EC;5U	2.8928	50/50	2.8928
274765	LEE CO EC;6U	2.8928	50/50	2.8928
274859	EASYR;U1 E	17.5815	Adder	20.68
274860	EASYR;U2 E	17.5815	Adder	20.68
290051	GSG-6; E	6.2599	Adder	7.36
293516	O-009 E1	13.5821	Adder	15.98
293517	O-009 E2	6.8987	Adder	8.12
293518	O-009 E3	7.5973	Adder	8.94
293715	O-029 E	14.5208	Adder	17.08
293716	O-029 E	7.9615	Adder	9.37
293717	O-029 E	7.3175	Adder	8.61
294401	BSHIL;1U E	5.9058	Adder	6.95
294410	BSHIL;2U E	5.9058	Adder	6.95
294763	P-046 E	9.3690	Adder	11.02
295109	WESTBROOK E	3.3515	Adder	3.94
295111	SUBLETTE E	3.8316	Adder	4.51
916221	Z1-073 E	3.2514	Adder	3.83
919221	AA1-146	6.5102	50/50	6.5102
919581	AA2-030 C	41.2643	50/50	41.2643
924472	AB2-096 CT1	9.8219	Adder	11.56
924473	AB2-096 CT2	9.8219	Adder	11.56
924474	AB2-096 CT3	9.8219	Adder	11.56
925581	AC1-033 C	0.9673	Adder	1.14
925582	AC1-033 E	6.4757	Adder	7.62
930482	AB1-089 CT	37.3158	Adder	43.9
930483	AB1-089 ST	29.6676	Adder	34.9
933911	AD1-013 C	0.9944	Adder	1.17
933912	AD1-013 E	1.5885	Adder	1.87
934051	AD1-031 C O1	1.9648	Adder	2.31
934052	AD1-031 E O1	3.2057	Adder	3.77
934432	AD1-067 E	0.3305	Adder	0.39
934701	AD1-098 C O1	4.4374	Adder	5.22
934702	AD1-098 E O1	3.2398	Adder	3.81
934971	AD1-129 C	0.5157	Adder	0.61
934972	AD1-129 E	0.3438	Adder	0.4

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936791	AD2-102 C	11.9136	Adder	14.02
936792	AD2-102 E	7.9424	Adder	9.34
937001	AD2-134 C	1.6364	Adder	1.93
937002	AD2-134 E	6.7601	Adder	7.95
937311	AD2-172 C	2.4594	Adder	2.89
937312	AD2-172 E	3.3963	Adder	4.0
937531	AD2-214 C	7.1136	Adder	8.37
937532	AD2-214 E	4.7424	Adder	5.58
938861	AE1-114 C O1	4.7835	Adder	5.63
938862	AE1-114 E O1	16.3203	Adder	19.2
939051	AE1-134 1	3.2065	50/50	3.2065
939061	AE1-134 2	3.2065	50/50	3.2065
940501	AE2-035 C	2.4594	Adder	2.89
940502	AE2-035 E	3.3963	Adder	4.0
943411	AF1-012 C	37.9249	50/50	37.9249
943412	AF1-012 E	25.2833	50/50	25.2833
943921	AF1-060	1.2109	Adder	1.42
946151	AF1-280 C O1	31.5168	50/50	31.5168
946152	AF1-280 E O1	14.4931	50/50	14.4931
946161	AF1-281 C O1	0.6901	50/50	0.6901
946162	AF1-281 E O1	3.9108	50/50	3.9108
946321	AF1-296 C O1	5.9977	Adder	7.06
946322	AF1-296 E O1	28.0798	Adder	33.04
946501	AF1-314 C	4.3697	Adder	5.14
946502	AF1-314 E	20.4582	Adder	24.07
946671	AF1-331	1.2915	Adder	1.52
951381	J504	4.2190	PJM External (MISO)	4.2190
951421	J514	2.5083	PJM External (MISO)	2.5083
951511	J530 C	3.8905	PJM External (MISO)	3.8905
951512	J530 E	15.5620	PJM External (MISO)	15.5620
952431	J760	2.1561	PJM External (MISO)	2.1561
953921	J855 C	1.2390	PJM External (MISO)	1.2390
953922	J855 E	6.7030	PJM External (MISO)	6.7030
954061	J870	14.7880	PJM External (MISO)	14.7880
954071	J871	7.3940	PJM External (MISO)	7.3940
954091	J873 C	2.4617	PJM External (MISO)	2.4617
954092	J873 E	13.3183	PJM External (MISO)	13.3183
954792	J952 E	4.9480	PJM External (MISO)	4.9480
954861	J959 C	1.8250	PJM External (MISO)	1.8250
954862	J959 E	9.8735	PJM External (MISO)	9.8735
954901	J963	0.9148	PJM External (MISO)	0.9148
955051	J981 C	2.7097	PJM External (MISO)	2.7097
955052	J981 E	14.6603	PJM External (MISO)	14.6603
955221	J1000	4.1695	PJM External (MISO)	4.1695
955971	J1084	22.7715	PJM External (MISO)	22.7715
956411	J1131	11.9140	PJM External (MISO)	11.9140
956831	J1181 C	2.3494	PJM External (MISO)	2.3494
956832	J1181 E	12.7106	PJM External (MISO)	12.7106
958911	AF2-182 C	41.4090	50/50	41.4090
958912	AF2-182 E	27.6060	50/50	27.6060
958921	AF2-183 C	7.3616	50/50	7.3616
958922	AF2-183 E	11.0424	50/50	11.0424

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959101	AF2-201 C O1	6.0196	Adder	7.08
959102	AF2-201 E O1	17.2859	Adder	20.34
960551	AF2-346 C	16.2535	50/50	16.2535
960552	AF2-346 E	10.8357	50/50	10.8357
960581	AF2-349 C	11.2180	Adder	13.2
960582	AF2-349 E	7.4786	Adder	8.8
960721	AF2-363 C O1	3.0629	Adder	3.6
960722	AF2-363 E O1	2.0419	Adder	2.4
961011	AF2-392 C O1	7.7447	50/50	7.7447
961012	AF2-392 E O1	36.2593	50/50	36.2593
961021	AF2-393 O1	13.2012	50/50	13.2012
961031	AF2-394 O1	8.8008	50/50	8.8008
962012	AG1-044 E	0.1252	50/50	0.1252
962791	AG1-128 C O2	1.9618	Adder	4.35
962792	AG1-128 E O2	9.1805	Adder	20.38
963681	AG1-220 C O2	3.7597	Adder	8.35
963682	AG1-220 E O2	2.5065	Adder	5.56
964461	AG1-309 FTIR	291.4731	Merchant Transmission	291.4731
965062	AG1-371 BAT	33.6810	50/50	33.6810
965072	AG1-372 BAT	22.4540	50/50	22.4540
965082	AG1-373 BAT	11.2270	50/50	11.2270
965551	AG1-423 C O2	7.7409	Adder	17.18
965552	AG1-423 E O2	5.1606	Adder	11.46
965661	AG1-434 C O2	1.3331	Adder	2.96
965662	AG1-434 E O2	6.2416	Adder	13.85
965931	AG1-462 C O2	15.9901	Adder	35.49
965932	AG1-462 E O2	10.6601	Adder	23.66
966521	AG1-521 C O2	6.9074	Adder	15.33
966522	AG1-521 E O2	1.7269	Adder	3.83
966821	AG1-553 C O2	22.8314	Adder	50.68
966822	AG1-553 E O2	5.7078	Adder	12.67
990901	L-005 E	7.9883	Adder	9.4
WEC	WEC	0.9267	Confirmed LTF	0.9267
CPL	CPL	0.0833	Confirmed LTF	0.0833
CBM-W2	CBM-W2	17.1405	Confirmed LTF	17.1405
NY	NY	0.2500	Confirmed LTF	0.2500
TVA	TVA	1.9110	Confirmed LTF	1.9110
O-066	O-066	2.9074	Confirmed LTF	2.9074
SIGE	SIGE	0.0590	Confirmed LTF	0.0590
CBM-S2	CBM-S2	3.1216	Confirmed LTF	3.1216
CBM-S1	CBM-S1	0.4131	Confirmed LTF	0.4131
G-007	G-007	0.4526	Confirmed LTF	0.4526
MEC	MEC	14.9859	Confirmed LTF	14.9859
BLUEG	BLUEG	0.3819	Confirmed LTF	0.3819
TRIMBLE	TRIMBLE	0.1402	Confirmed LTF	0.1402
LAGN	LAGN	4.2157	Confirmed LTF	4.2157
CBM-W1	CBM-W1	59.5149	Confirmed LTF	59.5149

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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
171077713	946150	AF1-280 TAP	CE	274768	LEE CO EC;BP	CE	1	COMED_P7-1_138-L11106_B-R+_345-L15502_B-R	tower	1768.0	114.68	119.3	DC	81.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274662	QUAD CITI;1U	37.4294	50/50	37.4294
274663	QUAD CITI;2U	37.5404	50/50	37.5404
274699	CORDOVA ;1C	6.6018	50/50	6.6018
274700	CORDOVA ;2C	6.6018	50/50	6.6018
274701	CORDOVA ;1S	7.4271	50/50	7.4271
274715	NELSON EC;1C	10.2222	50/50	10.2222
274716	NELSON EC;1S	7.4586	50/50	7.4586
274717	NELSON EC;2C	10.3012	50/50	10.3012
274718	NELSON EC;2S	7.5254	50/50	7.5254
274848	CAMPGROVE;RU	0.4525	50/50	0.4525
274849	CRESCENT ;1U	0.1643	50/50	0.1643
274851	PROVIDENC;RU	0.1692	50/50	0.1692
274877	BISHOP HL;1U	0.3944	50/50	0.3944
274878	BISHOP HL;2U	0.3944	50/50	0.3944
276156	O-029 C	0.4685	50/50	0.4685
276157	O-029 C	0.5065	50/50	0.5065
276158	O-029 C	0.9244	50/50	0.9244
293513	O-009 C1	0.8653	50/50	0.8653
293514	O-009 C2	0.4390	50/50	0.4390
293515	O-009 C3	0.4854	50/50	0.4854
293516	O-009 E1	21.9498	50/50	21.9498
293517	O-009 E2	11.1488	50/50	11.1488
293518	O-009 E3	12.2779	50/50	12.2779
293715	O-029 E	23.4668	50/50	23.4668
293716	O-029 E	12.8665	50/50	12.8665
293717	O-029 E	11.8257	50/50	11.8257
293771	O-035 E	6.1657	50/50	6.1657
294401	BSHIL;1U E	9.9984	50/50	9.9984
294410	BSHIL;2U E	9.9984	50/50	9.9984
295110	SUBLETTE C	0.1193	50/50	0.1193
295111	SUBLETTE E	5.3890	50/50	5.3890
916211	Z1-072 E	4.6659	50/50	4.6659
919221	AA1-146	9.5359	50/50	9.5359
919581	AA2-030 C	60.4419	50/50	60.4419
920273	AA2-123 BAT	2.3106	50/50	2.3106
925581	AC1-033 C	1.6375	50/50	1.6375
925582	AC1-033 E	10.9625	50/50	10.9625
927201	AC1-214 C O1	0.3122	50/50	0.3122
927202	AC1-214 E O1	6.2907	50/50	6.2907
934051	AD1-031 C O1	3.3261	50/50	3.3261

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934052	AD1-031 E O1	5.4267	50/50	5.4267
937531	AD2-214 C	11.3759	50/50	11.3759
937532	AD2-214 E	7.5839	50/50	7.5839
939051	AE1-134 1	4.6968	50/50	4.6968
939061	AE1-134 2	4.6968	50/50	4.6968
943411	AF1-012 C	40.4197	50/50	40.4197
943412	AF1-012 E	26.9465	50/50	26.9465
943803	AF1-048 BAT	5.9649	50/50	5.9649
946151	AF1-280 C O1	66.6341	50/50	66.6341
946152	AF1-280 E O1	30.6419	50/50	30.6419
946161	AF1-281 C O1	1.4591	50/50	1.4591
946162	AF1-281 E O1	8.2685	50/50	8.2685
946321	AF1-296 C O1	9.4072	50/50	9.4072
946322	AF1-296 E O1	44.0420	50/50	44.0420
951381	J504	5.2940	PJM External (MISO)	5.2940
951421	J514	3.3000	PJM External (MISO)	3.3000
951511	J530 C	5.6565	PJM External (MISO)	5.6565
951512	J530 E	22.6260	PJM External (MISO)	22.6260
954702	J844 E	16.1362	PJM External (MISO)	16.1362
954792	J952 E	7.3040	PJM External (MISO)	7.3040
954901	J963	1.3110	PJM External (MISO)	1.3110
955051	J981 C	4.0782	PJM External (MISO)	4.0782
955052	J981 E	22.0638	PJM External (MISO)	22.0638
955971	J1084	34.4835	PJM External (MISO)	34.4835
956411	J1131	18.0800	PJM External (MISO)	18.0800
957471	AF2-041 C	69.2820	50/50	69.2820
957472	AF2-041 E	34.6410	50/50	34.6410
957751	AF2-069 C	0.2291	50/50	0.2291
957752	AF2-069 E	0.7395	50/50	0.7395
957761	AF2-070 C	0.3229	50/50	0.3229
957762	AF2-070 E	1.5675	50/50	1.5675
958911	AF2-182 C	87.5484	50/50	87.5484
958912	AF2-182 E	58.3656	50/50	58.3656
958921	AF2-183 C	15.5642	50/50	15.5642
958922	AF2-183 E	23.3462	50/50	23.3462
959081	AF2-199 C	23.0940	50/50	23.0940
959082	AF2-199 E	11.5470	50/50	11.5470
959091	AF2-200 C O1	46.1880	50/50	46.1880
959092	AF2-200 E O1	23.0940	50/50	23.0940
960551	AF2-346 C	17.3228	50/50	17.3228
960552	AF2-346 E	11.5485	50/50	11.5485
961011	AF2-392 C O1	10.1996	50/50	10.1996
961012	AF2-392 E O1	47.7524	50/50	47.7524
961021	AF2-393 O1	17.3856	50/50	17.3856
961031	AF2-394 O1	11.5904	50/50	11.5904
962012	AG1-044 E	0.1737	50/50	0.1737
962721	AG1-121 C O2	5.4054	50/50	5.4054
962722	AG1-121 E O2	25.2876	50/50	25.2876
964462	AG1-309 NFTW	514.7730	50/50	514.7730
965061	AG1-371	11.5470	50/50	11.5470
965071	AG1-372	7.6980	50/50	7.6980
965081	AG1-373	3.8490	50/50	3.8490

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965671	AG1-435 C O2	3.6661	50/50	3.6661
965672	AG1-435 E O2	17.1639	50/50	17.1639
965931	AG1-462 C O2	49.0140	50/50	49.0140
965932	AG1-462 E O2	32.6760	50/50	32.6760
966521	AG1-521 C O2	16.9064	50/50	16.9064
966522	AG1-521 E O2	4.2266	50/50	4.2266
966821	AG1-553 C O2	69.6432	50/50	69.6432
966822	AG1-553 E O2	17.4108	50/50	17.4108
990901	L-005 E	13.6772	50/50	13.6772
LGEE	LGEE	0.3902	Confirmed LTF	0.3902
CPL	CPL	0.6074	Confirmed LTF	0.6074
G-007A	G-007A	0.7960	Confirmed LTF	0.7960
VFT	VFT	2.1350	Confirmed LTF	2.1350
CBM-W2	CBM-W2	24.4339	Confirmed LTF	24.4339
TVA	TVA	3.0114	Confirmed LTF	3.0114
SIGE	SIGE	0.0646	Confirmed LTF	0.0646
CBM-S2	CBM-S2	11.1604	Confirmed LTF	11.1604
CBM-S1	CBM-S1	0.7117	Confirmed LTF	0.7117
CBM-N	CBM-N	0.3960	Confirmed LTF	0.3960
MEC	MEC	15.7629	Confirmed LTF	15.7629
LAGN	LAGN	5.4600	Confirmed LTF	5.4600
CBM-W1	CBM-W1	27.2409	Confirmed LTF	27.2409

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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
174313635	957470	AF2-041 TAP	CE	270730	ELECT JCT; B	CE	1	COMED_P4_144-45-BT7-8__	breaker	1656.0	146.36	147.96	DC	59.16

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274715	NELSON EC;1C	6.9788	50/50	6.9788
274716	NELSON EC;1S	5.0921	50/50	5.0921
274717	NELSON EC;2C	7.0327	50/50	7.0327
274718	NELSON EC;2S	5.1377	50/50	5.1377
274765	LEE CO EC;6U	2.8928	50/50	2.8928
274859	EASYR;U1 E	17.5815	Adder	20.68
274860	EASYR;U2 E	17.5815	Adder	20.68
290051	GSG-6; E	6.2599	Adder	7.36
293516	O-009 E1	13.5821	Adder	15.98
293517	O-009 E2	6.8987	Adder	8.12
293518	O-009 E3	7.5973	Adder	8.94
293715	O-029 E	14.5208	Adder	17.08
293716	O-029 E	7.9615	Adder	9.37
293717	O-029 E	7.3175	Adder	8.61
294401	BSHIL;1U E	5.9058	Adder	6.95
294410	BSHIL;2U E	5.9058	Adder	6.95
294763	P-046 E	9.3690	Adder	11.02
295109	WESTBROOK E	3.3515	Adder	3.94
295111	SUBLETTE E	3.8316	Adder	4.51
916221	Z1-073 E	3.2514	Adder	3.83
919221	AA1-146	6.5102	50/50	6.5102
919581	AA2-030 C	41.2643	50/50	41.2643
925581	AC1-033 C	0.9673	Adder	1.14
925582	AC1-033 E	6.4757	Adder	7.62
930482	AB1-089 CT	37.3158	Adder	43.9
930483	AB1-089 ST	29.6676	Adder	34.9
934051	AD1-031 C O1	1.9648	Adder	2.31
934052	AD1-031 E O1	3.2057	Adder	3.77
934432	AD1-067 E	0.3305	Adder	0.39
934701	AD1-098 C O1	4.4374	Adder	5.22
934702	AD1-098 E O1	3.2398	Adder	3.81
934971	AD1-129 C	0.5157	Adder	0.61
934972	AD1-129 E	0.3438	Adder	0.4
936791	AD2-102 C	11.9136	Adder	14.02
936792	AD2-102 E	7.9424	Adder	9.34
937001	AD2-134 C	1.6364	Adder	1.93
937002	AD2-134 E	6.7601	Adder	7.95
937311	AD2-172 C	2.4594	Adder	2.89
937312	AD2-172 E	3.3963	Adder	4.0
937531	AD2-214 C	7.1136	Adder	8.37
937532	AD2-214 E	4.7424	Adder	5.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938861	AE1-114 C O1	4.7835	Adder	5.63
938862	AE1-114 E O1	16.3203	Adder	19.2
939051	AE1-134 1	3.2065	50/50	3.2065
939061	AE1-134 2	3.2065	50/50	3.2065
940501	AE2-035 C	2.4594	Adder	2.89
940502	AE2-035 E	3.3963	Adder	4.0
943411	AF1-012 C	37.9249	50/50	37.9249
943412	AF1-012 E	25.2833	50/50	25.2833
943921	AF1-060	1.2109	Adder	1.42
946151	AF1-280 C O1	31.5168	50/50	31.5168
946152	AF1-280 E O1	14.4931	50/50	14.4931
946161	AF1-281 C O1	0.6901	50/50	0.6901
946162	AF1-281 E O1	3.9108	50/50	3.9108
946321	AF1-296 C O1	5.9977	Adder	7.06
946322	AF1-296 E O1	28.0798	Adder	33.04
946501	AF1-314 C	4.3697	Adder	5.14
946502	AF1-314 E	20.4582	Adder	24.07
951381	J504	4.2190	PJM External (MISO)	4.2190
951421	J514	2.5083	PJM External (MISO)	2.5083
953921	J855 C	1.2390	PJM External (MISO)	1.2390
953922	J855 E	6.7030	PJM External (MISO)	6.7030
954091	J873 C	2.4617	PJM External (MISO)	2.4617
954092	J873 E	13.3183	PJM External (MISO)	13.3183
954792	J952 E	4.9480	PJM External (MISO)	4.9480
954901	J963	0.9148	PJM External (MISO)	0.9148
955051	J981 C	2.7097	PJM External (MISO)	2.7097
955052	J981 E	14.6603	PJM External (MISO)	14.6603
955221	J1000	4.1695	PJM External (MISO)	4.1695
955971	J1084	22.7715	PJM External (MISO)	22.7715
956411	J1131	11.9140	PJM External (MISO)	11.9140
957471	AF2-041 C	99.1656	50/50	99.1656
957472	AF2-041 E	49.5828	50/50	49.5828
958911	AF2-182 C	41.4090	50/50	41.4090
958912	AF2-182 E	27.6060	50/50	27.6060
958921	AF2-183 C	7.3616	50/50	7.3616
958922	AF2-183 E	11.0424	50/50	11.0424
959081	AF2-199 C	33.0552	50/50	33.0552
959082	AF2-199 E	16.5276	50/50	16.5276
959091	AF2-200 C O1	66.1104	50/50	66.1104
959092	AF2-200 E O1	33.0552	50/50	33.0552
959101	AF2-201 C O1	6.0196	Adder	7.08
959102	AF2-201 E O1	17.2859	Adder	20.34
960551	AF2-346 C	16.2535	50/50	16.2535
960552	AF2-346 E	10.8357	50/50	10.8357
961011	AF2-392 C O1	7.7447	50/50	7.7447
961012	AF2-392 E O1	36.2593	50/50	36.2593
961021	AF2-393 O1	13.2012	50/50	13.2012
961031	AF2-394 O1	8.8008	50/50	8.8008
962012	AG1-044 E	0.1252	50/50	0.1252
962791	AG1-128 C O2	1.9618	Adder	4.35
962792	AG1-128 E O2	9.1805	Adder	20.38
963681	AG1-220 C O2	3.7597	Adder	8.35

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963682	AG1-220 E O2	2.5065	Adder	5.56
964461	AG1-309 FTIR	291.4731	Merchant Transmission	291.4731
965061	AG1-371	16.5276	50/50	16.5276
965071	AG1-372	11.0184	50/50	11.0184
965081	AG1-373	5.5092	50/50	5.5092
965551	AG1-423 C O2	7.7409	Adder	17.18
965552	AG1-423 E O2	5.1606	Adder	11.46
965661	AG1-434 C O2	1.3331	Adder	2.96
965662	AG1-434 E O2	6.2416	Adder	13.85
965931	AG1-462 C O2	15.9901	Adder	35.49
965932	AG1-462 E O2	10.6601	Adder	23.66
966521	AG1-521 C O2	6.9074	Adder	15.33
966522	AG1-521 E O2	1.7269	Adder	3.83
966821	AG1-553 C O2	22.8314	Adder	50.68
966822	AG1-553 E O2	5.7078	Adder	12.67
WEC	WEC	0.9267	Confirmed LTF	0.9267
CPL	CPL	0.0833	Confirmed LTF	0.0833
CBM-W2	CBM-W2	17.1405	Confirmed LTF	17.1405
NY	NY	0.2500	Confirmed LTF	0.2500
TVA	TVA	1.9110	Confirmed LTF	1.9110
O-066	O-066	2.9074	Confirmed LTF	2.9074
SIGE	SIGE	0.0590	Confirmed LTF	0.0590
CBM-S2	CBM-S2	3.1216	Confirmed LTF	3.1216
CBM-S1	CBM-S1	0.4131	Confirmed LTF	0.4131
G-007	G-007	0.4526	Confirmed LTF	0.4526
MEC	MEC	14.9859	Confirmed LTF	14.9859
BLUEG	BLUEG	0.3819	Confirmed LTF	0.3819
TRIMBLE	TRIMBLE	0.1402	Confirmed LTF	0.1402
LAGN	LAGN	4.2157	Confirmed LTF	4.2157
CBM-W1	CBM-W1	59.5149	Confirmed LTF	59.5149

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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
175737833	965550	AG1-423 TAP	CE	270916	WAYNE ; B	CE	1	COMED_P1-2_345-L97104__-R	single	2058.0	130.77	131.22	DC	20.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	1.7004	Adder	2.0
274656	BYRON ;1U	55.9973	80/20	55.9973
274657	BYRON ;2U	54.6314	80/20	54.6314
274715	NELSON EC;1C	3.8228	80/20	3.8228
274717	NELSON EC;2C	3.8523	80/20	3.8523
274760	LEE CO EC;1U	2.7770	80/20	2.7770
274761	LEE CO EC;2U	2.7770	80/20	2.7770
274762	LEE CO EC;3U	2.7770	80/20	2.7770
274763	LEE CO EC;4U	2.7508	80/20	2.7508
274764	LEE CO EC;5U	2.7835	80/20	2.7835
274765	LEE CO EC;6U	2.7835	80/20	2.7835
274766	LEE CO EC;7U	2.7443	80/20	2.7443
274767	LEE CO EC;8U	2.7443	80/20	2.7443
274822	ROCKFORD ;11	4.2327	80/20	4.2327
274823	ROCKFORD ;21	4.3430	80/20	4.3430
274824	ROCKFORD ;12	4.1958	80/20	4.1958
274856	ECOGROVE ;U1	0.6217	80/20	0.6217
274857	BIG SKY ;U1	0.4972	80/20	0.4972
274858	BIG SKY ;U2	0.4972	80/20	0.4972
276162	X1-087	0.2945	80/20	0.2945
276590	R-018	0.2263	80/20	0.2263
919581	AA2-030 C	19.2128	Adder	22.6
924472	AB2-096 CT1	41.1305	80/20	41.1305
924473	AB2-096 CT2	41.1305	80/20	41.1305
924474	AB2-096 CT3	41.1305	80/20	41.1305
926431	AC1-114	0.7053	80/20	0.7053
927511	AC1-113 1	0.3527	80/20	0.3527
927521	AC1-113 2	0.3527	80/20	0.3527
930482	AB1-089 CT	124.0736	80/20	124.0736
930483	AB1-089 ST	98.6434	80/20	98.6434
932881	AC2-115 1	0.7054	80/20	0.7054
932891	AC2-115 2	0.7054	80/20	0.7054
932921	AC2-116	0.2469	80/20	0.2469
933911	AD1-013 C	1.1901	Adder	1.4
933931	AD1-016 C	0.5645	Adder	0.66
934701	AD1-098 C O1	4.6172	Adder	5.43
934971	AD1-129 C	1.2485	80/20	1.2485
936791	AD2-102 C	28.6296	80/20	28.6296
937001	AD2-134 C	1.7772	Adder	2.09
937311	AD2-172 C	4.2653	80/20	4.2653
937531	AD2-214 C	4.2878	Adder	5.04

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938861	AE1-114 C O1	6.0251	80/20	6.0251
939051	AE1-134 1	1.4930	Adder	1.76
939061	AE1-134 2	1.4930	Adder	1.76
940501	AE2-035 C	4.2653	80/20	4.2653
941131	AE2-107 C	3.2984	Adder	3.88
942991	AE2-321 C	4.7377	Adder	5.57
943411	AF1-012 C	10.4190	Adder	12.26
943801	AF1-048 C	2.2147	Adder	2.61
943921	AF1-060	2.1002	80/20	2.1002
946151	AF1-280 C O1	25.7300	80/20	25.7300
946161	AF1-281 C O1	0.5634	80/20	0.5634
946321	AF1-296 C O1	3.6719	Adder	4.32
946501	AF1-314 C	7.5784	80/20	7.5784
946661	AF1-330 C	1.1212	Adder	1.32
946671	AF1-331	1.5456	Adder	1.82
952431	J760	5.1261	PJM External (MISO)	5.1261
953681	J818	14.1088	PJM External (MISO)	14.1088
953901	J850	23.5925	PJM External (MISO)	23.5925
953921	J855 C	1.3605	PJM External (MISO)	1.3605
954001	J864	4.4957	PJM External (MISO)	4.4957
954061	J870	17.9560	PJM External (MISO)	17.9560
954071	J871	8.9780	PJM External (MISO)	8.9780
955221	J1000	4.0580	PJM External (MISO)	4.0580
955251	J1003	3.4320	PJM External (MISO)	3.4320
955971	J1084	12.2415	PJM External (MISO)	12.2415
956581	J1154	7.1055	PJM External (MISO)	7.1055
956901	J1188	5.7410	PJM External (MISO)	5.7410
958911	AF2-182 C	33.8058	80/20	33.8058
958921	AF2-183 C	6.0099	80/20	6.0099
959101	AF2-201 C O1	10.4399	80/20	10.4399
960551	AF2-346 C	4.4653	Adder	5.25
960581	AF2-349 C	46.9764	80/20	46.9764
960721	AF2-363 C O1	5.9066	Adder	6.95
960751	AF2-366 C	3.6696	Adder	4.32
961011	AF2-392 C O1	4.1831	Adder	4.92
961021	AF2-393 O1	7.1303	Adder	8.39
961031	AF2-394 O1	4.7535	Adder	5.59
962781	AG1-127 C O2	2.1539	Adder	4.78
962791	AG1-128 C O2	2.1306	Adder	4.73
963681	AG1-220 C O2	17.2800	80/20	17.2800
964461	AG1-309 FTIR	617.7243	80/20	617.7243
965551	AG1-423 C O2	67.5792	80/20	67.5792
965661	AG1-434 C O2	1.4478	Adder	3.21
965931	AG1-462 C O2	9.3716	Adder	20.8
966521	AG1-521 C O2	11.6576	80/20	11.6576
966821	AG1-553 C O2	13.4512	Adder	29.86
WEC	WEC	1.1110	Confirmed LTF	1.1110
CBM-W2	CBM-W2	10.2861	Confirmed LTF	10.2861
NY	NY	0.3097	Confirmed LTF	0.3097
TVA	TVA	1.0668	Confirmed LTF	1.0668
SIGE	SIGE	0.0401	Confirmed LTF	0.0401
CBM-S1	CBM-S1	0.2113	Confirmed LTF	0.2113

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
HAMLET	HAMLET	0.0497	Confirmed LTF	0.0497
MEC	MEC	10.8926	Confirmed LTF	10.8926
GIBSON	GIBSON	0.1343	Confirmed LTF	0.1343
BLUEG	BLUEG	0.7048	Confirmed LTF	0.7048
TRIMBLE	TRIMBLE	0.2387	Confirmed LTF	0.2387
LAGN	LAGN	2.7318	Confirmed LTF	2.7318
CATAWBA	CATAWBA	0.0101	Confirmed LTF	0.0101
CBM-W1	CBM-W1	55.7856	Confirmed LTF	55.7856

13.6 Contingency Descriptions - Secondary POI

Contingency Name	Contingency Definition
COMED_P2-2_120_LO-345R__2	CONTINGENCY 'COMED_P2-2_120_LO-345R__2' / CONTINGENCY # 130 TRIP BRANCH FROM BUS 270813 TO BUS 270753 CKT 1 / LOMBARD ; R 345 ESS W407M;OT 345 TRIP BRANCH FROM BUS 270813 TO BUS 270781 CKT 1 / LOMBARD ; R 345 ITASCA ; R 345 TRIP BRANCH FROM BUS 270813 TO BUS 270809 CKT 1 / LOMBARD ; R 345 LISLE ; R 345 DISCONNECT BUS 275198 / LOMBARD ;2M 138 END
COMED_P4_111-45-L16704T	CONTINGENCY 'COMED_P4_111-45-L16704T' / 1647 OPEN BRANCH FROM BUS 270730 TO BUS 270846 CKT 1 / 270730 ELECT JCT; B 345 270846 PLANO ; B 345 1 OPEN BRANCH FROM BUS 272250 TO BUS 272278 CKT 2 / 272250 PLANO ; B 138 272278 PLANO;1I 138 2 OPEN THREEWINDING AT BUS 270846 TO BUS 272278 TO BUS 275354 CKT 1/ OPEN THREEWINDING AT BUS 272278 TO BUS 270846 TO BUS 275354 CKT 1/ OPEN THREEWINDING AT BUS 275354 TO BUS 270846 TO BUS 272278 CKT 1/ OPEN BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / 270730 ELECT JCT; B 345 270916 WAYNE ; B 345 1 OPEN BRANCH FROM BUS 270730 TO BUS 270928 CKT 1 / 270730 ELECT JCT; B 345 270928 WOLFS ; B 345 1 OPEN THREEWINDING AT BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1/ OPEN THREEWINDING AT BUS 272794 TO BUS 270928 TO BUS 275334 CKT 1/ OPEN THREEWINDING AT BUS 275334 TO BUS 270928 TO BUS 272794 CKT 1/ OPEN BRANCH FROM BUS 270730 TO BUS 275239 CKT 1 / 270730 ELECT JCT; B 345 275239 ELECT JCT;2M 138 1 OPEN BRANCH FROM BUS 275239 TO BUS 271390 CKT 1 / 275239 ELECT JCT;2M 138 271390 ELECT JCT; B 138 1 OPEN BRANCH FROM BUS 275339 TO BUS 275239 CKT 1 / 275339 ELECT JCT;2C 34.5 275239 ELECT JCT;2M 138 1 END
COMED_P4_144-45-BT7-8__	CONTINGENCY 'COMED_P4_144-45-BT7-8__' / 1570 OPEN BRANCH FROM BUS 270900 TO BUS 270916 CKT 1 / 270900 TOLLWAY ; B 345 270916 WAYNE ; B 345 1 OPEN BRANCH FROM BUS 270916 TO BUS 275228 CKT 1 / 270916 WAYNE ; B 345 275228 WAYNE ;1M 138 1 OPEN BRANCH FROM BUS 275228 TO BUS 272740 CKT 1 / 275228 WAYNE ;1M 138 272740 WAYNE ; B 138 1 OPEN BRANCH FROM BUS 275328 TO BUS 275228 CKT 1 / 275328 WAYNE ;1C 34.5 275228 WAYNE ;1M 138 1 OPEN BRANCH FROM BUS 270916 TO BUS 965550 CKT 1 / 270916 WAYNE ; B 345 965550 AG1-423 TAP 345 1 END

Contingency Name	Contingency Definition
COMED_P4_016-45-BT6-11_	CONTINGENCY 'COMED_P4_016-45-BT6-11_' / 3047 OPEN BRANCH FROM BUS 270830 TO BUS 270914 CKT 1 / 270830 NBROOK159; B 345 270914 WAUKEGAN ; B 345 1 OPEN BRANCH FROM BUS 270914 TO BUS 270915 CKT 1 / 270914 WAUKEGAN ; B 345 270915 WAUKEGAN ; R 345 1 OPEN BRANCH FROM BUS 270915 TO BUS 270942 CKT 1 / 270915 WAUKEGAN ; R 345 270942 ZION STA ;OB 345 1 END
COMED_P7-1_345-L13821_R-R+_345-L18502AB-N	CONTINGENCY 'COMED_P7-1_345-L13821_R-R+_345-L18502AB-N' / CONTINGENCY # 127 TRIP BRANCH FROM BUS 270883 TO BUS 270807 CKT 1 / SILVER LK; R 345 LIBERTYVI; R 345 TRIP BRANCH FROM BUS 270900 TO BUS 270806 CKT 1 / TOLLWAY ; B 345 LIBERTYVI; B 345 END
COMED_P1-2_345-L0621__B-R	CONTINGENCY 'COMED_P1-2_345-L0621__B-R' / 1841 OPEN BRANCH FROM BUS 270678 TO BUS 270694 CKT 1 / 270678 BYRON ; B 345 270694 CHERRY VA; B 345 1 END
COMED_P4_144-45-BT6-9__	CONTINGENCY 'COMED_P4_144-45-BT6-9__' / 2258 OPEN BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / 270730 ELECT JCT; B 345 270916 WAYNE ; B 345 1 OPEN BRANCH FROM BUS 270916 TO BUS 270917 CKT 1 / 270916 WAYNE ; B 345 270917 WAYNE ; R 345 1 OPEN BRANCH FROM BUS 270883 TO BUS 270917 CKT 1 / 270883 SILVER LK; R 345 270917 WAYNE ; R 345 1 END
COMED_P7-1_345-L0301__B-S+_345-L0303__R-S-B	CONTINGENCY 'COMED_P7-1_345-L0301__B-S+_345-L0303__R-S-B' / CONTINGENCY # 4 TRIP BRANCH FROM BUS 270854 TO BUS 270790 CKT 1 / POWERTON ; B 345 KATYDID ; B 345 TRIP BRANCH FROM BUS 936290 TO BUS 270827 CKT 1 / AD2-038 TAP 345 NEVADA ; 345 REMOVE SWSHUNT FROM BUS 270827 / NEVADA ; 345 END
COMED_P2-2_156_CV-345R_10	CONTINGENCY 'COMED_P2-2_156_CV-345R_10' / CONTINGENCY # 166 TRIP BRANCH FROM BUS 270695 TO BUS 270694 CKT 1 / CHERR COMED_P2-2_VA; R 345 CHERR COMED_P2-2_VA; B 345 TRIP BRANCH FROM BUS 275167 TO BUS 270695 CKT 1 / CHERR COMED_P2-2_VA;3M 138 CHERR COMED_P2-2_VA; R 345 TRIP BRANCH FROM BUS 275167 TO BUS 271193 CKT 1 / CHERR COMED_P2-2_VA;3M 138 CHERR COMED_P2-2_VA; R 138 TRIP BRANCH FROM BUS 275167 TO BUS 275267 CKT 1 / CHERR COMED_P2-2_VA;3M 138 CHERR COMED_P2-2_VA;3C 34.5 END

Contingency Name	Contingency Definition
COMED_P4_156-45-BT10-11	CONTINGENCY 'COMED_P4_156-45-BT10-11' / 2097 OPEN BRANCH FROM BUS 270679 TO BUS 270695 CKT 1 / 270679 BYRON ; R 345 270695 CHERRY VA; R 345 1 OPEN BRANCH FROM BUS 270694 TO BUS 270695 CKT 1 / 270694 CHERRY VA; B 345 270695 CHERRY VA; R 345 1 OPEN BRANCH FROM BUS 270695 TO BUS 275167 CKT 1 / 270695 CHERRY VA; R 345 275167 CHERRY VA;3M 138 1 OPEN BRANCH FROM BUS 275167 TO BUS 271193 CKT 1 / 275167 CHERRY VA;3M 138 271193 CHERRY VA; R 138 1 OPEN BRANCH FROM BUS 275267 TO BUS 275167 CKT 1 / 275267 CHERRY VA;3C 34.5 275167 CHERRY VA;3M 138 1 END
COMED_P7-1_345-L15616__ - R_+ _138-L15627_R-R-B	CONTINGENCY 'COMED_P7-1_345-L15616__ -R_+ _138-L15627_R-R-B' / CONTINGENCY # 140 TRIP BRANCH FROM BUS 270694 TO BUS 924470 CKT 1 / CHERRY VA; B 345 GARDEN PR 345 TRIP BRANCH FROM BUS 963680 TO BUS 271581 CKT 1 / AG1-220 TAP 138 ESS B200 ; R 138 TRIP BRANCH FROM BUS 271581 TO BUS 271558 CKT 1 / ESS B200 ; R 138 GLIDDEN ; B 138 END
COMED_P1-2_345-L11124_B-N	CONTINGENCY 'COMED_P1-2_345-L11124_B-N' / 2498 OPEN BRANCH FROM BUS 270730 TO BUS 270812 CKT 1 / 270730 ELECT JCT; B 345 270812 LOMBARD ; B 345 1 END
COMED_P4_111-45-L14321T	CONTINGENCY 'COMED_P4_111-45-L14321T' / 2454 OPEN BRANCH FROM BUS 270730 TO BUS 270928 CKT 1 / 270730 ELECT JCT; B 345 270928 WOLFS ; B 345 1 OPEN THREEWINDING AT BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1/ OPEN THREEWINDING AT BUS 272794 TO BUS 270928 TO BUS 275334 CKT 1/ OPEN THREEWINDING AT BUS 275334 TO BUS 270928 TO BUS 272794 CKT 1/ OPEN BRANCH FROM BUS 270730 TO BUS 270846 CKT 1 / 270730 ELECT JCT; B 345 270846 PLANO ; B 345 1 OPEN BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / 270730 ELECT JCT; B 345 270916 WAYNE ; B 345 1 OPEN BRANCH FROM BUS 270730 TO BUS 275239 CKT 1 / 270730 ELECT JCT; B 345 275239 ELECT JCT;2M 138 1 OPEN BRANCH FROM BUS 275239 TO BUS 271390 CKT 1 / 275239 ELECT JCT;2M 138 271390 ELECT JCT; B 138 1 OPEN BRANCH FROM BUS 275339 TO BUS 275239 CKT 1 / 275339 ELECT JCT;2C 34.5 275239 ELECT JCT;2M 138 1 END
COMED_P1-2_345-L15502_B-R-D	CONTINGENCY 'COMED_P1-2_345-L15502_B-R-D' / 1387 OPEN BRANCH FROM BUS 270730 TO BUS 957470 CKT 1 / 270730 ELECT JCT; B 345 957470 AF2-041 TAP 345 1 END

Contingency Name	Contingency Definition
COMED_P1-2_345-L13821_R-R	CONTINGENCY 'COMED_P1-2_345-L13821_R-R' / 2310 OPEN BRANCH FROM BUS 270807 TO BUS 270883 CKT 1 / 270807 LIBERTYVI; R 345 270883 SILVER LK; R 345 1 END
COMED_P1-2_345-L2221__R-N	CONTINGENCY 'COMED_P1-2_345-L2221__R-N' / 2685 OPEN BRANCH FROM BUS 270941 TO BUS 699432 CKT 1 / 270941 ZION STA ; R 345 699432 PLS PR1 345 1 END
COMED_P2-2_116_GG-345R__2	CONTINGENCY 'COMED_P2-2_116_GG-345R__2' / CONTINGENCY # 118 DISCONNECT BUS 270769 / GOODINGS ;2R 345 END
COMED_P1-2_345-L0622__R-R	CONTINGENCY 'COMED_P1-2_345-L0622__R-R' / 1989 OPEN BRANCH FROM BUS 270679 TO BUS 270695 CKT 1 / 270679 BYRON ; R 345 270695 CHERRY VA; R 345 1 END
COMED_P2-2_144_WN-345B__7	CONTINGENCY 'COMED_P2-2_144_WN-345B__7' / CONTINGENCY # 147 TRIP BRANCH FROM BUS 270916 TO BUS 270900 CKT 1 / WAYNE ; B 345 TOLLWA COMED_P2-2_ ; B 345 DISCONNECT BUS 275228 / WAYNE ;1M 138 END
COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A	CONTINGENCY 'COMED_P7-1_345-L15502_B-R+_345-L16703_R-S-A' / CONTINGENCY # 136 TRIP BRANCH FROM BUS 957470 TO BUS 270730 CKT 1 / AF2-041 TAP 345 ELECT JCT; B 345 TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 TRIP BRANCH FROM BUS 270847 TO BUS 270733 CKT 1 / PLANO ; R 345 ELECT JCT;3R 345 END

Contingency Name	Contingency Definition
COMED_P4_111-45-L16703_	CONTINGENCY 'COMED_P4_111-45-L16703_' / 3238 OPEN BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / 270846 PLANO ; B 345 270847 PLANO ; R 345 1 OPEN BRANCH FROM BUS 270733 TO BUS 270847 CKT 1 / 270733 ELECT JCT;3R 345 270847 PLANO ; R 345 1 OPEN BRANCH FROM BUS 270717 TO BUS 270731 CKT 1 / 270717 DRESDEN ; R 345 270731 ELECT JCT;4R 345 1 OPEN BRANCH FROM BUS 270731 TO BUS 270733 CKT 1 / 270731 ELECT JCT;4R 345 270733 ELECT JCT;3R 345 1 OPEN BRANCH FROM BUS 270731 TO BUS 274749 CKT 1 / 270731 ELECT JCT;4R 345 274749 AURORA EC;RP 345 1 OPEN BRANCH FROM BUS 270731 TO BUS 275184 CKT 1 / 270731 ELECT JCT;4R 345 275184 ELECT JCT;4M 138 1 OPEN BRANCH FROM BUS 275184 TO BUS 271393 CKT 1 / 275184 ELECT JCT;4M 138 271393 ELECT JCT;4R 138 1 OPEN BRANCH FROM BUS 275284 TO BUS 275184 CKT 1 / 275284 ELECT JCT;4C 34.5 275184 ELECT JCT;4M 138 1 END
COMED_P2-2_111_EJ-345R__3	CONTINGENCY 'COMED_P2-2_111_EJ-345R__3' / CONTINGENCY # 103 DISCONNECT BUS 270733 / ELECT JCT;3R 345 DISCONNECT BUS 275183 / ELECT JCT;3M 138 END
COMED_P2-2_111_EJ-345R__4	CONTINGENCY 'COMED_P2-2_111_EJ-345R__4' / CONTINGENCY # 104 DISCONNECT BUS 270731 / ELECT JCT;4R 345 DISCONNECT BUS 275184 / ELECT JCT;4M 138 END
COMED_P1-2_345-L11126_B-N	CONTINGENCY 'COMED_P1-2_345-L11126_B-N' / 2086 OPEN BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / 270730 ELECT JCT; B 345 270916 WAYNE ; B 345 1 OPEN BRANCH FROM BUS 270916 TO BUS 270917 CKT 1 / 270916 WAYNE ; B 345 270917 WAYNE ; R 345 1 END

Contingency Name	Contingency Definition
COMED_P7-1_138-L11106_B-R+_345-L15502_B-R	CONTINGENCY 'COMED_P7-1_138-L11106_B-R+_345-L15502_B-R' / CONTINGENCY # 58 TRIP BRANCH FROM BUS 271390 TO BUS 271586 CKT 1 / ELECT JCT; B 138 ESS W541 ; B 138 TRIP BRANCH FROM BUS 271560 TO BUS 272728 CKT 1 / GLIDDEN ;BT 138 WATERMAN ; B 138 TRIP BRANCH FROM BUS 271586 TO BUS 272114 CKT 1 / ESS W541 ; B 138 N AURORA ; B 138 TRIP BRANCH FROM BUS 272114 TO BUS 272522 CKT 1 / N AURORA ; B 138 SUGAR GRV; B 138 TRIP BRANCH FROM BUS 272522 TO BUS 962690 CKT 1 / SUGAR GRV; B 138 AG1-118 TAP 138 MOVE 100 PERCENT LOAD FROM BUS 271586 TO BUS 271587 / ESS W541 ; B 138 ESS W541 ; R 138 MOVE 100 PERCENT LOAD FROM BUS 272522 TO BUS 272523 / SUGAR GRV; B 138 SUGAR GRV; R 138 CLOSE LINE FROM BUS 272114 TO BUS 272115 CKT 1 / N AURORA ; B 138 N AURORA ; R 138 TRIP BRANCH FROM BUS 957470 TO BUS 270730 CKT 1 / AF2-041 TAP 345 ELECT JCT; B 345 END
COMED_P2-2_111_EJ-345B__1	CONTINGENCY 'COMED_P2-2_111_EJ-345B__1' / CONTINGENCY # 101 TRIP BRANCH FROM BUS 270730 TO BUS 270812 CKT 1 / ELECT JCT; B 345 LOMBARD ; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 957470 CKT 1 / ELECT JCT; B 345 AF2-041 TAP 345 DISCONNECT BUS 275182 / ELECT JCT;1M 138 END
Base Case	
COMED_P2-2_111_EJ-345B__2	CONTINGENCY 'COMED_P2-2_111_EJ-345B__2' / CONTINGENCY # 102 TRIP BRANCH FROM BUS 270730 TO BUS 270846 CKT 1 / ELECT JCT; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / ELECT JCT; B 345 WAYNE ; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270928 CKT 1 / ELECT JCT; B 345 WOLFS ; B 345 TRIP BRANCH FROM BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1 / WOLFS ; B 345 WOLFS ; B 138 WOLFS ;1C 34.5 DISCONNECT BUS 275239 / ELECT JCT;2M 138 END
COMED_P1-2_345-L18905__B-R-B	CONTINGENCY 'COMED_P1-2_345-L18905__B-R-B' / 1087 OPEN BRANCH FROM BUS 270916 TO BUS 965550 CKT 1 / 270916 WAYNE ; B 345 965550 AG1-423 TAP 345 1 END

Contingency Name	Contingency Definition
COMED_P7-1_345-L13817TR-R+_345-L97104__R	CONTINGENCY 'COMED_P7-1_345-L13817TR-R+_345-L97104__R' / CONTINGENCY # 126 TRIP BRANCH FROM BUS 924470 TO BUS 270883 CKT 1 / GARDEN PR 345 SILVER LK; R 345 TRIP BRANCH FROM BUS 270851 TO BUS 270883 CKT 1 / PL VALLEY; R 345 SILVER LK; R 345 TRIP BRANCH FROM BUS 270883 TO BUS 270807 CKT 1 / SILVER LK; R 345 LIBERTYVI; R 345 TRIP BRANCH FROM BUS 270851 TO BUS 272257 TO BUS 275309 CKT 1 / PL VALLEY; R 345 PL VALLEY; R 138 PL VALLEY;1C 34.5 END
COMED_P7-1_138-L11104_R-R+_345-L16704TB-S	CONTINGENCY 'COMED_P7-1_138-L11104_R-R+_345-L16704TB-S' / CONTINGENCY # 57 TRIP BRANCH FROM BUS 271391 TO BUS 271587 CKT 1 / ELECT JCT;3R 138 ESS W541 ; R 138 TRIP BRANCH FROM BUS 271587 TO BUS 272115 CKT 1 / ESS W541 ; R 138 N AURORA ; R 138 TRIP BRANCH FROM BUS 272115 TO BUS 272523 CKT 1 / N AURORA ; R 138 SUGAR GRV; R 138 MOVE 100 PERCENT LOAD FROM BUS 271587 TO BUS 271586 / ESS W541 ; R 138 ESS W541 ; B 138 MOVE 100 PERCENT LOAD FROM BUS 272523 TO BUS 272522 / SUGAR GRV; R 138 SUGAR GRV; B 138 CLOSE LINE FROM BUS 272114 TO BUS 272115 CKT 1 / N AURORA ; B 138 N AURORA ; R 138 TRIP BRANCH FROM BUS 270846 TO BUS 270730 CKT 1 / PLANO ; B 345 ELECT JCT; B 345 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 2 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 1 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 270846 TO BUS 272278 TO BUS 275354 CKT 1 / PLANO ; B 345 PLANO;1I 138 PLANO;1C 34.5 END

Contingency Name	Contingency Definition
COMED_P4_111-45-L11120_	CONTINGENCY 'COMED_P4_111-45-L11120_' / 1799 OPEN BRANCH FROM BUS 270733 TO BUS 270747 CKT 1 / 270733 ELECT JCT;3R 345 270747 ESS W407K;0T 345 1 OPEN BRANCH FROM BUS 270747 TO BUS 270753 CKT 1 / 270747 ESS W407K;0T 345 270753 ESS W407M;0T 345 1 OPEN BRANCH FROM BUS 270749 TO BUS 270753 CKT 1 / 270749 ESS W407M; R 345 270753 ESS W407M;0T 345 1 OPEN BRANCH FROM BUS 270753 TO BUS 270813 CKT 1 / 270753 ESS W407M;0T 345 270813 LOMBARD ; R 345 1 OPEN BRANCH FROM BUS 270731 TO BUS 270733 CKT 1 / 270731 ELECT JCT;4R 345 270733 ELECT JCT;3R 345 1 OPEN BRANCH FROM BUS 270733 TO BUS 270847 CKT 1 / 270733 ELECT JCT;3R 345 270847 PLANO ; R 345 1 OPEN BRANCH FROM BUS 270733 TO BUS 275183 CKT 1 / 270733 ELECT JCT;3R 345 275183 ELECT JCT;3M 138 1 OPEN BRANCH FROM BUS 275183 TO BUS 271391 CKT 1 / 275183 ELECT JCT;3M 138 271391 ELECT JCT;3R 138 1 OPEN BRANCH FROM BUS 275283 TO BUS 275183 CKT 1 / 275283 ELECT JCT;3C 34.5 275183 ELECT JCT;3M 138 1 MOVE 100.00 PERCENT LOAD FROM BUS 270749 TO BUS 270751 / FROM 270749 ESS W407M; R 345 TO 270751 ESS W407M;9T 345 . LOAD=18.00 END
COMED_P7-1_345-L9806__R-S_+_345-L19601_B-S	CONTINGENCY 'COMED_P7-1_345-L9806__R-S_+_345-L19601_B-S' / CONTINGENCY # 238 TRIP BRANCH FROM BUS 270827 TO BUS 270769 CKT 1 / NEVADA ; 345 GOODINGS ;2R 345 TRIP BRANCH FROM BUS 270790 TO BUS 270770 CKT 1 / KATYDID ; B 345 GOODINGS ;4B 345 END
EXT_P12:345:MEC:CORDOVA:SUB 39	CONTINGENCY 'EXT_P12:345:MEC:CORDOVA:SUB 39' / 1561 OPEN BRANCH FROM BUS 636600 TO BUS 636605 CKT 1 / 636600 SB 39 3 345 636605 MECCORD3 345 1 END
COMED_P4_012-45-BT4-5__	CONTINGENCY 'COMED_P4_012-45-BT4-5__' / 809 OPEN BRANCH FROM BUS 270716 TO BUS 930770 CKT 1 / 270716 DRESDEN ; B 345 930770 AB1-122 TAP2 345 1 OPEN BRANCH FROM BUS 270716 TO BUS 270736 CKT 1 / 270716 DRESDEN ; B 345 270736 ELWOOD ; B 345 1 OPEN BRANCH FROM BUS 270736 TO BUS 270737 CKT 1 / 270736 ELWOOD ; B 345 270737 ELWOOD ; R 345 1 END
COMED_P1-2_345-L97104__R	CONTINGENCY 'COMED_P1-2_345-L97104__R' / 1538 OPEN BRANCH FROM BUS 270883 TO BUS 924470 CKT 1 / 270883 SILVER LK; R 345 924470 GARDEN PR; R 345 1 END

Contingency Name	Contingency Definition
COMED_P1-2_345-L1202__B-S	CONTINGENCY 'COMED_P1-2_345-L1202__B-S' / 1065 OPEN BRANCH FROM BUS 270716 TO BUS 930770 CKT 1 / 270716 DRESDEN ; B 345 930770 AB1-122 TAP2 345 1 END
COMED_P2-2_900_EL-345B_10	CONTINGENCY 'COMED_P2-2_900_EL-345B_10' / CONTINGENCY # 200 DISCONNECT BUS 274758 / ELWOOD EC;2P 345 END
COMED_P1-2_345-L11119_R-N	CONTINGENCY 'COMED_P1-2_345-L11119_R-N' / 2697 OPEN BRANCH FROM BUS 270731 TO BUS 274749 CKT 1 / 270731 ELECT JCT;4R 345 274749 AURORA EC;RP 345 1 END

14 Affected Systems

14.1 MISO

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

Attachment 1: One Line Diagram