



**Generation Interconnection
Feasibility Study Report
for
Queue Project AF2-003
“POWERTON-MOLE CREEK”**

July 2020

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.

The conduct of light load analysis as required under the PJM planning process is not performed during the Generation Interconnection Feasibility Study phase of the PJM study process. Additional reinforcement

requirements for this Interconnection Request may be defined during the conduct of the light load analysis which shall be performed following execution of the System Impact Study agreement.

3 General

The Interconnection Customer (IC) has proposed a wind generating facility located in Woodford County, Illinois. The installed facilities will have a total capability of 303.0 MW with 53.32 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is December 01, 2023. This study does not imply a TO commitment to this in-service date.

Queue Number	AF2-003
Project Name	POWERTON-MOLE CREEK
State	Illinois
County	Woodford
Transmission Owner	ComEd
MFO	303.0
MWE	303.0
MWC	53.32
Fuel	Wind
Basecase Study Year	2023

A new service customer with a generating facility that could be commercially operable prior to June 1st of the basecase study year is required to request an interim deliverability analysis from PJM.

4 Point of Interconnection

Queue Position AF2-003, a 303.0 MW wind project, proposes to interconnect with the ComEd transmission system by tying into the Powerton-Katydid Road 345kV line 0301, approximately 51 miles from Powerton Station 3.

5 Cost Summary

The AF2-003 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs (ComEd build)	\$26,000,000
Total System Network Upgrade Costs	\$81,902,440
Total Costs	\$107,902,440

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

6 Transmission Owner Scope of Work

Attachment Facilities

The AF2-003 generator lead would interconnect to a new 345kV Interconnection Substation (see details in Direct Connection section below). The required Attachment Facilities are one 345kV line MOD, a dead-end structure and revenue metering.

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

Direct Connection Network Upgrades

To accommodate interconnection of AF2-003, a new 345kV Interconnection Substation would need to be built close to the Powerton-Katydid Road 345kV line 0301, approximately 51 miles from Powerton Station 3.

The scope of work includes the installation of three 345kV circuit breakers in a “breaker-and-a-half” bus configuration and cutting in the Interconnection Substation to Powerton-Katydid Road 345kV line 0301.

The Interconnection Customer (“IC”) is responsible for constructing all of the facilities on the IC side of the Point of Interconnection (“POI”). It is assumed for the purposes of this report that the IC will obtain the site for the Interconnection Substation and right-of-way between the Interconnection Substation and the 345kV transmission line.

In the event that the IC exercises the option to build the Interconnecting Substation, the IC will be required to construct all interconnection facilities that will be turned over to ComEd in accordance with ComEd published standards and the PJM Tariff.

ComEd would design, engineer and construct the tie in of the Interconnection Substation to the Powerton-Katydid Road 345kV line 0301.

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

For Option to Build Direct Connection cost estimates:

Scope of Work	Cost Estimate
Installation of a new 345kV substation as described above	N/A
Transmission line tie in work (foundations, structures, conductors)	\$ 3,000,000
ComEd oversight and testing	\$ 1,500,000
Total Cost Estimate (see notes below on cost estimate)	\$ 4,500,000

For ComEd building the Interconnecting Substation cost estimates:

Scope of Work	Cost Estimate
Installation of a new 345kV substation as described above	\$ 20,000,000
Transmission line tie in work (foundations, structures, conductors)	\$ 3,000,000
Total Cost Estimate (see notes below on cost estimate)	\$ 23,000,000

ComEd would take approximately 24-months to construct the substation and transmission line work after the ISA / ICSA are signed.

Non-Direct Connection Network Upgrades

The integration of the new 345kV Interconnection Substation would require relay, communications and SCADA upgrades at the Nelson TSS 155 and Electric Junction TSS 111. The ComEd cost is given below:

Scope of Work	Cost Estimate
Relay/communications/SCADA upgrades at Powerton Station 3	\$ 1,000,000
Relay/communications/SCADA upgrades at Katydid Road TSS 196	\$ 1,000,000
Total Cost Estimate (see notes below on cost estimate)	\$ 2,000,000

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 IC.
- 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 IC and the actual costs of ComEd's work may differ significantly from these estimates. IC 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 IC is responsible for all engineering, procurement, testing and construction of all equipment on the IC'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 of acquiring property and associated legal costs will be investigated during Facilities Study for this project.

7 Schedule

See Sections 6 and 11.5.

8 Transmission Owner Analysis

See Section 6.

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 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>

To the extent that these Applicable Technical Requirements and Standards may conflict with the terms and conditions of the Tariff, the Tariff shall control.

11 Summer Peak - Load Flow Analysis - Primary POI

The Queue Project AF2-003 was evaluated as a 303.0 MW (Capacity 53.32 MW) injection tapping the Powerton to Katydid 345 kV line in the ComEd area. Project AF2-003 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-003 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

11.1 Generation Deliverability

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

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 CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
96022633	255112	17STJOHN	345.0	NIPS	270886	ST JOHN ; T	345.0	CE	1	AEP_P4_#2978_05DUMONT_FSA	breaker	1091.0	121.39	121.49	DC	29.54
96022634	255112	17STJOHN	345.0	NIPS	270886	ST JOHN ; T	345.0	CE	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	1091.0	121.39	121.49	DC	29.54
96022635	255112	17STJOHN	345.0	NIPS	270886	ST JOHN ; T	345.0	CE	1	COMED_P4_023-65-BT2-3__	breaker	1091.0	121.34	121.44	DC	29.72
96022636	255112	17STJOHN	345.0	NIPS	270886	ST JOHN ; T	345.0	CE	1	COMED_P4_112-65-BT4-5__	breaker	1091.0	121.18	121.28	DC	29.72
104781690	255112	17STJOHN	345.0	NIPS	270886	ST JOHN ; T	345.0	CE	1	COMED_P4_112-65-BT3-4__	breaker	1091.0	121.18	121.28	DC	29.72
96022535	270855	POWER TON ; R	345.0	CE	349662	7TAZEWELL	345.0	AMIL	1	COMED_P4_012-45-BT4-5__	breaker	1489.0	123.35	131.48	DC	121.03
96023917	270855	POWER TON ; R	345.0	CE	349662	7TAZEWELL	345.0	AMIL	1	COMED_P7_345-L19601_B-S_ + 345-L9801_R-S_FSA	tower	1489.0	136.1	151.09	DC	223.15
96023918	270855	POWER TON ; R	345.0	CE	349662	7TAZEWELL	345.0	AMIL	1	COMED_P7_345-L0301_B-S_ + 345-L9801_R-S_FSA-B	tower	1489.0	121.49	136.48	DC	223.22
96022638	270886	ST JOHN ; T	345.0	CE	255104	17GREEN_A CRE	345.0	NIPS	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	1091.0	121.38	121.48	DC	29.54
96022639	270886	ST JOHN ; T	345.0	CE	255104	17GREEN_A CRE	345.0	NIPS	1	AEP_P4_#2978_05DUMONT_FSA	breaker	1091.0	121.39	121.49	DC	29.54
96022640	270886	ST JOHN ; T	345.0	CE	255104	17GREEN_A CRE	345.0	NIPS	1	COMED_P4_023-65-BT2-3__	breaker	1091.0	121.33	121.43	DC	29.72
96022641	270886	ST JOHN ; T	345.0	CE	255104	17GREEN_A CRE	345.0	NIPS	1	COMED_P4_112-65-BT4-5__	breaker	1091.0	121.17	121.27	DC	29.72
96022642	270886	ST JOHN ; T	345.0	CE	255104	17GREEN_A CRE	345.0	NIPS	1	COMED_P4_023-65-BT4-5__	breaker	1091.0	121.17	121.27	DC	29.71
96022632	270926	WILTON ; B	345.0	CE	275232	WILTON ; 3M	345.0	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	121.49	121.58	DC	45.09
96022620	270927	WILTON ; R	345.0	CE	275233	WILTON ; 4M	345.0	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	124.03	124.12	DC	46.05

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADING %	POST PROJE CT LOADING %	AC DC	MW IMPACT
96022510	274750	CRETE EC;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	AEP_P4_#2978_05DUMONT_FSA	breaker	1399.0	154.62	154.81	DC	42.43
96022511	274750	CRETE EC;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	1399.0	154.61	154.81	DC	42.43
96022512	274750	CRETE EC;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	COMED_P4_112-65-BT4-5__	breaker	1399.0	154.52	154.71	DC	42.6
96022513	274750	CRETE EC;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	COMED_P4_112-65-BT3-4__	breaker	1399.0	154.51	154.7	DC	42.6
96022631	275232	WILTON ;3M	345.0	CE	270644	WILTON ;	765.0	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	121.49	121.58	DC	45.09
96022619	275233	WILTON ;4M	345.0	CE	270644	WILTON ;	765.0	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	124.03	124.12	DC	46.05
96023932	930740	AB1-122 TAP	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P7_345-L19601_B-S + 345-L9801_R-S_FSA	tower	1195.0	127.57	132.99	DC	64.72
96023933	930740	AB1-122 TAP	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P7_345-L0301_B-S + 345-L9801_R-S_FSA-B	tower	1195.0	122.18	127.6	DC	64.74
95164513	956820	J1180 TAP	345.0	AMI L	247712	05SULLIVAN	345.0	AEP	1	AEP_P4_#3128_05EUGENE_345_A2	breaker	1466.0	149.81	149.82	DC	20.12
95164514	956820	J1180 TAP	345.0	AMI L	247712	05SULLIVAN	345.0	AEP	1	COMED_P4_080-45-BT4-5__	breaker	1466.0	136.25	136.37	DC	16.14
95164515	956820	J1180 TAP	345.0	AMI L	247712	05SULLIVAN	345.0	AEP	1	COMED_P4_080-45-BT7-8__	breaker	1466.0	135.28	135.41	DC	15.8
95164591	960680	AF2-359 TAP	345.0	CE	243229	05OLIVE	345.0	AEP	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	971.0	106.21	106.83	DC	28.85
95164592	960680	AF2-359 TAP	345.0	CE	243229	05OLIVE	345.0	AEP	1	AEP_P4_#2978_05DUMONT_FSA	breaker	971.0	106.21	106.83	DC	28.85
95164593	960680	AF2-359 TAP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P4_023-65-BT2-3__	breaker	971.0	105.86	106.49	DC	29.07
95164594	960680	AF2-359 TAP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P4_112-65-BT4-5__	breaker	971.0	105.78	106.4	DC	29.07
95164595	960680	AF2-359 TAP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P4_112-65-BT3-4__	breaker	971.0	105.78	106.4	DC	29.07

11.4 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADING %	POST PROJE CT LOADING %	AC DC	MW IMPACT
96023147	255112	17STJOHN	345.0	NIPS	270886	ST JOHN ; T	345.0	CE	1	COMED_P1-2_695_B2	operation	1091.0	121.16	121.26	DC	29.72
96023300	270717	DRESDEN ; R	345.0	CE	270697	COLLINS ; R	345.0	CE	1	COMED_P1-2_345-L1223-TR-S	operation	1528.0	100.19	100.69	DC	16.32

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
96023191	270770	GOODINGS ;4B	345.0	CE	270766	GOODINGS ;3B	345.0	CE	1	COMED_P1-2_345-L11613AB-S	operation	1802.0	108.98	111.81	DC	86.99
96023056	270855	POWERTON ; R	345.0	CE	349662	7TAZEWELL	345.0	AMIL	1	COMED_P1-2_345-L1202__B-S-A	operation	1489.0	123.1	131.19	DC	120.5
96023144	270886	ST JOHN ; T	345.0	CE	255104	17GREEN_AC RE	345.0	NIPS	1	COMED_P1-2_695_B2	operation	1091.0	121.15	121.25	DC	29.72
96023005	274750	CRETE EC ;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	COMED_P1-2_695_B2	operation	1399.0	154.44	154.63	DC	42.6
96023006	274750	CRETE EC ;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	Base Case	operation	1091.0	152.99	153.13	DC	29.99
96023262	274804	UNIV PK N;RP	345.0	CE	960680	AF2-359 TAP	345.0	CE	1	COMED_P1-2_695_B2	operation	971.0	105.75	105.85	DC	29.07
96023138	930740	AB1-122 TAP	345.0	CE	270717	DRESDEN ; R	345.0	CE	1	COMED_P1-2_345-L1202__B-S-A	operation	1195.0	117.36	119.96	DC	31.0
96023132	930750	AB1-122 TAP	345.0	CE	270716	DRESDEN ; B	345.0	CE	1	COMED_P1-2_345-L0304__R-S	operation	1479.0	113.08	117.7	DC	68.37
96023133	930750	AB1-122 TAP	345.0	CE	270716	DRESDEN ; B	345.0	CE	1	Base Case	operation	1201.0	112.32	113.43	DC	29.51
95164792	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	AEP_P1-2_#286	operation	1466.0	138.12	138.13	DC	20.68
95164796	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	Base Case	operation	1334.0	134.59	134.6	DC	16.81
95164878	960680	AF2-359 TAP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P1-2_695_B2	operation	971.0	105.74	106.37	DC	29.07

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
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ID	Idx	Facility	Upgrade Description	Cost
95164513,95164515,95164514	10	J1180 TAP 345.0 kV - 05SULLIVAN 345.0 kV Ckt 1	AEP: AEPI0010a (278) : Reconductor/rebuild 0.82 miles of ACAR ~ 1024.5 ~ 30/7 ~ RAIL1 conductor section 5 Project Type : FAC Cost : \$1,640,000 Time Estimate : 24 - 36 Months AEPI0010b (279) : Reconductor/rebuild 1 miles of ACAR ~ 1024.5 ~ 30/7 ~ RAIL1 conductor section 6 Project Type : FAC Cost : \$2,000,000 Time Estimate : 24 - 36 Months AEPI0010c (280) : Replace two Sullivan 3000A Wave trap Project Type : FAC Cost : \$400,000 Time Estimate : 12- 18 Months AMIL: NonPJM Area: The external (i.e. Non-PJM) Transmission Owner, AMIL, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$4,040,000
96023932,96023933	9	AB1-122 TAP 345.0 kV - DRESDEN ; R 345.0 kV Ckt 1	CE-024 (898) : ComEd 345kV L1227 SLD and ALDR ratings are 1284 MVA & 1477 MVA. The post contingency flow for this event exceeds the ratings therefore an upgrade is required. The upgrade will be to mitigate the sag on a portion of the line, re-conductor another segment of the line and upgrade the station conductor at a terminal. A preliminary estimate for the upgrades is \$34.2 with an estimated construction timeline of 30-36 months. Upon completion of the upgrades the rating limits will be 1334/1726/1837/2084/2397 MVA (SN/SLTE/SSTE/SLD/ALDR). Project Type : FAC Cost : \$34,200,000 Time Estimate : 30-36 Months	\$34,200,000
96022631	7	WILTON ;3M 345.0 kV - WILTON ; 765.0 kV Ckt 1	Com Ed: n5145 (884): PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000
96022632	4	WILTON ; B 345.0 kV - WILTON ;3M 345.0 kV Ckt 1	Com Ed: n5145 (884): PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000

ID	Idx	Facility	Upgrade Description	Cost
96023918,96022535,96023917	2	POWERTON ; R 345.0 kV - 7TAZEWELL 345.0 kV Ckt 1	Com Ed: CE_NUN_0304 (915): ComEd 345kV L0304 SSTE rating is 1512 MVA. The post contingency flow for this event exceeds the rating therefore an upgrade is required. The upgrade will be to mitigate the sag on the line and replace a 345kV disconnect switch. A preliminary estimate for this work is \$9.7M with an estimated construction timeline of 30 months. Upon completion of this upgrade the new ratings will be 1679/2058/2107/2280/2622 MVA (SN/SLTE/SSTE/SLD/ALDR). Project Type : FAC Cost : \$9,700,000 Time Estimate : 30.0 Months AMIL: NonPJMArea: The external (i.e. Non-PJM) Transmission Owner, AMIL, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$9,700,000
96022619	8	WILTON ;4M 345.0 kV - WILTON ; 765.0 kV Ckt 1	Com Ed: n5145 (884): PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000
96022513,96022512,96022511,96022510	6	CRETE EC ;BP 345.0 kV - 17STJOHN 345.0 kV Ckt 1	Com Ed: N5253 (860): L94507 SSTE rating is 1483 MVA. The post contingency flow for this event exceeds the rating therefore an upgrade is required. The upgrade will be to reconductor the line, upgrade station conductor and upgrade a relay package. A preliminary cost estimate is \$14.9 M with an estimated construction timeline of 30 months. Upon completion of this upgrade the new ratings will be 1754/2246/2297/2488 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$14,900,000 Time Estimate : 30.0 Months NIPS: NonPJMArea (1659): The external (i.e. Non-PJM) Transmission Owner, NIPS, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$14,900,000
96022620	5	WILTON ; R 345.0 kV - WILTON ;4M 345.0 kV Ckt 1	Com Ed: n5145 (884): PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000

ID	Idx	Facility	Upgrade Description	Cost
96022636,96022634,96022635,96022633,104781690	1	17STJOHN 345.0 kV - ST JOHN ; T 345.0 kV Ckt 1	Com Ed: N5833 (861): L6617 SSTE is 1134 MVA. The post contingency flow for this event exceeds the rating therefore an upgrade is required. The upgrade is sag mitigation of the line. A preliminary estimate is \$3.1 M with an estimated construction timeline of 30 months. Upon completion of this upgrade the new ratings will be 1091/1399/1483/1674 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,100,000 Time Estimate : 30.0 Months NIPS: NonPJMArea (1659): The external (i.e. Non-PJM) Transmission Owner, NIPS, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$3,100,000
95164591,95164593,95164592,95164595,95164594	11	AF2-359 TAP 345.0 kV - 05OLIVE 345.0 kV Ckt 1	AEP: n4057 (502): A Sag Study will be required on the 40.64 miles of ACSR/PE 1414 62/19 conductor to mitigate the overload. The new ratings after sag study will be: S/N: 971 MVA, S/E: 1419 MVA, Depending on the sag study results, the cost for this upgrade is expected to be between \$162,560 (no remediation required, just sag study) and \$81.28 million (complete line Reconductor/rebuild). Time Estimate: a) Sag Study: 6-12 months b) Rebuild: The standard time required for construction differs from state to state. An approximate construction time would be 24 to 36 months after signing an interconnection agreement. Project Type : FAC Cost : \$162,440 Time Estimate : 6-12 Months Com Ed: CE_NUN_L97008 (912): Sag mitigation on a portion of the line. A preliminary estimate for this work is \$M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating swill be 1334/1334/1391/1523 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$4,800,000 Time Estimate : 30.0 Months	\$4,962,440

ID	Idx	Facility	Upgrade Description	Cost
96022640,96022642,96022641,96022638,96022639	3	ST JOHN ; T 345.0 kV - 17GREEN_ACRE 345.0 kV Ckt 1	Com Ed: N5834 (862): L6617 SSTE is 1134 MVA. The post contingency flow for this event exceeds the rating therefore an upgrade is required. The upgrade is sag mitigation of the line. A preliminary estimate is \$3.1 M with a estimated construction timeline of 30 months. Upon completion of this upgrade the new ratings will be 1091/1399/1483/1674 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,100,000 Time Estimate : 30.0 Months NIPS: NonPJMArea (1659): The external (i.e. Non-PJM) Transmission Owner, NIPS, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$3,100,000
TOTAL COST				\$81,902,440

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

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
104781690	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_112-65-BT3-4__	breaker	1091.0	121.18	121.28	DC	29.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	20.9080	50/50	20.9080

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274655	BRAIDWOOD;2U	20.3516	50/50	20.3516
274687	WILL CNTY;4U	8.9335	50/50	8.9335
274751	CRETE EC ;1U	3.7813	50/50	3.7813
274752	CRETE EC ;2U	3.7813	50/50	3.7813
274753	CRETE EC ;3U	3.7813	50/50	3.7813
274754	CRETE EC ;4U	3.7813	50/50	3.7813
274861	TOP CROP ;1U	0.3653	50/50	0.3653
274862	TOP CROP ;2U	0.7091	50/50	0.7091
274881	PILOT HIL;1E	10.7969	Adder	12.7
275149	KELLYCK ;1E	10.7969	Adder	12.7
276167	Z1-106 E2	0.7947	Adder	0.93
276168	Z1-106 E1	0.7947	Adder	0.93
276169	Z1-107 E	1.5628	Adder	1.84
276170	Z1-108 E	1.5681	Adder	1.84
290021	O50 E	12.3189	Adder	14.49
290108	LEEDK;1U E	15.2575	Adder	17.95
293061	N-015 E	9.7910	Adder	11.52
293644	O22 E1	8.4709	50/50	8.4709
293645	O22 E2	16.4435	50/50	16.4435
294392	P-010 E	12.4345	Adder	14.63
915011	Y3-013 1	2.3674	Adder	2.79
915021	Y3-013 2	2.3674	Adder	2.79
915031	Y3-013 3	2.3674	Adder	2.79
920272	AA2-123 E	1.5380	Adder	1.81
926311	AC1-109 1	1.1986	Adder	1.41
926321	AC1-109 2	1.1986	Adder	1.41
926331	AC1-110 1	1.1953	Adder	1.41
926341	AC1-110 2	1.1953	Adder	1.41
926351	AC1-111 1	0.4788	Adder	0.56
926361	AC1-111 2	0.4788	Adder	0.56
926371	AC1-111 3	0.4788	Adder	0.56
926381	AC1-111 4	0.4788	Adder	0.56
926391	AC1-111 5	0.4788	Adder	0.56
926401	AC1-111 6	0.4788	Adder	0.56
927451	AC1-142A 1	2.6999	Adder	3.18
927461	AC1-142A 2	2.7015	Adder	3.18
930501	AB1-091 O1	42.6594	Adder	50.19
930741	AB1-122 1O1	44.7157	Adder	52.61
930751	AB1-122 2O1	47.4136	Adder	55.78
933411	AC2-154 C	1.4653	Adder	1.72
933412	AC2-154 E	2.3907	Adder	2.81
933431	AC2-156 C O1	0.5983	Adder	0.7
933432	AC2-156 E O1	0.9762	Adder	1.15
933931	AD1-016 C	0.5844	Adder	0.69
933932	AD1-016 E	0.9536	Adder	1.12
934101	AD1-039 1	4.3821	Adder	5.16
934111	AD1-039 2	4.6465	Adder	5.47
934721	AD1-100 C	12.0322	Adder	14.16
934722	AD1-100 E	56.1502	Adder	66.06
936371	AD2-047 C O1	2.6221	Adder	3.08
936372	AD2-047 E O1	12.8020	Adder	15.06
936461	AD2-060	1.5424	Adder	1.81

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937401	AD2-194 1	5.0067	Adder	5.89
937411	AD2-194 2	4.9990	Adder	5.88
938511	AE1-070 1	5.8828	Adder	6.92
938521	AE1-070 2	5.3739	Adder	6.32
938851	AE1-113 C	5.0815	Adder	5.98
938852	AE1-113 E	18.0164	Adder	21.2
939351	AE1-166 C O1	6.4099	Adder	7.54
939352	AE1-166 E O1	5.9168	Adder	6.96
939631	AE1-193 C	18.9481	50/50	18.9481
939632	AE1-193 E	126.8068	50/50	126.8068
939641	AE1-194 C	18.9481	50/50	18.9481
939642	AE1-194 E	126.8068	50/50	126.8068
939651	AE1-195 C	18.9481	50/50	18.9481
939652	AE1-195 E	126.8068	50/50	126.8068
939681	AE1-198 C	56.2614	50/50	56.2614
939682	AE1-198 E	47.8076	50/50	47.8076
940752	AE2-062 E	0.1005	50/50	0.1005
941131	AE2-107 C	4.5890	Adder	5.4
941132	AE2-107 E	3.0593	Adder	3.6
941551	AE2-152 C O1	7.3960	Adder	8.7
941552	AE2-152 E O1	4.9307	Adder	5.8
941561	AE2-153 C O1	2.9474	Adder	3.47
941562	AE2-153 E O1	13.7993	Adder	16.23
942421	AE2-255 C O1	1.9248	Adder	2.26
942422	AE2-255 E O1	5.7745	Adder	6.79
942991	AE2-321 C	5.1443	Adder	6.05
942992	AE2-321 E	2.5338	Adder	2.98
943121	AE2-341 C	7.9832	Adder	9.39
943122	AE2-341 E	3.9202	Adder	4.61
943591	AF1-030 C O1	5.3089	Adder	6.25
943592	AF1-030 E O1	2.6267	Adder	3.09
943801	AF1-048 C	2.4048	Adder	2.83
943802	AF1-048 E	1.6032	Adder	1.89
944041	AF1-072	1.3570	Adder	1.6
944911	AF1-156 C	7.5360	Adder	8.87
944912	AF1-156 E	5.0240	Adder	5.91
945351	AF1-200 FTIR	193.9965	Merchant Transmission	193.9965
946661	AF1-330 C	1.2612	Adder	1.48
946662	AF1-330 E	0.2768	Adder	0.33
957021	AF2-003 C O1	2.3563	Adder	5.23
957022	AF2-003 E O1	11.0318	Adder	24.49
957331	AF2-027 C	0.8365	Adder	1.86
957332	AF2-027 E	1.2547	Adder	2.79
958011	AF2-095 C O1	5.5588	Adder	12.34
958012	AF2-095 E O1	2.6159	Adder	5.81
958021	AF2-096 C O1	26.0863	50/50	26.0863
958022	AF2-096 E O1	12.3362	50/50	12.3362
959351	AF2-226 C	2.0762	50/50	2.0762
959352	AF2-226 E	3.1143	50/50	3.1143
960281	AF2-319 C	2.0762	50/50	2.0762
960282	AF2-319 E	3.1143	50/50	3.1143
960381	AF2-329	2.1955	Adder	4.87

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960581	AF2-349 C	2.3143	Adder	5.14
960582	AF2-349 E	1.5429	Adder	3.42
960591	AF2-350 C O1	2.4524	Adder	5.44
960592	AF2-350 E O1	1.6350	Adder	3.63
960601	AF2-351 C O1	0.3270	Adder	0.73
960602	AF2-351 E O1	0.4905	Adder	1.09
960721	AF2-363 C O1	1.9818	Adder	4.4
960722	AF2-363 E O1	1.3212	Adder	2.93
960731	AF2-364 C O1	2.0497	Adder	4.55
960732	AF2-364 E O1	1.3665	Adder	3.03
960751	AF2-366 C O1	2.3158	Adder	5.14
960752	AF2-366 E O1	1.5439	Adder	3.43
WEC	WEC	2.7824	Confirmed LTF	2.7824
CALDERWOOD	CALDERWOOD	0.0656	Confirmed LTF	0.0656
CBM-W2	CBM-W2	13.0630	Confirmed LTF	13.0630
NY	NY	0.8350	Confirmed LTF	0.8350
CBM-W1	CBM-W1	41.6708	Confirmed LTF	41.6708
TVA	TVA	0.8050	Confirmed LTF	0.8050
O-066	O-066	9.8582	Confirmed LTF	9.8582
CHEOAH	CHEOAH	0.0731	Confirmed LTF	0.0731
CBM-S1	CBM-S1	2.6582	Confirmed LTF	2.6582
G-007	G-007	1.5246	Confirmed LTF	1.5246
MADISON	MADISON	14.3660	Confirmed LTF	14.3660
MEC	MEC	9.4482	Confirmed LTF	9.4482
GIBSON	GIBSON	0.1332	Confirmed LTF	0.1332
BLUEG	BLUEG	1.5294	Confirmed LTF	1.5294
TRIMBLE	TRIMBLE	0.5187	Confirmed LTF	0.5187
CATAWBA	CATAWBA	0.2177	Confirmed LTF	0.2177

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
96023917	270855	POWERTON ;R	CE	349662	7TAZEWELL	AMIL	1	COMED_P7_345-L19601_B-S+_345-L9801_R-S_FSA	tower	1489.0	136.1	151.09	DC	223.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274677	POWERTON ;5U	97.6817	50/50	97.6817
274678	POWERTON ;6U	97.9218	50/50	97.9218
274861	TOP CROP ;1U	2.5917	50/50	2.5917
274862	TOP CROP ;2U	5.0309	50/50	5.0309
274879	MINONK ;1U	3.0743	50/50	3.0743
290021	O50 E	71.2896	50/50	71.2896
293644	O22 E1	60.0992	50/50	60.0992
293645	O22 E2	116.6632	50/50	116.6632
918051	AA1-018 C OP	2.4835	50/50	2.4835
918052	AA1-018 E OP	96.3521	50/50	96.3521
934871	AD1-116 C	5.6113	50/50	5.6113
934872	AD1-116 E	9.1553	50/50	9.1553
936291	AD2-038 C O1	14.3963	50/50	14.3963
936292	AD2-038 E O1	96.3442	50/50	96.3442
938851	AE1-113 C	29.4070	50/50	29.4070
938852	AE1-113 E	104.2610	50/50	104.2610
939321	AE1-163 C O1	36.1752	50/50	36.1752
939322	AE1-163 E O1	222.2193	50/50	222.2193
942421	AE2-255 C O1	11.1390	50/50	11.1390
942422	AE2-255 E O1	33.4170	50/50	33.4170
942651	AE2-281 C O1	5.1679	50/50	5.1679
942652	AE2-281 E O1	31.7456	50/50	31.7456
957021	AF2-003 C O1	39.2745	50/50	39.2745
957022	AF2-003 E O1	183.8759	50/50	183.8759
958481	AF2-142 C	66.4497	50/50	66.4497
958482	AF2-142 E	44.2998	50/50	44.2998
958491	AF2-143 C	66.4443	50/50	66.4443
958492	AF2-143 E	44.2962	50/50	44.2962
959351	AF2-226 C	14.7302	50/50	14.7302
959352	AF2-226 E	22.0953	50/50	22.0953
960281	AF2-319 C	14.7302	50/50	14.7302
960282	AF2-319 E	22.0953	50/50	22.0953
WEC	WEC	0.0564	Confirmed LTF	0.0564
NEWTON	NEWTON	2.5745	Confirmed LTF	2.5745
FARMERCITY	FARMERCITY	0.2126	Confirmed LTF	0.2126
CALDERWOOD	CALDERWOOD	0.7758	Confirmed LTF	0.7758
NY	NY	0.4612	Confirmed LTF	0.4612
PRAIRIE	PRAIRIE	8.2733	Confirmed LTF	8.2733
O-066	O-066	5.6314	Confirmed LTF	5.6314
CHEOAH	CHEOAH	0.7773	Confirmed LTF	0.7773
EDWARDS	EDWARDS	5.4649	Confirmed LTF	5.4649

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
TILTON	TILTON	1.2203	Confirmed LTF	1.2203
G-007	G-007	0.8726	Confirmed LTF	0.8726
GIBSON	GIBSON	0.7868	Confirmed LTF	0.7868
BLUEG	BLUEG	1.9530	Confirmed LTF	1.9530
TRIMBLE	TRIMBLE	0.6110	Confirmed LTF	0.6110
CATAWBA	CATAWBA	0.4522	Confirmed LTF	0.4522

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
96022642	270886	ST JOHN ;T	CE	255104	17GREEN_ACRE	NIPS	1	COMED_P4_023-65-BT4-5__	breaker	1091.0	121.17	121.27	DC	29.71

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	20.9182	50/50	20.9182
274655	BRAIDWOOD;2U	20.3636	50/50	20.3636
274687	WILL CNTY;4U	8.9326	50/50	8.9326
274751	CRETE EC ;1U	3.7815	50/50	3.7815
274752	CRETE EC ;2U	3.7815	50/50	3.7815
274753	CRETE EC ;3U	3.7815	50/50	3.7815
274754	CRETE EC ;4U	3.7815	50/50	3.7815
274861	TOP CROP ;1U	0.3652	50/50	0.3652
274862	TOP CROP ;2U	0.7090	50/50	0.7090
274881	PILOT HIL;1E	10.8028	Adder	12.71
275149	KELLYCK ;1E	10.8028	Adder	12.71
276167	Z1-106 E2	0.7945	Adder	0.93
276168	Z1-106 E1	0.7945	Adder	0.93
276169	Z1-107 E	1.5621	Adder	1.84
276170	Z1-108 E	1.5676	Adder	1.84
290021	O50 E	12.3121	Adder	14.48
290108	LEEDK;1U E	15.2558	Adder	17.95
293061	N-015 E	9.7930	Adder	11.52
293644	O22 E1	8.4693	50/50	8.4693
293645	O22 E2	16.4403	50/50	16.4403
294392	P-010 E	12.4371	Adder	14.63
915011	Y3-013 1	2.3664	Adder	2.78
915021	Y3-013 2	2.3664	Adder	2.78
915031	Y3-013 3	2.3664	Adder	2.78
920272	AA2-123 E	1.5375	Adder	1.81
926311	AC1-109 1	1.1981	Adder	1.41
926321	AC1-109 2	1.1981	Adder	1.41
926331	AC1-110 1	1.1952	Adder	1.41
926341	AC1-110 2	1.1952	Adder	1.41
926351	AC1-111 1	0.4787	Adder	0.56
926361	AC1-111 2	0.4787	Adder	0.56
926371	AC1-111 3	0.4787	Adder	0.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926381	AC1-111 4	0.4787	Adder	0.56
926391	AC1-111 5	0.4787	Adder	0.56
926401	AC1-111 6	0.4787	Adder	0.56
927451	AC1-142A 1	2.6985	Adder	3.17
927461	AC1-142A 2	2.6999	Adder	3.18
930501	AB1-091 O1	42.6874	Adder	50.22
930741	AB1-122 1O1	44.6180	Adder	52.49
930751	AB1-122 2O1	47.3892	Adder	55.75
933411	AC2-154 C	1.4661	Adder	1.72
933412	AC2-154 E	2.3921	Adder	2.81
933431	AC2-156 C O1	0.5983	Adder	0.7
933432	AC2-156 E O1	0.9762	Adder	1.15
933931	AD1-016 C	0.5842	Adder	0.69
933932	AD1-016 E	0.9532	Adder	1.12
934101	AD1-039 1	4.3726	Adder	5.14
934111	AD1-039 2	4.6441	Adder	5.46
934721	AD1-100 C	12.0437	Adder	14.17
934722	AD1-100 E	56.2037	Adder	66.12
936371	AD2-047 C O1	2.6235	Adder	3.09
936372	AD2-047 E O1	12.8091	Adder	15.07
936461	AD2-060	1.5433	Adder	1.82
937401	AD2-194 1	5.0026	Adder	5.89
937411	AD2-194 2	4.9955	Adder	5.88
938511	AE1-070 1	5.8780	Adder	6.92
938521	AE1-070 2	5.3701	Adder	6.32
938851	AE1-113 C	5.0787	Adder	5.97
938852	AE1-113 E	18.0064	Adder	21.18
939351	AE1-166 C O1	6.4152	Adder	7.55
939352	AE1-166 E O1	5.9217	Adder	6.97
939631	AE1-193 C	18.9488	50/50	18.9488
939632	AE1-193 E	126.8112	50/50	126.8112
939641	AE1-194 C	18.9488	50/50	18.9488
939642	AE1-194 E	126.8112	50/50	126.8112
939651	AE1-195 C	18.9488	50/50	18.9488
939652	AE1-195 E	126.8112	50/50	126.8112
939681	AE1-198 C	56.2634	50/50	56.2634
939682	AE1-198 E	47.8093	50/50	47.8093
940752	AE2-062 E	0.1005	50/50	0.1005
941131	AE2-107 C	4.5880	Adder	5.4
941132	AE2-107 E	3.0586	Adder	3.6
941551	AE2-152 C O1	7.4021	Adder	8.71
941552	AE2-152 E O1	4.9348	Adder	5.81
941561	AE2-153 C O1	2.9489	Adder	3.47
941562	AE2-153 E O1	13.8063	Adder	16.24
942421	AE2-255 C O1	1.9238	Adder	2.26
942422	AE2-255 E O1	5.7713	Adder	6.79
942991	AE2-321 C	5.1426	Adder	6.05
942992	AE2-321 E	2.5329	Adder	2.98
943121	AE2-341 C	7.9841	Adder	9.39
943122	AE2-341 E	3.9206	Adder	4.61
943591	AF1-030 C O1	5.3095	Adder	6.25
943592	AF1-030 E O1	2.6270	Adder	3.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943801	AF1-048 C	2.4040	Adder	2.83
943802	AF1-048 E	1.6026	Adder	1.89
944041	AF1-072	1.3566	Adder	1.6
944911	AF1-156 C	7.5398	Adder	8.87
944912	AF1-156 E	5.0266	Adder	5.91
945351	AF1-200 FTIR	194.1186	Merchant Transmission	194.1186
946661	AF1-330 C	1.2607	Adder	1.48
946662	AF1-330 E	0.2767	Adder	0.33
957021	AF2-003 C O1	2.3556	Adder	5.23
957022	AF2-003 E O1	11.0284	Adder	24.48
957331	AF2-027 C	0.8361	Adder	1.86
957332	AF2-027 E	1.2542	Adder	2.78
958011	AF2-095 C O1	5.5619	Adder	12.35
958012	AF2-095 E O1	2.6174	Adder	5.81
958021	AF2-096 C O1	26.0990	50/50	26.0990
958022	AF2-096 E O1	12.3422	50/50	12.3422
959351	AF2-226 C	2.0758	50/50	2.0758
959352	AF2-226 E	3.1137	50/50	3.1137
960281	AF2-319 C	2.0758	50/50	2.0758
960282	AF2-319 E	3.1137	50/50	3.1137
960381	AF2-329	2.1957	Adder	4.87
960581	AF2-349 C	2.3138	Adder	5.14
960582	AF2-349 E	1.5425	Adder	3.42
960591	AF2-350 C O1	2.4538	Adder	5.45
960592	AF2-350 E O1	1.6359	Adder	3.63
960601	AF2-351 C O1	0.3272	Adder	0.73
960602	AF2-351 E O1	0.4908	Adder	1.09
960721	AF2-363 C O1	1.9813	Adder	4.4
960722	AF2-363 E O1	1.3209	Adder	2.93
960731	AF2-364 C O1	2.0491	Adder	4.55
960732	AF2-364 E O1	1.3661	Adder	3.03
960751	AF2-366 C O1	2.3156	Adder	5.14
960752	AF2-366 E O1	1.5437	Adder	3.43
WEC	WEC	2.7811	Confirmed LTF	2.7811
CALDERWOOD	CALDERWOOD	0.0656	Confirmed LTF	0.0656
CBM-W2	CBM-W2	13.0549	Confirmed LTF	13.0549
NY	NY	0.8345	Confirmed LTF	0.8345
CBM-W1	CBM-W1	41.6458	Confirmed LTF	41.6458
TVA	TVA	0.8036	Confirmed LTF	0.8036
O-066	O-066	9.8582	Confirmed LTF	9.8582
CHEOAH	CHEOAH	0.0736	Confirmed LTF	0.0736
CBM-S1	CBM-S1	2.6582	Confirmed LTF	2.6582
G-007	G-007	1.5246	Confirmed LTF	1.5246
MADISON	MADISON	14.3620	Confirmed LTF	14.3620
MEC	MEC	9.4450	Confirmed LTF	9.4450
GIBSON	GIBSON	0.1338	Confirmed LTF	0.1338
BLUEG	BLUEG	1.5294	Confirmed LTF	1.5294
TRIMBLE	TRIMBLE	0.5187	Confirmed LTF	0.5187
CATAWBA	CATAWBA	0.2180	Confirmed LTF	0.2180

11.6.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022632	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	121.49	121.58	DC	45.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274771	LINCOLN ;2U	3.7664	50/50	3.7664
274772	LINCOLN ;3U	3.7664	50/50	3.7664
274773	LINCOLN ;4U	3.7664	50/50	3.7664
274774	LINCOLN ;5U	3.7664	50/50	3.7664
274775	LINCOLN ;6U	3.7664	50/50	3.7664
274776	LINCOLN ;7U	3.7664	50/50	3.7664
274777	LINCOLN ;8U	3.7664	50/50	3.7664
274830	U3-021 1	6.3035	Adder	7.42
274831	U3-021 2	6.3035	Adder	7.42
274881	PILOT HIL;1E	19.9396	Adder	23.46
274890	CAYUG;1U E	17.0054	Adder	20.01
274891	CAYUG;2U E	17.0054	Adder	20.01
275149	KELLYCK ;1E	19.9396	Adder	23.46
276167	Z1-106 E2	1.3063	Adder	1.54
276168	Z1-106 E1	1.3062	Adder	1.54
276169	Z1-107 E	2.6738	Adder	3.15
276170	Z1-108 E	2.5704	Adder	3.02
290021	O50 E	20.0260	Adder	23.56
290051	GSG-6; E	10.8913	Adder	12.81
290108	LEEDK;1U E	25.1940	Adder	29.64
293061	N-015 E	16.4434	Adder	19.35
293644	O22 E1	10.5913	Adder	12.46
293645	O22 E2	20.5595	Adder	24.19
294392	P-010 E	20.8831	Adder	24.57
910542	X3-005 E	0.7562	Adder	0.89
915011	Y3-013 1	3.8635	Adder	4.55
915021	Y3-013 2	3.8635	Adder	4.55
915031	Y3-013 3	3.8635	Adder	4.55
918052	AA1-018 E OP	16.9837	Adder	19.98
920272	AA2-123 E	2.5262	Adder	2.97
924471	AB2-096	43.7741	Adder	51.5
926311	AC1-109 1	1.9765	Adder	2.33
926321	AC1-109 2	1.9765	Adder	2.33
926331	AC1-110 1	1.9634	Adder	2.31
926341	AC1-110 2	1.9634	Adder	2.31
926351	AC1-111 1	0.7894	Adder	0.93
926361	AC1-111 2	0.7894	Adder	0.93
926371	AC1-111 3	0.7894	Adder	0.93
926381	AC1-111 4	0.7894	Adder	0.93
926391	AC1-111 5	0.7894	Adder	0.93
926401	AC1-111 6	0.7894	Adder	0.93
927451	AC1-142A 1	4.3256	Adder	5.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927461	AC1-142A 2	4.3256	Adder	5.09
930501	AB1-091 O1	79.3394	Adder	93.34
930741	AB1-122 1O1	75.3017	Adder	88.59
930751	AB1-122 2O1	76.2303	Adder	89.68
933411	AC2-154 C	2.7061	Adder	3.18
933412	AC2-154 E	4.4152	Adder	5.19
933431	AC2-156 C O1	0.9893	Adder	1.16
933432	AC2-156 E O1	1.6142	Adder	1.9
933911	AD1-013 C	1.9232	Adder	2.26
933912	AD1-013 E	3.0721	Adder	3.61
933931	AD1-016 C	0.9600	Adder	1.13
933932	AD1-016 E	1.5662	Adder	1.84
934101	AD1-039 1	7.3796	Adder	8.68
934111	AD1-039 2	7.4706	Adder	8.79
934431	AD1-067 C	0.1368	Adder	0.16
934432	AD1-067 E	0.5750	Adder	0.68
934701	AD1-098 C O1	7.1661	Adder	8.43
934702	AD1-098 E O1	5.2320	Adder	6.16
934721	AD1-100 C	24.8523	Adder	29.24
934722	AD1-100 E	115.9774	Adder	136.44
934871	AD1-116 C	0.9891	Adder	1.16
934872	AD1-116 E	1.6138	Adder	1.9
934971	AD1-129 C	0.9344	Adder	1.1
934972	AD1-129 E	0.6230	Adder	0.73
935001	AD1-133 C O1	23.0234	Adder	27.09
935002	AD1-133 E O1	15.3490	Adder	18.06
936291	AD2-038 C O1	2.4301	Adder	2.86
936292	AD2-038 E O1	16.2627	Adder	19.13
936371	AD2-047 C O1	4.8425	Adder	5.7
936372	AD2-047 E O1	23.6427	Adder	27.81
936461	AD2-060	2.8485	Adder	3.35
936511	AD2-066 C O1	8.7640	Adder	10.31
936512	AD2-066 E O1	5.8426	Adder	6.87
937001	AD2-134 C	2.8471	Adder	3.35
937002	AD2-134 E	11.7616	Adder	13.84
937401	AD2-194 1	8.0697	Adder	9.49
937411	AD2-194 2	8.0692	Adder	9.49
938511	AE1-070 1	9.4819	Adder	11.16
938521	AE1-070 2	8.6744	Adder	10.21
938851	AE1-113 C	8.2607	Adder	9.72
938852	AE1-113 E	29.2880	Adder	34.46
939321	AE1-163 C O1	6.1063	Adder	7.18
939322	AE1-163 E O1	37.5102	Adder	44.13
939351	AE1-166 C O1	12.2622	Adder	14.43
939352	AE1-166 E O1	11.3189	Adder	13.32
939401	AE1-172 C O1	6.7946	Adder	7.99
939402	AE1-172 E O1	31.8801	Adder	37.51
940101	AE1-252 C O1	13.6499	Adder	16.06
940102	AE1-252 E O1	9.0999	Adder	10.71
940752	AE2-062 E	0.1351	Adder	0.16
941131	AE2-107 C	7.5761	Adder	8.91
941132	AE2-107 E	5.0507	Adder	5.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941551	AE2-152 C O1	14.1487	Adder	16.65
941552	AE2-152 E O1	9.4325	Adder	11.1
941561	AE2-153 C O1	5.1247	Adder	6.03
941562	AE2-153 E O1	23.9929	Adder	28.23
941731	AE2-173 O1	3.2665	Adder	3.84
942111	AE2-223 C	2.4140	Adder	2.84
942112	AE2-223 E	16.1551	Adder	19.01
942421	AE2-255 C O1	3.1291	Adder	3.68
942422	AE2-255 E O1	9.3872	Adder	11.04
942651	AE2-281 C O1	0.8723	Adder	1.03
942652	AE2-281 E O1	5.3586	Adder	6.3
942991	AE2-321 C	8.4508	Adder	9.94
942992	AE2-321 E	4.1623	Adder	4.9
943121	AE2-341 C	13.2079	Adder	15.54
943122	AE2-341 E	6.4858	Adder	7.63
943381	AF1-009 C	0.6199	Adder	0.73
943382	AF1-009 E	2.4796	Adder	2.92
943591	AF1-030 C O1	8.7834	Adder	10.33
943592	AF1-030 E O1	4.3457	Adder	5.11
943801	AF1-048 C	3.9504	Adder	4.65
943802	AF1-048 E	2.6336	Adder	3.1
944041	AF1-072	2.2259	Adder	2.62
944911	AF1-156 C	13.1029	Adder	15.42
944912	AF1-156 E	8.7353	Adder	10.28
945351	AF1-200 FTIR	322.6289	Merchant Transmission	322.6289
946661	AF1-330 C	2.0715	Adder	2.44
946662	AF1-330 E	0.4547	Adder	0.53
946671	AF1-331	2.4976	Adder	2.94
957021	AF2-003 C O1	3.5751	Adder	7.94
957022	AF2-003 E O1	16.7377	Adder	37.15
957331	AF2-027 C	1.3651	Adder	3.03
957332	AF2-027 E	2.0477	Adder	4.55
958011	AF2-095 C O1	10.2661	Adder	22.79
958012	AF2-095 E O1	4.8311	Adder	10.72
958021	AF2-096 C O1	19.7578	Adder	43.86
958022	AF2-096 E O1	9.3434	Adder	20.74
958481	AF2-142 C	6.2078	Adder	13.78
958482	AF2-142 E	4.1386	Adder	9.19
958491	AF2-143 C	5.9443	Adder	13.19
958492	AF2-143 E	3.9629	Adder	8.8
959341	AF2-225 C	4.1335	Adder	9.18
959342	AF2-225 E	5.7081	Adder	12.67
959351	AF2-226 C	1.3758	Adder	3.05
959352	AF2-226 E	2.0637	Adder	4.58
960281	AF2-319 C	1.3758	Adder	3.05
960282	AF2-319 E	2.0637	Adder	4.58
960381	AF2-329	3.6323	Adder	8.06
960581	AF2-349 C	11.9583	Adder	26.54
960582	AF2-349 E	7.9722	Adder	17.7
960591	AF2-350 C O1	4.5291	Adder	10.05
960592	AF2-350 E O1	3.0194	Adder	6.7
960601	AF2-351 C O1	0.6039	Adder	1.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960602	AF2-351 E O1	0.9058	Adder	2.01
960721	AF2-363 C O1	3.2702	Adder	7.26
960722	AF2-363 E O1	2.1801	Adder	4.84
960731	AF2-364 C O1	3.3662	Adder	7.47
960732	AF2-364 E O1	2.2441	Adder	4.98
960751	AF2-366 C O1	3.8221	Adder	8.48
960752	AF2-366 E O1	2.5480	Adder	5.66
961501	AF2-441 C O1	5.4914	Adder	12.19
961502	AF2-441 E O1	8.2371	Adder	18.28
WEC	WEC	4.5603	Confirmed LTF	4.5603
CALDERWOOD	CALDERWOOD	0.0631	Confirmed LTF	0.0631
CBM-W2	CBM-W2	25.0942	Confirmed LTF	25.0942
NY	NY	1.4306	Confirmed LTF	1.4306
CBM-W1	CBM-W1	78.1875	Confirmed LTF	78.1875
TVA	TVA	1.6184	Confirmed LTF	1.6184
O-066	O-066	16.9546	Confirmed LTF	16.9546
CHEOAH	CHEOAH	0.0771	Confirmed LTF	0.0771
CBM-S1	CBM-S1	6.0407	Confirmed LTF	6.0407
G-007	G-007	2.6218	Confirmed LTF	2.6218
MADISON	MADISON	24.3210	Confirmed LTF	24.3210
MEC	MEC	16.0171	Confirmed LTF	16.0171
BLUEG	BLUEG	2.3071	Confirmed LTF	2.3071
TRIMBLE	TRIMBLE	0.7969	Confirmed LTF	0.7969
CATAWBA	CATAWBA	0.3619	Confirmed LTF	0.3619

11.6.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022620	270927	WILTON ; R	CE	275233	WILTON ;4M	CE	1	COMED_P4_112-65-BT2-3	breaker	1379.0	124.03	124.12	DC	46.05

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274771	LINCOLN ;2U	3.8683	50/50	3.8683
274772	LINCOLN ;3U	3.8683	50/50	3.8683
274773	LINCOLN ;4U	3.8683	50/50	3.8683
274774	LINCOLN ;5U	3.8683	50/50	3.8683
274775	LINCOLN ;6U	3.8683	50/50	3.8683
274776	LINCOLN ;7U	3.8683	50/50	3.8683
274777	LINCOLN ;8U	3.8683	50/50	3.8683
274830	U3-021 1	6.4380	Adder	7.57
274831	U3-021 2	6.4380	Adder	7.57
274881	PILOT HIL;1E	20.3561	Adder	23.95
274890	CAYUG;1U E	17.3451	Adder	20.41
274891	CAYUG;2U E	17.3451	Adder	20.41
275149	KELLYCK ;1E	20.3561	Adder	23.95
276167	Z1-106 E2	1.3342	Adder	1.57
276168	Z1-106 E1	1.3341	Adder	1.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
276169	Z1-107 E	2.7309	Adder	3.21
276170	Z1-108 E	2.6251	Adder	3.09
290021	O50 E	20.4530	Adder	24.06
290051	GSG-6; E	11.1236	Adder	13.09
290108	LEEDK;1U E	25.7295	Adder	30.27
293061	N-015 E	16.7861	Adder	19.75
293644	O22 E1	10.8153	Adder	12.72
293645	O22 E2	20.9944	Adder	24.7
294392	P-010 E	21.3184	Adder	25.08
910542	X3-005 E	0.7727	Adder	0.91
915011	Y3-013 1	3.9461	Adder	4.64
915021	Y3-013 2	3.9461	Adder	4.64
915031	Y3-013 3	3.9461	Adder	4.64
918052	AA1-018 E OP	17.3542	Adder	20.42
920272	AA2-123 E	2.5799	Adder	3.04
924471	AB2-096	44.7083	Adder	52.6
926311	AC1-109 1	2.0186	Adder	2.37
926321	AC1-109 2	2.0186	Adder	2.37
926331	AC1-110 1	2.0052	Adder	2.36
926341	AC1-110 2	2.0052	Adder	2.36
926351	AC1-111 1	0.8063	Adder	0.95
926361	AC1-111 2	0.8063	Adder	0.95
926371	AC1-111 3	0.8063	Adder	0.95
926381	AC1-111 4	0.8063	Adder	0.95
926391	AC1-111 5	0.8063	Adder	0.95
926401	AC1-111 6	0.8063	Adder	0.95
927451	AC1-142A 1	4.4186	Adder	5.2
927461	AC1-142A 2	4.4186	Adder	5.2
930501	AB1-091 O1	80.9897	Adder	95.28
930741	AB1-122 1O1	76.8999	Adder	90.47
930751	AB1-122 2O1	77.8579	Adder	91.6
933411	AC2-154 C	2.7626	Adder	3.25
933412	AC2-154 E	4.5074	Adder	5.3
933431	AC2-156 C O1	1.0103	Adder	1.19
933432	AC2-156 E O1	1.6485	Adder	1.94
933911	AD1-013 C	1.9642	Adder	2.31
933912	AD1-013 E	3.1375	Adder	3.69
933931	AD1-016 C	0.9804	Adder	1.15
933932	AD1-016 E	1.5996	Adder	1.88
934101	AD1-039 1	7.5362	Adder	8.87
934111	AD1-039 2	7.6301	Adder	8.98
934431	AD1-067 C	0.1397	Adder	0.16
934432	AD1-067 E	0.5873	Adder	0.69
934701	AD1-098 C O1	7.3184	Adder	8.61
934702	AD1-098 E O1	5.3432	Adder	6.29
934721	AD1-100 C	25.3457	Adder	29.82
934722	AD1-100 E	118.2800	Adder	139.15
934871	AD1-116 C	1.0107	Adder	1.19
934872	AD1-116 E	1.6490	Adder	1.94
934971	AD1-129 C	0.9544	Adder	1.12
934972	AD1-129 E	0.6363	Adder	0.75
935001	AD1-133 C O1	23.5023	Adder	27.65

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
935002	AD1-133 E O1	15.6682	Adder	18.43
936291	AD2-038 C O1	2.4826	Adder	2.92
936292	AD2-038 E O1	16.6143	Adder	19.55
936371	AD2-047 C O1	4.9436	Adder	5.82
936372	AD2-047 E O1	24.1366	Adder	28.4
936461	AD2-060	2.9080	Adder	3.42
936511	AD2-066 C O1	8.9497	Adder	10.53
936512	AD2-066 E O1	5.9665	Adder	7.02
937001	AD2-134 C	2.9079	Adder	3.42
937002	AD2-134 E	12.0124	Adder	14.13
937401	AD2-194 1	8.2426	Adder	9.7
937411	AD2-194 2	8.2421	Adder	9.7
938511	AE1-070 1	9.6851	Adder	11.39
938521	AE1-070 2	8.8603	Adder	10.42
938851	AE1-113 C	8.4369	Adder	9.93
938852	AE1-113 E	29.9126	Adder	35.19
939321	AE1-163 C O1	6.2383	Adder	7.34
939322	AE1-163 E O1	38.3212	Adder	45.08
939351	AE1-166 C O1	12.5095	Adder	14.72
939352	AE1-166 E O1	11.5472	Adder	13.58
939401	AE1-172 C O1	6.9294	Adder	8.15
939402	AE1-172 E O1	32.5126	Adder	38.25
940101	AE1-252 C O1	13.9207	Adder	16.38
940102	AE1-252 E O1	9.2805	Adder	10.92
940752	AE2-062 E	0.1379	Adder	0.16
941131	AE2-107 C	7.7372	Adder	9.1
941132	AE2-107 E	5.1581	Adder	6.07
941551	AE2-152 C O1	14.4340	Adder	16.98
941552	AE2-152 E O1	9.6227	Adder	11.32
941561	AE2-153 C O1	5.2303	Adder	6.15
941562	AE2-153 E O1	24.4874	Adder	28.81
941731	AE2-173 O1	3.3326	Adder	3.92
942111	AE2-223 C	2.4629	Adder	2.9
942112	AE2-223 E	16.4823	Adder	19.39
942421	AE2-255 C O1	3.1958	Adder	3.76
942422	AE2-255 E O1	9.5874	Adder	11.28
942651	AE2-281 C O1	0.8912	Adder	1.05
942652	AE2-281 E O1	5.4745	Adder	6.44
942991	AE2-321 C	8.6313	Adder	10.15
942992	AE2-321 E	4.2513	Adder	5.0
943121	AE2-341 C	13.4892	Adder	15.87
943122	AE2-341 E	6.6239	Adder	7.79
943381	AF1-009 C	0.6331	Adder	0.74
943382	AF1-009 E	2.5323	Adder	2.98
943591	AF1-030 C O1	8.9705	Adder	10.55
943592	AF1-030 E O1	4.4383	Adder	5.22
943801	AF1-048 C	4.0348	Adder	4.75
943802	AF1-048 E	2.6899	Adder	3.16
944041	AF1-072	2.2734	Adder	2.67
944911	AF1-156 C	13.3730	Adder	15.73
944912	AF1-156 E	8.9153	Adder	10.49
945351	AF1-200 FTIR	329.4462	Merchant Transmission	329.4462

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946661	AF1-330 C	2.1155	Adder	2.49
946662	AF1-330 E	0.4644	Adder	0.55
946671	AF1-331	2.5508	Adder	3.0
957021	AF2-003 C O1	3.6510	Adder	8.1
957022	AF2-003 E O1	17.0932	Adder	37.94
957331	AF2-027 C	1.3943	Adder	3.1
957332	AF2-027 E	2.0914	Adder	4.64
958011	AF2-095 C O1	10.4805	Adder	23.26
958012	AF2-095 E O1	4.9320	Adder	10.95
958021	AF2-096 C O1	20.1649	Adder	44.76
958022	AF2-096 E O1	9.5360	Adder	21.17
958481	AF2-142 C	6.3433	Adder	14.08
958482	AF2-142 E	4.2288	Adder	9.39
958491	AF2-143 C	6.0728	Adder	13.48
958492	AF2-143 E	4.0486	Adder	8.99
959341	AF2-225 C	4.2172	Adder	9.36
959342	AF2-225 E	5.8238	Adder	12.93
959351	AF2-226 C	1.4049	Adder	3.12
959352	AF2-226 E	2.1074	Adder	4.68
960281	AF2-319 C	1.4049	Adder	3.12
960282	AF2-319 E	2.1074	Adder	4.68
960381	AF2-329	3.7097	Adder	8.23
960581	AF2-349 C	12.2138	Adder	27.11
960582	AF2-349 E	8.1425	Adder	18.07
960591	AF2-350 C O1	4.6238	Adder	10.26
960592	AF2-350 E O1	3.0825	Adder	6.84
960601	AF2-351 C O1	0.6165	Adder	1.37
960602	AF2-351 E O1	0.9248	Adder	2.05
960721	AF2-363 C O1	3.3397	Adder	7.41
960722	AF2-363 E O1	2.2265	Adder	4.94
960731	AF2-364 C O1	3.4379	Adder	7.63
960732	AF2-364 E O1	2.2919	Adder	5.09
960751	AF2-366 C O1	3.9034	Adder	8.66
960752	AF2-366 E O1	2.6023	Adder	5.78
961501	AF2-441 C O1	5.6075	Adder	12.45
961502	AF2-441 E O1	8.4112	Adder	18.67
WEC	WEC	4.6573	Confirmed LTF	4.6573
CALDERWOOD	CALDERWOOD	0.0656	Confirmed LTF	0.0656
CBM-W2	CBM-W2	25.6101	Confirmed LTF	25.6101
NY	NY	1.4616	Confirmed LTF	1.4616
CBM-W1	CBM-W1	79.8388	Confirmed LTF	79.8388
TVA	TVA	1.6492	Confirmed LTF	1.6492
O-066	O-066	17.3242	Confirmed LTF	17.3242
CHEOAH	CHEOAH	0.0801	Confirmed LTF	0.0801
CBM-S1	CBM-S1	6.1514	Confirmed LTF	6.1514
G-007	G-007	2.6780	Confirmed LTF	2.6780
MADISON	MADISON	24.8371	Confirmed LTF	24.8371
MEC	MEC	16.3540	Confirmed LTF	16.3540
BLUEG	BLUEG	2.3592	Confirmed LTF	2.3592
TRIMBLE	TRIMBLE	0.8147	Confirmed LTF	0.8147
CATAWBA	CATAWBA	0.3703	Confirmed LTF	0.3703

11.6.6 Index 6

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022513	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_112-65-BT3-4	breaker	1399.0	154.51	154.7	DC	42.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	29.7601	50/50	29.7601
274655	BRAIDWOOD;2U	28.9529	50/50	28.9529
274687	WILL CNTY;4U	12.5632	50/50	12.5632
274704	KENDALL ;1C	4.4153	50/50	4.4153
274706	KENDALL ;2C	4.4153	50/50	4.4153
274751	CRETE EC ;1U	6.4737	50/50	6.4737
274752	CRETE EC ;2U	6.4737	50/50	6.4737
274753	CRETE EC ;3U	6.4737	50/50	6.4737
274754	CRETE EC ;4U	6.4737	50/50	6.4737
274830	U3-021 1	5.3717	Adder	6.32
274831	U3-021 2	5.3717	Adder	6.32
274861	TOP CROP ;1U	0.5274	50/50	0.5274
274862	TOP CROP ;2U	1.0237	50/50	1.0237
276167	Z1-106 E2	1.1126	Adder	1.31
276168	Z1-106 E1	1.1126	Adder	1.31
276169	Z1-107 E	2.1384	Adder	2.52
276170	Z1-108 E	2.1971	Adder	2.58
290021	O50 E	17.3386	Adder	20.4
290051	GSG-6; E	9.2248	Adder	10.85
290108	LEEDK;1U E	21.3503	Adder	25.12
293061	N-015 E	13.7986	Adder	16.23
293644	O22 E1	12.2294	50/50	12.2294
293645	O22 E2	23.7394	50/50	23.7394
294392	P-010 E	17.5242	Adder	20.62
915011	Y3-013 1	3.3188	Adder	3.9
915021	Y3-013 2	3.3188	Adder	3.9
915031	Y3-013 3	3.3188	Adder	3.9
920272	AA2-123 E	2.1546	Adder	2.53
924471	AB2-096	37.3035	Adder	43.89
926311	AC1-109 1	1.6779	Adder	1.97
926321	AC1-109 2	1.6779	Adder	1.97
926331	AC1-110 1	1.6734	Adder	1.97
926341	AC1-110 2	1.6734	Adder	1.97
926351	AC1-111 1	0.6698	Adder	0.79
926361	AC1-111 2	0.6698	Adder	0.79
926371	AC1-111 3	0.6698	Adder	0.79
926381	AC1-111 4	0.6698	Adder	0.79
926391	AC1-111 5	0.6698	Adder	0.79
926401	AC1-111 6	0.6698	Adder	0.79
927451	AC1-142A 1	3.8001	Adder	4.47
927461	AC1-142A 2	3.8028	Adder	4.47
930481	AB1-089	13.9470	Adder	16.41

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930741	AB1-122 1O1	62.5014	Adder	73.53
930751	AB1-122 2O1	66.7877	Adder	78.57
933431	AC2-156 C O1	0.8366	Adder	0.98
933432	AC2-156 E O1	1.3649	Adder	1.61
933911	AD1-013 C	1.6294	Adder	1.92
933912	AD1-013 E	2.6029	Adder	3.06
933931	AD1-016 C	0.8187	Adder	0.96
933932	AD1-016 E	1.3358	Adder	1.57
934101	AD1-039 1	6.1251	Adder	7.21
934111	AD1-039 2	6.5452	Adder	7.7
934431	AD1-067 C	0.1158	Adder	0.14
934432	AD1-067 E	0.4870	Adder	0.57
934721	AD1-100 C	16.6757	Adder	19.62
934722	AD1-100 E	77.8200	Adder	91.55
934971	AD1-129 C	0.7957	Adder	0.94
934972	AD1-129 E	0.5305	Adder	0.62
937001	AD2-134 C	2.4115	Adder	2.84
937002	AD2-134 E	9.9620	Adder	11.72
937401	AD2-194 1	7.0553	Adder	8.3
937411	AD2-194 2	7.0426	Adder	8.29
938511	AE1-070 1	8.2900	Adder	9.75
938521	AE1-070 2	7.5708	Adder	8.91
938851	AE1-113 C	7.1522	Adder	8.41
938852	AE1-113 E	25.3578	Adder	29.83
939351	AE1-166 C O1	8.9273	Adder	10.5
939352	AE1-166 E O1	8.2406	Adder	9.69
939631	AE1-193 C	32.4395	50/50	32.4395
939632	AE1-193 E	217.0954	50/50	217.0954
939641	AE1-194 C	32.4395	50/50	32.4395
939642	AE1-194 E	217.0954	50/50	217.0954
939651	AE1-195 C	32.4395	50/50	32.4395
939652	AE1-195 E	217.0954	50/50	217.0954
939681	AE1-198 C	96.3205	50/50	96.3205
939682	AE1-198 E	81.8475	50/50	81.8475
940752	AE2-062 E	0.1413	50/50	0.1413
941131	AE2-107 C	6.4214	Adder	7.55
941132	AE2-107 E	4.2809	Adder	5.04
941551	AE2-152 C O1	10.3007	Adder	12.12
941552	AE2-152 E O1	6.8672	Adder	8.08
941561	AE2-153 C O1	4.0987	Adder	4.82
941562	AE2-153 E O1	19.1896	Adder	22.58
942421	AE2-255 C O1	2.7092	Adder	3.19
942422	AE2-255 E O1	8.1275	Adder	9.56
942991	AE2-321 C	7.2065	Adder	8.48
942992	AE2-321 E	3.5494	Adder	4.18
943121	AE2-341 C	11.1591	Adder	13.13
943122	AE2-341 E	5.4797	Adder	6.45
943591	AF1-030 C O1	7.4209	Adder	8.73
943592	AF1-030 E O1	3.6716	Adder	4.32
943801	AF1-048 C	3.3687	Adder	3.96
943802	AF1-048 E	2.2458	Adder	2.64
944041	AF1-072	1.9012	Adder	2.24

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944911	AF1-156 C	10.4797	Adder	12.33
944912	AF1-156 E	6.9865	Adder	8.22
945351	AF1-200 FTIR	271.4690	Merchant Transmission	271.4690
946661	AF1-330 C	1.7668	Adder	2.08
946662	AF1-330 E	0.3878	Adder	0.46
946671	AF1-331	2.1162	Adder	2.49
957021	AF2-003 C O1	7.4979	50/50	7.4979
957022	AF2-003 E O1	35.1039	50/50	35.1039
957331	AF2-027 C	1.1727	Adder	2.6
957332	AF2-027 E	1.7590	Adder	3.9
958021	AF2-096 C O1	37.1309	50/50	37.1309
958022	AF2-096 E O1	17.5591	50/50	17.5591
959351	AF2-226 C	2.9974	50/50	2.9974
959352	AF2-226 E	4.4961	50/50	4.4961
960281	AF2-319 C	2.9974	50/50	2.9974
960282	AF2-319 E	4.4961	50/50	4.4961
960381	AF2-329	3.0689	Adder	6.81
960581	AF2-349 C	10.1930	Adder	22.63
960582	AF2-349 E	6.7953	Adder	15.08
960721	AF2-363 C O1	2.7732	Adder	6.16
960722	AF2-363 E O1	1.8488	Adder	4.1
960731	AF2-364 C O1	2.8709	Adder	6.37
960732	AF2-364 E O1	1.9139	Adder	4.25
960751	AF2-366 C O1	3.2408	Adder	7.19
960752	AF2-366 E O1	2.1605	Adder	4.8
WEC	WEC	3.8988	Confirmed LTF	3.8988
CALDERWOOD	CALDERWOOD	0.1233	Confirmed LTF	0.1233
CBM-W2	CBM-W2	17.6085	Confirmed LTF	17.6085
NY	NY	1.1895	Confirmed LTF	1.1895
CBM-W1	CBM-W1	53.8305	Confirmed LTF	53.8305
TVA	TVA	1.0290	Confirmed LTF	1.0290
O-066	O-066	14.0515	Confirmed LTF	14.0515
CHEOAH	CHEOAH	0.1341	Confirmed LTF	0.1341
CBM-S1	CBM-S1	3.1013	Confirmed LTF	3.1013
G-007	G-007	2.1726	Confirmed LTF	2.1726
MADISON	MADISON	20.2164	Confirmed LTF	20.2164
MEC	MEC	13.1839	Confirmed LTF	13.1839
GIBSON	GIBSON	0.2550	Confirmed LTF	0.2550
BLUEG	BLUEG	2.3002	Confirmed LTF	2.3002
TRIMBLE	TRIMBLE	0.7763	Confirmed LTF	0.7763
CATAWBA	CATAWBA	0.3238	Confirmed LTF	0.3238

11.6.7 Index 7

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022631	275232	WILTON ;3M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	121.49	121.58	DC	45.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274771	LINCOLN ;2U	3.7664	50/50	3.7664
274772	LINCOLN ;3U	3.7664	50/50	3.7664
274773	LINCOLN ;4U	3.7664	50/50	3.7664
274774	LINCOLN ;5U	3.7664	50/50	3.7664
274775	LINCOLN ;6U	3.7664	50/50	3.7664
274776	LINCOLN ;7U	3.7664	50/50	3.7664
274777	LINCOLN ;8U	3.7664	50/50	3.7664
274830	U3-021 1	6.3035	Adder	7.42
274831	U3-021 2	6.3035	Adder	7.42
274881	PILOT HIL;1E	19.9396	Adder	23.46
274890	CAYUG;1U E	17.0054	Adder	20.01
274891	CAYUG;2U E	17.0054	Adder	20.01
275149	KELLYCK ;1E	19.9396	Adder	23.46
276167	Z1-106 E2	1.3063	Adder	1.54
276168	Z1-106 E1	1.3062	Adder	1.54
276169	Z1-107 E	2.6738	Adder	3.15
276170	Z1-108 E	2.5704	Adder	3.02
290021	O50 E	20.0260	Adder	23.56
290051	GSG-6; E	10.8913	Adder	12.81
290108	LEEDK;1U E	25.1940	Adder	29.64
293061	N-015 E	16.4434	Adder	19.35
293644	O22 E1	10.5913	Adder	12.46
293645	O22 E2	20.5595	Adder	24.19
294392	P-010 E	20.8831	Adder	24.57
910542	X3-005 E	0.7562	Adder	0.89
915011	Y3-013 1	3.8635	Adder	4.55
915021	Y3-013 2	3.8635	Adder	4.55
915031	Y3-013 3	3.8635	Adder	4.55
918052	AA1-018 E OP	16.9837	Adder	19.98
920272	AA2-123 E	2.5262	Adder	2.97
924471	AB2-096	43.7741	Adder	51.5
926311	AC1-109 1	1.9765	Adder	2.33
926321	AC1-109 2	1.9765	Adder	2.33
926331	AC1-110 1	1.9634	Adder	2.31
926341	AC1-110 2	1.9634	Adder	2.31
926351	AC1-111 1	0.7894	Adder	0.93
926361	AC1-111 2	0.7894	Adder	0.93
926371	AC1-111 3	0.7894	Adder	0.93
926381	AC1-111 4	0.7894	Adder	0.93
926391	AC1-111 5	0.7894	Adder	0.93
926401	AC1-111 6	0.7894	Adder	0.93
927451	AC1-142A 1	4.3256	Adder	5.09
927461	AC1-142A 2	4.3256	Adder	5.09
930501	AB1-091 O1	79.3394	Adder	93.34
930741	AB1-122 1O1	75.3017	Adder	88.59
930751	AB1-122 2O1	76.2303	Adder	89.68
933411	AC2-154 C	2.7061	Adder	3.18
933412	AC2-154 E	4.4152	Adder	5.19
933431	AC2-156 C O1	0.9893	Adder	1.16
933432	AC2-156 E O1	1.6142	Adder	1.9
933911	AD1-013 C	1.9232	Adder	2.26
933912	AD1-013 E	3.0721	Adder	3.61

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
933931	AD1-016 C	0.9600	Adder	1.13
933932	AD1-016 E	1.5662	Adder	1.84
934101	AD1-039 1	7.3796	Adder	8.68
934111	AD1-039 2	7.4706	Adder	8.79
934431	AD1-067 C	0.1368	Adder	0.16
934432	AD1-067 E	0.5750	Adder	0.68
934701	AD1-098 C O1	7.1661	Adder	8.43
934702	AD1-098 E O1	5.2320	Adder	6.16
934721	AD1-100 C	24.8523	Adder	29.24
934722	AD1-100 E	115.9774	Adder	136.44
934871	AD1-116 C	0.9891	Adder	1.16
934872	AD1-116 E	1.6138	Adder	1.9
934971	AD1-129 C	0.9344	Adder	1.1
934972	AD1-129 E	0.6230	Adder	0.73
935001	AD1-133 C O1	23.0234	Adder	27.09
935002	AD1-133 E O1	15.3490	Adder	18.06
936291	AD2-038 C O1	2.4301	Adder	2.86
936292	AD2-038 E O1	16.2627	Adder	19.13
936371	AD2-047 C O1	4.8425	Adder	5.7
936372	AD2-047 E O1	23.6427	Adder	27.81
936461	AD2-060	2.8485	Adder	3.35
936511	AD2-066 C O1	8.7640	Adder	10.31
936512	AD2-066 E O1	5.8426	Adder	6.87
937001	AD2-134 C	2.8471	Adder	3.35
937002	AD2-134 E	11.7616	Adder	13.84
937401	AD2-194 1	8.0697	Adder	9.49
937411	AD2-194 2	8.0692	Adder	9.49
938511	AE1-070 1	9.4819	Adder	11.16
938521	AE1-070 2	8.6744	Adder	10.21
938851	AE1-113 C	8.2607	Adder	9.72
938852	AE1-113 E	29.2880	Adder	34.46
939321	AE1-163 C O1	6.1063	Adder	7.18
939322	AE1-163 E O1	37.5102	Adder	44.13
939351	AE1-166 C O1	12.2622	Adder	14.43
939352	AE1-166 E O1	11.3189	Adder	13.32
939401	AE1-172 C O1	6.7946	Adder	7.99
939402	AE1-172 E O1	31.8801	Adder	37.51
940101	AE1-252 C O1	13.6499	Adder	16.06
940102	AE1-252 E O1	9.0999	Adder	10.71
940752	AE2-062 E	0.1351	Adder	0.16
941131	AE2-107 C	7.5761	Adder	8.91
941132	AE2-107 E	5.0507	Adder	5.94
941551	AE2-152 C O1	14.1487	Adder	16.65
941552	AE2-152 E O1	9.4325	Adder	11.1
941561	AE2-153 C O1	5.1247	Adder	6.03
941562	AE2-153 E O1	23.9929	Adder	28.23
941731	AE2-173 O1	3.2665	Adder	3.84
942111	AE2-223 C	2.4140	Adder	2.84
942112	AE2-223 E	16.1551	Adder	19.01
942421	AE2-255 C O1	3.1291	Adder	3.68
942422	AE2-255 E O1	9.3872	Adder	11.04
942651	AE2-281 C O1	0.8723	Adder	1.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942652	AE2-281 E O1	5.3586	Adder	6.3
942991	AE2-321 C	8.4508	Adder	9.94
942992	AE2-321 E	4.1623	Adder	4.9
943121	AE2-341 C	13.2079	Adder	15.54
943122	AE2-341 E	6.4858	Adder	7.63
943381	AF1-009 C	0.6199	Adder	0.73
943382	AF1-009 E	2.4796	Adder	2.92
943591	AF1-030 C O1	8.7834	Adder	10.33
943592	AF1-030 E O1	4.3457	Adder	5.11
943801	AF1-048 C	3.9504	Adder	4.65
943802	AF1-048 E	2.6336	Adder	3.1
944041	AF1-072	2.2259	Adder	2.62
944911	AF1-156 C	13.1029	Adder	15.42
944912	AF1-156 E	8.7353	Adder	10.28
945351	AF1-200 FTIR	322.6289	Merchant Transmission	322.6289
946661	AF1-330 C	2.0715	Adder	2.44
946662	AF1-330 E	0.4547	Adder	0.53
946671	AF1-331	2.4976	Adder	2.94
957021	AF2-003 C O1	3.5751	Adder	7.94
957022	AF2-003 E O1	16.7377	Adder	37.15
957331	AF2-027 C	1.3651	Adder	3.03
957332	AF2-027 E	2.0477	Adder	4.55
958011	AF2-095 C O1	10.2661	Adder	22.79
958012	AF2-095 E O1	4.8311	Adder	10.72
958021	AF2-096 C O1	19.7578	Adder	43.86
958022	AF2-096 E O1	9.3434	Adder	20.74
958481	AF2-142 C	6.2078	Adder	13.78
958482	AF2-142 E	4.1386	Adder	9.19
958491	AF2-143 C	5.9443	Adder	13.19
958492	AF2-143 E	3.9629	Adder	8.8
959341	AF2-225 C	4.1335	Adder	9.18
959342	AF2-225 E	5.7081	Adder	12.67
959351	AF2-226 C	1.3758	Adder	3.05
959352	AF2-226 E	2.0637	Adder	4.58
960281	AF2-319 C	1.3758	Adder	3.05
960282	AF2-319 E	2.0637	Adder	4.58
960381	AF2-329	3.6323	Adder	8.06
960581	AF2-349 C	11.9583	Adder	26.54
960582	AF2-349 E	7.9722	Adder	17.7
960591	AF2-350 C O1	4.5291	Adder	10.05
960592	AF2-350 E O1	3.0194	Adder	6.7
960601	AF2-351 C O1	0.6039	Adder	1.34
960602	AF2-351 E O1	0.9058	Adder	2.01
960721	AF2-363 C O1	3.2702	Adder	7.26
960722	AF2-363 E O1	2.1801	Adder	4.84
960731	AF2-364 C O1	3.3662	Adder	7.47
960732	AF2-364 E O1	2.2441	Adder	4.98
960751	AF2-366 C O1	3.8221	Adder	8.48
960752	AF2-366 E O1	2.5480	Adder	5.66
961501	AF2-441 C O1	5.4914	Adder	12.19
961502	AF2-441 E O1	8.2371	Adder	18.28
WEC	WEC	4.5603	Confirmed LTF	4.5603

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CALDERWOOD	CALDERWOOD	0.0631	Confirmed LTF	0.0631
CBM-W2	CBM-W2	25.0942	Confirmed LTF	25.0942
NY	NY	1.4306	Confirmed LTF	1.4306
CBM-W1	CBM-W1	78.1875	Confirmed LTF	78.1875
TVA	TVA	1.6184	Confirmed LTF	1.6184
O-066	O-066	16.9546	Confirmed LTF	16.9546
CHEOAH	CHEOAH	0.0771	Confirmed LTF	0.0771
CBM-S1	CBM-S1	6.0407	Confirmed LTF	6.0407
G-007	G-007	2.6218	Confirmed LTF	2.6218
MADISON	MADISON	24.3210	Confirmed LTF	24.3210
MEC	MEC	16.0171	Confirmed LTF	16.0171
BLUEG	BLUEG	2.3071	Confirmed LTF	2.3071
TRIMBLE	TRIMBLE	0.7969	Confirmed LTF	0.7969
CATAWBA	CATAWBA	0.3619	Confirmed LTF	0.3619

11.6.8 Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
96022619	275233	WILTON ;4M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	124.03	124.12	DC	46.05

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274771	LINCOLN ;2U	3.8683	50/50	3.8683
274772	LINCOLN ;3U	3.8683	50/50	3.8683
274773	LINCOLN ;4U	3.8683	50/50	3.8683
274774	LINCOLN ;5U	3.8683	50/50	3.8683
274775	LINCOLN ;6U	3.8683	50/50	3.8683
274776	LINCOLN ;7U	3.8683	50/50	3.8683
274777	LINCOLN ;8U	3.8683	50/50	3.8683
274830	U3-021 1	6.4380	Adder	7.57
274831	U3-021 2	6.4380	Adder	7.57
274881	PILOT HIL;1E	20.3561	Adder	23.95
274890	CAYUG;1U E	17.3451	Adder	20.41
274891	CAYUG;2U E	17.3451	Adder	20.41
275149	KELLYCK ;1E	20.3561	Adder	23.95
276167	Z1-106 E2	1.3342	Adder	1.57
276168	Z1-106 E1	1.3341	Adder	1.57
276169	Z1-107 E	2.7309	Adder	3.21
276170	Z1-108 E	2.6251	Adder	3.09
290021	O50 E	20.4530	Adder	24.06
290051	GSG-6; E	11.1236	Adder	13.09
290108	LEEDK;1U E	25.7295	Adder	30.27
293061	N-015 E	16.7861	Adder	19.75
293644	O22 E1	10.8153	Adder	12.72
293645	O22 E2	20.9944	Adder	24.7
294392	P-010 E	21.3184	Adder	25.08
910542	X3-005 E	0.7727	Adder	0.91

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
915011	Y3-013 1	3.9461	Adder	4.64
915021	Y3-013 2	3.9461	Adder	4.64
915031	Y3-013 3	3.9461	Adder	4.64
918052	AA1-018 E OP	17.3542	Adder	20.42
920272	AA2-123 E	2.5799	Adder	3.04
924471	AB2-096	44.7083	Adder	52.6
926311	AC1-109 1	2.0186	Adder	2.37
926321	AC1-109 2	2.0186	Adder	2.37
926331	AC1-110 1	2.0052	Adder	2.36
926341	AC1-110 2	2.0052	Adder	2.36
926351	AC1-111 1	0.8063	Adder	0.95
926361	AC1-111 2	0.8063	Adder	0.95
926371	AC1-111 3	0.8063	Adder	0.95
926381	AC1-111 4	0.8063	Adder	0.95
926391	AC1-111 5	0.8063	Adder	0.95
926401	AC1-111 6	0.8063	Adder	0.95
927451	AC1-142A 1	4.4186	Adder	5.2
927461	AC1-142A 2	4.4186	Adder	5.2
930501	AB1-091 O1	80.9897	Adder	95.28
930741	AB1-122 1O1	76.8999	Adder	90.47
930751	AB1-122 2O1	77.8579	Adder	91.6
933411	AC2-154 C	2.7626	Adder	3.25
933412	AC2-154 E	4.5074	Adder	5.3
933431	AC2-156 C O1	1.0103	Adder	1.19
933432	AC2-156 E O1	1.6485	Adder	1.94
933911	AD1-013 C	1.9642	Adder	2.31
933912	AD1-013 E	3.1375	Adder	3.69
933931	AD1-016 C	0.9804	Adder	1.15
933932	AD1-016 E	1.5996	Adder	1.88
934101	AD1-039 1	7.5362	Adder	8.87
934111	AD1-039 2	7.6301	Adder	8.98
934431	AD1-067 C	0.1397	Adder	0.16
934432	AD1-067 E	0.5873	Adder	0.69
934701	AD1-098 C O1	7.3184	Adder	8.61
934702	AD1-098 E O1	5.3432	Adder	6.29
934721	AD1-100 C	25.3457	Adder	29.82
934722	AD1-100 E	118.2800	Adder	139.15
934871	AD1-116 C	1.0107	Adder	1.19
934872	AD1-116 E	1.6490	Adder	1.94
934971	AD1-129 C	0.9544	Adder	1.12
934972	AD1-129 E	0.6363	Adder	0.75
935001	AD1-133 C O1	23.5023	Adder	27.65
935002	AD1-133 E O1	15.6682	Adder	18.43
936291	AD2-038 C O1	2.4826	Adder	2.92
936292	AD2-038 E O1	16.6143	Adder	19.55
936371	AD2-047 C O1	4.9436	Adder	5.82
936372	AD2-047 E O1	24.1366	Adder	28.4
936461	AD2-060	2.9080	Adder	3.42
936511	AD2-066 C O1	8.9497	Adder	10.53
936512	AD2-066 E O1	5.9665	Adder	7.02
937001	AD2-134 C	2.9079	Adder	3.42
937002	AD2-134 E	12.0124	Adder	14.13

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937401	AD2-194 1	8.2426	Adder	9.7
937411	AD2-194 2	8.2421	Adder	9.7
938511	AE1-070 1	9.6851	Adder	11.39
938521	AE1-070 2	8.8603	Adder	10.42
938851	AE1-113 C	8.4369	Adder	9.93
938852	AE1-113 E	29.9126	Adder	35.19
939321	AE1-163 C O1	6.2383	Adder	7.34
939322	AE1-163 E O1	38.3212	Adder	45.08
939351	AE1-166 C O1	12.5095	Adder	14.72
939352	AE1-166 E O1	11.5472	Adder	13.58
939401	AE1-172 C O1	6.9294	Adder	8.15
939402	AE1-172 E O1	32.5126	Adder	38.25
940101	AE1-252 C O1	13.9207	Adder	16.38
940102	AE1-252 E O1	9.2805	Adder	10.92
940752	AE2-062 E	0.1379	Adder	0.16
941131	AE2-107 C	7.7372	Adder	9.1
941132	AE2-107 E	5.1581	Adder	6.07
941551	AE2-152 C O1	14.4340	Adder	16.98
941552	AE2-152 E O1	9.6227	Adder	11.32
941561	AE2-153 C O1	5.2303	Adder	6.15
941562	AE2-153 E O1	24.4874	Adder	28.81
941731	AE2-173 O1	3.3326	Adder	3.92
942111	AE2-223 C	2.4629	Adder	2.9
942112	AE2-223 E	16.4823	Adder	19.39
942421	AE2-255 C O1	3.1958	Adder	3.76
942422	AE2-255 E O1	9.5874	Adder	11.28
942651	AE2-281 C O1	0.8912	Adder	1.05
942652	AE2-281 E O1	5.4745	Adder	6.44
942991	AE2-321 C	8.6313	Adder	10.15
942992	AE2-321 E	4.2513	Adder	5.0
943121	AE2-341 C	13.4892	Adder	15.87
943122	AE2-341 E	6.6239	Adder	7.79
943381	AF1-009 C	0.6331	Adder	0.74
943382	AF1-009 E	2.5323	Adder	2.98
943591	AF1-030 C O1	8.9705	Adder	10.55
943592	AF1-030 E O1	4.4383	Adder	5.22
943801	AF1-048 C	4.0348	Adder	4.75
943802	AF1-048 E	2.6899	Adder	3.16
944041	AF1-072	2.2734	Adder	2.67
944911	AF1-156 C	13.3730	Adder	15.73
944912	AF1-156 E	8.9153	Adder	10.49
945351	AF1-200 FTIR	329.4462	Merchant Transmission	329.4462
946661	AF1-330 C	2.1155	Adder	2.49
946662	AF1-330 E	0.4644	Adder	0.55
946671	AF1-331	2.5508	Adder	3.0
957021	AF2-003 C O1	3.6510	Adder	8.1
957022	AF2-003 E O1	17.0932	Adder	37.94
957331	AF2-027 C	1.3943	Adder	3.1
957332	AF2-027 E	2.0914	Adder	4.64
958011	AF2-095 C O1	10.4805	Adder	23.26
958012	AF2-095 E O1	4.9320	Adder	10.95
958021	AF2-096 C O1	20.1649	Adder	44.76

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958022	AF2-096 E O1	9.5360	Adder	21.17
958481	AF2-142 C	6.3433	Adder	14.08
958482	AF2-142 E	4.2288	Adder	9.39
958491	AF2-143 C	6.0728	Adder	13.48
958492	AF2-143 E	4.0486	Adder	8.99
959341	AF2-225 C	4.2172	Adder	9.36
959342	AF2-225 E	5.8238	Adder	12.93
959351	AF2-226 C	1.4049	Adder	3.12
959352	AF2-226 E	2.1074	Adder	4.68
960281	AF2-319 C	1.4049	Adder	3.12
960282	AF2-319 E	2.1074	Adder	4.68
960381	AF2-329	3.7097	Adder	8.23
960581	AF2-349 C	12.2138	Adder	27.11
960582	AF2-349 E	8.1425	Adder	18.07
960591	AF2-350 C O1	4.6238	Adder	10.26
960592	AF2-350 E O1	3.0825	Adder	6.84
960601	AF2-351 C O1	0.6165	Adder	1.37
960602	AF2-351 E O1	0.9248	Adder	2.05
960721	AF2-363 C O1	3.3397	Adder	7.41
960722	AF2-363 E O1	2.2265	Adder	4.94
960731	AF2-364 C O1	3.4379	Adder	7.63
960732	AF2-364 E O1	2.2919	Adder	5.09
960751	AF2-366 C O1	3.9034	Adder	8.66
960752	AF2-366 E O1	2.6023	Adder	5.78
961501	AF2-441 C O1	5.6075	Adder	12.45
961502	AF2-441 E O1	8.4112	Adder	18.67
WEC	WEC	4.6573	Confirmed LTF	4.6573
CALDERWOOD	CALDERWOOD	0.0656	Confirmed LTF	0.0656
CBM-W2	CBM-W2	25.6101	Confirmed LTF	25.6101
NY	NY	1.4616	Confirmed LTF	1.4616
CBM-W1	CBM-W1	79.8388	Confirmed LTF	79.8388
TVA	TVA	1.6492	Confirmed LTF	1.6492
O-066	O-066	17.3242	Confirmed LTF	17.3242
CHEOAH	CHEOAH	0.0801	Confirmed LTF	0.0801
CBM-S1	CBM-S1	6.1514	Confirmed LTF	6.1514
G-007	G-007	2.6780	Confirmed LTF	2.6780
MADISON	MADISON	24.8371	Confirmed LTF	24.8371
MEC	MEC	16.3540	Confirmed LTF	16.3540
BLUEG	BLUEG	2.3592	Confirmed LTF	2.3592
TRIMBLE	TRIMBLE	0.8147	Confirmed LTF	0.8147
CATAWBA	CATAWBA	0.3703	Confirmed LTF	0.3703

11.6.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96023932	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P7_345-L19601_B-S+_345-L9801_R-S_FSA	tower	1195.0	127.57	132.99	DC	64.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274677	POWERTON ;5U	28.3468	50/50	28.3468
274678	POWERTON ;6U	28.4277	50/50	28.4277
274861	TOP CROP ;1U	0.7514	50/50	0.7514
274862	TOP CROP ;2U	1.4586	50/50	1.4586
274879	MINONK ;1U	0.8015	50/50	0.8015
290021	O50 E	18.5856	50/50	18.5856
293644	O22 E1	17.4249	50/50	17.4249
293645	O22 E2	33.8247	50/50	33.8247
293771	O-035 E	3.9436	Adder	4.64
294401	BSHIL;1U E	5.9160	Adder	6.96
294410	BSHIL;2U E	5.9160	Adder	6.96
918051	AA1-018 C OP	0.7203	50/50	0.7203
918052	AA1-018 E OP	27.9466	50/50	27.9466
925581	AC1-033 C	0.9687	Adder	1.14
925582	AC1-033 E	6.4854	Adder	7.63
926821	AC1-168 C O1	0.5478	Adder	0.64
926822	AC1-168 E O1	3.6760	Adder	4.32
926841	AC1-171 C O1	1.3961	50/50	1.3961
926842	AC1-171 E O1	9.3252	50/50	9.3252
927201	AC1-214 C O1	1.2657	Adder	1.49
927202	AC1-214 E O1	4.0235	Adder	4.73
930741	AB1-122 1O1	524.6358	50/50	524.6358
934051	AD1-031 C O1	1.9659	Adder	2.31
934052	AD1-031 E O1	3.2076	Adder	3.77
934101	AD1-039 1	51.4143	50/50	51.4143
934871	AD1-116 C	1.6275	50/50	1.6275
934872	AD1-116 E	2.6555	50/50	2.6555
936291	AD2-038 C O1	4.1775	50/50	4.1775
936292	AD2-038 E O1	27.9570	50/50	27.9570
938851	AE1-113 C	7.6666	50/50	7.6666
938852	AE1-113 E	27.1814	50/50	27.1814
939321	AE1-163 C O1	10.4973	50/50	10.4973
939322	AE1-163 E O1	64.4832	50/50	64.4832
942421	AE2-255 C O1	2.9040	50/50	2.9040
942422	AE2-255 E O1	8.7120	50/50	8.7120
942651	AE2-281 C O1	1.4996	50/50	1.4996
942652	AE2-281 E O1	9.2119	50/50	9.2119
946541	AF1-318 C O1	2.9781	Adder	3.5
946542	AF1-318 E O1	13.9445	Adder	16.41
951631	J456 C	1.9539	PJM External (MISO)	1.9539
951632	J456 E	10.5711	PJM External (MISO)	10.5711
953951	J859	10.7522	PJM External (MISO)	10.7522
954702	J844 E	13.2756	PJM External (MISO)	13.2756
954981	J974 C	7.1109	PJM External (MISO)	7.1109
954982	J974 E	38.4716	PJM External (MISO)	38.4716
955711	J1055 C	2.0719	PJM External (MISO)	2.0719
955712	J1055 E	11.2093	PJM External (MISO)	11.2093
957021	AF2-003 C O1	11.3903	50/50	11.3903
957022	AF2-003 E O1	53.3274	50/50	53.3274
957751	AF2-069 C	0.0777	Adder	0.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957752	AF2-069 E	0.2507	Adder	0.56
957761	AF2-070 C	0.1094	Adder	0.24
957762	AF2-070 E	0.5314	Adder	1.18
958341	AF2-128 C O1	0.4028	Adder	0.89
958342	AF2-128 E O1	1.8858	Adder	4.19
958481	AF2-142 C	19.2735	50/50	19.2735
958482	AF2-142 E	12.8490	50/50	12.8490
958491	AF2-143 C	19.2807	50/50	19.2807
958492	AF2-143 E	12.8538	50/50	12.8538
959351	AF2-226 C	4.2708	50/50	4.2708
959352	AF2-226 E	6.4062	50/50	6.4062
960281	AF2-319 C	4.2708	50/50	4.2708
960282	AF2-319 E	6.4062	50/50	6.4062
990901	L-005 E	9.9164	Adder	11.67
LGEE	LGEE	0.1506	Confirmed LTF	0.1506
CPL	CPL	0.2381	Confirmed LTF	0.2381
CBM-W2	CBM-W2	16.4619	Confirmed LTF	16.4619
NY	NY	0.0415	Confirmed LTF	0.0415
CBM-W1	CBM-W1	15.1371	Confirmed LTF	15.1371
TVA	TVA	1.7472	Confirmed LTF	1.7472
O-066	O-066	0.3965	Confirmed LTF	0.3965
CBM-S2	CBM-S2	2.8149	Confirmed LTF	2.8149
CBM-S1	CBM-S1	9.0738	Confirmed LTF	9.0738
G-007	G-007	0.0603	Confirmed LTF	0.0603
MADISON	MADISON	6.4411	Confirmed LTF	6.4411
MEC	MEC	6.8851	Confirmed LTF	6.8851

11.6.10 Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
95164513	956820	J1180 TAP	AMIL	247712	OSSULLIVAN	AEP	1	AEP_P4_#3128_05EUGENE 345_A2	breaker	1466.0	149.81	149.82	DC	20.12

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274650	KINCAID ;1U	16.4201	50/50	16.4201
274651	KINCAID ;2U	16.4134	50/50	16.4134
274830	U3-021 1	2.7006	Adder	3.18
274831	U3-021 2	2.7006	Adder	3.18
274853	TWINGROVE;U1	0.8780	50/50	0.8780
274854	TWINGROVE;U2	0.8780	50/50	0.8780
274859	EASYSR;U1 E	5.8205	Adder	6.85
274860	EASYSR;U2 E	5.8205	Adder	6.85
274880	GENERATOR;	1.1644	50/50	1.1644
274882	W4-005 E	45.2070	50/50	45.2070
274890	CAYUG;1U E	8.8046	Adder	10.36
274891	CAYUG;2U E	8.8046	Adder	10.36
276153	W2-048 E	9.4531	50/50	9.4531

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
290021	O50 E	9.3106	Adder	10.95
290051	GSG-6; E	4.7900	Adder	5.64
290108	LEEDK;1U E	10.5689	Adder	12.43
290261	S-027 E	20.3607	50/50	20.3607
290265	S-028 E	20.3607	50/50	20.3607
293516	O-009 E1	5.4128	Adder	6.37
293517	O-009 E2	2.7493	Adder	3.23
293518	O-009 E3	3.0277	Adder	3.56
293644	O22 E1	4.2351	Adder	4.98
293645	O22 E2	8.2211	Adder	9.67
293715	O-029 E	5.7868	Adder	6.81
293716	O-029 E	3.1728	Adder	3.73
293717	O-029 E	2.9162	Adder	3.43
293771	O-035 E	4.3577	Adder	5.13
294401	BSHIL;1U E	5.9235	Adder	6.97
294410	BSHIL;2U E	5.9235	Adder	6.97
294763	P-046 E	4.6158	Adder	5.43
909052	X2-022 E	28.4350	50/50	28.4350
917501	Z2-087 C	0.4565	50/50	0.4565
917502	Z2-087 E	17.7115	50/50	17.7115
918052	AA1-018 E OP	6.8407	Adder	8.05
919581	AA2-030	9.9554	Adder	11.71
920272	AA2-123 E	1.0469	Adder	1.23
924041	AB2-047 C O1	3.3082	50/50	3.3082
924042	AB2-047 E O1	22.1393	50/50	22.1393
924261	AB2-070 C O1	3.8212	50/50	3.8212
924262	AB2-070 E O1	24.2207	50/50	24.2207
924471	AB2-096	18.7544	Adder	22.06
925581	AC1-033 C	0.9699	Adder	1.14
925582	AC1-033 E	6.4929	Adder	7.64
925771	AC1-053 C	3.8568	50/50	3.8568
925772	AC1-053 E	25.8112	50/50	25.8112
926431	AC1-114	1.1133	Adder	1.31
926821	AC1-168 C O1	0.7021	Adder	0.83
926822	AC1-168 E O1	4.7116	Adder	5.54
926841	AC1-171 C O1	1.0395	50/50	1.0395
926842	AC1-171 E O1	6.9433	50/50	6.9433
927201	AC1-214 C O1	1.3986	Adder	1.65
927202	AC1-214 E O1	4.4460	Adder	5.23
927511	AC1-113 1	0.5567	Adder	0.65
927521	AC1-113 2	0.5567	Adder	0.65
930481	AB1-089	30.3080	Adder	35.66
930741	AB1-122 1O1	30.2194	Adder	35.55
932881	AC2-115 1	1.1133	Adder	1.31
932891	AC2-115 2	1.1133	Adder	1.31
932921	AC2-116	0.3897	Adder	0.46
933911	AD1-013 C	0.8324	Adder	0.98
933912	AD1-013 E	1.3297	Adder	1.56
933931	AD1-016 C	0.3978	Adder	0.47
933932	AD1-016 E	0.6491	Adder	0.76
934051	AD1-031 C O1	1.9693	Adder	2.32
934052	AD1-031 E O1	3.2131	Adder	3.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934101	AD1-039 1	2.9615	Adder	3.48
934431	AD1-067 C	0.0601	Adder	0.07
934432	AD1-067 E	0.2529	Adder	0.3
934651	AD1-096 C	0.4384	Adder	0.52
934652	AD1-096 E	0.7153	Adder	0.84
934701	AD1-098 C O1	3.1831	Adder	3.74
934702	AD1-098 E O1	2.3240	Adder	2.73
934871	AD1-116 C	0.3984	Adder	0.47
934872	AD1-116 E	0.6500	Adder	0.76
934971	AD1-129 C	0.4056	Adder	0.48
934972	AD1-129 E	0.2704	Adder	0.32
935001	AD1-133 C O1	12.2446	Adder	14.41
935002	AD1-133 E O1	8.1631	Adder	9.6
935141	AD1-148	7.4113	50/50	7.4113
936291	AD2-038 C O1	1.1607	Adder	1.37
936292	AD2-038 E O1	7.7681	Adder	9.14
936511	AD2-066 C O1	4.0625	Adder	4.78
936512	AD2-066 E O1	2.7083	Adder	3.19
936771	AD2-100 C	22.4645	50/50	22.4645
936772	AD2-100 E	14.9764	50/50	14.9764
936791	AD2-102 C	6.7901	Adder	7.99
936792	AD2-102 E	4.5268	Adder	5.33
936971	AD2-131 C	1.4798	50/50	1.4798
936972	AD2-131 E	7.4347	50/50	7.4347
937001	AD2-134 C	1.2522	Adder	1.47
937002	AD2-134 E	5.1728	Adder	6.09
937211	AD2-159 C	4.8853	50/50	4.8853
937212	AD2-159 E	22.8722	50/50	22.8722
937311	AD2-172 C	1.2117	Adder	1.43
937312	AD2-172 E	1.6732	Adder	1.97
937531	AD2-214 C	2.7588	Adder	3.25
937532	AD2-214 E	1.8392	Adder	2.16
938851	AE1-113 C	3.8406	Adder	4.52
938852	AE1-113 E	13.6167	Adder	16.02
938861	AE1-114 C O1	2.0247	Adder	2.38
938862	AE1-114 E O1	6.9079	Adder	8.13
939051	AE1-134 1	0.7736	Adder	0.91
939061	AE1-134 2	0.7736	Adder	0.91
939321	AE1-163 C O1	2.9167	Adder	3.43
939322	AE1-163 E O1	17.9172	Adder	21.08
939401	AE1-172 C O1	2.9603	Adder	3.48
939402	AE1-172 E O1	13.8898	Adder	16.34
939741	AE1-205 C O1	8.5504	50/50	8.5504
939742	AE1-205 E O1	11.8076	50/50	11.8076
940101	AE1-252 C O1	5.9471	Adder	7.0
940102	AE1-252 E O1	3.9647	Adder	4.66
940501	AE2-035 C	1.2117	Adder	1.43
940502	AE2-035 E	1.6732	Adder	1.97
941131	AE2-107 C	3.1503	Adder	3.71
941132	AE2-107 E	2.1002	Adder	2.47
941343	AE2-130 BAT	31.8120	50/50	31.8120
941731	AE2-173 O1	5.0895	50/50	5.0895

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942111	AE2-223 C	1.9849	50/50	1.9849
942112	AE2-223 E	13.2836	50/50	13.2836
942421	AE2-255 C O1	1.4548	Adder	1.71
942422	AE2-255 E O1	4.3643	Adder	5.13
942481	AE2-261 C	31.0577	50/50	31.0577
942482	AE2-261 E	20.7052	50/50	20.7052
942602	AE2-276 BAT	14.0105	50/50	14.0105
942651	AE2-281 C O1	0.4167	Adder	0.49
942652	AE2-281 E O1	2.5596	Adder	3.01
942991	AE2-321 C	3.5189	Adder	4.14
942992	AE2-321 E	1.7332	Adder	2.04
943381	AF1-009 C	0.2754	Adder	0.32
943382	AF1-009 E	1.1014	Adder	1.3
943401	AF1-011 C	0.7389	Adder	0.87
943402	AF1-011 E	1.2404	Adder	1.46
943411	AF1-012 C	6.4046	Adder	7.53
943412	AF1-012 E	4.2697	Adder	5.02
943801	AF1-048 C	1.6450	Adder	1.94
943802	AF1-048 E	1.0966	Adder	1.29
943921	AF1-060	0.5966	Adder	0.7
944202	AF1-088 FTWR	280.2100	50/50	280.2100
944221	AF1-090 C O1	6.8094	50/50	6.8094
944222	AF1-090 E O1	31.8806	50/50	31.8806
945871	AF1-252 O1	12.0713	50/50	12.0713
945881	AF1-253 O1	8.3570	50/50	8.3570
946151	AF1-280 C O1	8.4217	Adder	9.91
946152	AF1-280 E O1	3.8727	Adder	4.56
946161	AF1-281 C	0.1844	Adder	0.22
946162	AF1-281 E	1.0450	Adder	1.23
946321	AF1-296 C O1	2.6152	Adder	3.08
946322	AF1-296 E O1	12.2439	Adder	14.4
946501	AF1-314 C	2.1528	Adder	2.53
946502	AF1-314 E	10.0791	Adder	11.86
946531	AF1-317 C O1	1.2199	Adder	1.44
946541	AF1-318 C O1	3.8549	Adder	4.54
946542	AF1-318 E O1	18.0499	Adder	21.24
946661	AF1-330 C	0.8584	Adder	1.01
946662	AF1-330 E	0.1884	Adder	0.22
946671	AF1-331	1.0810	Adder	1.27
955131	J991	25.9737	PJM External (MISO)	25.9737
957021	AF2-003 C O1	1.5955	Adder	3.54
957022	AF2-003 E O1	7.4696	Adder	16.58
957381	AF2-032 C	2.3285	50/50	2.3285
957382	AF2-032 E	1.0957	50/50	1.0957
957471	AF2-041 C	5.3746	Adder	11.93
957472	AF2-041 E	3.5831	Adder	7.95
957751	AF2-069 C	0.0858	Adder	0.19
957752	AF2-069 E	0.2770	Adder	0.61
957761	AF2-070 C	0.1209	Adder	0.27
957762	AF2-070 E	0.5872	Adder	1.3
958341	AF2-128 C O1	0.5406	Adder	1.2
958342	AF2-128 E O1	2.5309	Adder	5.62

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958481	AF2-142 C	2.5004	Adder	5.55
958482	AF2-142 E	1.6669	Adder	3.7
958491	AF2-143 C	2.8394	Adder	6.3
958492	AF2-143 E	1.8929	Adder	4.2
958911	AF2-182	5.8644	Adder	13.02
958921	AF2-183 C	1.0426	Adder	2.31
958922	AF2-183 E	1.5638	Adder	3.47
959081	AF2-199 C	1.7915	Adder	3.98
959082	AF2-199 E	1.1944	Adder	2.65
959091	AF2-200 C	3.5831	Adder	7.95
959092	AF2-200 E	2.3887	Adder	5.3
959101	AF2-201 C O1	1.5718	Adder	3.49
959102	AF2-201 E O1	4.5136	Adder	10.02
959341	AF2-225 C	6.4128	50/50	6.4128
959342	AF2-225 E	8.8557	50/50	8.8557
959351	AF2-226 C	0.5502	Adder	1.22
959352	AF2-226 E	0.8252	Adder	1.83
959611	AF2-252 C	2.5708	50/50	2.5708
959612	AF2-252 E	3.8562	50/50	3.8562
959761	AF2-267 C O1	1.1351	Adder	2.52
959762	AF2-267 E O1	5.3142	Adder	11.8
960141	AF2-305	1.3521	50/50	1.3521
960261	AF2-317	2.3716	50/50	2.3716
960281	AF2-319 C	0.5502	Adder	1.22
960282	AF2-319 E	0.8252	Adder	1.83
960551	AF2-346 C	1.4548	Adder	3.23
960552	AF2-346 E	0.9698	Adder	2.15
960581	AF2-349 C	5.0843	Adder	11.29
960582	AF2-349 E	3.3896	Adder	7.52
960611	AF2-352 C	2.5708	50/50	2.5708
960612	AF2-352 E	3.8562	50/50	3.8562
960623	AF2-353 BAT	31.8120	50/50	31.8120
960721	AF2-363 C O1	1.3562	Adder	3.01
960722	AF2-363 E O1	0.9042	Adder	2.01
960751	AF2-366 C O1	1.5712	Adder	3.49
960752	AF2-366 E O1	1.0474	Adder	2.32
961011	AF2-392 C O1	1.1727	Adder	2.6
961012	AF2-392 E O1	5.4902	Adder	12.19
961021	AF2-393 O1	1.9989	Adder	4.44
961031	AF2-394 O1	1.3326	Adder	2.96
990901	L-005 E	9.1810	Adder	10.8
WEC	WEC	2.0201	Confirmed LTF	2.0201
CPL	CPL	0.5953	Confirmed LTF	0.5953
CBM-W2	CBM-W2	70.4668	Confirmed LTF	70.4668
NY	NY	0.4468	Confirmed LTF	0.4468
CBM-W1	CBM-W1	61.5742	Confirmed LTF	61.5742
TVA	TVA	7.7938	Confirmed LTF	7.7938
O-066	O-066	4.9930	Confirmed LTF	4.9930
CBM-S2	CBM-S2	8.6238	Confirmed LTF	8.6238
CBM-S1	CBM-S1	36.9257	Confirmed LTF	36.9257
G-007	G-007	0.7706	Confirmed LTF	0.7706
MADISON	MADISON	25.0367	Confirmed LTF	25.0367

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MEC	MEC	15.7613	Confirmed LTF	15.7613
BLUEG	BLUEG	2.7151	Confirmed LTF	2.7151
TRIMBLE	TRIMBLE	1.0039	Confirmed LTF	1.0039

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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
95164595	960680	AF2-359 TAP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT3-4__	breaker	971.0	105.78	106.4	DC	29.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274806	UNIV PK N;2U	1.8438	50/50	1.8438
274808	UNIV PK N;4U	1.8438	50/50	1.8438
274809	UNIV PK N;5U	1.8438	50/50	1.8438
274811	UNIV PK N;7U	1.8438	50/50	1.8438
274812	UNIV PK N;8U	1.8438	50/50	1.8438
274814	UNIV PK N;0U	1.8438	50/50	1.8438
274815	UNIV PK N;XU	1.8438	50/50	1.8438
274830	U3-021 1	4.2437	Adder	4.99
274831	U3-021 2	4.2437	Adder	4.99
274881	PILOT HIL;1E	12.8008	Adder	15.06
275149	KELLYCK ;1E	12.8008	Adder	15.06
276167	Z1-106 E2	0.8815	Adder	1.04
276168	Z1-106 E1	0.8815	Adder	1.04
276169	Z1-107 E	1.8726	Adder	2.2
276170	Z1-108 E	1.7357	Adder	2.04
290021	O50 E	13.4014	Adder	15.77
290051	GSG-6; E	7.3075	Adder	8.6
290108	LEEDK;1U E	16.9235	Adder	19.91
293061	N-015 E	10.8589	Adder	12.78
293644	O22 E1	6.7411	Adder	7.93
293645	O22 E2	13.0857	Adder	15.39
294392	P-010 E	13.7908	Adder	16.22
915011	Y3-013 1	2.6176	Adder	3.08
915021	Y3-013 2	2.6176	Adder	3.08
915031	Y3-013 3	2.6176	Adder	3.08
918052	AA1-018 E OP	12.3182	Adder	14.49
920272	AA2-123 E	1.7022	Adder	2.0
924471	AB2-096	29.4703	Adder	34.67
926311	AC1-109 1	1.3324	Adder	1.57
926321	AC1-109 2	1.3324	Adder	1.57
926331	AC1-110 1	1.3249	Adder	1.56
926341	AC1-110 2	1.3249	Adder	1.56
926351	AC1-111 1	0.5330	Adder	0.63
926361	AC1-111 2	0.5330	Adder	0.63
926371	AC1-111 3	0.5330	Adder	0.63

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926381	AC1-111 4	0.5330	Adder	0.63
926391	AC1-111 5	0.5330	Adder	0.63
926401	AC1-111 6	0.5330	Adder	0.63
926431	AC1-114	1.6527	Adder	1.94
927451	AC1-142A 1	2.9727	Adder	3.5
927461	AC1-142A 2	2.9713	Adder	3.5
927511	AC1-113 1	0.8264	Adder	0.97
927521	AC1-113 2	0.8264	Adder	0.97
930481	AB1-089	45.6841	Adder	53.75
930501	AB1-091 O1	49.2044	Adder	57.89
930741	AB1-122 1O1	49.9503	Adder	58.77
930751	AB1-122 2O1	51.4018	Adder	60.47
932881	AC2-115 1	1.6527	Adder	1.94
932891	AC2-115 2	1.6527	Adder	1.94
932921	AC2-116	0.5785	Adder	0.68
932931	AC2-117	8.9559	Adder	10.54
933411	AC2-154 C	1.7374	Adder	2.04
933412	AC2-154 E	2.8347	Adder	3.33
933431	AC2-156 C O1	0.6658	Adder	0.78
933432	AC2-156 E O1	1.0864	Adder	1.28
933911	AD1-013 C	1.2909	Adder	1.52
933912	AD1-013 E	2.0621	Adder	2.43
933931	AD1-016 C	0.6468	Adder	0.76
933932	AD1-016 E	1.0554	Adder	1.24
934101	AD1-039 1	4.8951	Adder	5.76
934111	AD1-039 2	5.0374	Adder	5.93
934431	AD1-067 C	0.0918	Adder	0.11
934432	AD1-067 E	0.3858	Adder	0.45
934651	AD1-096 C	0.6185	Adder	0.73
934652	AD1-096 E	1.0091	Adder	1.19
934701	AD1-098 C O1	4.8064	Adder	5.65
934702	AD1-098 E O1	3.5092	Adder	4.13
934721	AD1-100 C	13.3811	Adder	15.74
934722	AD1-100 E	62.4453	Adder	73.47
934871	AD1-116 C	0.7174	Adder	0.84
934872	AD1-116 E	1.1705	Adder	1.38
934971	AD1-129 C	0.6287	Adder	0.74
934972	AD1-129 E	0.4191	Adder	0.49
936291	AD2-038 C O1	1.6923	Adder	1.99
936292	AD2-038 E O1	11.3254	Adder	13.32
936371	AD2-047 C O1	3.1091	Adder	3.66
936372	AD2-047 E O1	15.1795	Adder	17.86
936461	AD2-060	1.8289	Adder	2.15
936511	AD2-066 C O1	5.8799	Adder	6.92
936512	AD2-066 E O1	3.9199	Adder	4.61
936791	AD2-102 C	9.8165	Adder	11.55
936792	AD2-102 E	6.5443	Adder	7.7
937001	AD2-134 C	1.9103	Adder	2.25
937002	AD2-134 E	7.8914	Adder	9.28
937401	AD2-194 1	5.4743	Adder	6.44
937411	AD2-194 2	5.4784	Adder	6.45
938511	AE1-070 1	6.4323	Adder	7.57

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938521	AE1-070 2	5.8893	Adder	6.93
938851	AE1-113 C	5.5281	Adder	6.5
938852	AE1-113 E	19.5996	Adder	23.06
939321	AE1-163 C O1	4.2525	Adder	5.0
939322	AE1-163 E O1	26.1223	Adder	30.73
939351	AE1-166 C O1	7.1186	Adder	8.37
939352	AE1-166 E O1	6.5710	Adder	7.73
940752	AE2-062 E	0.0901	Adder	0.11
941131	AE2-107 C	5.0908	Adder	5.99
941132	AE2-107 E	3.3939	Adder	3.99
941551	AE2-152 C O1	8.2138	Adder	9.66
941552	AE2-152 E O1	5.4759	Adder	6.44
941561	AE2-153 C O1	3.2939	Adder	3.88
941562	AE2-153 E O1	15.4214	Adder	18.14
942421	AE2-255 C O1	2.0940	Adder	2.46
942422	AE2-255 E O1	6.2819	Adder	7.39
942651	AE2-281 C O1	0.6075	Adder	0.71
942652	AE2-281 E O1	3.7318	Adder	4.39
942991	AE2-321 C	5.6939	Adder	6.7
942992	AE2-321 E	2.8044	Adder	3.3
943121	AE2-341 C	8.8930	Adder	10.46
943122	AE2-341 E	4.3670	Adder	5.14
943381	AF1-009 C	0.4158	Adder	0.49
943382	AF1-009 E	1.6631	Adder	1.96
943591	AF1-030 C O1	5.9140	Adder	6.96
943592	AF1-030 E O1	2.9260	Adder	3.44
943801	AF1-048 C	2.6617	Adder	3.13
943802	AF1-048 E	1.7744	Adder	2.09
944041	AF1-072	1.5025	Adder	1.77
944911	AF1-156 C	8.4219	Adder	9.91
944912	AF1-156 E	5.6146	Adder	6.61
945351	AF1-200 FTIR	215.3640	Merchant Transmission	215.3640
946661	AF1-330 C	1.3958	Adder	1.64
946662	AF1-330 E	0.3064	Adder	0.36
946671	AF1-331	1.6765	Adder	1.97
957021	AF2-003 C O1	2.3049	Adder	5.12
957022	AF2-003 E O1	10.7911	Adder	23.95
957331	AF2-027 C	0.9249	Adder	2.05
957332	AF2-027 E	1.3873	Adder	3.08
957471	AF2-041 C	7.8455	Adder	17.42
957472	AF2-041 E	5.2303	Adder	11.61
958011	AF2-095 C O1	6.5900	Adder	14.63
958012	AF2-095 E O1	3.1012	Adder	6.88
958021	AF2-096 C O1	12.8794	Adder	28.59
958022	AF2-096 E O1	6.0906	Adder	13.52
958481	AF2-142 C	4.5025	Adder	9.99
958482	AF2-142 E	3.0017	Adder	6.66
958491	AF2-143 C	4.1396	Adder	9.19
958492	AF2-143 E	2.7598	Adder	6.13
959081	AF2-199 C	2.6152	Adder	5.81
959082	AF2-199 E	1.7434	Adder	3.87
959091	AF2-200 C	5.2303	Adder	11.61

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959092	AF2-200 E	3.4869	Adder	7.74
959101	AF2-201 C O1	0.0380	Adder	0.08
959102	AF2-201 E O1	0.1091	Adder	0.24
959351	AF2-226 C	0.8757	Adder	1.94
959352	AF2-226 E	1.3135	Adder	2.92
960281	AF2-319 C	0.8757	Adder	1.94
960282	AF2-319 E	1.3135	Adder	2.92
960381	AF2-329	2.4457	Adder	5.43
960581	AF2-349 C	8.0530	Adder	17.88
960582	AF2-349 E	5.3687	Adder	11.92
960591	AF2-350 C O1	2.9076	Adder	6.45
960592	AF2-350 E O1	1.9384	Adder	4.3
960601	AF2-351 C O1	0.3877	Adder	0.86
960602	AF2-351 E O1	0.5815	Adder	1.29
960681	AF2-359 C	65.7540	50/50	65.7540
960682	AF2-359 E	43.8360	50/50	43.8360
960721	AF2-363 C O1	2.1980	Adder	4.88
960722	AF2-363 E O1	1.4654	Adder	3.25
960731	AF2-364 C O1	2.2713	Adder	5.04
960732	AF2-364 E O1	1.5142	Adder	3.36
960751	AF2-366 C O1	2.5693	Adder	5.7
960752	AF2-366 E O1	1.7128	Adder	3.8
WEC	WEC	3.0757	Confirmed LTF	3.0757
CALDERWOOD	CALDERWOOD	0.0691	Confirmed LTF	0.0691
CBM-W2	CBM-W2	14.5536	Confirmed LTF	14.5536
NY	NY	0.9241	Confirmed LTF	0.9241
CBM-W1	CBM-W1	47.1877	Confirmed LTF	47.1877
TVA	TVA	0.9016	Confirmed LTF	0.9016
O-066	O-066	10.9133	Confirmed LTF	10.9133
CHEOAH	CHEOAH	0.0776	Confirmed LTF	0.0776
CBM-S1	CBM-S1	3.0246	Confirmed LTF	3.0246
G-007	G-007	1.6869	Confirmed LTF	1.6869
MADISON	MADISON	15.8659	Confirmed LTF	15.8659
MEC	MEC	10.4429	Confirmed LTF	10.4429
GIBSON	GIBSON	0.1338	Confirmed LTF	0.1338
BLUEG	BLUEG	1.6666	Confirmed LTF	1.6666
TRIMBLE	TRIMBLE	0.5654	Confirmed LTF	0.5654
CATAWBA	CATAWBA	0.2394	Confirmed LTF	0.2394

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
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	Active
AB2-047	Brokaw-Pontiac Midpoint	Engineering and Procurement
AB2-070	Brokaw-Lanesville	Active
AB2-096	Silver Lake-Cherry Valley	Active
AC1-033	Kewanee	Active
AC1-053	Lanesville-Brokaw	Active
AC1-109	Aurora 345kV	Active
AC1-110	Aurora 138kV	Active
AC1-111	Aurora 138kV	Active
AC1-113	Rockford	Active
AC1-114	Rockford II	Active
AC1-142A	Joliet	Active
AC1-168	Kewanee-Streator	Active
AC1-171	Powerton	Active
AC1-214	Crescent Ridge	Engineering and Procurement
AC2-115	Rockford	Active
AC2-116	Rockford II	Active
AC2-117	University Park North	Engineering and Procurement
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	Active
AD1-096	Stillman Valley 34 kV	Active
AD1-098	Dixon-McGirr	Active
AD1-100	Loretto-Wilton & Braidwood-Davis Creek	Active
AD1-116	Nevada 345 kV	Active
AD1-129	Belvidere 34 kV	Active
AD1-133	Pontiac MidPoint-Dresden	Active
AD1-148	Brokaw-Lanesville	Active
AD2-038	Powerton	Active
AD2-047	Davis Creek 138 kV	Active
AD2-060	Davis Creek 138kV	Active
AD2-066	Mazon-Crescent Ridge	Active
AD2-100	Kincaid-Pana	Active
AD2-102	Wempletown 345 kV	Active
AD2-131	Latham Kincaid	Active
AD2-134	Shady Oaks	Active
AD2-159	Chestnut 345kV	Active
AD2-172	Lena 138kV	Active
AD2-194	Elwood	Active
AD2-214	Rock Falls-Garden Plains	Active
AE1-070	Elwood 345 kV	Active
AE1-113	Mole Creek 345 kV	Active
AE1-114	Maryland-Lancaster 138 kV	Active

Queue Number	Project Name	Status
AE1-134	Nelson 345 kV	Active
AE1-163	Powerton-Nevada 345 kV	Active
AE1-166	Loretto-Wilton & Braidwood-Davis Creek	Active
AE1-172	Loretto-Wilton Center	Active
AE1-193	Crete 345 kV	Active
AE1-194	Crete 345 kV	Active
AE1-195	Crete 345 kV	Active
AE1-198	Crete 345 kV	Active
AE1-205	McLean 345 kV	Active
AE1-252	Loretto-Wilton Center	Active
AE2-035	Lena 138 kV	Active
AE2-062	Normantown	Active
AE2-107	Haumesser Road 138 kV	Active
AE2-130	Rockport 765 kV	Active
AE2-152	Loretto-Wilton & Braidwood-Davis Creek	Active
AE2-153	Braidwood-Davis Creek	Active
AE2-173	McLean 345 kV	Active
AE2-223	McLean 345 kV	Active
AE2-255	Molecreek 345 kV	Active
AE2-261	Kincaid-Pana	Active
AE2-276	Sullivan 345kV	Active
AE2-281	Powerton-Nevada 345 kV	Active
AE2-321	Belvidere-Marengo 138 kV	Active
AE2-341	Sandwich-Plano	Active
AF1-009	Dixon-McGirr	Active
AF1-011	Schauff Road	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
AF1-088	Sullivan 345 kV	Active
AF1-090	Kincaid-Pana	Active
AF1-156	Braidwood-Davis Creek	Active
AF1-200	Plano 345 kV	Active
AF1-252	Kincaid-Pana	Active
AF1-253	Kincaid-Pana	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
AF1-317	Electric Jct-Nelson	Active
AF1-318	Crescent Ridge-Corbin	Active
AF1-330	Marengo	Active
AF1-331	Twombly Road	Active
AF2-003	Powerton-Mole Creek	Active
AF2-027	Zion Energy Center 345 kV	Active
AF2-032	Kincaid	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

Queue Number	Project Name	Status
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
AF2-225	McLean 345 kV	Active
AF2-226	Katydid Road 345 kV	Active
AF2-252	Blue Mound 345 kV	Active
AF2-267	Lancaster 138 kV	Active
AF2-305	Brokaw-Lanesville 345 kV	Active
AF2-317	Hill Topper 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
AF2-352	Blue Mound 34.5 kV	Active
AF2-353	Rockport 765 kV	Active
AF2-359	Olive-University Park 345 kV	Active
AF2-363	Glidden 138 kV	Active
AF2-364	Wayne Red 138 kV	Active
AF2-366	Glidden-Waterman 345 kV	Active
AF2-392	Nelson-Dixon 138 kV	Active
AF2-393	Nelson-Dixon 138 kV	Active
AF2-394	Nelson-Dixon 138 kV	Active
AF2-441	Burnham 138kV	Active
U3-021	Silver Lake-Cherry Valley	Active
W2-048	Brokaw-Lanesville	In Service
W4-005	Blue Mound-Latham	Partially in Service - Under Construction
X2-022	Brokaw-Lanesville	
X3-005	Wildwood 12kV	In Service
Y3-013	Zion Energy Center	Active
Z1-106	West Chicago 34kV	In Service
Z1-107	Joliet 34kV	In Service
Z1-108	McHenry 34kV	In Service
Z2-087	Pontiac MidPoint-Brokaw 345kV	In Service
J1055	MISO	MISO
J456	MISO	MISO
J844	MISO	MISO
J859	MISO	MISO
J974	MISO	MISO
J991	MISO	MISO

11.8 Contingency Descriptions - Primary POI

Contingency Name	Contingency Definition
COMED_P4_080-45-BT4-5__	CONTINGENCY 'COMED_P4_080-45-BT4-5__' TRIP BRANCH FROM BUS 270852 TO BUS 270668 CKT 1 / PONTI; B 345 BLUEM; B 345 TRIP BRANCH FROM BUS 270852 TO BUS 270704 CKT 1 / PONTI; B 345 LORET; B 345 END
COMED_P1-2_345-L11613AB-S	CONTINGENCY 'COMED_P1-2_345-L11613AB-S' TRIP BRANCH FROM BUS 270666 TO BUS 270664 CKT 1 / B ISL;BT 345 B ISL; B 345 TRIP BRANCH FROM BUS 270666 TO BUS 270926 CKT 1 / B ISL;BT 345 WILTO; B 345 TRIP BRANCH FROM BUS 270770 TO BUS 270666 CKT 1 / GOODI;4B 345 B ISL;BT 345 END
COMED_P1-2_345-L0304__R-S	CONTINGENCY 'COMED_P1-2_345-L0304__R-S' TRIP BRANCH FROM BUS 270855 TO BUS 349662 CKT 1 / POWER; R 345 7TAZEWELL END
COMED_P4_112-65-BT5-6__	CONTINGENCY 'COMED_P4_112-65-BT5-6__' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 / WILTO; 765 COLLI; 765 TRIP BRANCH FROM BUS 275233 TO BUS 270644 CKT 1 / WILTO;4M 345 WILTO; 765 TRIP BRANCH FROM BUS 275233 TO BUS 270927 CKT 1 / WILTO;4M 345 WILTO; R TRIP BRANCH FROM BUS 275233 TO BUS 275333 CKT 1 / WILTO;4M 345 WILTO;4C END
AEP_P4_#2978_05DUMONT_FSA	CONTINGENCY 'AEP_P4_#2978_05DUMONT_FSA' OPEN BRANCH FROM BUS 243206 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 X1-020 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P7_345-L19601_B-S+_345-L9801__R-S_FSA	CONTINGENCY 'COMED_P7_345-L19601_B-S+_345-L9801__R-S_FSA' TRIP BRANCH FROM BUS 270790 TO BUS 270770 CKT 1 / KATYD; B 345 GOODI;4B TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R END
COMED_P7_345-L0301__B-S+_345-L9801__R-S_FSA-B	CONTINGENCY 'COMED_P7_345-L0301__B-S+_345-L9801__R-S_FSA-B' TRIP BRANCH FROM BUS 957020 TO BUS 270790 CKT 1 / AF2-003 TAP 345 KATYDID TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R END

Contingency Name	Contingency Definition
COMED_P4_012-45-BT4-5__	CONTINGENCY 'COMED_P4_012-45-BT4-5__' TRIP BRANCH FROM BUS 270716 TO BUS 930750 CKT 1 / DRESDEN ; B 345 AB1-122 TAP 345 TRIP BRANCH FROM BUS 270716 TO BUS 270736 CKT 1 / DRESD; B 345 ELWOO; B 345 TRIP BRANCH FROM BUS 270736 TO BUS 270737 CKT 1 / ELWOO; B 345 ELWOO; R 345 END
COMED_P1-2_695_B2	CONTINGENCY 'COMED_P1-2_695_B2' OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTO; 765 1 END
COMED_P4_112-65-BT2-3__	CONTINGENCY 'COMED_P4_112-65-BT2-3__' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 / WILTO; 765 COLLI; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270644 CKT 1 / WILTO;3M 345 WILTO; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270926 CKT 1 / WILTO;3M 345 WILTO; B 345 TRIP BRANCH FROM BUS 275232 TO BUS 275332 CKT 1 / WILTO;3M 345 WILTO;3C 33 END
COMED_P4_112-65-BT3-4__	CONTINGENCY 'COMED_P4_112-65-BT3-4__' TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 / WILTO; 765 05DUMONT 765 TRIP BRANCH FROM BUS 275232 TO BUS 270644 CKT 1 / WILTO;3M 345 WILTO; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270926 CKT 1 / WILTO;3M 345 WILTO; B 345 TRIP BRANCH FROM BUS 275232 TO BUS 275332 CKT 1 / WILTO;3M 345 WILTO;3C 33 END
COMED_P4_023-65-BT4-5__	CONTINGENCY 'COMED_P4_023-65-BT4-5__' TRIP BRANCH FROM BUS 275168 TO BUS 270607 CKT 1 / COLLI;2M 345 COLLI; 765 TRIP BRANCH FROM BUS 275168 TO BUS 270697 CKT 1 / COLLI;2M 345 COLLI; R 345 TRIP BRANCH FROM BUS 275168 TO BUS 275268 CKT 1 / COLLI;2M 345 COLLI;2C 33 TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 / WILTO; 765 05DUMONT 765 END
COMED_P1-2_345-L1223_TR-S	CONTINGENCY 'COMED_P1-2_345-L1223_TR-S' TRIP BRANCH FROM BUS 270717 TO BUS 270731 CKT 1 / DRESD; R 345 ELECT;4R 345 TRIP BRANCH FROM BUS 275180 TO BUS 270717 CKT 1 / DRESD;3M 138 DRESD; R 345 TRIP BRANCH FROM BUS 275180 TO BUS 271336 CKT 1 / DRESD;3M 138 DRESD; B 138 TRIP BRANCH FROM BUS 275180 TO BUS 275280 CKT 1 / DRESD;3M 138 DRESD;3C 34.5 END

Contingency Name	Contingency Definition
Base Case	
COMED_P4_023-65-BT2-3__	CONTINGENCY 'COMED_P4_023-65-BT2-3__' TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 / WILTO; 765 05DUMONT 765 TRIP BRANCH FROM BUS 270607 TO BUS 270630 CKT 1 / COLLI; 765 PLANO; 765 END
COMED_P4_080-45-BT7-8__	CONTINGENCY 'COMED_P4_080-45-BT7-8__' TRIP BRANCH FROM BUS 270853 TO BUS 917500 CKT 1 / PONTIAC ; R 345 Z2-087 TAP 345 TRIP BRANCH FROM BUS 270853 TO BUS 935000 CKT 1 / PONTIAC ; R 345 AD1-133 TAP 345 END
AEP_P1-2_#286	CONTINGENCY 'AEP_P1-2_#286' OPEN BRANCH FROM BUS 243221 TO BUS 348885 CKT 1 / 243221 05EUGENE 345 348885 7BUNSONVILLE 345 1 END
AEP_P4_#2978_05DUMONT_NON_FSA	CONTINGENCY 'AEP_P4_#2978_05DUMONT_NON_FSA' OPEN BRANCH FROM BUS 243206 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 X1-020 OPEN BRANCH FROM BUS 243207 TO BUS 907040 CKT 1 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P1-2_345-L1202__B-S-A	CONTINGENCY 'COMED_P1-2_345-L1202__B-S-A' TRIP BRANCH FROM BUS 270716 TO BUS 930750 CKT 1 / DRESDEN ; B 345 AB1-122 TAP 345 END
COMED_P4_112-65-BT4-5__	CONTINGENCY 'COMED_P4_112-65-BT4-5__' TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 / WILTO; 765 05DUMONT 765 TRIP BRANCH FROM BUS 275233 TO BUS 270644 CKT 1 / WILTO;4M 345 WILTO; 765 TRIP BRANCH FROM BUS 275233 TO BUS 270927 CKT 1 / WILTO;4M 345 WILTO; R 345 TRIP BRANCH FROM BUS 275233 TO BUS 275333 CKT 1 / WILTO;4M 345 WILTO;4C 33 END

Contingency Name	Contingency Definition
AEP_P4_#3128_05EUGENE 345_A2	CONTINGENCY 'AEP_P4_#3128_05EUGENE 345_A2' OPEN BRANCH FROM BUS 243221 TO BUS 249504 CKT 1 / 243221 05EUGENE 345 249504 08CAYSUB 345 1 OPEN BRANCH FROM BUS 243221 TO BUS 348885 CKT 1 / 243221 05EUGENE 345 348885 7BUNSONVILLE 345 1 END

12 Short Circuit Analysis - Primary POI

The following breakers are overdutied:

None

12.1 System Reinforcements - Short Circuit

None

13 Summer Peak - Load Flow Analysis - Secondary POI

The Queue Project AF2-003 was evaluated as a 303.0 MW (Capacity 53.328 MW) injection tapping the Streator to Hennepin 138 kV line in the ComEd area. Project AF2-003 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-003 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

13.1 Generation Deliverability

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

None

13.2 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC/D C	MW IMPAC T
96022776	270846	PLANO ; B	345.0	CE	275207	PLANO ;3M	345.0	CE	1	COMED_P4_167-45-BT5-6	breaker	1379.0	99.98	100.83	DC	31.42
147325373	271655	HENNEPI N; T	138.0	CE	348918	4HENNEPI N S	138.0	AMI L	1	COMED_P2-2_001_LA-138B_1	bus	305.0	89.68	151.43	DC	188.34
147479599	271655	HENNEPI N; T	138.0	CE	348918	4HENNEPI N S	138.0	AMI L	1	COMED_P4_001-38-L0108	breaker	305.0	89.68	151.43	DC	188.34
147479600	271655	HENNEPI N; T	138.0	CE	348918	4HENNEPI N S	138.0	AMI L	1	COMED_P4_001-38-TR81	breaker	305.0	89.68	151.43	DC	188.34

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
148480179	271844	KICKAPOO ; B	138.0	CE	271908	LASCO STA; B	138.0	CE	1	COMED_P7_138-L6101__S+_138-L7413__R-S-A	tower	498.0	69.21	124.4	DC	274.82
148480180	271844	KICKAPOO ; B	138.0	CE	271908	LASCO STA; B	138.0	CE	1	COMED_P7_138-L6101__S+_138-L7713__R-S-A	tower	498.0	67.53	122.75	DC	274.99
148480246	271908	LASCO STA; B	138.0	CE	270802	LASCO STA; B	345.0	CE	1	COMED_P7_138-L1205__B-S+_138-L7719__R-S	tower	498.0	74.05	106.32	DC	160.74
148480247	271908	LASCO STA; B	138.0	CE	270802	LASCO STA; B	345.0	CE	1	COMED_P7_138-L1205__B-S+_138-L1206__R-S	tower	498.0	72.8	105.08	DC	160.74
104782023	272124	ESS J339 ; B	138.0	CE	271336	DRESDEN ; B	138.0	CE	1	COMED_P4_001-45-BT1-9__	breaker	268.0	89.43	126.03	DC	98.08
104782024	272124	ESS J339 ; B	138.0	CE	271336	DRESDEN ; B	138.0	CE	1	COMED_P4_001-45-BT1-2__	breaker	268.0	89.43	126.03	DC	98.08
96024038	272269	POWERTO N ;	138.0	CE	272285	POWERTO N ; RT	138.0	CE	1	COMED_P7_138-L7411__R-R+_138-L7408__R-R_NON_FSA	tower	230.0	98.95	103.09	DC	21.16
96024039	272269	POWERTO N ;	138.0	CE	272285	POWERTO N ; RT	138.0	CE	1	COMED_P7_138-L7411__R-R+_138-L7408__R-R_FSA	tower	230.0	98.95	103.09	DC	21.16
96022777	275207	PLANO ; 3M	345.0	CE	270630	PLANO ;	765.0	CE	1	COMED_P4_167-45-BT5-6__	breaker	1379.0	99.98	100.83	DC	31.42
96022398	348935	4CORBIN	138.0	AMIL	936510	AD2-066 TAP	138.0	CE	1	COMED_P2-2_001_LA-138B__1	bus	223.0	98.98	122.14	DC	51.66
96022757	348935	4CORBIN	138.0	AMIL	936510	AD2-066 TAP	138.0	CE	1	COMED_P4_001-38-L0108__	breaker	223.0	98.98	122.14	DC	51.66
96022758	348935	4CORBIN	138.0	AMIL	936510	AD2-066 TAP	138.0	CE	1	COMED_P4_001-38-TR81__	breaker	223.0	98.98	122.14	DC	51.66
147325338	957020	AF2-003 TAP	138.0	CE	926820	AC1-168 TAP	138.0	CE	1	COMED_P2-2_001_LA-138B__1	bus	184.0	95.42	230.44	DC	248.43
147479506	957020	AF2-003 TAP	138.0	CE	926820	AC1-168 TAP	138.0	CE	1	COMED_P4_001-38-TR81__	breaker	184.0	95.42	230.44	DC	248.43
147479507	957020	AF2-003 TAP	138.0	CE	926820	AC1-168 TAP	138.0	CE	1	COMED_P4_001-38-L0108__	breaker	184.0	95.42	230.44	DC	248.43

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 LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
148480218	270670	BRAIDWOOD; B	345.0	CE	934730	AD1-100 TAP	345.0	CE	1	COMED_P7_345-L2001__B-S+_345-L2003__R-S-B	tower	1915.0	103.01	105.46	DC	46.88
96022730	270671	BRAIDWOOD; R	345.0	CE	941560	AE2-153 TAP	345.0	CE	1	ADD AD1-100 5	breaker	1341.0	107.24	107.78	DC	16.06
96022661	270802	LASCO STA; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P4_167-45-BT2-5__	breaker	1528.0	115.25	117.64	DC	36.22
96022664	270803	LASCO STA; R	345.0	CE	270847	PLANO ; R	345.0	CE	1	COMED_P4_167-45-BT9-12__	breaker	1528.0	115.19	117.58	DC	36.23

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
96022798	270847	PLANO ; R	345.0	CE	275208	PLANO ;4M	345.0	CE	1	COMED_P4_167-45-BT8-12_	breaker	1379.0	101.14	101.43	DC	32.27
96022632	270926	WILTON ; B	345.0	CE	275232	WILTON ;3M	345.0	CE	1	COMED_P4_112-65-BT5-6_	breaker	1379.0	121.48	121.57	DC	45.11
96022620	270927	WILTON ; R	345.0	CE	275233	WILTON ;4M	345.0	CE	1	COMED_P4_112-65-BT2-3_	breaker	1379.0	124.02	124.11	DC	46.06
96022374	272269	POWERTO N ;	138.0	CE	272285	POWERTO N ;RT	138.0	CE	1	COMED_P2-2_001_LA-138B_1	bus	214.0	107.99	122.34	DC	30.7
96022377	272285	POWERTO N ;RT	138.0	CE	349600	4TOWERLINE	138.0	AMIL	1	COMED_P2-2_001_LA-138B_1	bus	214.0	107.99	122.34	DC	30.7
96024000	272285	POWERTO N ;RT	138.0	CE	349600	4TOWERLINE	138.0	AMIL	1	COMED_P7_138-L7411_R-R_+ 138-L7408_R-R_FSA	tower	214.0	106.3	110.75	DC	21.16
96024001	272285	POWERTO N ;RT	138.0	CE	349600	4TOWERLINE	138.0	AMIL	1	COMED_P7_138-L7411_R-R_+ 138-L7408_R-R_NON_FSA	tower	214.0	106.3	110.75	DC	21.16
96022739	272366	ROCK FALL; B	138.0	CE	272094	NELSON ; B	138.0	CE	1	COMED_P4_155-38-L15508_	breaker	426.0	106.48	108.53	DC	19.36
96022510	274750	CRETE EC ;BP	345.0	CE	255112	17STJOH N	345.0	NIPS	1	AEP_P4_#2978_05DUMONT_FSA	breaker	1399.0	154.61	154.71	DC	37.41
96022511	274750	CRETE EC ;BP	345.0	CE	255112	17STJOH N	345.0	NIPS	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	1399.0	154.61	154.71	DC	37.41
96022512	274750	CRETE EC ;BP	345.0	CE	255112	17STJOH N	345.0	NIPS	1	COMED_P4_112-65-BT4-5_	breaker	1399.0	154.51	154.6	DC	37.58
96022513	274750	CRETE EC ;BP	345.0	CE	255112	17STJOH N	345.0	NIPS	1	COMED_P4_112-65-BT3-4_	breaker	1399.0	154.5	154.59	DC	37.58
96022514	274750	CRETE EC ;BP	345.0	CE	255112	17STJOH N	345.0	NIPS	1	COMED_P4_023-65-BT4-5_	breaker	1399.0	154.44	154.53	DC	37.55
143898370	274804	UNIV PK N;RP	345.0	CE	243229	05OLIVE	345.0	AEP	1	AEP_P4_#2978_05DUMONT_FSA	breaker	971.0	106.22	106.32	DC	29.46
143898371	274804	UNIV PK N;RP	345.0	CE	243229	05OLIVE	345.0	AEP	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	971.0	106.22	106.32	DC	29.46
143898372	274804	UNIV PK N;RP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P4_023-65-BT2-3_	breaker	971.0	105.87	105.98	DC	29.68
143898373	274804	UNIV PK N;RP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P4_112-65-BT4-5_	breaker	971.0	105.78	105.88	DC	29.66
143898374	274804	UNIV PK N;RP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P4_112-65-BT3-4_	breaker	971.0	105.78	105.88	DC	29.66
96022799	275208	PLANO ;4M	345.0	CE	270630	PLANO ;	765.0	CE	1	COMED_P4_167-45-BT8-12_	breaker	1379.0	101.14	101.43	DC	32.27
96022631	275232	WILTON ;3M	345.0	CE	270644	WILTON ;	765.0	CE	1	COMED_P4_112-65-BT5-6_	breaker	1379.0	121.48	121.57	DC	45.11
96022619	275233	WILTON ;4M	345.0	CE	270644	WILTON ;	765.0	CE	1	COMED_P4_112-65-BT2-3_	breaker	1379.0	124.02	124.11	DC	46.06
148480184	934720	AD1-100 TAP	345.0	CE	270926	WILTON ; B	345.0	CE	1	COMED_P7_345-L2001_B-S_+ 345-L2003_R-S-B	tower	2221.0	114.42	114.86	DC	27.82
148480185	934720	AD1-100 TAP	345.0	CE	270926	WILTON ; B	345.0	CE	1	COMED_P7_345-L2001_B-S_+ 345-L2003_R-S-A	tower	2221.0	114.7	115.12	DC	27.82
96022271	936510	AD2-066 TAP	138.0	CE	271987	MAZON ; R	138.0	CE	1	COMED_P2-2_001_LA-138B_1	bus	223.0	132.21	155.38	DC	51.66
96022540	936510	AD2-066 TAP	138.0	CE	271987	MAZON ; R	138.0	CE	1	COMED_P4_001-38-TR81_	breaker	223.0	132.21	155.38	DC	51.66
96022541	936510	AD2-066 TAP	138.0	CE	271987	MAZON ; R	138.0	CE	1	COMED_P4_001-38-L0108_	breaker	223.0	132.21	155.38	DC	51.66
96022646	941560	AE2-153 TAP	345.0	CE	270711	DAVIS CRK; R	345.0	CE	1	ADD AD1-100 5	breaker	1341.0	115.37	115.92	DC	16.06
96022647	941560	AE2-153 TAP	345.0	CE	270711	DAVIS CRK; R	345.0	CE	1	ADD AD1-100 2	breaker	1341.0	104.35	105.11	DC	22.5
95164513	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	AEP_P4_#3128_05EUGENE_345_A2	breaker	1466.0	149.81	149.82	DC	21.31
95164514	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	COMED_P4_080-45-BT4-5_	breaker	1466.0	136.25	136.37	DC	16.6
95164515	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	COMED_P4_080-45-BT7-8_	breaker	1466.0	135.28	135.42	DC	16.92

13.4 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC/D C	MW IMPAC T
96023022	270670	BRAIDWOOD; B	345.0	CE	934730	AD1-100 TAP	345.0	CE	1	COMED_P1-2_345-L2004_AR-S-B	operation	1341.0	131.76	134.55	DC	37.36
96023031	270670	BRAIDWOOD; B	345.0	CE	934730	AD1-100 TAP	345.0	CE	1	Base Case	operation	1245.0	98.66	101.13	DC	30.81
96023235	270802	LASCO STA; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P1-2_345-L0102_R-S	operation	1528.0	110.95	113.49	DC	38.56
96023234	270803	LASCO STA; R	345.0	CE	270847	PLANO ; R	345.0	CE	1	COMED_P1-2_345-L0101_B-S	operation	1528.0	111.16	113.68	DC	38.4
105054777	271655	HENNEEPIN ; T	138.0	CE	348918	4HENNEPIN S	138.0	AMIL	1	COMED_P1-2_138-L0112_B-S	operation	305.0	89.5	151.26	DC	188.37
96023299	271844	KICKAPOO ; B	138.0	CE	271908	LASCO STA; B	138.0	CE	1	Base Case	operation	351.0	99.31	144.68	DC	159.26
147763616	271844	KICKAPOO ; B	138.0	CE	271908	LASCO STA; B	138.0	CE	1	COMED_P1-2_138-L6101___-S-B	operation	442.0	70.78	132.86	DC	274.41
96023225	271908	LASCO STA; B	138.0	CE	271986	MAZON ; B	138.0	CE	1	COMED_P1-3_TR81_LASCO_B-S	operation	223.0	113.85	161.84	DC	107.0
147763978	271908	LASCO STA; B	138.0	CE	270802	LASCO STA; B	345.0	CE	1	COMED_P1-2_138-L0108_B-S	operation	449.0	73.87	108.67	DC	156.26
105054699	271977	MARSEILLE; T	138.0	CE	348931	4MARSEILLES	138.0	AMIL	1	COMED_P1-2_138-L0112_B-S	operation	143.0	94.12	132.19	DC	54.44
96023176	271987	MAZON ; R	138.0	CE	271187	CHANNAHON; R	138.0	CE	1	COMED_P1-2_138-L0112_B-S	operation	223.0	110.95	131.39	DC	45.57
96023177	271987	MAZON ; R	138.0	CE	271187	CHANNAHON; R	138.0	CE	1	Base Case	operation	173.0	107.43	113.18	DC	22.1
105054727	272124	ESS J339; B	138.0	CE	271336	DRESDEN ; B	138.0	CE	1	COMED_P1-3_TR81_LASCO_B-S	operation	268.0	89.39	125.99	DC	98.08
96023310	272125	ESS J339; R	138.0	CE	271337	DRESDEN ; R	138.0	CE	1	COMED_P1-2_138-L0112_B-S	operation	268.0	95.0	111.96	DC	45.44
96023255	272367	ROCK FALL; R	138.0	CE	272095	NELSON ; R	138.0	CE	1	COMED_P1-2_138-L15518GB-R-A	operation	223.0	105.9	109.05	DC	15.55
147763700	272521	STREATOR ;	138.0	CE	271977	MARSEILLE; T	138.0	CE	1	COMED_P2-1_061-L6101_B	operation	264.0	17.21	131.98	DC	302.98
147763701	272521	STREATOR ;	138.0	CE	271977	MARSEILLE; T	138.0	CE	1	COMED_P1-2_138-L6101___-S-B	operation	264.0	17.21	131.98	DC	302.98

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
147763702	272521	STREATOR ;	138.0	CE	271977	MARSEILLE; T	138.0	CE	1	Base Case	operation	208.0	25.25	105.65	DC	167.23
105054637	272607	TOULON ; R	138.0	CE	272269	POVERTON ;	138.0	CE	1	COMED_P1-2_138-L0112__B-S	operation	194.0	87.69	103.51	DC	30.68
96023005	274750	CRETE EC ;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	COMED_P1-2_695_B2	operation	1399.0	154.43	154.52	DC	37.55
96023006	274750	CRETE EC ;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	Base Case	operation	1091.0	152.98	153.12	DC	24.13
143898802	274804	UNIV PK N;RP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P1-2_695_B2	operation	971.0	105.74	105.84	DC	29.65
96023264	348935	4CORBIN	138.0	AMIL	936510	AD2-066 TAP	138.0	CE	1	COMED_P1-2_138-L0112__B-S	operation	223.0	97.56	120.81	DC	51.83
96023564	926820	AC1-168 TAP	138.0	CE	271655	HENNEEPIN ; T	138.0	CE	1	COMED_P1-2_138-L0112__B-S	operation	184.0	135.81	270.83	DC	248.43
147763431	926820	AC1-168 TAP	138.0	CE	271655	HENNEEPIN ; T	138.0	CE	1	Base Case	operation	142.0	62.04	157.64	DC	135.75
96022971	934720	AD1-100 TAP	345.0	CE	270926	WILTON ; B	345.0	CE	1	Base Case	operation	1364.0	137.35	138.01	DC	19.79
96023072	936510	AD2-066 TAP	138.0	CE	271987	MAZON ; R	138.0	CE	1	COMED_P1-2_138-L0112__B-S	operation	223.0	130.93	154.18	DC	51.83
96023073	936510	AD2-066 TAP	138.0	CE	271987	MAZON ; R	138.0	CE	1	Base Case	operation	173.0	128.77	134.45	DC	21.83
95164792	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	AEP_P1-2_#286	operation	1466.0	138.12	138.13	DC	21.79
95164796	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	Base Case	operation	1334.0	134.59	134.6	DC	17.45
147763448	957020	AF2-003 TAP	138.0	CE	926820	AC1-168 TAP	138.0	CE	1	COMED_P1-2_138-L0112__B-S	operation	184.0	95.42	230.43	DC	248.43
147763452	957020	AF2-003 TAP	138.0	CE	926820	AC1-168 TAP	138.0	CE	1	Base Case	operation	142.0	19.93	115.53	DC	135.75
147763481	957020	AF2-003 TAP	138.0	CE	272521	STREATOR ;	138.0	CE	1	COMED_P2-1_061-L6101__B	operation	184.0	42.74	207.42	DC	303.0
147763482	957020	AF2-003 TAP	138.0	CE	272521	STREATOR ;	138.0	CE	1	COMED_P1-2_138-L6101__S-B	operation	184.0	42.74	207.42	DC	303.0
147763483	957020	AF2-003 TAP	138.0	CE	272521	STREATOR ;	138.0	CE	1	Base Case	operation	142.0	61.07	178.85	DC	167.25

13.5 Flow Gate Details - Secondary POI

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

13.5.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022776	270846	PLANO ; B	CE	275207	PLANO ;3M	CE	1	COMED_P4_167-45-BT5-6__	breaker	1379.0	99.98	100.83	DC	31.42

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	0.4228	50/50	0.4228
274660	LASCO STA;1U	31.0976	50/50	31.0976
274661	LASCO STA;2U	31.2227	50/50	31.2227
274738	AURORA EC;3P	3.0223	50/50	3.0223
274740	AURORA EC;4P	3.0223	50/50	3.0223
274830	U3-021 1	3.8110	Adder	4.48
274831	U3-021 2	3.8110	Adder	4.48
274847	GR RIDGE ;BU	0.7007	50/50	0.7007
274850	MENDOTA H;RU	0.0989	50/50	0.0989
274855	GSG-6 ;RU	0.4166	50/50	0.4166
274859	EASYSR;U1 E	7.0829	Adder	8.33
274860	EASYSR;U2 E	7.0829	Adder	8.33
274871	GR RIDGE ;2U	0.8899	50/50	0.8899
274872	LEE DEKAL;1U	0.9635	50/50	0.9635
276167	Z1-106 E2	0.8540	Adder	1.0
276168	Z1-106 E1	1.0067	50/50	1.0067
276169	Z1-107 E	1.1407	Adder	1.34
276170	Z1-108 E	1.5275	Adder	1.8
276173	Z2-081	0.2483	50/50	0.2483
290051	GSG-6; E	9.6605	50/50	9.6605
290108	LEEDK;1U E	23.2740	50/50	23.2740
292543	L-013 2	0.5026	50/50	0.5026
293061	N-015 E	16.2492	50/50	16.2492
293516	O-009 E1	5.6791	Adder	6.68
293517	O-009 E2	2.8846	Adder	3.39
293518	O-009 E3	3.1767	Adder	3.74
293715	O-029 E	6.0716	Adder	7.14
293716	O-029 E	3.3290	Adder	3.92
293717	O-029 E	3.0597	Adder	3.6
293771	O-035 E	3.4509	Adder	4.06
294392	P-010 E	20.6365	50/50	20.6365
294401	BSHIL;1U E	4.6165	Adder	5.43
294410	BSHIL;2U E	4.6165	Adder	5.43
294763	P-046 E	6.0003	Adder	7.06
915011	Y3-013 1	2.0681	Adder	2.43
915021	Y3-013 2	2.0681	Adder	2.43
915031	Y3-013 3	2.0681	Adder	2.43
916221	AB2-191	0.1598	50/50	0.1598
919581	AA2-030	11.4247	Adder	13.44
920272	AA2-123 E	1.5307	Adder	1.8
924471	AB2-096	26.4656	Adder	31.14
925581	AC1-033 C	0.7561	Adder	0.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925582	AC1-033 E	5.0616	Adder	5.95
926311	AC1-109 1	1.0385	Adder	1.22
926321	AC1-109 2	1.0385	Adder	1.22
926331	AC1-110 1	1.7291	50/50	1.7291
926341	AC1-110 2	1.7291	50/50	1.7291
926351	AC1-111 1	0.4739	Adder	0.56
926361	AC1-111 2	0.4739	Adder	0.56
926371	AC1-111 3	0.4739	Adder	0.56
926381	AC1-111 4	0.4739	Adder	0.56
926391	AC1-111 5	0.4739	Adder	0.56
926401	AC1-111 6	0.4739	Adder	0.56
926431	AC1-114	1.5159	Adder	1.78
926821	AC1-168 C O1	0.6945	Adder	0.82
926822	AC1-168 E O1	4.6604	Adder	5.48
927201	AC1-214 C O1	1.1076	Adder	1.3
927202	AC1-214 E O1	3.5209	Adder	4.14
927511	AC1-113 1	0.7579	Adder	0.89
927521	AC1-113 2	0.7579	Adder	0.89
930481	AB1-089	42.0563	Adder	49.48
930751	AB1-122 2O1	32.7707	Adder	38.55
932881	AC2-115 1	1.5159	Adder	1.78
932891	AC2-115 2	1.5159	Adder	1.78
932921	AC2-116	0.5306	Adder	0.62
933431	AC2-156 C O1	1.1325	50/50	1.1325
933432	AC2-156 E O1	1.8477	50/50	1.8477
933911	AD1-013 C	1.7223	50/50	1.7223
933912	AD1-013 E	2.7513	50/50	2.7513
933931	AD1-016 C	0.5817	Adder	0.68
933932	AD1-016 E	0.9490	Adder	1.12
934051	AD1-031 C O1	1.5352	Adder	1.81
934052	AD1-031 E O1	2.5048	Adder	2.95
934111	AD1-039 2	3.2115	Adder	3.78
934431	AD1-067 C	0.1213	50/50	0.1213
934432	AD1-067 E	0.5100	50/50	0.5100
934651	AD1-096 C	0.5797	Adder	0.68
934652	AD1-096 E	0.9458	Adder	1.11
934701	AD1-098 C O1	6.3048	50/50	6.3048
934702	AD1-098 E O1	4.6032	50/50	4.6032
934971	AD1-129 C	0.5727	Adder	0.67
934972	AD1-129 E	0.3818	Adder	0.45
936511	AD2-066 C O1	4.0968	Adder	4.82
936512	AD2-066 E O1	2.7312	Adder	3.21
936791	AD2-102 C	8.8403	Adder	10.4
936792	AD2-102 E	5.8936	Adder	6.93
937001	AD2-134 C	2.5254	50/50	2.5254
937002	AD2-134 E	10.4325	50/50	10.4325
937311	AD2-172 C	1.5751	Adder	1.85
937312	AD2-172 E	2.1751	Adder	2.56
937531	AD2-214 C	2.7453	Adder	3.23
937532	AD2-214 E	1.8302	Adder	2.15
938861	AE1-114 C O1	2.5452	Adder	2.99
938862	AE1-114 E O1	8.6837	Adder	10.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939051	AE1-134 1	0.8878	Adder	1.04
939061	AE1-134 2	0.8878	Adder	1.04
939351	AE1-166 C O1	1.3533	Adder	1.59
939352	AE1-166 E O1	1.2492	Adder	1.47
940501	AE2-035 C	1.5751	Adder	1.85
940502	AE2-035 E	2.1751	Adder	2.56
941131	AE2-107 C	7.0512	50/50	7.0512
941132	AE2-107 E	4.7008	50/50	4.7008
941551	AE2-152 C O1	4.9977	Adder	5.88
941552	AE2-152 E O1	3.3318	Adder	3.92
941561	AE2-153 C O1	2.3412	Adder	2.75
941562	AE2-153 E O1	10.9613	Adder	12.9
942991	AE2-321 C	5.1306	Adder	6.04
942992	AE2-321 E	2.5270	Adder	2.97
943121	AE2-341 C	16.0065	50/50	16.0065
943122	AE2-341 E	7.8600	50/50	7.8600
943381	AF1-009 C	0.5454	50/50	0.5454
943382	AF1-009 E	2.1816	50/50	2.1816
943401	AF1-011 C	0.7753	Adder	0.91
943402	AF1-011 E	1.3014	Adder	1.53
943411	AF1-012 C	8.1691	Adder	9.61
943412	AF1-012 E	5.4460	Adder	6.41
943591	AF1-030 C O1	10.6445	50/50	10.6445
943592	AF1-030 E O1	5.2665	50/50	5.2665
943801	AF1-048 C	2.3984	Adder	2.82
943802	AF1-048 E	1.5989	Adder	1.88
943921	AF1-060	0.7755	Adder	0.91
944041	AF1-072	1.3690	Adder	1.61
944911	AF1-156 C	5.9861	Adder	7.04
944912	AF1-156 E	3.9908	Adder	4.7
945351	AF1-200 FTIR	581.6030	50/50	581.6030
946151	AF1-280 C O1	10.0659	Adder	11.84
946152	AF1-280 E O1	4.6289	Adder	5.45
946161	AF1-281 C	0.2204	Adder	0.26
946162	AF1-281 E	1.2491	Adder	1.47
946321	AF1-296 C O1	2.3941	Adder	2.82
946322	AF1-296 E O1	11.2084	Adder	13.19
946501	AF1-314 C	2.7985	Adder	3.29
946502	AF1-314 E	13.1023	Adder	15.41
946531	AF1-317 C O1	1.5560	Adder	1.83
946541	AF1-318 C O1	3.1199	Adder	3.67
946542	AF1-318 E O1	14.6085	Adder	17.19
946661	AF1-330 C	1.2552	Adder	1.48
946662	AF1-330 E	0.2755	Adder	0.32
946671	AF1-331	2.2368	50/50	2.2368
957021	AF2-003 C O2	5.5301	50/50	5.5301
957022	AF2-003 E O2	25.8910	50/50	25.8910
957331	AF2-027 C	0.7307	Adder	1.62
957332	AF2-027 E	1.0961	Adder	2.43
957471	AF2-041 C	18.5310	50/50	18.5310
957472	AF2-041 E	12.3540	50/50	12.3540
957751	AF2-069 C	0.0680	Adder	0.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957752	AF2-069 E	0.2194	Adder	0.49
957761	AF2-070 C	0.0958	Adder	0.21
957762	AF2-070 E	0.4650	Adder	1.03
958021	AF2-096 C O2	9.5015	Adder	21.09
958022	AF2-096 E O2	4.4933	Adder	9.97
958341	AF2-128 C O2	0.4399	Adder	0.98
958342	AF2-128 E O2	2.0593	Adder	4.57
958911	AF2-182	7.0094	Adder	15.56
958921	AF2-183 C	1.2461	Adder	2.77
958922	AF2-183 E	1.8692	Adder	4.15
959081	AF2-199 C O2	6.1770	50/50	6.1770
959082	AF2-199 E O2	4.1180	50/50	4.1180
959091	AF2-200 C O2	12.3540	50/50	12.3540
959092	AF2-200 E O2	8.2360	50/50	8.2360
959101	AF2-201 C O2	2.0433	Adder	4.54
959102	AF2-201 E O2	5.8674	Adder	13.02
959761	AF2-267 C O2	1.4756	Adder	3.28
959762	AF2-267 E O2	6.9081	Adder	15.33
960381	AF2-329	8.3055	50/50	8.3055
960551	AF2-346 C	1.8555	Adder	4.12
960552	AF2-346 E	1.2370	Adder	2.75
960581	AF2-349 C	7.2154	Adder	16.02
960582	AF2-349 E	4.8103	Adder	10.68
960721	AF2-363 C O2	5.2034	50/50	5.2034
960722	AF2-363 E O2	3.4689	50/50	3.4689
960731	AF2-364 C O2	2.1675	Adder	4.81
960732	AF2-364 E O2	1.4450	Adder	3.21
960751	AF2-366 C O2	6.7258	50/50	6.7258
960752	AF2-366 E O2	4.4838	50/50	4.4838
961011	AF2-392 C O2	1.3582	Adder	3.01
961012	AF2-392 E O2	6.3589	Adder	14.12
961021	AF2-393 O2	2.3151	Adder	5.14
961031	AF2-394 O2	1.5434	Adder	3.43
WEC	WEC	2.4923	Confirmed LTF	2.4923
CALDERWOOD	CALDERWOOD	0.0919	Confirmed LTF	0.0919
CBM-W2	CBM-W2	9.2629	Confirmed LTF	9.2629
NY	NY	0.6835	Confirmed LTF	0.6835
CBM-W1	CBM-W1	41.8209	Confirmed LTF	41.8209
TVA	TVA	0.5180	Confirmed LTF	0.5180
O-066	O-066	8.1043	Confirmed LTF	8.1043
CHEOAH	CHEOAH	0.0986	Confirmed LTF	0.0986
CBM-S1	CBM-S1	1.3802	Confirmed LTF	1.3802
G-007	G-007	1.2542	Confirmed LTF	1.2542
MADISON	MADISON	12.3722	Confirmed LTF	12.3722
MEC	MEC	8.3375	Confirmed LTF	8.3375
GIBSON	GIBSON	0.1605	Confirmed LTF	0.1605
BLUEG	BLUEG	1.3662	Confirmed LTF	1.3662
TRIMBLE	TRIMBLE	0.4602	Confirmed LTF	0.4602
CATAWBA	CATAWBA	0.1988	Confirmed LTF	0.1988

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
147479600	271655	HENNEEPIN; T	CE	348918	4HENNEPIN S	AMIL	1	COMED_P4_001-38-TR81	breaker	305.0	89.68	151.43	DC	188.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274847	GR RIDGE ;BU	2.6757	50/50	2.6757
274871	GR RIDGE ;2U	3.3982	50/50	3.3982
276173	Z2-081	1.3746	50/50	1.3746
293061	N-015 E	62.0484	50/50	62.0484
294392	P-010 E	78.8015	50/50	78.8015
294401	BSHIL;1U E	5.4312	Adder	6.39
294410	BSHIL;2U E	5.4312	Adder	6.39
925581	AC1-033 C	0.8820	Adder	1.04
925582	AC1-033 E	5.9047	Adder	6.95
926821	AC1-168 C O1	7.5259	50/50	7.5259
926822	AC1-168 E O1	50.5045	50/50	50.5045
934051	AD1-031 C O1	1.8285	Adder	2.15
934052	AD1-031 E O1	2.9833	Adder	3.51
957021	AF2-003 C O2	33.1487	50/50	33.1487
957022	AF2-003 E O2	155.1961	50/50	155.1961
990901	L-005 E	6.8646	Adder	8.08
WEC	WEC	0.0747	Confirmed LTF	0.0747
NEWTON	NEWTON	0.0559	Confirmed LTF	0.0559
CALDERWOOD	CALDERWOOD	0.0050	Confirmed LTF	0.0050
NY	NY	0.0271	Confirmed LTF	0.0271
CBM-W1	CBM-W1	2.5520	Confirmed LTF	2.5520
TVA	TVA	0.0182	Confirmed LTF	0.0182
O-066	O-066	0.3226	Confirmed LTF	0.3226
CHEOAH	CHEOAH	0.0055	Confirmed LTF	0.0055
EDWARDS	EDWARDS	0.2062	Confirmed LTF	0.2062
CBM-S1	CBM-S1	0.0085	Confirmed LTF	0.0085
TILTON	TILTON	0.0995	Confirmed LTF	0.0995
G-007	G-007	0.0489	Confirmed LTF	0.0489
MADISON	MADISON	0.6209	Confirmed LTF	0.6209
MEC	MEC	0.6976	Confirmed LTF	0.6976
GIBSON	GIBSON	0.0339	Confirmed LTF	0.0339
BLUEG	BLUEG	0.0937	Confirmed LTF	0.0937
TRIMBLE	TRIMBLE	0.0306	Confirmed LTF	0.0306
CATAWBA	CATAWBA	0.0081	Confirmed LTF	0.0081

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
148480179	271844	KICKAPOO ; B	CE	271908	LASCO STA; B	CE	1	COMED_P7_138-L6101____-S+_138-L7413__R-S-A	tower	498.0	69.21	124.4	DC	274.82

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274847	GR RIDGE ;BU	4.9322	50/50	4.9322
274871	GR RIDGE ;2U	6.2639	50/50	6.2639
276173	Z2-081	2.0808	50/50	2.0808
293061	N-015 E	114.3744	50/50	114.3744
293771	O-035 E	4.5942	Adder	5.4
294392	P-010 E	145.2555	50/50	145.2555
926821	AC1-168 C O1	9.2515	50/50	9.2515
926822	AC1-168 E O1	62.0848	50/50	62.0848
927201	AC1-214 C O1	1.4745	Adder	1.73
927202	AC1-214 E O1	4.6873	Adder	5.51
946541	AF1-318 C O1	4.0968	Adder	4.82
946542	AF1-318 E O1	19.1824	Adder	22.57
953201	J715 C	1.4093	PJM External (MISO)	1.4093
953202	J715 E	7.6247	PJM External (MISO)	7.6247
957021	AF2-003 C O2	48.3685	50/50	48.3685
957022	AF2-003 E O2	226.4525	50/50	226.4525
957751	AF2-069 C	0.0905	Adder	0.2
957752	AF2-069 E	0.2920	Adder	0.65
957761	AF2-070 C	0.1275	Adder	0.28
957762	AF2-070 E	0.6190	Adder	1.37
958341	AF2-128 C O2	0.5755	Adder	1.28
958342	AF2-128 E O2	2.6944	Adder	5.98
LGEE	LGEE	0.0011	Confirmed LTF	0.0011
CBM-W2	CBM-W2	1.0811	Confirmed LTF	1.0811
NY	NY	0.0177	Confirmed LTF	0.0177
CBM-W1	CBM-W1	0.6630	Confirmed LTF	0.6630
TVA	TVA	0.0868	Confirmed LTF	0.0868
O-066	O-066	0.2083	Confirmed LTF	0.2083
CBM-S2	CBM-S2	0.0462	Confirmed LTF	0.0462
CBM-S1	CBM-S1	0.4345	Confirmed LTF	0.4345
G-007	G-007	0.0322	Confirmed LTF	0.0322
MADISON	MADISON	0.4778	Confirmed LTF	0.4778
MEC	MEC	0.4004	Confirmed LTF	0.4004
TRIMBLE	TRIMBLE	0.0017	Confirmed LTF	0.0017

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
148480246	271908	LASCO STA; B	CE	270802	LASCO STA; B	CE	1	COMED_P7_138-L1205__B-S+_138-L7719__R-S	tower	498.0	74.05	106.32	DC	160.74

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274847	GR RIDGE ;BU	4.4852	50/50	4.4852
274849	CRESCENT ;1U	0.2115	50/50	0.2115
274851	PROVIDENC;RU	0.3227	50/50	0.3227
274871	GR RIDGE ;2U	5.6962	50/50	5.6962
276173	Z2-081	1.3282	50/50	1.3282
293061	N-015 E	104.0088	50/50	104.0088
293771	O-035 E	7.4829	50/50	7.4829
294392	P-010 E	132.0912	50/50	132.0912
294401	BSHIL;1U E	6.4641	Adder	7.6
294410	BSHIL;2U E	6.4641	Adder	7.6
925581	AC1-033 C	1.0584	Adder	1.25
925582	AC1-033 E	7.0855	Adder	8.34
926821	AC1-168 C O1	2.8521	50/50	2.8521
926822	AC1-168 E O1	19.1400	50/50	19.1400
927201	AC1-214 C O1	2.4016	50/50	2.4016
927202	AC1-214 E O1	7.6346	50/50	7.6346
934051	AD1-031 C O1	2.1500	Adder	2.53
934052	AD1-031 E O1	3.5079	Adder	4.13
936511	AD2-066 C O1	13.1419	50/50	13.1419
936512	AD2-066 E O1	8.7612	50/50	8.7612
946541	AF1-318 C O1	8.9870	50/50	8.9870
946542	AF1-318 E O1	42.0799	50/50	42.0799
953201	J715 C	2.8752	PJM External (MISO)	2.8752
953202	J715 E	15.5558	PJM External (MISO)	15.5558
957021	AF2-003 C O2	28.2905	50/50	28.2905
957022	AF2-003 E O2	132.4510	50/50	132.4510
957751	AF2-069 C	0.2781	50/50	0.2781
957752	AF2-069 E	0.8974	50/50	0.8974
957761	AF2-070 C	0.3918	50/50	0.3918
957762	AF2-070 E	1.9023	50/50	1.9023
958341	AF2-128 C O2	2.5457	50/50	2.5457
958342	AF2-128 E O2	11.9185	50/50	11.9185
990901	L-005 E	8.5670	Adder	10.08
WEC	WEC	0.0372	Confirmed LTF	0.0372
LGEE	LGEE	0.0468	Confirmed LTF	0.0468
CPL	CPL	0.0582	Confirmed LTF	0.0582
CBM-W2	CBM-W2	4.2424	Confirmed LTF	4.2424
NY	NY	0.0105	Confirmed LTF	0.0105
CBM-W1	CBM-W1	4.4911	Confirmed LTF	4.4911
TVA	TVA	0.4214	Confirmed LTF	0.4214
O-066	O-066	0.1008	Confirmed LTF	0.1008

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S2	CBM-S2	0.6820	Confirmed LTF	0.6820
CBM-S1	CBM-S1	2.2152	Confirmed LTF	2.2152
G-007	G-007	0.0156	Confirmed LTF	0.0156
MADISON	MADISON	1.7983	Confirmed LTF	1.7983
MEC	MEC	1.7384	Confirmed LTF	1.7384

13.5.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
104782024	272124	ESS J339 ; B	CE	271336	DRESDEN ; B	CE	1	COMED_P4_001-45-BT1-2	breaker	268.0	89.43	126.03	DC	98.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274837	EQUISTAR ; B	8.6952	50/50	8.6952
274847	GR RIDGE ;BU	2.7607	50/50	2.7607
274871	GR RIDGE ;2U	3.5061	50/50	3.5061
276173	Z2-081	0.8119	50/50	0.8119
293061	N-015 E	64.0188	50/50	64.0188
293771	O-035 E	3.6658	Adder	4.31
294392	P-010 E	81.3039	50/50	81.3039
294401	BSHIL;1U E	3.7284	Adder	4.39
294410	BSHIL;2U E	3.7284	Adder	4.39
925581	AC1-033 C	0.6104	Adder	0.72
925582	AC1-033 E	4.0866	Adder	4.81
926821	AC1-168 C O1	1.7061	50/50	1.7061
926822	AC1-168 E O1	11.4489	50/50	11.4489
927201	AC1-214 C O1	1.1765	Adder	1.38
927202	AC1-214 E O1	3.7401	Adder	4.4
934051	AD1-031 C O1	1.2402	Adder	1.46
934052	AD1-031 E O1	2.0234	Adder	2.38
936511	AD2-066 C O1	5.5800	Adder	6.56
936512	AD2-066 E O1	3.7200	Adder	4.38
946541	AF1-318 C O1	4.4001	Adder	5.18
946542	AF1-318 E O1	20.6027	Adder	24.24
953201	J715 C	1.6662	PJM External (MISO)	1.6662
953202	J715 E	9.0148	PJM External (MISO)	9.0148
957021	AF2-003 C O2	17.2628	50/50	17.2628
957022	AF2-003 E O2	80.8213	50/50	80.8213
957751	AF2-069 C	0.0722	Adder	0.16
957752	AF2-069 E	0.2330	Adder	0.52
957761	AF2-070 C	0.1017	Adder	0.23
957762	AF2-070 E	0.4939	Adder	1.1
958341	AF2-128 C O2	1.4662	50/50	1.4662
958342	AF2-128 E O2	6.8646	50/50	6.8646
CPL	CPL	0.0040	Confirmed LTF	0.0040
CBM-W2	CBM-W2	1.8427	Confirmed LTF	1.8427
NY	NY	0.0265	Confirmed LTF	0.0265
CBM-W1	CBM-W1	1.8515	Confirmed LTF	1.8515
TVA	TVA	0.1582	Confirmed LTF	0.1582
O-066	O-066	0.3024	Confirmed LTF	0.3024
CBM-S2	CBM-S2	0.1214	Confirmed LTF	0.1214
CBM-S1	CBM-S1	0.7838	Confirmed LTF	0.7838
G-007	G-007	0.0468	Confirmed LTF	0.0468
MADISON	MADISON	0.9395	Confirmed LTF	0.9395
MEC	MEC	0.8628	Confirmed LTF	0.8628

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
BLUEG	BLUEG	0.0052	Confirmed LTF	0.0052
TRIMBLE	TRIMBLE	0.0039	Confirmed LTF	0.0039

13.5.6 Index 6

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022374	272269	POWERTON ;	CE	272285	POWERTON ;RT	CE	1	COMED_P2-2_001_LA-138B__1	bus	214.0	107.99	122.34	DC	30.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274847	GR RIDGE ;BU	0.5179	50/50	0.5179
274848	CAMPGROVE;RU	1.5464	50/50	1.5464
274849	CRESCENT ;1U	0.2415	50/50	0.2415
274851	PROVIDENC;RU	0.3684	50/50	0.3684
274871	GR RIDGE ;2U	0.6578	50/50	0.6578
274877	BISHOP HL;1U	0.5914	50/50	0.5914
274878	BISHOP HL;2U	0.5914	50/50	0.5914
276173	Z2-081	0.2318	50/50	0.2318
293061	N-015 E	12.0108	50/50	12.0108
293516	O-009 E1	4.3110	Adder	5.07
293517	O-009 E2	2.1896	Adder	2.58
293518	O-009 E3	2.4114	Adder	2.84
293715	O-029 E	4.6089	Adder	5.42
293716	O-029 E	2.5270	Adder	2.97
293717	O-029 E	2.3226	Adder	2.73
293771	O-035 E	8.5432	50/50	8.5432
294392	P-010 E	15.2537	50/50	15.2537
294401	BSHIL;1U E	13.7144	50/50	13.7144
294410	BSHIL;2U E	13.7144	50/50	13.7144
925581	AC1-033 C	2.2379	50/50	2.2379
925582	AC1-033 E	14.9818	50/50	14.9818
926821	AC1-168 C O1	1.0471	50/50	1.0471
926822	AC1-168 E O1	7.0271	50/50	7.0271
926841	AC1-171 C O1	7.9843	50/50	7.9843
926842	AC1-171 E O1	53.3317	50/50	53.3317
927201	AC1-214 C O1	2.7419	50/50	2.7419
927202	AC1-214 E O1	8.7163	50/50	8.7163
934051	AD1-031 C O1	4.5670	50/50	4.5670
934052	AD1-031 E O1	7.4513	50/50	7.4513
943401	AF1-011 C	0.5885	Adder	0.69
943402	AF1-011 E	0.9879	Adder	1.16
946541	AF1-318 C O1	5.6691	50/50	5.6691
946542	AF1-318 E O1	26.5447	50/50	26.5447
953201	J715 C	1.3993	PJM External (MISO)	1.3993
953202	J715 E	7.5707	PJM External (MISO)	7.5707
957021	AF2-003 C O2	5.4027	50/50	5.4027
957022	AF2-003 E O2	25.2943	50/50	25.2943
957751	AF2-069 C	0.3175	50/50	0.3175
957752	AF2-069 E	1.0246	50/50	1.0246
957761	AF2-070 C	0.4474	50/50	0.4474
957762	AF2-070 E	2.1719	50/50	2.1719

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958341	AF2-128 C O2	0.6149	Adder	1.36
958342	AF2-128 E O2	2.8788	Adder	6.39
990901	L-005 E	35.8608	50/50	35.8608
WEC	WEC	0.2170	Confirmed LTF	0.2170
NEWTON	NEWTON	0.3309	Confirmed LTF	0.3309
CALDERWOOD	CALDERWOOD	0.0452	Confirmed LTF	0.0452
NY	NY	0.0481	Confirmed LTF	0.0481
CBM-W1	CBM-W1	5.4293	Confirmed LTF	5.4293
PRAIRIE	PRAIRIE	0.4856	Confirmed LTF	0.4856
O-066	O-066	0.5779	Confirmed LTF	0.5779
CHEOAH	CHEOAH	0.0455	Confirmed LTF	0.0455
EDWARDS	EDWARDS	0.7718	Confirmed LTF	0.7718
TILTON	TILTON	0.2488	Confirmed LTF	0.2488
G-007	G-007	0.0894	Confirmed LTF	0.0894
MADISON	MADISON	1.1310	Confirmed LTF	1.1310
MEC	MEC	1.1314	Confirmed LTF	1.1314
GIBSON	GIBSON	0.1054	Confirmed LTF	0.1054
BLUEG	BLUEG	0.2378	Confirmed LTF	0.2378
TRIMBLE	TRIMBLE	0.0751	Confirmed LTF	0.0751
CATAWBA	CATAWBA	0.0308	Confirmed LTF	0.0308

13.5.7 Index 7

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022777	275207	PLANO ;3M	CE	270630	PLANO ;	CE	1	COMED_P4_167-45-BT5-6__	breaker	1379.0	99.98	100.83	DC	31.42

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
272364	ESS H440N ;R	0.4228	50/50	0.4228
274660	LASCO STA;1U	31.0976	50/50	31.0976
274661	LASCO STA;2U	31.2227	50/50	31.2227
274738	AURORA EC;3P	3.0223	50/50	3.0223
274740	AURORA EC;4P	3.0223	50/50	3.0223
274830	U3-021 1	3.8110	Adder	4.48
274831	U3-021 2	3.8110	Adder	4.48
274847	GR RIDGE ;BU	0.7007	50/50	0.7007
274850	MENDOTA H;RU	0.0989	50/50	0.0989
274855	GSG-6 ;RU	0.4166	50/50	0.4166
274859	EASYSR;U1 E	7.0829	Adder	8.33
274860	EASYSR;U2 E	7.0829	Adder	8.33
274871	GR RIDGE ;2U	0.8899	50/50	0.8899
274872	LEE DEKAL;1U	0.9635	50/50	0.9635
276167	Z1-106 E2	0.8540	Adder	1.0
276168	Z1-106 E1	1.0067	50/50	1.0067
276169	Z1-107 E	1.1407	Adder	1.34
276170	Z1-108 E	1.5275	Adder	1.8
276173	Z2-081	0.2483	50/50	0.2483
290051	GSG-6; E	9.6605	50/50	9.6605
290108	LEEDK;1U E	23.2740	50/50	23.2740
292543	L-013 2	0.5026	50/50	0.5026
293061	N-015 E	16.2492	50/50	16.2492
293516	O-009 E1	5.6791	Adder	6.68
293517	O-009 E2	2.8846	Adder	3.39
293518	O-009 E3	3.1767	Adder	3.74
293715	O-029 E	6.0716	Adder	7.14
293716	O-029 E	3.3290	Adder	3.92
293717	O-029 E	3.0597	Adder	3.6
293771	O-035 E	3.4509	Adder	4.06
294392	P-010 E	20.6365	50/50	20.6365
294401	BSHIL;1U E	4.6165	Adder	5.43
294410	BSHIL;2U E	4.6165	Adder	5.43
294763	P-046 E	6.0003	Adder	7.06
915011	Y3-013 1	2.0681	Adder	2.43
915021	Y3-013 2	2.0681	Adder	2.43
915031	Y3-013 3	2.0681	Adder	2.43
916221	AB2-191	0.1598	50/50	0.1598
919581	AA2-030	11.4247	Adder	13.44
920272	AA2-123 E	1.5307	Adder	1.8
924471	AB2-096	26.4656	Adder	31.14
925581	AC1-033 C	0.7561	Adder	0.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925582	AC1-033 E	5.0616	Adder	5.95
926311	AC1-109 1	1.0385	Adder	1.22
926321	AC1-109 2	1.0385	Adder	1.22
926331	AC1-110 1	1.7291	50/50	1.7291
926341	AC1-110 2	1.7291	50/50	1.7291
926351	AC1-111 1	0.4739	Adder	0.56
926361	AC1-111 2	0.4739	Adder	0.56
926371	AC1-111 3	0.4739	Adder	0.56
926381	AC1-111 4	0.4739	Adder	0.56
926391	AC1-111 5	0.4739	Adder	0.56
926401	AC1-111 6	0.4739	Adder	0.56
926431	AC1-114	1.5159	Adder	1.78
926821	AC1-168 C O1	0.6945	Adder	0.82
926822	AC1-168 E O1	4.6604	Adder	5.48
927201	AC1-214 C O1	1.1076	Adder	1.3
927202	AC1-214 E O1	3.5209	Adder	4.14
927511	AC1-113 1	0.7579	Adder	0.89
927521	AC1-113 2	0.7579	Adder	0.89
930481	AB1-089	42.0563	Adder	49.48
930751	AB1-122 2O1	32.7707	Adder	38.55
932881	AC2-115 1	1.5159	Adder	1.78
932891	AC2-115 2	1.5159	Adder	1.78
932921	AC2-116	0.5306	Adder	0.62
933431	AC2-156 C O1	1.1325	50/50	1.1325
933432	AC2-156 E O1	1.8477	50/50	1.8477
933911	AD1-013 C	1.7223	50/50	1.7223
933912	AD1-013 E	2.7513	50/50	2.7513
933931	AD1-016 C	0.5817	Adder	0.68
933932	AD1-016 E	0.9490	Adder	1.12
934051	AD1-031 C O1	1.5352	Adder	1.81
934052	AD1-031 E O1	2.5048	Adder	2.95
934111	AD1-039 2	3.2115	Adder	3.78
934431	AD1-067 C	0.1213	50/50	0.1213
934432	AD1-067 E	0.5100	50/50	0.5100
934651	AD1-096 C	0.5797	Adder	0.68
934652	AD1-096 E	0.9458	Adder	1.11
934701	AD1-098 C O1	6.3048	50/50	6.3048
934702	AD1-098 E O1	4.6032	50/50	4.6032
934971	AD1-129 C	0.5727	Adder	0.67
934972	AD1-129 E	0.3818	Adder	0.45
936511	AD2-066 C O1	4.0968	Adder	4.82
936512	AD2-066 E O1	2.7312	Adder	3.21
936791	AD2-102 C	8.8403	Adder	10.4
936792	AD2-102 E	5.8936	Adder	6.93
937001	AD2-134 C	2.5254	50/50	2.5254
937002	AD2-134 E	10.4325	50/50	10.4325
937311	AD2-172 C	1.5751	Adder	1.85
937312	AD2-172 E	2.1751	Adder	2.56
937531	AD2-214 C	2.7453	Adder	3.23
937532	AD2-214 E	1.8302	Adder	2.15
938861	AE1-114 C O1	2.5452	Adder	2.99
938862	AE1-114 E O1	8.6837	Adder	10.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939051	AE1-134 1	0.8878	Adder	1.04
939061	AE1-134 2	0.8878	Adder	1.04
939351	AE1-166 C O1	1.3533	Adder	1.59
939352	AE1-166 E O1	1.2492	Adder	1.47
940501	AE2-035 C	1.5751	Adder	1.85
940502	AE2-035 E	2.1751	Adder	2.56
941131	AE2-107 C	7.0512	50/50	7.0512
941132	AE2-107 E	4.7008	50/50	4.7008
941551	AE2-152 C O1	4.9977	Adder	5.88
941552	AE2-152 E O1	3.3318	Adder	3.92
941561	AE2-153 C O1	2.3412	Adder	2.75
941562	AE2-153 E O1	10.9613	Adder	12.9
942991	AE2-321 C	5.1306	Adder	6.04
942992	AE2-321 E	2.5270	Adder	2.97
943121	AE2-341 C	16.0065	50/50	16.0065
943122	AE2-341 E	7.8600	50/50	7.8600
943381	AF1-009 C	0.5454	50/50	0.5454
943382	AF1-009 E	2.1816	50/50	2.1816
943401	AF1-011 C	0.7753	Adder	0.91
943402	AF1-011 E	1.3014	Adder	1.53
943411	AF1-012 C	8.1691	Adder	9.61
943412	AF1-012 E	5.4460	Adder	6.41
943591	AF1-030 C O1	10.6445	50/50	10.6445
943592	AF1-030 E O1	5.2665	50/50	5.2665
943801	AF1-048 C	2.3984	Adder	2.82
943802	AF1-048 E	1.5989	Adder	1.88
943921	AF1-060	0.7755	Adder	0.91
944041	AF1-072	1.3690	Adder	1.61
944911	AF1-156 C	5.9861	Adder	7.04
944912	AF1-156 E	3.9908	Adder	4.7
945351	AF1-200 FTIR	581.6030	50/50	581.6030
946151	AF1-280 C O1	10.0659	Adder	11.84
946152	AF1-280 E O1	4.6289	Adder	5.45
946161	AF1-281 C	0.2204	Adder	0.26
946162	AF1-281 E	1.2491	Adder	1.47
946321	AF1-296 C O1	2.3941	Adder	2.82
946322	AF1-296 E O1	11.2084	Adder	13.19
946501	AF1-314 C	2.7985	Adder	3.29
946502	AF1-314 E	13.1023	Adder	15.41
946531	AF1-317 C O1	1.5560	Adder	1.83
946541	AF1-318 C O1	3.1199	Adder	3.67
946542	AF1-318 E O1	14.6085	Adder	17.19
946661	AF1-330 C	1.2552	Adder	1.48
946662	AF1-330 E	0.2755	Adder	0.32
946671	AF1-331	2.2368	50/50	2.2368
957021	AF2-003 C O2	5.5301	50/50	5.5301
957022	AF2-003 E O2	25.8910	50/50	25.8910
957331	AF2-027 C	0.7307	Adder	1.62
957332	AF2-027 E	1.0961	Adder	2.43
957471	AF2-041 C	18.5310	50/50	18.5310
957472	AF2-041 E	12.3540	50/50	12.3540
957751	AF2-069 C	0.0680	Adder	0.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957752	AF2-069 E	0.2194	Adder	0.49
957761	AF2-070 C	0.0958	Adder	0.21
957762	AF2-070 E	0.4650	Adder	1.03
958021	AF2-096 C O2	9.5015	Adder	21.09
958022	AF2-096 E O2	4.4933	Adder	9.97
958341	AF2-128 C O2	0.4399	Adder	0.98
958342	AF2-128 E O2	2.0593	Adder	4.57
958911	AF2-182	7.0094	Adder	15.56
958921	AF2-183 C	1.2461	Adder	2.77
958922	AF2-183 E	1.8692	Adder	4.15
959081	AF2-199 C O2	6.1770	50/50	6.1770
959082	AF2-199 E O2	4.1180	50/50	4.1180
959091	AF2-200 C O2	12.3540	50/50	12.3540
959092	AF2-200 E O2	8.2360	50/50	8.2360
959101	AF2-201 C O2	2.0433	Adder	4.54
959102	AF2-201 E O2	5.8674	Adder	13.02
959761	AF2-267 C O2	1.4756	Adder	3.28
959762	AF2-267 E O2	6.9081	Adder	15.33
960381	AF2-329	8.3055	50/50	8.3055
960551	AF2-346 C	1.8555	Adder	4.12
960552	AF2-346 E	1.2370	Adder	2.75
960581	AF2-349 C	7.2154	Adder	16.02
960582	AF2-349 E	4.8103	Adder	10.68
960721	AF2-363 C O2	5.2034	50/50	5.2034
960722	AF2-363 E O2	3.4689	50/50	3.4689
960731	AF2-364 C O2	2.1675	Adder	4.81
960732	AF2-364 E O2	1.4450	Adder	3.21
960751	AF2-366 C O2	6.7258	50/50	6.7258
960752	AF2-366 E O2	4.4838	50/50	4.4838
961011	AF2-392 C O2	1.3582	Adder	3.01
961012	AF2-392 E O2	6.3589	Adder	14.12
961021	AF2-393 O2	2.3151	Adder	5.14
961031	AF2-394 O2	1.5434	Adder	3.43
WEC	WEC	2.4923	Confirmed LTF	2.4923
CALDERWOOD	CALDERWOOD	0.0919	Confirmed LTF	0.0919
CBM-W2	CBM-W2	9.2629	Confirmed LTF	9.2629
NY	NY	0.6835	Confirmed LTF	0.6835
CBM-W1	CBM-W1	41.8209	Confirmed LTF	41.8209
TVA	TVA	0.5180	Confirmed LTF	0.5180
O-066	O-066	8.1043	Confirmed LTF	8.1043
CHEOAH	CHEOAH	0.0986	Confirmed LTF	0.0986
CBM-S1	CBM-S1	1.3802	Confirmed LTF	1.3802
G-007	G-007	1.2542	Confirmed LTF	1.2542
MADISON	MADISON	12.3722	Confirmed LTF	12.3722
MEC	MEC	8.3375	Confirmed LTF	8.3375
GIBSON	GIBSON	0.1605	Confirmed LTF	0.1605
BLUEG	BLUEG	1.3662	Confirmed LTF	1.3662
TRIMBLE	TRIMBLE	0.4602	Confirmed LTF	0.4602
CATAWBA	CATAWBA	0.1988	Confirmed LTF	0.1988

13.5.8 Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022758	348935	4CORBIN	AMIL	936510	AD2-066 TAP	CE	1	COMED_P4_001-38-TR81____	breaker	223.0	98.98	122.14	DC	51.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274847	GR RIDGE ;BU	0.9119	50/50	0.9119
274849	CRESCENT ;1U	0.2163	50/50	0.2163
274851	PROVIDENC;RU	0.3300	50/50	0.3300
274871	GR RIDGE ;2U	1.1581	50/50	1.1581
276173	Z2-081	0.3940	50/50	0.3940
293061	N-015 E	21.1452	50/50	21.1452
293771	O-035 E	7.6522	50/50	7.6522
294392	P-010 E	26.8544	50/50	26.8544
294401	BSHIL;1U E	5.7786	Adder	6.8
294410	BSHIL;2U E	5.7786	Adder	6.8
925581	AC1-033 C	0.9466	Adder	1.11
925582	AC1-033 E	6.3371	Adder	7.46
926821	AC1-168 C O1	1.6744	50/50	1.6744
926822	AC1-168 E O1	11.2368	50/50	11.2368
927201	AC1-214 C O1	2.4559	50/50	2.4559
927202	AC1-214 E O1	7.8073	50/50	7.8073
934051	AD1-031 C O1	1.9214	Adder	2.26
934052	AD1-031 E O1	3.1349	Adder	3.69
946541	AF1-318 C O1	10.0887	50/50	10.0887
946542	AF1-318 E O1	47.2386	50/50	47.2386
953201	J715 C	3.3343	PJM External (MISO)	3.3343
953202	J715 E	18.0397	PJM External (MISO)	18.0397
957021	AF2-003 C O2	9.0930	50/50	9.0930
957022	AF2-003 E O2	42.5716	50/50	42.5716
957751	AF2-069 C	0.2844	50/50	0.2844
957752	AF2-069 E	0.9177	50/50	0.9177
957761	AF2-070 C	0.4007	50/50	0.4007
957762	AF2-070 E	1.9454	50/50	1.9454
958341	AF2-128 C O2	2.9049	50/50	2.9049
958342	AF2-128 E O2	13.6001	50/50	13.6001
990901	L-005 E	7.6265	Adder	8.97
LGEE	LGEE	0.0610	Confirmed LTF	0.0610
CPL	CPL	0.0701	Confirmed LTF	0.0701
G-007A	G-007A	0.0527	Confirmed LTF	0.0527
VFT	VFT	0.1419	Confirmed LTF	0.1419
CBM-W2	CBM-W2	3.7920	Confirmed LTF	3.7920
CBM-W1	CBM-W1	3.1650	Confirmed LTF	3.1650
TVA	TVA	0.3920	Confirmed LTF	0.3920
CBM-S2	CBM-S2	0.7572	Confirmed LTF	0.7572
CBM-S1	CBM-S1	2.1130	Confirmed LTF	2.1130
MADISON	MADISON	1.3406	Confirmed LTF	1.3406

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MEC	MEC	1.3824	Confirmed LTF	1.3824

13.5.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
147479507	957020	AF2-003 TAP	CE	926820	AC1-168 TAP	CE	1	COMED_P4_001-38-L0108__	breaker	184.0	95.42	230.44	DC	248.43

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274847	GR RIDGE ;BU	3.6606	50/50	3.6606
274871	GR RIDGE ;2U	4.6489	50/50	4.6489
276173	Z2-081	1.8256	50/50	1.8256
293061	N-015 E	84.8856	50/50	84.8856
294392	P-010 E	107.8047	50/50	107.8047
957021	AF2-003 C O2	43.7242	50/50	43.7242
957022	AF2-003 E O2	204.7086	50/50	204.7086
NEWTON	NEWTON	0.0322	Confirmed LTF	0.0322
FARMERCITY	FARMERCITY	0.0033	Confirmed LTF	0.0033
CALDERWOOD	CALDERWOOD	0.0159	Confirmed LTF	0.0159
NY	NY	0.0166	Confirmed LTF	0.0166
PRAIRIE	PRAIRIE	0.1007	Confirmed LTF	0.1007
O-066	O-066	0.1949	Confirmed LTF	0.1949
CHEOAH	CHEOAH	0.0160	Confirmed LTF	0.0160
EDWARDS	EDWARDS	0.0606	Confirmed LTF	0.0606
TILTON	TILTON	0.0113	Confirmed LTF	0.0113
G-007	G-007	0.0302	Confirmed LTF	0.0302
GIBSON	GIBSON	0.0153	Confirmed LTF	0.0153
BLUEG	BLUEG	0.0486	Confirmed LTF	0.0486
TRIMBLE	TRIMBLE	0.0156	Confirmed LTF	0.0156
CATAWBA	CATAWBA	0.0109	Confirmed LTF	0.0109

13.5.10 Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
148480218	270670	BRAIDWOOD; B	CE	934730	AD1-100 TAP	CE	1	COMED_P7_345-L2001_B-S+_345-L2003_R-S-B	tower	1915.0	103.01	105.46	DC	46.88

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	98.3732	50/50	98.3732
274655	BRAIDWOOD;2U	95.1037	50/50	95.1037
274660	LASCO STA;1U	64.4730	50/50	64.4730
274661	LASCO STA;2U	64.7376	50/50	64.7376
274847	GR RIDGE ;BU	1.3349	50/50	1.3349
274871	GR RIDGE ;2U	1.6954	50/50	1.6954
276153	W2-048 E	-2.7168	Adder	-3.2
276173	Z2-081	0.3890	50/50	0.3890
293061	N-015 E	30.9564	50/50	30.9564
294392	P-010 E	39.3146	50/50	39.3146
909052	X2-022 E	-8.1722	Adder	-9.61
924041	AB2-047 C O1	-2.5490	Adder	-3.0
926311	AC1-109 1	0.6490	Adder	0.76
926321	AC1-109 2	0.6490	Adder	0.76
926331	AC1-110 1	0.6394	Adder	0.75
926341	AC1-110 2	0.6394	Adder	0.75
926821	AC1-168 C O1	0.6749	Adder	0.79
926822	AC1-168 E O1	4.5289	Adder	5.33
933431	AC2-156 C O1	0.4125	Adder	0.49
933432	AC2-156 E O1	0.6730	Adder	0.79
941561	AE2-153 C O1	11.2865	50/50	11.2865
941562	AE2-153 E O1	52.8415	50/50	52.8415
941732	AE2-173 BAT	4.6135	Merchant Transmission	4.6135
943121	AE2-341 C	5.8489	Adder	6.88
943122	AE2-341 E	2.8721	Adder	3.38
943591	AF1-030 C O1	3.8896	Adder	4.58
943592	AF1-030 E O1	1.9244	Adder	2.26
944911	AF1-156 C	28.8576	50/50	28.8576
944912	AF1-156 E	19.2384	50/50	19.2384
945351	AF1-200 FTIR	248.5752	50/50	248.5752
957021	AF2-003 C O2	8.2509	50/50	8.2509
957022	AF2-003 E O2	38.6293	50/50	38.6293
958021	AF2-096 C O2	122.7325	50/50	122.7325
958022	AF2-096 E O2	58.0400	50/50	58.0400
959613	AF2-252 BAT	1.9215	Merchant Transmission	1.9215
960381	AF2-329	1.6085	Adder	3.57
960613	AF2-352 BAT	1.9215	Merchant Transmission	1.9215
WEC	WEC	0.9626	Confirmed LTF	0.9626
NEWTON	NEWTON	2.3908	Confirmed LTF	2.3908
CALDERWOOD	CALDERWOOD	0.6829	Confirmed LTF	0.6829
NY	NY	0.7449	Confirmed LTF	0.7449

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-W1	CBM-W1	7.2433	Confirmed LTF	7.2433
PRAIRIE	PRAIRIE	4.3446	Confirmed LTF	4.3446
O-066	O-066	8.9510	Confirmed LTF	8.9510
CHEOAH	CHEOAH	0.6872	Confirmed LTF	0.6872
TILTON	TILTON	1.8087	Confirmed LTF	1.8087
G-007	G-007	1.3853	Confirmed LTF	1.3853
MADISON	MADISON	4.0441	Confirmed LTF	4.0441
MEC	MEC	1.2442	Confirmed LTF	1.2442
GIBSON	GIBSON	0.9828	Confirmed LTF	0.9828
BLUEG	BLUEG	2.6977	Confirmed LTF	2.6977
TRIMBLE	TRIMBLE	0.8598	Confirmed LTF	0.8598
CATAWBA	CATAWBA	0.4739	Confirmed LTF	0.4739

13.5.11 Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022730	270671	BRAIDWOOD; R	CE	941560	AE2-153 TAP	CE	1	ADD AD1-100 5	breaker	1341.0	107.24	107.78	DC	16.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	33.4821	50/50	33.4821
274655	BRAIDWOOD;2U	32.9938	50/50	32.9938
274660	LASCO STA;1U	21.7834	50/50	21.7834
274661	LASCO STA;2U	21.8779	50/50	21.8779
274890	CAYUG;1U E	8.4232	Adder	9.91
274891	CAYUG;2U E	8.4232	Adder	9.91
293061	N-015 E	8.6894	Adder	10.22
294392	P-010 E	11.0355	Adder	12.98
917502	Z2-087 E	8.3859	Adder	9.87
924041	AB2-047 C O1	1.5663	Adder	1.84
924042	AB2-047 E O1	10.4824	Adder	12.33
934721	AD1-100 C	20.7990	50/50	20.7990
934722	AD1-100 E	97.0620	50/50	97.0620
939351	AE1-166 C O1	11.5292	50/50	11.5292
939352	AE1-166 E O1	10.6423	50/50	10.6423
939401	AE1-172 C O1	3.6926	Adder	4.34
939402	AE1-172 E O1	17.3256	Adder	20.38
939741	AE1-205 C O1	4.0484	Adder	4.76
939742	AE1-205 E O1	5.5906	Adder	6.58
940101	AE1-252 C O1	7.4182	Adder	8.73
940102	AE1-252 E O1	4.9455	Adder	5.82
941551	AE2-152 C O1	13.3029	50/50	13.3029
941552	AE2-152 E O1	8.8686	50/50	8.8686
941731	AE2-173 O1	2.4097	Adder	2.83
942111	AE2-223 C	0.9398	Adder	1.11
942112	AE2-223 E	6.2894	Adder	7.4
957021	AF2-003 C O2	1.2735	Adder	2.83
957022	AF2-003 E O2	5.9624	Adder	13.24
957373	AF2-031 BAT	0.8212	Merchant Transmission	0.8212
958013	AF2-095 BAT	11.6308	50/50	11.6308
958021	AF2-096 C O2	38.5923	50/50	38.5923
958022	AF2-096 E O2	18.2502	50/50	18.2502
959341	AF2-225 C	1.6092	Adder	3.57
959342	AF2-225 E	2.2223	Adder	4.93
960603	AF2-351 BAT	6.9884	50/50	6.9884
WEC	WEC	0.1767	Confirmed LTF	0.1767
CBM-W2	CBM-W2	4.6355	Confirmed LTF	4.6355
NY	NY	0.2146	Confirmed LTF	0.2146
CBM-W1	CBM-W1	0.4754	Confirmed LTF	0.4754
TVA	TVA	0.3178	Confirmed LTF	0.3178
O-066	O-066	2.5267	Confirmed LTF	2.5267

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S1	CBM-S1	1.4058	Confirmed LTF	1.4058
G-007	G-007	0.3910	Confirmed LTF	0.3910
MADISON	MADISON	2.4998	Confirmed LTF	2.4998
MEC	MEC	1.4635	Confirmed LTF	1.4635
BLUEG	BLUEG	0.2014	Confirmed LTF	0.2014
TRIMBLE	TRIMBLE	0.0746	Confirmed LTF	0.0746
CATAWBA	CATAWBA	0.0431	Confirmed LTF	0.0431

13.5.12 Index 12

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022661	270802	LASCO STA; B	CE	270846	PLANO ; B	CE	1	COMED_P4_167-45-BT2-5__	breaker	1528.0	115.25	117.64	DC	36.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	25.5136	50/50	25.5136
274655	BRAIDWOOD;2U	24.9439	50/50	24.9439
274660	LASCO STA;1U	53.7210	50/50	53.7210
274661	LASCO STA;2U	53.6927	50/50	53.6927
274847	GR RIDGE ;BU	1.0908	50/50	1.0908
274871	GR RIDGE ;2U	1.3854	50/50	1.3854
274881	PILOT HIL;1E	7.7053	Adder	9.07
275149	KELLYCK ;1E	7.7053	Adder	9.07
276165	Z1-106 BAT2	0.7257	Merchant Transmission	0.7257
276166	Z1-106 BAT1	0.7257	Merchant Transmission	0.7257
276172	Z1-108 BAT	1.2034	Merchant Transmission	1.2034
276173	Z2-081	0.3044	50/50	0.3044
293061	N-015 E	25.2960	50/50	25.2960
294392	P-010 E	32.1259	50/50	32.1259
920273	AA2-123 BAT	1.1788	Merchant Transmission	1.1788
926821	AC1-168 C O1	0.4461	Adder	0.52
926822	AC1-168 E O1	2.9935	Adder	3.52
930501	AB1-091 O1	34.9176	Adder	41.08
933411	AC2-154 C	1.0457	Adder	1.23
933412	AC2-154 E	1.7062	Adder	2.01
934721	AD1-100 C	9.8545	Adder	11.59
934722	AD1-100 E	45.9875	Adder	54.1
936371	AD2-047 C O1	1.8713	Adder	2.2
936372	AD2-047 E O1	9.1362	Adder	10.75
936461	AD2-060	1.1008	Adder	1.3
939351	AE1-166 C O1	6.1374	Adder	7.22
939352	AE1-166 E O1	5.6653	Adder	6.67
941551	AE2-152 C O1	7.0816	Adder	8.33
941552	AE2-152 E O1	4.7211	Adder	5.55
941561	AE2-153 C O1	3.8051	50/50	3.8051
941562	AE2-153 E O1	17.8149	50/50	17.8149
943383	AF1-009 BAT	1.6720	Merchant Transmission	1.6720
943803	AF1-048 BAT	3.0709	Merchant Transmission	3.0709
943922	AF1-060 BAT	0.5506	Merchant Transmission	0.5506
944911	AF1-156 C	9.7290	50/50	9.7290
944912	AF1-156 E	6.4860	50/50	6.4860
945352	AF1-200 NFTW	406.0980	50/50	406.0980
946533	AF1-317 BAT	2.6190	Merchant Transmission	2.6190
957021	AF2-003 C O2	6.3748	50/50	6.3748
957022	AF2-003 E O2	29.8458	50/50	29.8458
958011	AF2-095 C O2	3.1761	Adder	7.05
958012	AF2-095 E O2	1.4947	Adder	3.32

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958021	AF2-096 C O2	29.7042	50/50	29.7042
958022	AF2-096 E O2	14.0471	50/50	14.0471
960382	AF2-329 BAT	5.4356	50/50	5.4356
960591	AF2-350 C O2	1.7502	Adder	3.89
960592	AF2-350 E O2	1.1668	Adder	2.59
960601	AF2-351 C O2	0.2334	Adder	0.52
960602	AF2-351 E O2	0.3500	Adder	0.78
NEWTON	NEWTON	0.1440	Confirmed LTF	0.1440
FARMERCITY	FARMERCITY	0.1155	Confirmed LTF	0.1155
CALDERWOOD	CALDERWOOD	0.1948	Confirmed LTF	0.1948
NY	NY	0.1300	Confirmed LTF	0.1300
PRAIRIE	PRAIRIE	1.4594	Confirmed LTF	1.4594
O-066	O-066	1.5926	Confirmed LTF	1.5926
CHEOAH	CHEOAH	0.1952	Confirmed LTF	0.1952
EDWARDS	EDWARDS	0.1915	Confirmed LTF	0.1915
G-007	G-007	0.2465	Confirmed LTF	0.2465
GIBSON	GIBSON	0.0699	Confirmed LTF	0.0699
BLUEG	BLUEG	0.3281	Confirmed LTF	0.3281
TRIMBLE	TRIMBLE	0.1041	Confirmed LTF	0.1041
CATAWBA	CATAWBA	0.1190	Confirmed LTF	0.1190

13.5.13 Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022664	270803	LASCO STA; R	CE	270847	PLANO ; R	CE	1	COMED_P4_167-45-BT9-12_	breaker	1528.0	115.19	117.58	DC	36.23

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	25.6136	50/50	25.6136
274655	BRAIDWOOD;2U	25.0454	50/50	25.0454
274660	LASCO STA;1U	53.6389	50/50	53.6389
274661	LASCO STA;2U	54.1202	50/50	54.1202
274847	GR RIDGE ;BU	1.0896	50/50	1.0896
274871	GR RIDGE ;2U	1.3838	50/50	1.3838
274881	PILOT HIL;1E	7.7505	Adder	9.12
275149	KELLYCK ;1E	7.7505	Adder	9.12
276165	Z1-106 BAT2	0.7174	Merchant Transmission	0.7174
276166	Z1-106 BAT1	0.7173	Merchant Transmission	0.7173
276172	Z1-108 BAT	1.1888	Merchant Transmission	1.1888
276173	Z2-081	0.3044	50/50	0.3044
293061	N-015 E	25.2672	50/50	25.2672
294392	P-010 E	32.0893	50/50	32.0893
920273	AA2-123 BAT	1.1642	Merchant Transmission	1.1642
926821	AC1-168 C O1	0.4480	Adder	0.53
926822	AC1-168 E O1	3.0063	Adder	3.54
930501	AB1-091 O1	35.0952	Adder	41.29
933411	AC2-154 C	1.0518	Adder	1.24
933412	AC2-154 E	1.7162	Adder	2.02
934721	AD1-100 C	9.8940	Adder	11.64
934722	AD1-100 E	46.1720	Adder	54.32
936371	AD2-047 C O1	1.8823	Adder	2.21
936372	AD2-047 E O1	9.1898	Adder	10.81
936461	AD2-060	1.1072	Adder	1.3
939351	AE1-166 C O1	6.1626	Adder	7.25
939352	AE1-166 E O1	5.6885	Adder	6.69
941551	AE2-152 C O1	7.1107	Adder	8.37
941552	AE2-152 E O1	4.7405	Adder	5.58
941561	AE2-153 C O1	3.8213	50/50	3.8213
941562	AE2-153 E O1	17.8907	50/50	17.8907
943383	AF1-009 BAT	1.6502	Merchant Transmission	1.6502
943803	AF1-048 BAT	3.0328	Merchant Transmission	3.0328
943922	AF1-060 BAT	0.5433	Merchant Transmission	0.5433
944911	AF1-156 C	9.7704	50/50	9.7704
944912	AF1-156 E	6.5136	50/50	6.5136
945352	AF1-200 NFTW	402.7170	50/50	402.7170
946533	AF1-317 BAT	2.5825	Merchant Transmission	2.5825
957021	AF2-003 C O2	6.3764	50/50	6.3764
957022	AF2-003 E O2	29.8533	50/50	29.8533
958011	AF2-095 C O2	3.2006	Adder	7.1
958012	AF2-095 E O2	1.5062	Adder	3.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958021	AF2-096 C O2	29.8289	50/50	29.8289
958022	AF2-096 E O2	14.1061	50/50	14.1061
960382	AF2-329 BAT	5.3677	50/50	5.3677
960591	AF2-350 C O2	1.7605	Adder	3.91
960592	AF2-350 E O2	1.1736	Adder	2.61
960601	AF2-351 C O2	0.2347	Adder	0.52
960602	AF2-351 E O2	0.3521	Adder	0.78
NEWTON	NEWTON	0.1375	Confirmed LTF	0.1375
FARMERCITY	FARMERCITY	0.1136	Confirmed LTF	0.1136
CALDERWOOD	CALDERWOOD	0.1953	Confirmed LTF	0.1953
NY	NY	0.1349	Confirmed LTF	0.1349
PRAIRIE	PRAIRIE	1.4258	Confirmed LTF	1.4258
O-066	O-066	1.6531	Confirmed LTF	1.6531
CHEOAH	CHEOAH	0.1962	Confirmed LTF	0.1962
EDWARDS	EDWARDS	0.1795	Confirmed LTF	0.1795
G-007	G-007	0.2558	Confirmed LTF	0.2558
GIBSON	GIBSON	0.0715	Confirmed LTF	0.0715
BLUEG	BLUEG	0.3385	Confirmed LTF	0.3385
TRIMBLE	TRIMBLE	0.1080	Confirmed LTF	0.1080
CATAWBA	CATAWBA	0.1204	Confirmed LTF	0.1204

13.5.14 Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
96022798	270847	PLANO ; R	CE	275208	PLANO ;4M	CE	1	COMED_P4_167-45-BT8-12_	breaker	1379.0	101.14	101.43	DC	32.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274660	LASCO STA;1U	33.3383	50/50	33.3383
274661	LASCO STA;2U	33.4737	50/50	33.4737
274737	AURORA EC;1P	3.1982	50/50	3.1982
274739	AURORA EC;2P	3.1982	50/50	3.1982
274745	AURORA EC;9P	0.6040	50/50	0.6040
274746	AURORA EC;0P	0.6040	50/50	0.6040
274830	U3-021 1	3.5005	Adder	4.12
274831	U3-021 2	3.5005	Adder	4.12
274847	GR RIDGE ;BU	0.7450	50/50	0.7450
274859	EASYSR;U1 E	5.9837	Adder	7.04
274860	EASYSR;U2 E	5.9837	Adder	7.04
274871	GR RIDGE ;2U	0.9461	50/50	0.9461
274881	PILOT HIL;1E	7.6648	Adder	9.02
275149	KELLYCK ;1E	7.6648	Adder	9.02
276167	Z1-106 E2	0.8035	Adder	0.95
276168	Z1-106 E1	0.8018	Adder	0.94
276169	Z1-107 E	1.0596	Adder	1.25
276170	Z1-108 E	1.4606	Adder	1.72
276173	Z2-081	0.2567	50/50	0.2567
290051	GSG-6; E	5.8235	Adder	6.85
290108	LEEDK;1U E	13.5728	Adder	15.97
293061	N-015 E	17.2752	50/50	17.2752
293516	O-009 E1	4.7370	Adder	5.57
293517	O-009 E2	2.4060	Adder	2.83
293518	O-009 E3	2.6497	Adder	3.12
293715	O-029 E	5.0644	Adder	5.96
293716	O-029 E	2.7767	Adder	3.27
293717	O-029 E	2.5521	Adder	3.0
293771	O-035 E	3.1988	Adder	3.76
294392	P-010 E	21.9395	50/50	21.9395
294401	BSHIL;1U E	4.2004	Adder	4.94
294410	BSHIL;2U E	4.2004	Adder	4.94
294763	P-046 E	5.2115	Adder	6.13
915011	Y3-013 1	2.0010	Adder	2.35
915021	Y3-013 2	2.0010	Adder	2.35
915031	Y3-013 3	2.0010	Adder	2.35
919581	AA2-030	9.2948	Adder	10.94
920272	AA2-123 E	1.4188	Adder	1.67
924471	AB2-096	24.3087	Adder	28.6
925581	AC1-033 C	0.6878	Adder	0.81
925582	AC1-033 E	4.6046	Adder	5.42
926311	AC1-109 1	1.8297	50/50	1.8297

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926321	AC1-109 2	1.8297	50/50	1.8297
926331	AC1-110 1	1.0771	Adder	1.27
926341	AC1-110 2	1.0771	Adder	1.27
926351	AC1-111 1	0.5471	Adder	0.64
926361	AC1-111 2	0.5471	Adder	0.64
926371	AC1-111 3	0.5471	Adder	0.64
926381	AC1-111 4	0.5471	Adder	0.64
926391	AC1-111 5	0.5471	Adder	0.64
926401	AC1-111 6	0.5471	Adder	0.64
926431	AC1-114	1.3455	Adder	1.58
926821	AC1-168 C O1	0.6816	Adder	0.8
926822	AC1-168 E O1	4.5743	Adder	5.38
927201	AC1-214 C O1	1.0267	Adder	1.21
927202	AC1-214 E O1	3.2637	Adder	3.84
927511	AC1-113 1	0.6728	Adder	0.79
927521	AC1-113 2	0.6728	Adder	0.79
930481	AB1-089	38.0779	Adder	44.8
930501	AB1-091 O1	30.8176	Adder	36.26
930751	AB1-122 2O1	0.0988	Adder	0.12
932881	AC2-115 1	1.3455	Adder	1.58
932891	AC2-115 2	1.3455	Adder	1.58
932921	AC2-116	0.4709	Adder	0.55
933411	AC2-154 C	1.0402	Adder	1.22
933412	AC2-154 E	1.6972	Adder	2.0
933431	AC2-156 C O1	0.5351	Adder	0.63
933432	AC2-156 E O1	0.8731	Adder	1.03
933911	AD1-013 C	1.0318	Adder	1.21
933912	AD1-013 E	1.6481	Adder	1.94
933931	AD1-016 C	0.5392	Adder	0.63
933932	AD1-016 E	0.8797	Adder	1.03
934051	AD1-031 C O1	1.3968	Adder	1.64
934052	AD1-031 E O1	2.2791	Adder	2.68
934111	AD1-039 2	2.7915	Adder	3.28
934431	AD1-067 C	0.0731	Adder	0.09
934432	AD1-067 E	0.3075	Adder	0.36
934651	AD1-096 C	0.4954	Adder	0.58
934652	AD1-096 E	0.8083	Adder	0.95
934701	AD1-098 C O1	3.8248	Adder	4.5
934702	AD1-098 E O1	2.7925	Adder	3.29
934971	AD1-129 C	0.5178	Adder	0.61
934972	AD1-129 E	0.3452	Adder	0.41
936371	AD2-047 C O1	1.8614	Adder	2.19
936372	AD2-047 E O1	9.0883	Adder	10.69
936461	AD2-060	1.0950	Adder	1.29
936511	AD2-066 C O1	3.8738	Adder	4.56
936512	AD2-066 E O1	2.5825	Adder	3.04
936791	AD2-102 C	7.9315	Adder	9.33
936792	AD2-102 E	5.2877	Adder	6.22
937001	AD2-134 C	1.5224	Adder	1.79
937002	AD2-134 E	6.2889	Adder	7.4
937311	AD2-172 C	1.3680	Adder	1.61
937312	AD2-172 E	1.8892	Adder	2.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937531	AD2-214 C	2.2754	Adder	2.68
937532	AD2-214 E	1.5169	Adder	1.78
938861	AE1-114 C O1	2.1504	Adder	2.53
938862	AE1-114 E O1	7.3368	Adder	8.63
939051	AE1-134 1	0.7223	Adder	0.85
939061	AE1-134 2	0.7223	Adder	0.85
939351	AE1-166 C O1	4.6171	Adder	5.43
939352	AE1-166 E O1	4.2620	Adder	5.01
940501	AE2-035 C	1.3680	Adder	1.61
940502	AE2-035 E	1.8892	Adder	2.22
940752	AE2-062 E	0.0506	Adder	0.06
941131	AE2-107 C	4.0871	Adder	4.81
941132	AE2-107 E	2.7248	Adder	3.21
941551	AE2-152 C O1	5.3275	Adder	6.27
941552	AE2-152 E O1	3.5516	Adder	4.18
941561	AE2-153 C O1	2.4795	Adder	2.92
941562	AE2-153 E O1	11.6084	Adder	13.66
942991	AE2-321 C	4.7399	Adder	5.58
942992	AE2-321 E	2.3346	Adder	2.75
943121	AE2-341 C	7.1444	Adder	8.41
943122	AE2-341 E	3.5083	Adder	4.13
943381	AF1-009 C	0.3309	Adder	0.39
943382	AF1-009 E	1.3234	Adder	1.56
943401	AF1-011 C	0.6467	Adder	0.76
943402	AF1-011 E	1.0855	Adder	1.28
943411	AF1-012 C	6.3546	Adder	7.48
943412	AF1-012 E	4.2364	Adder	4.98
943591	AF1-030 C O1	4.7511	Adder	5.59
943592	AF1-030 E O1	2.3507	Adder	2.77
943801	AF1-048 C	2.2157	Adder	2.61
943802	AF1-048 E	1.4772	Adder	1.74
943921	AF1-060	0.6736	Adder	0.79
944041	AF1-072	1.3146	Adder	1.55
944911	AF1-156 C	6.3396	Adder	7.46
944912	AF1-156 E	4.2264	Adder	4.97
945351	AF1-200 FTIR	627.0445	50/50	627.0445
946151	AF1-280 C O1	8.4100	Adder	9.89
946152	AF1-280 E O1	3.8674	Adder	4.55
946161	AF1-281 C	0.1842	Adder	0.22
946162	AF1-281 E	1.0436	Adder	1.23
946321	AF1-296 C O1	2.0012	Adder	2.35
946322	AF1-296 E O1	9.3693	Adder	11.02
946501	AF1-314 C	2.4307	Adder	2.86
946502	AF1-314 E	11.3799	Adder	13.39
946531	AF1-317 C O1	1.2104	Adder	1.42
946541	AF1-318 C O1	2.9651	Adder	3.49
946542	AF1-318 E O1	13.8836	Adder	16.33
946661	AF1-330 C	1.1634	Adder	1.37
946662	AF1-330 E	0.2554	Adder	0.3
946671	AF1-331	1.3399	Adder	1.58
957021	AF2-003 C O2	2.5588	Adder	5.68
957022	AF2-003 E O2	11.9800	Adder	26.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957331	AF2-027 C	0.7070	Adder	1.57
957332	AF2-027 E	1.0605	Adder	2.35
957471	AF2-041 C	6.0161	Adder	13.35
957472	AF2-041 E	4.0107	Adder	8.9
957751	AF2-069 C	0.0630	Adder	0.14
957752	AF2-069 E	0.2033	Adder	0.45
957761	AF2-070 C	0.0888	Adder	0.2
957762	AF2-070 E	0.4310	Adder	0.96
958011	AF2-095 C O2	3.8973	Adder	8.65
958012	AF2-095 E O2	1.8340	Adder	4.07
958021	AF2-096 C O2	10.0762	Adder	22.37
958022	AF2-096 E O2	4.7650	Adder	10.58
958341	AF2-128 C O2	0.4208	Adder	0.93
958342	AF2-128 E O2	1.9699	Adder	4.37
958911	AF2-182	5.8563	Adder	13.0
958921	AF2-183 C	1.0411	Adder	2.31
958922	AF2-183 E	1.5617	Adder	3.47
959081	AF2-199 C O2	2.0054	Adder	4.45
959082	AF2-199 E O2	1.3369	Adder	2.97
959091	AF2-200 C O2	4.0107	Adder	8.9
959092	AF2-200 E O2	2.6738	Adder	5.94
959101	AF2-201 C O2	1.7747	Adder	3.94
959102	AF2-201 E O2	5.0961	Adder	11.31
959761	AF2-267 C O2	1.2814	Adder	2.84
959762	AF2-267 E O2	5.9992	Adder	13.32
960381	AF2-329	1.9648	Adder	4.36
960551	AF2-346 C	1.4434	Adder	3.2
960552	AF2-346 E	0.9623	Adder	2.14
960581	AF2-349 C	6.6518	Adder	14.77
960582	AF2-349 E	4.4345	Adder	9.84
960591	AF2-350 C O2	1.7410	Adder	3.86
960592	AF2-350 E O2	1.1607	Adder	2.58
960601	AF2-351 C O2	0.2321	Adder	0.52
960602	AF2-351 E O2	0.3482	Adder	0.77
960721	AF2-363 C O2	1.7637	Adder	3.91
960722	AF2-363 E O2	1.1758	Adder	2.61
960731	AF2-364 C O2	2.0101	Adder	4.46
960732	AF2-364 E O2	1.3401	Adder	2.97
960751	AF2-366 C O2	2.0693	Adder	4.59
960752	AF2-366 E O2	1.3795	Adder	3.06
961011	AF2-392 C O2	1.1105	Adder	2.47
961012	AF2-392 E O2	5.1992	Adder	11.54
961021	AF2-393 O2	1.8929	Adder	4.2
961031	AF2-394 O2	1.2619	Adder	2.8
990901	L-005 E	6.0139	Adder	7.08
WEC	WEC	2.3562	Confirmed LTF	2.3562
CALDERWOOD	CALDERWOOD	0.1103	Confirmed LTF	0.1103
CBM-W2	CBM-W2	8.3620	Confirmed LTF	8.3620
NY	NY	0.6669	Confirmed LTF	0.6669
CBM-W1	CBM-W1	37.6301	Confirmed LTF	37.6301
TVA	TVA	0.4144	Confirmed LTF	0.4144
O-066	O-066	7.9094	Confirmed LTF	7.9094

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CHEOAH	CHEOAH	0.1166	Confirmed LTF	0.1166
CBM-S1	CBM-S1	0.8946	Confirmed LTF	0.8946
G-007	G-007	1.2230	Confirmed LTF	1.2230
MADISON	MADISON	11.3098	Confirmed LTF	11.3098
MEC	MEC	7.3205	Confirmed LTF	7.3205
GIBSON	GIBSON	0.1523	Confirmed LTF	0.1523
BLUEG	BLUEG	1.3280	Confirmed LTF	1.3280
TRIMBLE	TRIMBLE	0.4469	Confirmed LTF	0.4469
CATAWBA	CATAWBA	0.2034	Confirmed LTF	0.2034

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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
96022632	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	121.48	121.57	DC	45.11

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274771	LINCOLN ;2U	3.7664	50/50	3.7664
274772	LINCOLN ;3U	3.7664	50/50	3.7664
274773	LINCOLN ;4U	3.7664	50/50	3.7664
274774	LINCOLN ;5U	3.7664	50/50	3.7664
274775	LINCOLN ;6U	3.7664	50/50	3.7664
274776	LINCOLN ;7U	3.7664	50/50	3.7664
274777	LINCOLN ;8U	3.7664	50/50	3.7664
274830	U3-021 1	6.3035	Adder	7.42
274831	U3-021 2	6.3035	Adder	7.42
274881	PILOT HIL;1E	19.9396	Adder	23.46
274890	CAYUG;1U E	17.0054	Adder	20.01
274891	CAYUG;2U E	17.0054	Adder	20.01
275149	KELLYCK ;1E	19.9396	Adder	23.46
276167	Z1-106 E2	1.3063	Adder	1.54
276168	Z1-106 E1	1.3062	Adder	1.54
276169	Z1-107 E	2.6738	Adder	3.15
276170	Z1-108 E	2.5704	Adder	3.02
290021	O50 E	20.0260	Adder	23.56
290051	GSG-6; E	10.8913	Adder	12.81
290108	LEEDK;1U E	25.1940	Adder	29.64
293061	N-015 E	16.4434	Adder	19.35
293644	O22 E1	10.5913	Adder	12.46
293645	O22 E2	20.5595	Adder	24.19
294392	P-010 E	20.8831	Adder	24.57
910542	X3-005 E	0.7562	Adder	0.89
915011	Y3-013 1	3.8635	Adder	4.55
915021	Y3-013 2	3.8635	Adder	4.55
915031	Y3-013 3	3.8635	Adder	4.55
918052	AA1-018 E OP	16.9837	Adder	19.98
920272	AA2-123 E	2.5262	Adder	2.97
924471	AB2-096	43.7741	Adder	51.5
926311	AC1-109 1	1.9765	Adder	2.33
926321	AC1-109 2	1.9765	Adder	2.33
926331	AC1-110 1	1.9634	Adder	2.31
926341	AC1-110 2	1.9634	Adder	2.31
926351	AC1-111 1	0.7894	Adder	0.93
926361	AC1-111 2	0.7894	Adder	0.93
926371	AC1-111 3	0.7894	Adder	0.93
926381	AC1-111 4	0.7894	Adder	0.93
926391	AC1-111 5	0.7894	Adder	0.93
926401	AC1-111 6	0.7894	Adder	0.93
927451	AC1-142A 1	4.3256	Adder	5.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927461	AC1-142A 2	4.3256	Adder	5.09
930501	AB1-091 O1	79.3394	Adder	93.34
930741	AB1-122 1O1	75.3017	Adder	88.59
930751	AB1-122 2O1	76.2303	Adder	89.68
933411	AC2-154 C	2.7061	Adder	3.18
933412	AC2-154 E	4.4152	Adder	5.19
933431	AC2-156 C O1	0.9893	Adder	1.16
933432	AC2-156 E O1	1.6142	Adder	1.9
933911	AD1-013 C	1.9232	Adder	2.26
933912	AD1-013 E	3.0721	Adder	3.61
933931	AD1-016 C	0.9600	Adder	1.13
933932	AD1-016 E	1.5662	Adder	1.84
934101	AD1-039 1	7.3796	Adder	8.68
934111	AD1-039 2	7.4706	Adder	8.79
934431	AD1-067 C	0.1368	Adder	0.16
934432	AD1-067 E	0.5750	Adder	0.68
934701	AD1-098 C O1	7.1661	Adder	8.43
934702	AD1-098 E O1	5.2320	Adder	6.16
934721	AD1-100 C	24.8523	Adder	29.24
934722	AD1-100 E	115.9774	Adder	136.44
934871	AD1-116 C	0.9891	Adder	1.16
934872	AD1-116 E	1.6138	Adder	1.9
934971	AD1-129 C	0.9344	Adder	1.1
934972	AD1-129 E	0.6230	Adder	0.73
935001	AD1-133 C O1	23.0234	Adder	27.09
935002	AD1-133 E O1	15.3490	Adder	18.06
936291	AD2-038 C O1	2.4301	Adder	2.86
936292	AD2-038 E O1	16.2627	Adder	19.13
936371	AD2-047 C O1	4.8425	Adder	5.7
936372	AD2-047 E O1	23.6427	Adder	27.81
936461	AD2-060	2.8485	Adder	3.35
936511	AD2-066 C O1	8.7640	Adder	10.31
936512	AD2-066 E O1	5.8426	Adder	6.87
937001	AD2-134 C	2.8471	Adder	3.35
937002	AD2-134 E	11.7616	Adder	13.84
937401	AD2-194 1	8.0697	Adder	9.49
937411	AD2-194 2	8.0692	Adder	9.49
938511	AE1-070 1	9.4819	Adder	11.16
938521	AE1-070 2	8.6744	Adder	10.21
938851	AE1-113 C	8.2607	Adder	9.72
938852	AE1-113 E	29.2880	Adder	34.46
939321	AE1-163 C O1	6.1063	Adder	7.18
939322	AE1-163 E O1	37.5102	Adder	44.13
939351	AE1-166 C O1	12.2622	Adder	14.43
939352	AE1-166 E O1	11.3189	Adder	13.32
939401	AE1-172 C O1	6.7946	Adder	7.99
939402	AE1-172 E O1	31.8801	Adder	37.51
940101	AE1-252 C O1	13.6499	Adder	16.06
940102	AE1-252 E O1	9.0999	Adder	10.71
940752	AE2-062 E	0.1351	Adder	0.16
941131	AE2-107 C	7.5761	Adder	8.91
941132	AE2-107 E	5.0507	Adder	5.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941551	AE2-152 C O1	14.1487	Adder	16.65
941552	AE2-152 E O1	9.4325	Adder	11.1
941561	AE2-153 C O1	5.1247	Adder	6.03
941562	AE2-153 E O1	23.9929	Adder	28.23
941731	AE2-173 O1	3.2665	Adder	3.84
942111	AE2-223 C	2.4140	Adder	2.84
942112	AE2-223 E	16.1551	Adder	19.01
942421	AE2-255 C O1	3.1291	Adder	3.68
942422	AE2-255 E O1	9.3872	Adder	11.04
942651	AE2-281 C O1	0.8723	Adder	1.03
942652	AE2-281 E O1	5.3586	Adder	6.3
942991	AE2-321 C	8.4508	Adder	9.94
942992	AE2-321 E	4.1623	Adder	4.9
943121	AE2-341 C	13.2079	Adder	15.54
943122	AE2-341 E	6.4858	Adder	7.63
943381	AF1-009 C	0.6199	Adder	0.73
943382	AF1-009 E	2.4796	Adder	2.92
943591	AF1-030 C O1	8.7834	Adder	10.33
943592	AF1-030 E O1	4.3457	Adder	5.11
943801	AF1-048 C	3.9504	Adder	4.65
943802	AF1-048 E	2.6336	Adder	3.1
944041	AF1-072	2.2259	Adder	2.62
944911	AF1-156 C	13.1029	Adder	15.42
944912	AF1-156 E	8.7353	Adder	10.28
945351	AF1-200 FTIR	322.6289	Merchant Transmission	322.6289
946661	AF1-330 C	2.0715	Adder	2.44
946662	AF1-330 E	0.4547	Adder	0.53
946671	AF1-331	2.4976	Adder	2.94
957021	AF2-003 C O2	3.5767	Adder	7.94
957022	AF2-003 E O2	16.7456	Adder	37.17
957331	AF2-027 C	1.3651	Adder	3.03
957332	AF2-027 E	2.0477	Adder	4.55
958011	AF2-095 C O2	10.1350	Adder	22.5
958012	AF2-095 E O2	4.7694	Adder	10.59
958021	AF2-096 C O2	19.5077	Adder	43.3
958022	AF2-096 E O2	9.2252	Adder	20.48
958481	AF2-142 C	6.2078	Adder	13.78
958482	AF2-142 E	4.1386	Adder	9.19
958491	AF2-143 C	5.9443	Adder	13.19
958492	AF2-143 E	3.9629	Adder	8.8
959341	AF2-225 C	4.1335	Adder	9.18
959342	AF2-225 E	5.7081	Adder	12.67
959351	AF2-226 C	1.3758	Adder	3.05
959352	AF2-226 E	2.0637	Adder	4.58
960281	AF2-319 C	1.3758	Adder	3.05
960282	AF2-319 E	2.0637	Adder	4.58
960381	AF2-329	3.6323	Adder	8.06
960581	AF2-349 C	11.9583	Adder	26.54
960582	AF2-349 E	7.9722	Adder	17.7
960591	AF2-350 C O2	4.5291	Adder	10.05
960592	AF2-350 E O2	3.0194	Adder	6.7
960601	AF2-351 C O2	0.6039	Adder	1.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960602	AF2-351 E O2	0.9058	Adder	2.01
960721	AF2-363 C O2	3.2432	Adder	7.2
960722	AF2-363 E O2	2.1621	Adder	4.8
960731	AF2-364 C O2	3.3639	Adder	7.47
960732	AF2-364 E O2	2.2426	Adder	4.98
960751	AF2-366 C O2	3.8234	Adder	8.49
960752	AF2-366 E O2	2.5489	Adder	5.66
961501	AF2-441 C O2	5.5606	Adder	12.34
961502	AF2-441 E O2	8.3409	Adder	18.51
WEC	WEC	4.5603	Confirmed LTF	4.5603
CALDERWOOD	CALDERWOOD	0.0631	Confirmed LTF	0.0631
CBM-W2	CBM-W2	25.0942	Confirmed LTF	25.0942
NY	NY	1.4306	Confirmed LTF	1.4306
CBM-W1	CBM-W1	78.1875	Confirmed LTF	78.1875
TVA	TVA	1.6184	Confirmed LTF	1.6184
O-066	O-066	16.9546	Confirmed LTF	16.9546
CHEOAH	CHEOAH	0.0771	Confirmed LTF	0.0771
CBM-S1	CBM-S1	6.0407	Confirmed LTF	6.0407
G-007	G-007	2.6218	Confirmed LTF	2.6218
MADISON	MADISON	24.3210	Confirmed LTF	24.3210
MEC	MEC	16.0171	Confirmed LTF	16.0171
BLUEG	BLUEG	2.3071	Confirmed LTF	2.3071
TRIMBLE	TRIMBLE	0.7969	Confirmed LTF	0.7969
CATAWBA	CATAWBA	0.3619	Confirmed LTF	0.3619

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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
96022620	270927	WILTON ; R	CE	275233	WILTON ;4M	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	124.02	124.11	DC	46.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274771	LINCOLN ;2U	3.8683	50/50	3.8683
274772	LINCOLN ;3U	3.8683	50/50	3.8683
274773	LINCOLN ;4U	3.8683	50/50	3.8683
274774	LINCOLN ;5U	3.8683	50/50	3.8683
274775	LINCOLN ;6U	3.8683	50/50	3.8683
274776	LINCOLN ;7U	3.8683	50/50	3.8683
274777	LINCOLN ;8U	3.8683	50/50	3.8683
274830	U3-021 1	6.4380	Adder	7.57
274831	U3-021 2	6.4380	Adder	7.57
274881	PILOT HIL;1E	20.3561	Adder	23.95
274890	CAYUG;1U E	17.3451	Adder	20.41
274891	CAYUG;2U E	17.3451	Adder	20.41
275149	KELLYCK ;1E	20.3561	Adder	23.95
276167	Z1-106 E2	1.3342	Adder	1.57
276168	Z1-106 E1	1.3341	Adder	1.57
276169	Z1-107 E	2.7309	Adder	3.21
276170	Z1-108 E	2.6251	Adder	3.09
290021	O50 E	20.4530	Adder	24.06
290051	GSG-6; E	11.1236	Adder	13.09
290108	LEEDK;1U E	25.7295	Adder	30.27
293061	N-015 E	16.7861	Adder	19.75
293644	O22 E1	10.8153	Adder	12.72
293645	O22 E2	20.9944	Adder	24.7
294392	P-010 E	21.3184	Adder	25.08
910542	X3-005 E	0.7727	Adder	0.91
915011	Y3-013 1	3.9461	Adder	4.64
915021	Y3-013 2	3.9461	Adder	4.64
915031	Y3-013 3	3.9461	Adder	4.64
918052	AA1-018 E OP	17.3542	Adder	20.42
920272	AA2-123 E	2.5799	Adder	3.04
924471	AB2-096	44.7083	Adder	52.6
926311	AC1-109 1	2.0186	Adder	2.37
926321	AC1-109 2	2.0186	Adder	2.37
926331	AC1-110 1	2.0052	Adder	2.36
926341	AC1-110 2	2.0052	Adder	2.36
926351	AC1-111 1	0.8063	Adder	0.95
926361	AC1-111 2	0.8063	Adder	0.95
926371	AC1-111 3	0.8063	Adder	0.95
926381	AC1-111 4	0.8063	Adder	0.95
926391	AC1-111 5	0.8063	Adder	0.95
926401	AC1-111 6	0.8063	Adder	0.95
927451	AC1-142A 1	4.4186	Adder	5.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927461	AC1-142A 2	4.4186	Adder	5.2
930501	AB1-091 O1	80.9897	Adder	95.28
930741	AB1-122 1O1	76.8999	Adder	90.47
930751	AB1-122 2O1	77.8579	Adder	91.6
933411	AC2-154 C	2.7626	Adder	3.25
933412	AC2-154 E	4.5074	Adder	5.3
933431	AC2-156 C O1	1.0103	Adder	1.19
933432	AC2-156 E O1	1.6485	Adder	1.94
933911	AD1-013 C	1.9642	Adder	2.31
933912	AD1-013 E	3.1375	Adder	3.69
933931	AD1-016 C	0.9804	Adder	1.15
933932	AD1-016 E	1.5996	Adder	1.88
934101	AD1-039 1	7.5362	Adder	8.87
934111	AD1-039 2	7.6301	Adder	8.98
934431	AD1-067 C	0.1397	Adder	0.16
934432	AD1-067 E	0.5873	Adder	0.69
934701	AD1-098 C O1	7.3184	Adder	8.61
934702	AD1-098 E O1	5.3432	Adder	6.29
934721	AD1-100 C	25.3457	Adder	29.82
934722	AD1-100 E	118.2800	Adder	139.15
934871	AD1-116 C	1.0107	Adder	1.19
934872	AD1-116 E	1.6490	Adder	1.94
934971	AD1-129 C	0.9544	Adder	1.12
934972	AD1-129 E	0.6363	Adder	0.75
935001	AD1-133 C O1	23.5023	Adder	27.65
935002	AD1-133 E O1	15.6682	Adder	18.43
936291	AD2-038 C O1	2.4826	Adder	2.92
936292	AD2-038 E O1	16.6143	Adder	19.55
936371	AD2-047 C O1	4.9436	Adder	5.82
936372	AD2-047 E O1	24.1366	Adder	28.4
936461	AD2-060	2.9080	Adder	3.42
936511	AD2-066 C O1	8.9497	Adder	10.53
936512	AD2-066 E O1	5.9665	Adder	7.02
937001	AD2-134 C	2.9079	Adder	3.42
937002	AD2-134 E	12.0124	Adder	14.13
937401	AD2-194 1	8.2426	Adder	9.7
937411	AD2-194 2	8.2421	Adder	9.7
938511	AE1-070 1	9.6851	Adder	11.39
938521	AE1-070 2	8.8603	Adder	10.42
938851	AE1-113 C	8.4369	Adder	9.93
938852	AE1-113 E	29.9126	Adder	35.19
939321	AE1-163 C O1	6.2383	Adder	7.34
939322	AE1-163 E O1	38.3212	Adder	45.08
939351	AE1-166 C O1	12.5095	Adder	14.72
939352	AE1-166 E O1	11.5472	Adder	13.58
939401	AE1-172 C O1	6.9294	Adder	8.15
939402	AE1-172 E O1	32.5126	Adder	38.25
940101	AE1-252 C O1	13.9207	Adder	16.38
940102	AE1-252 E O1	9.2805	Adder	10.92
940752	AE2-062 E	0.1379	Adder	0.16
941131	AE2-107 C	7.7372	Adder	9.1
941132	AE2-107 E	5.1581	Adder	6.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941551	AE2-152 C O1	14.4340	Adder	16.98
941552	AE2-152 E O1	9.6227	Adder	11.32
941561	AE2-153 C O1	5.2303	Adder	6.15
941562	AE2-153 E O1	24.4874	Adder	28.81
941731	AE2-173 O1	3.3326	Adder	3.92
942111	AE2-223 C	2.4629	Adder	2.9
942112	AE2-223 E	16.4823	Adder	19.39
942421	AE2-255 C O1	3.1958	Adder	3.76
942422	AE2-255 E O1	9.5874	Adder	11.28
942651	AE2-281 C O1	0.8912	Adder	1.05
942652	AE2-281 E O1	5.4745	Adder	6.44
942991	AE2-321 C	8.6313	Adder	10.15
942992	AE2-321 E	4.2513	Adder	5.0
943121	AE2-341 C	13.4892	Adder	15.87
943122	AE2-341 E	6.6239	Adder	7.79
943381	AF1-009 C	0.6331	Adder	0.74
943382	AF1-009 E	2.5323	Adder	2.98
943591	AF1-030 C O1	8.9705	Adder	10.55
943592	AF1-030 E O1	4.4383	Adder	5.22
943801	AF1-048 C	4.0348	Adder	4.75
943802	AF1-048 E	2.6899	Adder	3.16
944041	AF1-072	2.2734	Adder	2.67
944911	AF1-156 C	13.3730	Adder	15.73
944912	AF1-156 E	8.9153	Adder	10.49
945351	AF1-200 FTIR	329.4462	Merchant Transmission	329.4462
946661	AF1-330 C	2.1155	Adder	2.49
946662	AF1-330 E	0.4644	Adder	0.55
946671	AF1-331	2.5508	Adder	3.0
957021	AF2-003 C O2	3.6517	Adder	8.11
957022	AF2-003 E O2	17.0965	Adder	37.95
957331	AF2-027 C	1.3943	Adder	3.1
957332	AF2-027 E	2.0914	Adder	4.64
958011	AF2-095 C O2	10.3469	Adder	22.97
958012	AF2-095 E O2	4.8691	Adder	10.81
958021	AF2-096 C O2	19.9092	Adder	44.19
958022	AF2-096 E O2	9.4150	Adder	20.9
958481	AF2-142 C	6.3433	Adder	14.08
958482	AF2-142 E	4.2288	Adder	9.39
958491	AF2-143 C	6.0728	Adder	13.48
958492	AF2-143 E	4.0486	Adder	8.99
959341	AF2-225 C	4.2172	Adder	9.36
959342	AF2-225 E	5.8238	Adder	12.93
959351	AF2-226 C	1.4049	Adder	3.12
959352	AF2-226 E	2.1074	Adder	4.68
960281	AF2-319 C	1.4049	Adder	3.12
960282	AF2-319 E	2.1074	Adder	4.68
960381	AF2-329	3.7097	Adder	8.23
960581	AF2-349 C	12.2138	Adder	27.11
960582	AF2-349 E	8.1425	Adder	18.07
960591	AF2-350 C O2	4.6238	Adder	10.26
960592	AF2-350 E O2	3.0825	Adder	6.84
960601	AF2-351 C O2	0.6165	Adder	1.37

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960602	AF2-351 E O2	0.9248	Adder	2.05
960721	AF2-363 C O2	3.3122	Adder	7.35
960722	AF2-363 E O2	2.2082	Adder	4.9
960731	AF2-364 C O2	3.4357	Adder	7.63
960732	AF2-364 E O2	2.2905	Adder	5.08
960751	AF2-366 C O2	3.9047	Adder	8.67
960752	AF2-366 E O2	2.6031	Adder	5.78
961501	AF2-441 C O2	5.6774	Adder	12.6
961502	AF2-441 E O2	8.5161	Adder	18.9
WEC	WEC	4.6573	Confirmed LTF	4.6573
CALDERWOOD	CALDERWOOD	0.0656	Confirmed LTF	0.0656
CBM-W2	CBM-W2	25.6101	Confirmed LTF	25.6101
NY	NY	1.4616	Confirmed LTF	1.4616
CBM-W1	CBM-W1	79.8388	Confirmed LTF	79.8388
TVA	TVA	1.6492	Confirmed LTF	1.6492
O-066	O-066	17.3242	Confirmed LTF	17.3242
CHEOAH	CHEOAH	0.0801	Confirmed LTF	0.0801
CBM-S1	CBM-S1	6.1514	Confirmed LTF	6.1514
G-007	G-007	2.6780	Confirmed LTF	2.6780
MADISON	MADISON	24.8371	Confirmed LTF	24.8371
MEC	MEC	16.3540	Confirmed LTF	16.3540
BLUEG	BLUEG	2.3592	Confirmed LTF	2.3592
TRIMBLE	TRIMBLE	0.8147	Confirmed LTF	0.8147
CATAWBA	CATAWBA	0.3703	Confirmed LTF	0.3703

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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
96022377	272285	POWERTON ;RT	CE	349600	4TOWERLINE	AMIL	1	COMED_P2-2_001_LA-138B__1	bus	214.0	107.99	122.34	DC	30.7

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274847	GR RIDGE ;BU	0.5179	50/50	0.5179
274848	CAMPGROVE;RU	1.5464	50/50	1.5464
274849	CRESCENT ;1U	0.2415	50/50	0.2415
274851	PROVIDENC;RU	0.3684	50/50	0.3684
274871	GR RIDGE ;2U	0.6578	50/50	0.6578
274877	BISHOP HL;1U	0.5914	50/50	0.5914
274878	BISHOP HL;2U	0.5914	50/50	0.5914
276173	Z2-081	0.2318	50/50	0.2318
293061	N-015 E	12.0108	50/50	12.0108
293516	O-009 E1	4.3110	Adder	5.07
293517	O-009 E2	2.1896	Adder	2.58
293518	O-009 E3	2.4114	Adder	2.84
293715	O-029 E	4.6089	Adder	5.42
293716	O-029 E	2.5270	Adder	2.97
293717	O-029 E	2.3226	Adder	2.73
293771	O-035 E	8.5432	50/50	8.5432
294392	P-010 E	15.2537	50/50	15.2537
294401	BSHIL;1U E	13.7144	50/50	13.7144
294410	BSHIL;2U E	13.7144	50/50	13.7144
925581	AC1-033 C	2.2379	50/50	2.2379
925582	AC1-033 E	14.9818	50/50	14.9818
926821	AC1-168 C O1	1.0471	50/50	1.0471
926822	AC1-168 E O1	7.0271	50/50	7.0271
926841	AC1-171 C O1	7.9843	50/50	7.9843
926842	AC1-171 E O1	53.3317	50/50	53.3317
927201	AC1-214 C O1	2.7419	50/50	2.7419
927202	AC1-214 E O1	8.7163	50/50	8.7163
934051	AD1-031 C O1	4.5670	50/50	4.5670
934052	AD1-031 E O1	7.4513	50/50	7.4513
943401	AF1-011 C	0.5885	Adder	0.69
943402	AF1-011 E	0.9879	Adder	1.16
946541	AF1-318 C O1	5.6691	50/50	5.6691
946542	AF1-318 E O1	26.5447	50/50	26.5447
953201	J715 C	1.3993	PJM External (MISO)	1.3993
953202	J715 E	7.5707	PJM External (MISO)	7.5707
957021	AF2-003 C O2	5.4027	50/50	5.4027
957022	AF2-003 E O2	25.2943	50/50	25.2943
957751	AF2-069 C	0.3175	50/50	0.3175
957752	AF2-069 E	1.0246	50/50	1.0246
957761	AF2-070 C	0.4474	50/50	0.4474
957762	AF2-070 E	2.1719	50/50	2.1719

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958341	AF2-128 C O2	0.6149	Adder	1.36
958342	AF2-128 E O2	2.8788	Adder	6.39
990901	L-005 E	35.8608	50/50	35.8608
WEC	WEC	0.2170	Confirmed LTF	0.2170
NEWTON	NEWTON	0.3309	Confirmed LTF	0.3309
CALDERWOOD	CALDERWOOD	0.0452	Confirmed LTF	0.0452
NY	NY	0.0481	Confirmed LTF	0.0481
CBM-W1	CBM-W1	5.4293	Confirmed LTF	5.4293
PRAIRIE	PRAIRIE	0.4856	Confirmed LTF	0.4856
O-066	O-066	0.5779	Confirmed LTF	0.5779
CHEOAH	CHEOAH	0.0455	Confirmed LTF	0.0455
EDWARDS	EDWARDS	0.7718	Confirmed LTF	0.7718
TILTON	TILTON	0.2488	Confirmed LTF	0.2488
G-007	G-007	0.0894	Confirmed LTF	0.0894
MADISON	MADISON	1.1310	Confirmed LTF	1.1310
MEC	MEC	1.1314	Confirmed LTF	1.1314
GIBSON	GIBSON	0.1054	Confirmed LTF	0.1054
BLUEG	BLUEG	0.2378	Confirmed LTF	0.2378
TRIMBLE	TRIMBLE	0.0751	Confirmed LTF	0.0751
CATAWBA	CATAWBA	0.0308	Confirmed LTF	0.0308

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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
96022739	272366	ROCK FALL; B	CE	272094	NELSON ; B	CE	1	COMED_P4_155-38-L15508_	breaker	426.0	106.48	108.53	DC	19.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274848	CAMPGROVE;RU	0.8909	50/50	0.8909
274849	CRESCENT ;1U	0.2793	50/50	0.2793
274851	PROVIDENC;RU	0.4262	50/50	0.4262
274877	BISHOP HL;1U	0.6857	50/50	0.6857
274878	BISHOP HL;2U	0.6857	50/50	0.6857
276156	O-029 C	1.0215	50/50	1.0215
276157	O-029 C	1.1043	50/50	1.1043
276158	O-029 C	2.0154	50/50	2.0154
293513	O-009 C1	1.8866	50/50	1.8866
293514	O-009 C2	0.9571	50/50	0.9571
293515	O-009 C3	1.0583	50/50	1.0583
293516	O-009 E1	43.7692	50/50	43.7692
293517	O-009 E2	22.2314	50/50	22.2314
293518	O-009 E3	24.4828	50/50	24.4828
293715	O-029 E	46.7942	50/50	46.7942
293716	O-029 E	25.6565	50/50	25.6565
293717	O-029 E	23.5811	50/50	23.5811
293771	O-035 E	9.8823	50/50	9.8823
294401	BSHIL;1U E	15.9000	50/50	15.9000
294410	BSHIL;2U E	15.9000	50/50	15.9000
925581	AC1-033 C	2.6043	50/50	2.6043
925582	AC1-033 E	17.4348	50/50	17.4348
926821	AC1-168 C O1	1.0506	50/50	1.0506
926822	AC1-168 E O1	7.0503	50/50	7.0503
926841	AC1-171 C O1	0.6325	Adder	0.74
926842	AC1-171 E O1	4.2246	Adder	4.97
927201	AC1-214 C O1	3.1717	50/50	3.1717
927202	AC1-214 E O1	10.0826	50/50	10.0826
934051	AD1-031 C O1	5.2934	50/50	5.2934
934052	AD1-031 E O1	8.6366	50/50	8.6366
937531	AD2-214 C	20.2021	50/50	20.2021
937532	AD2-214 E	13.4681	50/50	13.4681
943383	AF1-009 BAT	1.5955	Merchant Transmission	1.5955
943401	AF1-011 C	5.9753	50/50	5.9753
943402	AF1-011 E	10.0300	50/50	10.0300
946321	AF1-296 C O1	11.0482	50/50	11.0482
946322	AF1-296 E O1	51.7249	50/50	51.7249
946541	AF1-318 C O1	6.4451	50/50	6.4451
946542	AF1-318 E O1	30.1782	50/50	30.1782
953201	J715 C	1.6004	PJM External (MISO)	1.6004
953202	J715 E	8.6586	PJM External (MISO)	8.6586
957021	AF2-003 C O2	1.5354	Adder	3.41

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957022	AF2-003 E O2	7.1884	Adder	15.96
957751	AF2-069 C	0.3672	50/50	0.3672
957752	AF2-069 E	1.1852	50/50	1.1852
957761	AF2-070 C	0.5175	50/50	0.5175
957762	AF2-070 E	2.5123	50/50	2.5123
958341	AF2-128 C O2	1.5409	50/50	1.5409
958342	AF2-128 E O2	7.2144	50/50	7.2144
990901	L-005 E	20.6604	50/50	20.6604
LGEE	LGEE	0.1221	Confirmed LTF	0.1221
CPL	CPL	0.1283	Confirmed LTF	0.1283
G-007A	G-007A	0.3213	Confirmed LTF	0.3213
VFT	VFT	0.8643	Confirmed LTF	0.8643
CBM-W2	CBM-W2	4.0868	Confirmed LTF	4.0868
TVA	TVA	0.4452	Confirmed LTF	0.4452
CBM-S2	CBM-S2	1.2196	Confirmed LTF	1.2196
CBM-S1	CBM-S1	2.5475	Confirmed LTF	2.5475
MEC	MEC	0.5927	Confirmed LTF	0.5927

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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
96022514	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_023-65-BT4-5	breaker	1399.0	154.44	154.53	DC	37.55

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	29.7662	50/50	29.7662
274655	BRAIDWOOD;2U	28.9589	50/50	28.9589
274687	WILL CNTY;4U	12.5606	50/50	12.5606
274704	KENDALL ;1C	4.4131	50/50	4.4131
274706	KENDALL ;2C	4.4131	50/50	4.4131
274751	CRETE EC ;1U	6.4741	50/50	6.4741
274752	CRETE EC ;2U	6.4741	50/50	6.4741
274753	CRETE EC ;3U	6.4741	50/50	6.4741
274754	CRETE EC ;4U	6.4741	50/50	6.4741
274830	U3-021 1	5.3666	Adder	6.31
274831	U3-021 2	5.3666	Adder	6.31
274861	TOP CROP ;1U	0.5273	50/50	0.5273
274862	TOP CROP ;2U	1.0236	50/50	1.0236
276167	Z1-106 E2	1.1114	Adder	1.31
276168	Z1-106 E1	1.1114	Adder	1.31
276169	Z1-107 E	2.1374	Adder	2.51
276170	Z1-108 E	2.1950	Adder	2.58
290021	O50 E	17.3305	Adder	20.39
290051	GSG-6; E	9.2159	Adder	10.84
290108	LEEDK;1U E	21.3282	Adder	25.09
293061	N-015 E	13.7894	Adder	16.22
293644	O22 E1	12.2278	50/50	12.2278
293645	O22 E2	23.7362	50/50	23.7362
294392	P-010 E	17.5125	Adder	20.6
915011	Y3-013 1	3.3160	Adder	3.9
915021	Y3-013 2	3.3160	Adder	3.9
915031	Y3-013 3	3.3160	Adder	3.9
920272	AA2-123 E	2.1525	Adder	2.53
924471	AB2-096	37.2678	Adder	43.84
926311	AC1-109 1	1.6759	Adder	1.97
926321	AC1-109 2	1.6759	Adder	1.97
926331	AC1-110 1	1.6718	Adder	1.97
926341	AC1-110 2	1.6718	Adder	1.97
926351	AC1-111 1	0.6691	Adder	0.79
926361	AC1-111 2	0.6691	Adder	0.79
926371	AC1-111 3	0.6691	Adder	0.79
926381	AC1-111 4	0.6691	Adder	0.79
926391	AC1-111 5	0.6691	Adder	0.79
926401	AC1-111 6	0.6691	Adder	0.79
927451	AC1-142A 1	3.7985	Adder	4.47
927461	AC1-142A 2	3.8009	Adder	4.47
930481	AB1-089	34.5111	Adder	40.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
930741	AB1-122 1O1	62.4134	Adder	73.43
930751	AB1-122 2O1	66.7486	Adder	78.53
933431	AC2-156 C O1	0.8355	Adder	0.98
933432	AC2-156 E O1	1.3632	Adder	1.6
933911	AD1-013 C	1.6277	Adder	1.91
933912	AD1-013 E	2.6002	Adder	3.06
933931	AD1-016 C	0.8180	Adder	0.96
933932	AD1-016 E	1.3346	Adder	1.57
934101	AD1-039 1	6.1165	Adder	7.2
934111	AD1-039 2	6.5414	Adder	7.7
934431	AD1-067 C	0.1157	Adder	0.14
934432	AD1-067 E	0.4866	Adder	0.57
934721	AD1-100 C	16.6923	Adder	19.64
934722	AD1-100 E	77.8974	Adder	91.64
934971	AD1-129 C	0.7950	Adder	0.94
934972	AD1-129 E	0.5300	Adder	0.62
937001	AD2-134 C	2.4092	Adder	2.83
937002	AD2-134 E	9.9523	Adder	11.71
937401	AD2-194 1	7.0513	Adder	8.3
937411	AD2-194 2	7.0385	Adder	8.28
938511	AE1-070 1	8.2852	Adder	9.75
938521	AE1-070 2	7.5664	Adder	8.9
938851	AE1-113 C	7.1488	Adder	8.41
938852	AE1-113 E	25.3458	Adder	29.82
939351	AE1-166 C O1	8.9333	Adder	10.51
939352	AE1-166 E O1	8.2461	Adder	9.7
939631	AE1-193 C	32.4415	50/50	32.4415
939632	AE1-193 E	217.1085	50/50	217.1085
939641	AE1-194 C	32.4415	50/50	32.4415
939642	AE1-194 E	217.1085	50/50	217.1085
939651	AE1-195 C	32.4415	50/50	32.4415
939652	AE1-195 E	217.1085	50/50	217.1085
939681	AE1-198 C	96.3263	50/50	96.3263
939682	AE1-198 E	81.8524	50/50	81.8524
940752	AE2-062 E	0.1413	50/50	0.1413
941131	AE2-107 C	6.4143	Adder	7.55
941132	AE2-107 E	4.2762	Adder	5.03
941551	AE2-152 C O1	10.3076	Adder	12.13
941552	AE2-152 E O1	6.8717	Adder	8.08
941561	AE2-153 C O1	4.0999	Adder	4.82
941562	AE2-153 E O1	19.1952	Adder	22.58
942421	AE2-255 C O1	2.7079	Adder	3.19
942422	AE2-255 E O1	8.1237	Adder	9.56
942991	AE2-321 C	7.1996	Adder	8.47
942992	AE2-321 E	3.5461	Adder	4.17
943121	AE2-341 C	11.1445	Adder	13.11
943122	AE2-341 E	5.4726	Adder	6.44
943591	AF1-030 C O1	7.4112	Adder	8.72
943592	AF1-030 E O1	3.6668	Adder	4.31
943801	AF1-048 C	3.3656	Adder	3.96
943802	AF1-048 E	2.2437	Adder	2.64
944041	AF1-072	1.8993	Adder	2.23

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944911	AF1-156 C	10.4828	Adder	12.33
944912	AF1-156 E	6.9885	Adder	8.22
945351	AF1-200 FTIR	270.9399	Merchant Transmission	270.9399
946661	AF1-330 C	1.7651	Adder	2.08
946662	AF1-330 E	0.3875	Adder	0.46
946671	AF1-331	2.1139	Adder	2.49
957021	AF2-003 C O2	2.9776	Adder	6.61
957022	AF2-003 E O2	13.9404	Adder	30.94
957331	AF2-027 C	1.1717	Adder	2.6
957332	AF2-027 E	1.7575	Adder	3.9
958021	AF2-096 C O2	40.1733	50/50	40.1733
958022	AF2-096 E O2	18.9979	50/50	18.9979
959351	AF2-226 C	2.9970	50/50	2.9970
959352	AF2-226 E	4.4955	50/50	4.4955
960281	AF2-319 C	2.9970	50/50	2.9970
960282	AF2-319 E	4.4955	50/50	4.4955
960381	AF2-329	3.0649	Adder	6.8
960581	AF2-349 C	10.1841	Adder	22.61
960582	AF2-349 E	6.7894	Adder	15.07
960721	AF2-363 C O2	2.7503	Adder	6.1
960722	AF2-363 E O2	1.8335	Adder	4.07
960731	AF2-364 C O2	2.8678	Adder	6.37
960732	AF2-364 E O2	1.9119	Adder	4.24
960751	AF2-366 C O2	3.2382	Adder	7.19
960752	AF2-366 E O2	2.1588	Adder	4.79
WEC	WEC	3.8956	Confirmed LTF	3.8956
CALDERWOOD	CALDERWOOD	0.1233	Confirmed LTF	0.1233
CBM-W2	CBM-W2	17.5921	Confirmed LTF	17.5921
NY	NY	1.1895	Confirmed LTF	1.1895
CBM-W1	CBM-W1	53.7805	Confirmed LTF	53.7805
TVA	TVA	1.0276	Confirmed LTF	1.0276
O-066	O-066	14.0515	Confirmed LTF	14.0515
CHEOAH	CHEOAH	0.1346	Confirmed LTF	0.1346
CBM-S1	CBM-S1	3.0928	Confirmed LTF	3.0928
G-007	G-007	2.1726	Confirmed LTF	2.1726
MADISON	MADISON	20.2003	Confirmed LTF	20.2003
MEC	MEC	13.1744	Confirmed LTF	13.1744
GIBSON	GIBSON	0.2550	Confirmed LTF	0.2550
BLUEG	BLUEG	2.3002	Confirmed LTF	2.3002
TRIMBLE	TRIMBLE	0.7763	Confirmed LTF	0.7763
CATAWBA	CATAWBA	0.3241	Confirmed LTF	0.3241

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPACT
143898371	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	971.0	106.22	106.32	DC	29.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274806	UNIV PK N;2U	1.8341	50/50	1.8341
274808	UNIV PK N;4U	1.8341	50/50	1.8341
274809	UNIV PK N;5U	1.8341	50/50	1.8341
274811	UNIV PK N;7U	1.8341	50/50	1.8341
274812	UNIV PK N;8U	1.8341	50/50	1.8341
274814	UNIV PK N;0U	1.8341	50/50	1.8341
274815	UNIV PK N;XU	1.8341	50/50	1.8341
274830	U3-021 1	4.2120	Adder	4.96
274831	U3-021 2	4.2120	Adder	4.96
274881	PILOT HIL;1E	12.6830	Adder	14.92
275149	KELLYCK ;1E	12.6830	Adder	14.92
276167	Z1-106 E2	0.8743	Adder	1.03
276168	Z1-106 E1	0.8743	Adder	1.03
276169	Z1-107 E	1.8566	Adder	2.18
276170	Z1-108 E	1.7221	Adder	2.03
290021	O50 E	13.3076	Adder	15.66
290051	GSG-6; E	7.2539	Adder	8.53
290108	LEEDK;1U E	16.7960	Adder	19.76
293061	N-015 E	10.7712	Adder	12.67
293644	O22 E1	6.6849	Adder	7.86
293645	O22 E2	12.9766	Adder	15.27
294392	P-010 E	13.6794	Adder	16.09
915011	Y3-013 1	2.5967	Adder	3.05
915021	Y3-013 2	2.5967	Adder	3.05
915031	Y3-013 3	2.5967	Adder	3.05
918052	AA1-018 E OP	12.2295	Adder	14.39
920272	AA2-123 E	1.6893	Adder	1.99
924471	AB2-096	29.2502	Adder	34.41
926311	AC1-109 1	1.3213	Adder	1.55
926321	AC1-109 2	1.3213	Adder	1.55
926331	AC1-110 1	1.3140	Adder	1.55
926341	AC1-110 2	1.3140	Adder	1.55
926351	AC1-111 1	0.5285	Adder	0.62
926361	AC1-111 2	0.5285	Adder	0.62
926371	AC1-111 3	0.5285	Adder	0.62
926381	AC1-111 4	0.5285	Adder	0.62
926391	AC1-111 5	0.5285	Adder	0.62
926401	AC1-111 6	0.5285	Adder	0.62
926431	AC1-114	1.6410	Adder	1.93
927451	AC1-142A 1	2.9468	Adder	3.47
927461	AC1-142A 2	2.9455	Adder	3.47

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927511	AC1-113 1	0.8205	Adder	0.97
927521	AC1-113 2	0.8205	Adder	0.97
930481	AB1-089	45.3569	Adder	53.36
930501	AB1-091 O1	48.7415	Adder	57.34
930741	AB1-122 1O1	49.5641	Adder	58.31
930751	AB1-122 2O1	50.9766	Adder	59.97
932881	AC2-115 1	1.6410	Adder	1.93
932891	AC2-115 2	1.6410	Adder	1.93
932921	AC2-116	0.5744	Adder	0.68
932931	AC2-117	8.9089	Adder	10.48
933411	AC2-154 C	1.7214	Adder	2.03
933412	AC2-154 E	2.8086	Adder	3.3
933431	AC2-156 C O1	0.6604	Adder	0.78
933432	AC2-156 E O1	1.0775	Adder	1.27
933911	AD1-013 C	1.2814	Adder	1.51
933912	AD1-013 E	2.0469	Adder	2.41
933931	AD1-016 C	0.6419	Adder	0.76
933932	AD1-016 E	1.0474	Adder	1.23
934101	AD1-039 1	4.8573	Adder	5.71
934111	AD1-039 2	4.9957	Adder	5.88
934431	AD1-067 C	0.0911	Adder	0.11
934432	AD1-067 E	0.3830	Adder	0.45
934651	AD1-096 C	0.6143	Adder	0.72
934652	AD1-096 E	1.0022	Adder	1.18
934701	AD1-098 C O1	4.7715	Adder	5.61
934702	AD1-098 E O1	3.4837	Adder	4.1
934721	AD1-100 C	13.2766	Adder	15.62
934722	AD1-100 E	61.9573	Adder	72.89
934871	AD1-116 C	0.7122	Adder	0.84
934872	AD1-116 E	1.1620	Adder	1.37
934971	AD1-129 C	0.6240	Adder	0.73
934972	AD1-129 E	0.4160	Adder	0.49
936291	AD2-038 C O1	1.6810	Adder	1.98
936292	AD2-038 E O1	11.2500	Adder	13.24
936371	AD2-047 C O1	3.0805	Adder	3.62
936372	AD2-047 E O1	15.0398	Adder	17.69
936461	AD2-060	1.8120	Adder	2.13
936511	AD2-066 C O1	5.8391	Adder	6.87
936512	AD2-066 E O1	3.8927	Adder	4.58
936791	AD2-102 C	9.7481	Adder	11.47
936792	AD2-102 E	6.4988	Adder	7.65
937001	AD2-134 C	1.8963	Adder	2.23
937002	AD2-134 E	7.8335	Adder	9.22
937401	AD2-194 1	5.4284	Adder	6.39
937411	AD2-194 2	5.4325	Adder	6.39
938511	AE1-070 1	6.3784	Adder	7.5
938521	AE1-070 2	5.8400	Adder	6.87
938851	AE1-113 C	5.4894	Adder	6.46
938852	AE1-113 E	19.4624	Adder	22.9
939321	AE1-163 C O1	4.2241	Adder	4.97
939322	AE1-163 E O1	25.9483	Adder	30.53
939351	AE1-166 C O1	7.0603	Adder	8.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939352	AE1-166 E O1	6.5172	Adder	7.67
940752	AE2-062 E	0.0893	Adder	0.11
941131	AE2-107 C	5.0521	Adder	5.94
941132	AE2-107 E	3.3680	Adder	3.96
941551	AE2-152 C O1	8.1465	Adder	9.58
941552	AE2-152 E O1	5.4310	Adder	6.39
941561	AE2-153 C O1	3.2649	Adder	3.84
941562	AE2-153 E O1	15.2855	Adder	17.98
942421	AE2-255 C O1	2.0793	Adder	2.45
942422	AE2-255 E O1	6.2379	Adder	7.34
942651	AE2-281 C O1	0.6034	Adder	0.71
942652	AE2-281 E O1	3.7069	Adder	4.36
942991	AE2-321 C	5.6506	Adder	6.65
942992	AE2-321 E	2.7831	Adder	3.27
943121	AE2-341 C	8.8186	Adder	10.37
943122	AE2-341 E	4.3304	Adder	5.09
943381	AF1-009 C	0.4128	Adder	0.49
943382	AF1-009 E	1.6510	Adder	1.94
943591	AF1-030 C O1	5.8645	Adder	6.9
943592	AF1-030 E O1	2.9016	Adder	3.41
943801	AF1-048 C	2.6414	Adder	3.11
943802	AF1-048 E	1.7610	Adder	2.07
944041	AF1-072	1.4905	Adder	1.75
944911	AF1-156 C	8.3477	Adder	9.82
944912	AF1-156 E	5.5651	Adder	6.55
945351	AF1-200 FTIR	213.4308	Merchant Transmission	213.4308
946661	AF1-330 C	1.3852	Adder	1.63
946662	AF1-330 E	0.3041	Adder	0.36
946671	AF1-331	1.6641	Adder	1.96
957021	AF2-003 C O2	2.3356	Adder	5.18
957022	AF2-003 E O2	10.9350	Adder	24.27
957331	AF2-027 C	0.9175	Adder	2.04
957332	AF2-027 E	1.3762	Adder	3.05
957471	AF2-041 C	7.7903	Adder	17.29
957472	AF2-041 E	5.1935	Adder	11.53
958011	AF2-095 C O2	6.5238	Adder	14.48
958012	AF2-095 E O2	3.0700	Adder	6.81
958021	AF2-096 C O2	12.5318	Adder	27.82
958022	AF2-096 E O2	5.9263	Adder	13.15
958481	AF2-142 C	4.4701	Adder	9.92
958482	AF2-142 E	2.9801	Adder	6.62
958491	AF2-143 C	4.1121	Adder	9.13
958492	AF2-143 E	2.7414	Adder	6.09
959081	AF2-199 C O2	2.5968	Adder	5.76
959082	AF2-199 E O2	1.7312	Adder	3.84
959091	AF2-200 C O2	5.1935	Adder	11.53
959092	AF2-200 E O2	3.4624	Adder	7.69
959101	AF2-201 C O2	0.7734	Adder	1.72
959102	AF2-201 E O2	2.2208	Adder	4.93
959351	AF2-226 C	0.8684	Adder	1.93
959352	AF2-226 E	1.3026	Adder	2.89
959761	AF2-267 C O2	1.5881	Adder	3.53

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959762	AF2-267 E O2	7.4350	Adder	16.5
960281	AF2-319 C	0.8684	Adder	1.93
960282	AF2-319 E	1.3026	Adder	2.89
960381	AF2-329	2.4252	Adder	5.38
960581	AF2-349 C	7.9930	Adder	17.74
960582	AF2-349 E	5.3287	Adder	11.83
960591	AF2-350 C O2	2.8809	Adder	6.39
960592	AF2-350 E O2	1.9206	Adder	4.26
960601	AF2-351 C O2	0.3841	Adder	0.85
960602	AF2-351 E O2	0.5762	Adder	1.28
960721	AF2-363 C O2	2.1635	Adder	4.8
960722	AF2-363 E O2	1.4423	Adder	3.2
960731	AF2-364 C O2	2.2513	Adder	5.0
960732	AF2-364 E O2	1.5009	Adder	3.33
960751	AF2-366 C O2	2.5505	Adder	5.66
960752	AF2-366 E O2	1.7004	Adder	3.77
WEC	WEC	3.0536	Confirmed LTF	3.0536
CALDERWOOD	CALDERWOOD	0.0268	Confirmed LTF	0.0268
CBM-W2	CBM-W2	15.3808	Confirmed LTF	15.3808
NY	NY	0.9196	Confirmed LTF	0.9196
CBM-W1	CBM-W1	46.1369	Confirmed LTF	46.1369
TVA	TVA	1.0304	Confirmed LTF	1.0304
O-066	O-066	10.8461	Confirmed LTF	10.8461
CHEOAH	CHEOAH	0.0355	Confirmed LTF	0.0355
CBM-S1	CBM-S1	3.9448	Confirmed LTF	3.9448
G-007	G-007	1.6765	Confirmed LTF	1.6765
MADISON	MADISON	15.6704	Confirmed LTF	15.6704
MEC	MEC	10.4445	Confirmed LTF	10.4445
GIBSON	GIBSON	0.0360	Confirmed LTF	0.0360
BLUEG	BLUEG	1.3228	Confirmed LTF	1.3228
TRIMBLE	TRIMBLE	0.4530	Confirmed LTF	0.4530
CATAWBA	CATAWBA	0.2167	Confirmed LTF	0.2167

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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
96022799	275208	PLANO ;4M	CE	270630	PLANO ;	CE	1	COMED_P4_167-45-BT8-12_	breaker	1379.0	101.14	101.43	DC	32.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274660	LASCO STA;1U	33.3383	50/50	33.3383
274661	LASCO STA;2U	33.4737	50/50	33.4737
274737	AURORA EC;1P	3.1982	50/50	3.1982
274739	AURORA EC;2P	3.1982	50/50	3.1982
274745	AURORA EC;9P	0.6040	50/50	0.6040
274746	AURORA EC;0P	0.6040	50/50	0.6040
274830	U3-021 1	3.5005	Adder	4.12
274831	U3-021 2	3.5005	Adder	4.12
274847	GR RIDGE ;BU	0.7450	50/50	0.7450
274859	EASYSR;U1 E	5.9837	Adder	7.04
274860	EASYSR;U2 E	5.9837	Adder	7.04
274871	GR RIDGE ;2U	0.9461	50/50	0.9461
274881	PILOT HIL;1E	7.6648	Adder	9.02
275149	KELLYCK ;1E	7.6648	Adder	9.02
276167	Z1-106 E2	0.8035	Adder	0.95
276168	Z1-106 E1	0.8018	Adder	0.94
276169	Z1-107 E	1.0596	Adder	1.25
276170	Z1-108 E	1.4606	Adder	1.72
276173	Z2-081	0.2567	50/50	0.2567
290051	GSG-6; E	5.8235	Adder	6.85
290108	LEEDK;1U E	13.5728	Adder	15.97
293061	N-015 E	17.2752	50/50	17.2752
293516	O-009 E1	4.7370	Adder	5.57
293517	O-009 E2	2.4060	Adder	2.83
293518	O-009 E3	2.6497	Adder	3.12
293715	O-029 E	5.0644	Adder	5.96
293716	O-029 E	2.7767	Adder	3.27
293717	O-029 E	2.5521	Adder	3.0
293771	O-035 E	3.1988	Adder	3.76
294392	P-010 E	21.9395	50/50	21.9395
294401	BSHIL;1U E	4.2004	Adder	4.94
294410	BSHIL;2U E	4.2004	Adder	4.94
294763	P-046 E	5.2115	Adder	6.13
915011	Y3-013 1	2.0010	Adder	2.35
915021	Y3-013 2	2.0010	Adder	2.35
915031	Y3-013 3	2.0010	Adder	2.35
919581	AA2-030	9.2948	Adder	10.94
920272	AA2-123 E	1.4188	Adder	1.67
924471	AB2-096	24.3087	Adder	28.6
925581	AC1-033 C	0.6878	Adder	0.81
925582	AC1-033 E	4.6046	Adder	5.42
926311	AC1-109 1	1.8297	50/50	1.8297

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
926321	AC1-109 2	1.8297	50/50	1.8297
926331	AC1-110 1	1.0771	Adder	1.27
926341	AC1-110 2	1.0771	Adder	1.27
926351	AC1-111 1	0.5471	Adder	0.64
926361	AC1-111 2	0.5471	Adder	0.64
926371	AC1-111 3	0.5471	Adder	0.64
926381	AC1-111 4	0.5471	Adder	0.64
926391	AC1-111 5	0.5471	Adder	0.64
926401	AC1-111 6	0.5471	Adder	0.64
926431	AC1-114	1.3455	Adder	1.58
926821	AC1-168 C O1	0.6816	Adder	0.8
926822	AC1-168 E O1	4.5743	Adder	5.38
927201	AC1-214 C O1	1.0267	Adder	1.21
927202	AC1-214 E O1	3.2637	Adder	3.84
927511	AC1-113 1	0.6728	Adder	0.79
927521	AC1-113 2	0.6728	Adder	0.79
930481	AB1-089	38.0779	Adder	44.8
930501	AB1-091 O1	30.8176	Adder	36.26
930751	AB1-122 2O1	0.0988	Adder	0.12
932881	AC2-115 1	1.3455	Adder	1.58
932891	AC2-115 2	1.3455	Adder	1.58
932921	AC2-116	0.4709	Adder	0.55
933411	AC2-154 C	1.0402	Adder	1.22
933412	AC2-154 E	1.6972	Adder	2.0
933431	AC2-156 C O1	0.5351	Adder	0.63
933432	AC2-156 E O1	0.8731	Adder	1.03
933911	AD1-013 C	1.0318	Adder	1.21
933912	AD1-013 E	1.6481	Adder	1.94
933931	AD1-016 C	0.5392	Adder	0.63
933932	AD1-016 E	0.8797	Adder	1.03
934051	AD1-031 C O1	1.3968	Adder	1.64
934052	AD1-031 E O1	2.2791	Adder	2.68
934111	AD1-039 2	2.7915	Adder	3.28
934431	AD1-067 C	0.0731	Adder	0.09
934432	AD1-067 E	0.3075	Adder	0.36
934651	AD1-096 C	0.4954	Adder	0.58
934652	AD1-096 E	0.8083	Adder	0.95
934701	AD1-098 C O1	3.8248	Adder	4.5
934702	AD1-098 E O1	2.7925	Adder	3.29
934971	AD1-129 C	0.5178	Adder	0.61
934972	AD1-129 E	0.3452	Adder	0.41
936371	AD2-047 C O1	1.8614	Adder	2.19
936372	AD2-047 E O1	9.0883	Adder	10.69
936461	AD2-060	1.0950	Adder	1.29
936511	AD2-066 C O1	3.8738	Adder	4.56
936512	AD2-066 E O1	2.5825	Adder	3.04
936791	AD2-102 C	7.9315	Adder	9.33
936792	AD2-102 E	5.2877	Adder	6.22
937001	AD2-134 C	1.5224	Adder	1.79
937002	AD2-134 E	6.2889	Adder	7.4
937311	AD2-172 C	1.3680	Adder	1.61
937312	AD2-172 E	1.8892	Adder	2.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937531	AD2-214 C	2.2754	Adder	2.68
937532	AD2-214 E	1.5169	Adder	1.78
938861	AE1-114 C O1	2.1504	Adder	2.53
938862	AE1-114 E O1	7.3368	Adder	8.63
939051	AE1-134 1	0.7223	Adder	0.85
939061	AE1-134 2	0.7223	Adder	0.85
939351	AE1-166 C O1	4.6171	Adder	5.43
939352	AE1-166 E O1	4.2620	Adder	5.01
940501	AE2-035 C	1.3680	Adder	1.61
940502	AE2-035 E	1.8892	Adder	2.22
940752	AE2-062 E	0.0506	Adder	0.06
941131	AE2-107 C	4.0871	Adder	4.81
941132	AE2-107 E	2.7248	Adder	3.21
941551	AE2-152 C O1	5.3275	Adder	6.27
941552	AE2-152 E O1	3.5516	Adder	4.18
941561	AE2-153 C O1	2.4795	Adder	2.92
941562	AE2-153 E O1	11.6084	Adder	13.66
942991	AE2-321 C	4.7399	Adder	5.58
942992	AE2-321 E	2.3346	Adder	2.75
943121	AE2-341 C	7.1444	Adder	8.41
943122	AE2-341 E	3.5083	Adder	4.13
943381	AF1-009 C	0.3309	Adder	0.39
943382	AF1-009 E	1.3234	Adder	1.56
943401	AF1-011 C	0.6467	Adder	0.76
943402	AF1-011 E	1.0855	Adder	1.28
943411	AF1-012 C	6.3546	Adder	7.48
943412	AF1-012 E	4.2364	Adder	4.98
943591	AF1-030 C O1	4.7511	Adder	5.59
943592	AF1-030 E O1	2.3507	Adder	2.77
943801	AF1-048 C	2.2157	Adder	2.61
943802	AF1-048 E	1.4772	Adder	1.74
943921	AF1-060	0.6736	Adder	0.79
944041	AF1-072	1.3146	Adder	1.55
944911	AF1-156 C	6.3396	Adder	7.46
944912	AF1-156 E	4.2264	Adder	4.97
945351	AF1-200 FTIR	627.0445	50/50	627.0445
946151	AF1-280 C O1	8.4100	Adder	9.89
946152	AF1-280 E O1	3.8674	Adder	4.55
946161	AF1-281 C	0.1842	Adder	0.22
946162	AF1-281 E	1.0436	Adder	1.23
946321	AF1-296 C O1	2.0012	Adder	2.35
946322	AF1-296 E O1	9.3693	Adder	11.02
946501	AF1-314 C	2.4307	Adder	2.86
946502	AF1-314 E	11.3799	Adder	13.39
946531	AF1-317 C O1	1.2104	Adder	1.42
946541	AF1-318 C O1	2.9651	Adder	3.49
946542	AF1-318 E O1	13.8836	Adder	16.33
946661	AF1-330 C	1.1634	Adder	1.37
946662	AF1-330 E	0.2554	Adder	0.3
946671	AF1-331	1.3399	Adder	1.58
957021	AF2-003 C O2	2.5588	Adder	5.68
957022	AF2-003 E O2	11.9800	Adder	26.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957331	AF2-027 C	0.7070	Adder	1.57
957332	AF2-027 E	1.0605	Adder	2.35
957471	AF2-041 C	6.0161	Adder	13.35
957472	AF2-041 E	4.0107	Adder	8.9
957751	AF2-069 C	0.0630	Adder	0.14
957752	AF2-069 E	0.2033	Adder	0.45
957761	AF2-070 C	0.0888	Adder	0.2
957762	AF2-070 E	0.4310	Adder	0.96
958011	AF2-095 C O2	3.8973	Adder	8.65
958012	AF2-095 E O2	1.8340	Adder	4.07
958021	AF2-096 C O2	10.0762	Adder	22.37
958022	AF2-096 E O2	4.7650	Adder	10.58
958341	AF2-128 C O2	0.4208	Adder	0.93
958342	AF2-128 E O2	1.9699	Adder	4.37
958911	AF2-182	5.8563	Adder	13.0
958921	AF2-183 C	1.0411	Adder	2.31
958922	AF2-183 E	1.5617	Adder	3.47
959081	AF2-199 C O2	2.0054	Adder	4.45
959082	AF2-199 E O2	1.3369	Adder	2.97
959091	AF2-200 C O2	4.0107	Adder	8.9
959092	AF2-200 E O2	2.6738	Adder	5.94
959101	AF2-201 C O2	1.7747	Adder	3.94
959102	AF2-201 E O2	5.0961	Adder	11.31
959761	AF2-267 C O2	1.2814	Adder	2.84
959762	AF2-267 E O2	5.9992	Adder	13.32
960381	AF2-329	1.9648	Adder	4.36
960551	AF2-346 C	1.4434	Adder	3.2
960552	AF2-346 E	0.9623	Adder	2.14
960581	AF2-349 C	6.6518	Adder	14.77
960582	AF2-349 E	4.4345	Adder	9.84
960591	AF2-350 C O2	1.7410	Adder	3.86
960592	AF2-350 E O2	1.1607	Adder	2.58
960601	AF2-351 C O2	0.2321	Adder	0.52
960602	AF2-351 E O2	0.3482	Adder	0.77
960721	AF2-363 C O2	1.7637	Adder	3.91
960722	AF2-363 E O2	1.1758	Adder	2.61
960731	AF2-364 C O2	2.0101	Adder	4.46
960732	AF2-364 E O2	1.3401	Adder	2.97
960751	AF2-366 C O2	2.0693	Adder	4.59
960752	AF2-366 E O2	1.3795	Adder	3.06
961011	AF2-392 C O2	1.1105	Adder	2.47
961012	AF2-392 E O2	5.1992	Adder	11.54
961021	AF2-393 O2	1.8929	Adder	4.2
961031	AF2-394 O2	1.2619	Adder	2.8
990901	L-005 E	6.0139	Adder	7.08
WEC	WEC	2.3562	Confirmed LTF	2.3562
CALDERWOOD	CALDERWOOD	0.1103	Confirmed LTF	0.1103
CBM-W2	CBM-W2	8.3620	Confirmed LTF	8.3620
NY	NY	0.6669	Confirmed LTF	0.6669
CBM-W1	CBM-W1	37.6301	Confirmed LTF	37.6301
TVA	TVA	0.4144	Confirmed LTF	0.4144
O-066	O-066	7.9094	Confirmed LTF	7.9094

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CHEOAH	CHEOAH	0.1166	Confirmed LTF	0.1166
CBM-S1	CBM-S1	0.8946	Confirmed LTF	0.8946
G-007	G-007	1.2230	Confirmed LTF	1.2230
MADISON	MADISON	11.3098	Confirmed LTF	11.3098
MEC	MEC	7.3205	Confirmed LTF	7.3205
GIBSON	GIBSON	0.1523	Confirmed LTF	0.1523
BLUEG	BLUEG	1.3280	Confirmed LTF	1.3280
TRIMBLE	TRIMBLE	0.4469	Confirmed LTF	0.4469
CATAWBA	CATAWBA	0.2034	Confirmed LTF	0.2034

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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
96022631	275232	WILTON ;3M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	121.48	121.57	DC	45.11

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274771	LINCOLN ;2U	3.7664	50/50	3.7664
274772	LINCOLN ;3U	3.7664	50/50	3.7664
274773	LINCOLN ;4U	3.7664	50/50	3.7664
274774	LINCOLN ;5U	3.7664	50/50	3.7664
274775	LINCOLN ;6U	3.7664	50/50	3.7664
274776	LINCOLN ;7U	3.7664	50/50	3.7664
274777	LINCOLN ;8U	3.7664	50/50	3.7664
274830	U3-021 1	6.3035	Adder	7.42
274831	U3-021 2	6.3035	Adder	7.42
274881	PILOT HIL;1E	19.9396	Adder	23.46
274890	CAYUG;1U E	17.0054	Adder	20.01
274891	CAYUG;2U E	17.0054	Adder	20.01
275149	KELLYCK ;1E	19.9396	Adder	23.46
276167	Z1-106 E2	1.3063	Adder	1.54
276168	Z1-106 E1	1.3062	Adder	1.54
276169	Z1-107 E	2.6738	Adder	3.15
276170	Z1-108 E	2.5704	Adder	3.02
290021	O50 E	20.0260	Adder	23.56
290051	GSG-6; E	10.8913	Adder	12.81
290108	LEEDK;1U E	25.1940	Adder	29.64
293061	N-015 E	16.4434	Adder	19.35
293644	O22 E1	10.5913	Adder	12.46
293645	O22 E2	20.5595	Adder	24.19
294392	P-010 E	20.8831	Adder	24.57
910542	X3-005 E	0.7562	Adder	0.89
915011	Y3-013 1	3.8635	Adder	4.55
915021	Y3-013 2	3.8635	Adder	4.55
915031	Y3-013 3	3.8635	Adder	4.55
918052	AA1-018 E OP	16.9837	Adder	19.98
920272	AA2-123 E	2.5262	Adder	2.97
924471	AB2-096	43.7741	Adder	51.5
926311	AC1-109 1	1.9765	Adder	2.33
926321	AC1-109 2	1.9765	Adder	2.33
926331	AC1-110 1	1.9634	Adder	2.31
926341	AC1-110 2	1.9634	Adder	2.31
926351	AC1-111 1	0.7894	Adder	0.93
926361	AC1-111 2	0.7894	Adder	0.93
926371	AC1-111 3	0.7894	Adder	0.93
926381	AC1-111 4	0.7894	Adder	0.93
926391	AC1-111 5	0.7894	Adder	0.93
926401	AC1-111 6	0.7894	Adder	0.93
927451	AC1-142A 1	4.3256	Adder	5.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927461	AC1-142A 2	4.3256	Adder	5.09
930501	AB1-091 O1	79.3394	Adder	93.34
930741	AB1-122 1O1	75.3017	Adder	88.59
930751	AB1-122 2O1	76.2303	Adder	89.68
933411	AC2-154 C	2.7061	Adder	3.18
933412	AC2-154 E	4.4152	Adder	5.19
933431	AC2-156 C O1	0.9893	Adder	1.16
933432	AC2-156 E O1	1.6142	Adder	1.9
933911	AD1-013 C	1.9232	Adder	2.26
933912	AD1-013 E	3.0721	Adder	3.61
933931	AD1-016 C	0.9600	Adder	1.13
933932	AD1-016 E	1.5662	Adder	1.84
934101	AD1-039 1	7.3796	Adder	8.68
934111	AD1-039 2	7.4706	Adder	8.79
934431	AD1-067 C	0.1368	Adder	0.16
934432	AD1-067 E	0.5750	Adder	0.68
934701	AD1-098 C O1	7.1661	Adder	8.43
934702	AD1-098 E O1	5.2320	Adder	6.16
934721	AD1-100 C	24.8523	Adder	29.24
934722	AD1-100 E	115.9774	Adder	136.44
934871	AD1-116 C	0.9891	Adder	1.16
934872	AD1-116 E	1.6138	Adder	1.9
934971	AD1-129 C	0.9344	Adder	1.1
934972	AD1-129 E	0.6230	Adder	0.73
935001	AD1-133 C O1	23.0234	Adder	27.09
935002	AD1-133 E O1	15.3490	Adder	18.06
936291	AD2-038 C O1	2.4301	Adder	2.86
936292	AD2-038 E O1	16.2627	Adder	19.13
936371	AD2-047 C O1	4.8425	Adder	5.7
936372	AD2-047 E O1	23.6427	Adder	27.81
936461	AD2-060	2.8485	Adder	3.35
936511	AD2-066 C O1	8.7640	Adder	10.31
936512	AD2-066 E O1	5.8426	Adder	6.87
937001	AD2-134 C	2.8471	Adder	3.35
937002	AD2-134 E	11.7616	Adder	13.84
937401	AD2-194 1	8.0697	Adder	9.49
937411	AD2-194 2	8.0692	Adder	9.49
938511	AE1-070 1	9.4819	Adder	11.16
938521	AE1-070 2	8.6744	Adder	10.21
938851	AE1-113 C	8.2607	Adder	9.72
938852	AE1-113 E	29.2880	Adder	34.46
939321	AE1-163 C O1	6.1063	Adder	7.18
939322	AE1-163 E O1	37.5102	Adder	44.13
939351	AE1-166 C O1	12.2622	Adder	14.43
939352	AE1-166 E O1	11.3189	Adder	13.32
939401	AE1-172 C O1	6.7946	Adder	7.99
939402	AE1-172 E O1	31.8801	Adder	37.51
940101	AE1-252 C O1	13.6499	Adder	16.06
940102	AE1-252 E O1	9.0999	Adder	10.71
940752	AE2-062 E	0.1351	Adder	0.16
941131	AE2-107 C	7.5761	Adder	8.91
941132	AE2-107 E	5.0507	Adder	5.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941551	AE2-152 C O1	14.1487	Adder	16.65
941552	AE2-152 E O1	9.4325	Adder	11.1
941561	AE2-153 C O1	5.1247	Adder	6.03
941562	AE2-153 E O1	23.9929	Adder	28.23
941731	AE2-173 O1	3.2665	Adder	3.84
942111	AE2-223 C	2.4140	Adder	2.84
942112	AE2-223 E	16.1551	Adder	19.01
942421	AE2-255 C O1	3.1291	Adder	3.68
942422	AE2-255 E O1	9.3872	Adder	11.04
942651	AE2-281 C O1	0.8723	Adder	1.03
942652	AE2-281 E O1	5.3586	Adder	6.3
942991	AE2-321 C	8.4508	Adder	9.94
942992	AE2-321 E	4.1623	Adder	4.9
943121	AE2-341 C	13.2079	Adder	15.54
943122	AE2-341 E	6.4858	Adder	7.63
943381	AF1-009 C	0.6199	Adder	0.73
943382	AF1-009 E	2.4796	Adder	2.92
943591	AF1-030 C O1	8.7834	Adder	10.33
943592	AF1-030 E O1	4.3457	Adder	5.11
943801	AF1-048 C	3.9504	Adder	4.65
943802	AF1-048 E	2.6336	Adder	3.1
944041	AF1-072	2.2259	Adder	2.62
944911	AF1-156 C	13.1029	Adder	15.42
944912	AF1-156 E	8.7353	Adder	10.28
945351	AF1-200 FTIR	322.6289	Merchant Transmission	322.6289
946661	AF1-330 C	2.0715	Adder	2.44
946662	AF1-330 E	0.4547	Adder	0.53
946671	AF1-331	2.4976	Adder	2.94
957021	AF2-003 C O2	3.5767	Adder	7.94
957022	AF2-003 E O2	16.7456	Adder	37.17
957331	AF2-027 C	1.3651	Adder	3.03
957332	AF2-027 E	2.0477	Adder	4.55
958011	AF2-095 C O2	10.1350	Adder	22.5
958012	AF2-095 E O2	4.7694	Adder	10.59
958021	AF2-096 C O2	19.5077	Adder	43.3
958022	AF2-096 E O2	9.2252	Adder	20.48
958481	AF2-142 C	6.2078	Adder	13.78
958482	AF2-142 E	4.1386	Adder	9.19
958491	AF2-143 C	5.9443	Adder	13.19
958492	AF2-143 E	3.9629	Adder	8.8
959341	AF2-225 C	4.1335	Adder	9.18
959342	AF2-225 E	5.7081	Adder	12.67
959351	AF2-226 C	1.3758	Adder	3.05
959352	AF2-226 E	2.0637	Adder	4.58
960281	AF2-319 C	1.3758	Adder	3.05
960282	AF2-319 E	2.0637	Adder	4.58
960381	AF2-329	3.6323	Adder	8.06
960581	AF2-349 C	11.9583	Adder	26.54
960582	AF2-349 E	7.9722	Adder	17.7
960591	AF2-350 C O2	4.5291	Adder	10.05
960592	AF2-350 E O2	3.0194	Adder	6.7
960601	AF2-351 C O2	0.6039	Adder	1.34

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960602	AF2-351 E O2	0.9058	Adder	2.01
960721	AF2-363 C O2	3.2432	Adder	7.2
960722	AF2-363 E O2	2.1621	Adder	4.8
960731	AF2-364 C O2	3.3639	Adder	7.47
960732	AF2-364 E O2	2.2426	Adder	4.98
960751	AF2-366 C O2	3.8234	Adder	8.49
960752	AF2-366 E O2	2.5489	Adder	5.66
961501	AF2-441 C O2	5.5606	Adder	12.34
961502	AF2-441 E O2	8.3409	Adder	18.51
WEC	WEC	4.5603	Confirmed LTF	4.5603
CALDERWOOD	CALDERWOOD	0.0631	Confirmed LTF	0.0631
CBM-W2	CBM-W2	25.0942	Confirmed LTF	25.0942
NY	NY	1.4306	Confirmed LTF	1.4306
CBM-W1	CBM-W1	78.1875	Confirmed LTF	78.1875
TVA	TVA	1.6184	Confirmed LTF	1.6184
O-066	O-066	16.9546	Confirmed LTF	16.9546
CHEOAH	CHEOAH	0.0771	Confirmed LTF	0.0771
CBM-S1	CBM-S1	6.0407	Confirmed LTF	6.0407
G-007	G-007	2.6218	Confirmed LTF	2.6218
MADISON	MADISON	24.3210	Confirmed LTF	24.3210
MEC	MEC	16.0171	Confirmed LTF	16.0171
BLUEG	BLUEG	2.3071	Confirmed LTF	2.3071
TRIMBLE	TRIMBLE	0.7969	Confirmed LTF	0.7969
CATAWBA	CATAWBA	0.3619	Confirmed LTF	0.3619

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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
96022619	275233	WILTON ;4M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	124.02	124.11	DC	46.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274771	LINCOLN ;2U	3.8683	50/50	3.8683
274772	LINCOLN ;3U	3.8683	50/50	3.8683
274773	LINCOLN ;4U	3.8683	50/50	3.8683
274774	LINCOLN ;5U	3.8683	50/50	3.8683
274775	LINCOLN ;6U	3.8683	50/50	3.8683
274776	LINCOLN ;7U	3.8683	50/50	3.8683
274777	LINCOLN ;8U	3.8683	50/50	3.8683
274830	U3-021 1	6.4380	Adder	7.57
274831	U3-021 2	6.4380	Adder	7.57
274881	PILOT HIL;1E	20.3561	Adder	23.95
274890	CAYUG;1U E	17.3451	Adder	20.41
274891	CAYUG;2U E	17.3451	Adder	20.41
275149	KELLYCK ;1E	20.3561	Adder	23.95
276167	Z1-106 E2	1.3342	Adder	1.57
276168	Z1-106 E1	1.3341	Adder	1.57
276169	Z1-107 E	2.7309	Adder	3.21
276170	Z1-108 E	2.6251	Adder	3.09
290021	O50 E	20.4530	Adder	24.06
290051	GSG-6; E	11.1236	Adder	13.09
290108	LEEDK;1U E	25.7295	Adder	30.27
293061	N-015 E	16.7861	Adder	19.75
293644	O22 E1	10.8153	Adder	12.72
293645	O22 E2	20.9944	Adder	24.7
294392	P-010 E	21.3184	Adder	25.08
910542	X3-005 E	0.7727	Adder	0.91
915011	Y3-013 1	3.9461	Adder	4.64
915021	Y3-013 2	3.9461	Adder	4.64
915031	Y3-013 3	3.9461	Adder	4.64
918052	AA1-018 E OP	17.3542	Adder	20.42
920272	AA2-123 E	2.5799	Adder	3.04
924471	AB2-096	44.7083	Adder	52.6
926311	AC1-109 1	2.0186	Adder	2.37
926321	AC1-109 2	2.0186	Adder	2.37
926331	AC1-110 1	2.0052	Adder	2.36
926341	AC1-110 2	2.0052	Adder	2.36
926351	AC1-111 1	0.8063	Adder	0.95
926361	AC1-111 2	0.8063	Adder	0.95
926371	AC1-111 3	0.8063	Adder	0.95
926381	AC1-111 4	0.8063	Adder	0.95
926391	AC1-111 5	0.8063	Adder	0.95
926401	AC1-111 6	0.8063	Adder	0.95
927451	AC1-142A 1	4.4186	Adder	5.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
927461	AC1-142A 2	4.4186	Adder	5.2
930501	AB1-091 O1	80.9897	Adder	95.28
930741	AB1-122 1O1	76.8999	Adder	90.47
930751	AB1-122 2O1	77.8579	Adder	91.6
933411	AC2-154 C	2.7626	Adder	3.25
933412	AC2-154 E	4.5074	Adder	5.3
933431	AC2-156 C O1	1.0103	Adder	1.19
933432	AC2-156 E O1	1.6485	Adder	1.94
933911	AD1-013 C	1.9642	Adder	2.31
933912	AD1-013 E	3.1375	Adder	3.69
933931	AD1-016 C	0.9804	Adder	1.15
933932	AD1-016 E	1.5996	Adder	1.88
934101	AD1-039 1	7.5362	Adder	8.87
934111	AD1-039 2	7.6301	Adder	8.98
934431	AD1-067 C	0.1397	Adder	0.16
934432	AD1-067 E	0.5873	Adder	0.69
934701	AD1-098 C O1	7.3184	Adder	8.61
934702	AD1-098 E O1	5.3432	Adder	6.29
934721	AD1-100 C	25.3457	Adder	29.82
934722	AD1-100 E	118.2800	Adder	139.15
934871	AD1-116 C	1.0107	Adder	1.19
934872	AD1-116 E	1.6490	Adder	1.94
934971	AD1-129 C	0.9544	Adder	1.12
934972	AD1-129 E	0.6363	Adder	0.75
935001	AD1-133 C O1	23.5023	Adder	27.65
935002	AD1-133 E O1	15.6682	Adder	18.43
936291	AD2-038 C O1	2.4826	Adder	2.92
936292	AD2-038 E O1	16.6143	Adder	19.55
936371	AD2-047 C O1	4.9436	Adder	5.82
936372	AD2-047 E O1	24.1366	Adder	28.4
936461	AD2-060	2.9080	Adder	3.42
936511	AD2-066 C O1	8.9497	Adder	10.53
936512	AD2-066 E O1	5.9665	Adder	7.02
937001	AD2-134 C	2.9079	Adder	3.42
937002	AD2-134 E	12.0124	Adder	14.13
937401	AD2-194 1	8.2426	Adder	9.7
937411	AD2-194 2	8.2421	Adder	9.7
938511	AE1-070 1	9.6851	Adder	11.39
938521	AE1-070 2	8.8603	Adder	10.42
938851	AE1-113 C	8.4369	Adder	9.93
938852	AE1-113 E	29.9126	Adder	35.19
939321	AE1-163 C O1	6.2383	Adder	7.34
939322	AE1-163 E O1	38.3212	Adder	45.08
939351	AE1-166 C O1	12.5095	Adder	14.72
939352	AE1-166 E O1	11.5472	Adder	13.58
939401	AE1-172 C O1	6.9294	Adder	8.15
939402	AE1-172 E O1	32.5126	Adder	38.25
940101	AE1-252 C O1	13.9207	Adder	16.38
940102	AE1-252 E O1	9.2805	Adder	10.92
940752	AE2-062 E	0.1379	Adder	0.16
941131	AE2-107 C	7.7372	Adder	9.1
941132	AE2-107 E	5.1581	Adder	6.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941551	AE2-152 C O1	14.4340	Adder	16.98
941552	AE2-152 E O1	9.6227	Adder	11.32
941561	AE2-153 C O1	5.2303	Adder	6.15
941562	AE2-153 E O1	24.4874	Adder	28.81
941731	AE2-173 O1	3.3326	Adder	3.92
942111	AE2-223 C	2.4629	Adder	2.9
942112	AE2-223 E	16.4823	Adder	19.39
942421	AE2-255 C O1	3.1958	Adder	3.76
942422	AE2-255 E O1	9.5874	Adder	11.28
942651	AE2-281 C O1	0.8912	Adder	1.05
942652	AE2-281 E O1	5.4745	Adder	6.44
942991	AE2-321 C	8.6313	Adder	10.15
942992	AE2-321 E	4.2513	Adder	5.0
943121	AE2-341 C	13.4892	Adder	15.87
943122	AE2-341 E	6.6239	Adder	7.79
943381	AF1-009 C	0.6331	Adder	0.74
943382	AF1-009 E	2.5323	Adder	2.98
943591	AF1-030 C O1	8.9705	Adder	10.55
943592	AF1-030 E O1	4.4383	Adder	5.22
943801	AF1-048 C	4.0348	Adder	4.75
943802	AF1-048 E	2.6899	Adder	3.16
944041	AF1-072	2.2734	Adder	2.67
944911	AF1-156 C	13.3730	Adder	15.73
944912	AF1-156 E	8.9153	Adder	10.49
945351	AF1-200 FTIR	329.4462	Merchant Transmission	329.4462
946661	AF1-330 C	2.1155	Adder	2.49
946662	AF1-330 E	0.4644	Adder	0.55
946671	AF1-331	2.5508	Adder	3.0
957021	AF2-003 C O2	3.6517	Adder	8.11
957022	AF2-003 E O2	17.0965	Adder	37.95
957331	AF2-027 C	1.3943	Adder	3.1
957332	AF2-027 E	2.0914	Adder	4.64
958011	AF2-095 C O2	10.3469	Adder	22.97
958012	AF2-095 E O2	4.8691	Adder	10.81
958021	AF2-096 C O2	19.9092	Adder	44.19
958022	AF2-096 E O2	9.4150	Adder	20.9
958481	AF2-142 C	6.3433	Adder	14.08
958482	AF2-142 E	4.2288	Adder	9.39
958491	AF2-143 C	6.0728	Adder	13.48
958492	AF2-143 E	4.0486	Adder	8.99
959341	AF2-225 C	4.2172	Adder	9.36
959342	AF2-225 E	5.8238	Adder	12.93
959351	AF2-226 C	1.4049	Adder	3.12
959352	AF2-226 E	2.1074	Adder	4.68
960281	AF2-319 C	1.4049	Adder	3.12
960282	AF2-319 E	2.1074	Adder	4.68
960381	AF2-329	3.7097	Adder	8.23
960581	AF2-349 C	12.2138	Adder	27.11
960582	AF2-349 E	8.1425	Adder	18.07
960591	AF2-350 C O2	4.6238	Adder	10.26
960592	AF2-350 E O2	3.0825	Adder	6.84
960601	AF2-351 C O2	0.6165	Adder	1.37

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960602	AF2-351 E O2	0.9248	Adder	2.05
960721	AF2-363 C O2	3.3122	Adder	7.35
960722	AF2-363 E O2	2.2082	Adder	4.9
960731	AF2-364 C O2	3.4357	Adder	7.63
960732	AF2-364 E O2	2.2905	Adder	5.08
960751	AF2-366 C O2	3.9047	Adder	8.67
960752	AF2-366 E O2	2.6031	Adder	5.78
961501	AF2-441 C O2	5.6774	Adder	12.6
961502	AF2-441 E O2	8.5161	Adder	18.9
WEC	WEC	4.6573	Confirmed LTF	4.6573
CALDERWOOD	CALDERWOOD	0.0656	Confirmed LTF	0.0656
CBM-W2	CBM-W2	25.6101	Confirmed LTF	25.6101
NY	NY	1.4616	Confirmed LTF	1.4616
CBM-W1	CBM-W1	79.8388	Confirmed LTF	79.8388
TVA	TVA	1.6492	Confirmed LTF	1.6492
O-066	O-066	17.3242	Confirmed LTF	17.3242
CHEOAH	CHEOAH	0.0801	Confirmed LTF	0.0801
CBM-S1	CBM-S1	6.1514	Confirmed LTF	6.1514
G-007	G-007	2.6780	Confirmed LTF	2.6780
MADISON	MADISON	24.8371	Confirmed LTF	24.8371
MEC	MEC	16.3540	Confirmed LTF	16.3540
BLUEG	BLUEG	2.3592	Confirmed LTF	2.3592
TRIMBLE	TRIMBLE	0.8147	Confirmed LTF	0.8147
CATAWBA	CATAWBA	0.3703	Confirmed LTF	0.3703

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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
148480185	934720	AD1-100 TAP	CE	270926	WILTON ; B	CE	1	COMED_P7_345-L2001__B-S+_345-L2003__R-S-A	tower	2221.0	114.7	115.12	DC	27.82

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	47.1072	50/50	47.1072
274655	BRAIDWOOD;2U	45.7454	50/50	45.7454
274660	LASCO STA;1U	29.7712	50/50	29.7712
274661	LASCO STA;2U	29.8914	50/50	29.8914
274847	GR RIDGE ;BU	0.6528	50/50	0.6528
274853	TWINGROVE;U1	0.9571	50/50	0.9571
274854	TWINGROVE;U2	0.9571	50/50	0.9571
274863	CAYUGA RI;1U	1.3220	50/50	1.3220
274864	CAYUGA RI;2U	1.3220	50/50	1.3220
274871	GR RIDGE ;2U	0.8291	50/50	0.8291
274880	GENERATOR;	0.8854	50/50	0.8854
274881	PILOT HIL;1E	20.2230	50/50	20.2230
274882	W4-005 E	34.3755	50/50	34.3755
274887	PILOT HIL;1U	0.8721	50/50	0.8721
274888	KELLYCK ;1U	0.8721	50/50	0.8721
274890	CAYUG;1U E	30.6564	50/50	30.6564
274891	CAYUG;2U E	30.6564	50/50	30.6564
275149	KELLYCK ;1E	20.2230	50/50	20.2230
276153	W2-048 E	6.4163	50/50	6.4163
290261	S-027 E	22.1934	50/50	22.1934
290265	S-028 E	22.1934	50/50	22.1934
293061	N-015 E	15.1380	50/50	15.1380
294392	P-010 E	19.2253	50/50	19.2253
909052	X2-022 E	19.3001	50/50	19.3001
917501	Z2-087 C	0.7931	50/50	0.7931
917502	Z2-087 E	30.7719	50/50	30.7719
924041	AB2-047 C O1	5.7476	50/50	5.7476
924042	AB2-047 E O1	38.4649	50/50	38.4649
924261	AB2-070 C O1	2.8181	50/50	2.8181
924262	AB2-070 E O1	17.8627	50/50	17.8627
925771	AC1-053 C	2.7703	50/50	2.7703
925772	AC1-053 E	18.5397	50/50	18.5397
926821	AC1-168 C O1	0.5733	Adder	0.67
926822	AC1-168 E O1	3.8476	Adder	4.53
930501	AB1-091 O1	91.9655	50/50	91.9655
933411	AC2-154 C	2.7444	50/50	2.7444
933412	AC2-154 E	4.4776	50/50	4.4776
934721	AD1-100 C	51.5040	50/50	51.5040
934722	AD1-100 E	240.3520	50/50	240.3520
935001	AD1-133 C O1	15.0200	Adder	17.67
935002	AD1-133 E O1	10.0133	Adder	11.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
935141	AD1-148	5.0303	50/50	5.0303
936371	AD2-047 C O1	4.9110	50/50	4.9110
936372	AD2-047 E O1	23.9770	50/50	23.9770
936461	AD2-060	2.8888	50/50	2.8888
936771	AD2-100 C	8.0786	Adder	9.5
936772	AD2-100 E	5.3857	Adder	6.34
936971	AD2-131 C	0.5322	Adder	0.63
936972	AD2-131 E	2.6736	Adder	3.15
937211	AD2-159 C	3.7148	50/50	3.7148
937212	AD2-159 E	17.3921	50/50	17.3921
939351	AE1-166 C O1	22.5124	50/50	22.5124
939352	AE1-166 E O1	20.7806	50/50	20.7806
939401	AE1-172 C O1	13.4051	50/50	13.4051
939402	AE1-172 E O1	62.8960	50/50	62.8960
939741	AE1-205 C O1	14.8554	50/50	14.8554
939742	AE1-205 E O1	20.5146	50/50	20.5146
940101	AE1-252 C O1	26.9298	50/50	26.9298
940102	AE1-252 E O1	17.9532	50/50	17.9532
941551	AE2-152 C O1	25.9758	50/50	25.9758
941552	AE2-152 E O1	17.3172	50/50	17.3172
941561	AE2-153 C O1	7.3403	50/50	7.3403
941562	AE2-153 E O1	34.3657	50/50	34.3657
941731	AE2-173 O1	8.8425	50/50	8.8425
942111	AE2-223 C	3.4486	50/50	3.4486
942112	AE2-223 E	23.0789	50/50	23.0789
942481	AE2-261 C	11.9095	Adder	14.01
942482	AE2-261 E	7.9396	Adder	9.34
944221	AF1-090 C O1	2.0232	Adder	2.38
944222	AF1-090 E O1	9.4722	Adder	11.14
944911	AF1-156 C	18.7677	50/50	18.7677
944912	AF1-156 E	12.5118	50/50	12.5118
945871	AF1-252 O1	3.5866	Adder	4.22
945881	AF1-253 O1	2.4830	Adder	2.92
946541	AF1-318 C O1	2.5213	Adder	2.97
946542	AF1-318 E O1	11.8057	Adder	13.89
951741	J474 C	1.8519	PJM External (MISO)	1.8519
951742	J474 E	10.0194	PJM External (MISO)	10.0194
952651	J756 C	0.5254	PJM External (MISO)	0.5254
952652	J756 E	2.8426	PJM External (MISO)	2.8426
953741	J826 C	1.0380	PJM External (MISO)	1.0380
953742	J826 E	5.6160	PJM External (MISO)	5.6160
954721	J750 C	1.3605	PJM External (MISO)	1.3605
954722	J750 E	7.3605	PJM External (MISO)	7.3605
954821	J955	62.7536	PJM External (MISO)	62.7536
955401	J1022 C	1.5570	PJM External (MISO)	1.5570
955402	J1022 E	8.4240	PJM External (MISO)	8.4240
956151	J1102	4.3260	PJM External (MISO)	4.3260
956281	J1115 C	2.6642	PJM External (MISO)	2.6642
956282	J1115 E	14.4138	PJM External (MISO)	14.4138
957021	AF2-003 C O2	2.2061	Adder	4.9
957022	AF2-003 E O2	10.3288	Adder	22.93
957381	AF2-032 C	0.4845	Adder	1.08

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957382	AF2-032 E	0.2280	Adder	0.51
958011	AF2-095 C O2	16.6233	50/50	16.6233
958012	AF2-095 E O2	7.8227	50/50	7.8227
958341	AF2-128 C O2	0.3662	Adder	0.81
958342	AF2-128 E O2	1.7143	Adder	3.81
959341	AF2-225 C	11.1416	50/50	11.1416
959342	AF2-225 E	15.3860	50/50	15.3860
959611	AF2-252 C	2.8022	50/50	2.8022
959612	AF2-252 E	4.2033	50/50	4.2033
960141	AF2-305	0.9972	50/50	0.9972
960261	AF2-317	1.6097	50/50	1.6097
960591	AF2-350 C O2	8.6670	50/50	8.6670
960592	AF2-350 E O2	5.7780	50/50	5.7780
960601	AF2-351 C O2	1.1556	50/50	1.1556
960602	AF2-351 E O2	1.7334	50/50	1.7334
960611	AF2-352 C	2.8022	50/50	2.8022
960612	AF2-352 E	4.2033	50/50	4.2033
WEC	WEC	0.4237	Confirmed LTF	0.4237
LGEE	LGEE	0.0867	Confirmed LTF	0.0867
CBM-W2	CBM-W2	17.3464	Confirmed LTF	17.3464
NY	NY	0.3987	Confirmed LTF	0.3987
CBM-W1	CBM-W1	9.0322	Confirmed LTF	9.0322
TVA	TVA	1.5218	Confirmed LTF	1.5218
O-066	O-066	4.6570	Confirmed LTF	4.6570
CBM-S2	CBM-S2	0.3526	Confirmed LTF	0.3526
CBM-S1	CBM-S1	7.7788	Confirmed LTF	7.7788
G-007	G-007	0.7197	Confirmed LTF	0.7197
MADISON	MADISON	6.6024	Confirmed LTF	6.6024
MEC	MEC	4.3936	Confirmed LTF	4.3936

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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
96022541	936510	AD2-066 TAP	CE	271987	MAZON ; R	CE	1	COMED_P4_001-38-L0108__	breaker	223.0	132.21	155.38	DC	51.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274847	GR RIDGE ;BU	0.9119	50/50	0.9119
274849	CRESCENT ;1U	0.2163	50/50	0.2163
274851	PROVIDENC;RU	0.3300	50/50	0.3300
274871	GR RIDGE ;2U	1.1581	50/50	1.1581
276173	Z2-081	0.3940	50/50	0.3940
293061	N-015 E	21.1452	50/50	21.1452
293771	O-035 E	7.6522	50/50	7.6522
294392	P-010 E	26.8544	50/50	26.8544
294401	BSHIL;1U E	5.7786	Adder	6.8
294410	BSHIL;2U E	5.7786	Adder	6.8
925581	AC1-033 C	0.9466	Adder	1.11
925582	AC1-033 E	6.3371	Adder	7.46
926821	AC1-168 C O1	1.6744	50/50	1.6744
926822	AC1-168 E O1	11.2368	50/50	11.2368
927201	AC1-214 C O1	2.4559	50/50	2.4559
927202	AC1-214 E O1	7.8073	50/50	7.8073
934051	AD1-031 C O1	1.9214	Adder	2.26
934052	AD1-031 E O1	3.1349	Adder	3.69
936511	AD2-066 C O1	44.5329	50/50	44.5329
936512	AD2-066 E O1	29.6886	50/50	29.6886
946541	AF1-318 C O1	10.0887	50/50	10.0887
946542	AF1-318 E O1	47.2386	50/50	47.2386
953201	J715 C	3.3343	PJM External (MISO)	3.3343
953202	J715 E	18.0397	PJM External (MISO)	18.0397
957021	AF2-003 C O2	9.0930	50/50	9.0930
957022	AF2-003 E O2	42.5716	50/50	42.5716
957751	AF2-069 C	0.2844	50/50	0.2844
957752	AF2-069 E	0.9177	50/50	0.9177
957761	AF2-070 C	0.4007	50/50	0.4007
957762	AF2-070 E	1.9454	50/50	1.9454
958341	AF2-128 C O2	2.9049	50/50	2.9049
958342	AF2-128 E O2	13.6001	50/50	13.6001
990901	L-005 E	7.6265	Adder	8.97
LGEE	LGEE	0.0610	Confirmed LTF	0.0610
CPL	CPL	0.0701	Confirmed LTF	0.0701
G-007A	G-007A	0.0527	Confirmed LTF	0.0527
VFT	VFT	0.1419	Confirmed LTF	0.1419
CBM-W2	CBM-W2	3.7920	Confirmed LTF	3.7920
CBM-W1	CBM-W1	3.1650	Confirmed LTF	3.1650
TVA	TVA	0.3920	Confirmed LTF	0.3920
CBM-S2	CBM-S2	0.7572	Confirmed LTF	0.7572

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S1	CBM-S1	2.1130	Confirmed LTF	2.1130
MADISON	MADISON	1.3406	Confirmed LTF	1.3406
MEC	MEC	1.3824	Confirmed LTF	1.3824

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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
96022646	941560	AE2-153 TAP	CE	270711	DAVIS CRK; R	CE	1	ADD AD1-100 5	breaker	1341.0	115.37	115.92	DC	16.06

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274654	BRAIDWOOD;1U	33.4821	50/50	33.4821
274655	BRAIDWOOD;2U	32.9938	50/50	32.9938
274660	LASCO STA;1U	21.7834	50/50	21.7834
274661	LASCO STA;2U	21.8779	50/50	21.8779
274890	CAYUG;1U E	8.4232	Adder	9.91
274891	CAYUG;2U E	8.4232	Adder	9.91
276171	Z1-107 BAT	1.0170	Merchant Transmission	1.0170
293061	N-015 E	8.6894	Adder	10.22
294392	P-010 E	11.0355	Adder	12.98
917502	Z2-087 E	8.3859	Adder	9.87
924041	AB2-047 C O1	1.5663	Adder	1.84
924042	AB2-047 E O1	10.4824	Adder	12.33
934721	AD1-100 C	20.7990	50/50	20.7990
934722	AD1-100 E	97.0620	50/50	97.0620
939351	AE1-166 C O1	11.5292	50/50	11.5292
939352	AE1-166 E O1	10.6423	50/50	10.6423
939401	AE1-172 C O1	3.6926	Adder	4.34
939402	AE1-172 E O1	17.3256	Adder	20.38
939741	AE1-205 C O1	4.0484	Adder	4.76
939742	AE1-205 E O1	5.5906	Adder	6.58
940101	AE1-252 C O1	7.4182	Adder	8.73
940102	AE1-252 E O1	4.9455	Adder	5.82
941551	AE2-152 C O1	13.3029	50/50	13.3029
941552	AE2-152 E O1	8.8686	50/50	8.8686
941561	AE2-153 C O1	10.9768	50/50	10.9768
941562	AE2-153 E O1	51.3912	50/50	51.3912
941731	AE2-173 O1	2.4097	Adder	2.83
942111	AE2-223 C	0.9398	Adder	1.11
942112	AE2-223 E	6.2894	Adder	7.4
944911	AF1-156 C	28.0656	50/50	28.0656
944912	AF1-156 E	18.7104	50/50	18.7104
957021	AF2-003 C O2	1.2735	Adder	2.83
957022	AF2-003 E O2	5.9624	Adder	13.24
957373	AF2-031 BAT	0.8212	Merchant Transmission	0.8212
958013	AF2-095 BAT	11.6308	50/50	11.6308
958021	AF2-096 C O2	38.5923	50/50	38.5923
958022	AF2-096 E O2	18.2502	50/50	18.2502
959341	AF2-225 C	1.6092	Adder	3.57
959342	AF2-225 E	2.2223	Adder	4.93
960603	AF2-351 BAT	6.9884	50/50	6.9884
WEC	WEC	0.1767	Confirmed LTF	0.1767

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-W2	CBM-W2	4.6355	Confirmed LTF	4.6355
NY	NY	0.2146	Confirmed LTF	0.2146
CBM-W1	CBM-W1	0.4754	Confirmed LTF	0.4754
TVA	TVA	0.3178	Confirmed LTF	0.3178
O-066	O-066	2.5267	Confirmed LTF	2.5267
CBM-S1	CBM-S1	1.4058	Confirmed LTF	1.4058
G-007	G-007	0.3910	Confirmed LTF	0.3910
MADISON	MADISON	2.4998	Confirmed LTF	2.4998
MEC	MEC	1.4635	Confirmed LTF	1.4635
BLUEG	BLUEG	0.2014	Confirmed LTF	0.2014
TRIMBLE	TRIMBLE	0.0746	Confirmed LTF	0.0746
CATAWBA	CATAWBA	0.0431	Confirmed LTF	0.0431

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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
95164513	956820	J1180 TAP	AMIL	247712	O5SULLIVAN	AEP	1	AEP_P4_#3128_05EUGENE 345_A2	breaker	1466.0	149.81	149.82	DC	21.31

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
274650	KINCAID ;1U	16.4201	50/50	16.4201
274651	KINCAID ;2U	16.4134	50/50	16.4134
274830	U3-021 1	2.7006	Adder	3.18
274831	U3-021 2	2.7006	Adder	3.18
274853	TWINGROVE;U1	0.8780	50/50	0.8780
274854	TWINGROVE;U2	0.8780	50/50	0.8780
274859	EASYR;U1 E	5.8205	Adder	6.85
274860	EASYR;U2 E	5.8205	Adder	6.85
274880	GENERATOR;	1.1644	50/50	1.1644
274882	W4-005 E	45.2070	50/50	45.2070
274890	CAYUG;1U E	8.8046	Adder	10.36
274891	CAYUG;2U E	8.8046	Adder	10.36
276153	W2-048 E	9.4531	50/50	9.4531
290021	O50 E	9.3106	Adder	10.95
290051	GSG-6; E	4.7900	Adder	5.64
290108	LEEDK;1U E	10.5689	Adder	12.43
290261	S-027 E	20.3607	50/50	20.3607
290265	S-028 E	20.3607	50/50	20.3607
293516	O-009 E1	5.4128	Adder	6.37
293517	O-009 E2	2.7493	Adder	3.23
293518	O-009 E3	3.0277	Adder	3.56
293644	O22 E1	4.2351	Adder	4.98
293645	O22 E2	8.2211	Adder	9.67
293715	O-029 E	5.7868	Adder	6.81
293716	O-029 E	3.1728	Adder	3.73
293717	O-029 E	2.9162	Adder	3.43
293771	O-035 E	4.3577	Adder	5.13
294401	BSHIL;1U E	5.9235	Adder	6.97
294410	BSHIL;2U E	5.9235	Adder	6.97
294763	P-046 E	4.6158	Adder	5.43
909052	X2-022 E	28.4350	50/50	28.4350
917501	Z2-087 C	0.4565	50/50	0.4565
917502	Z2-087 E	17.7115	50/50	17.7115
918052	AA1-018 E OP	6.8407	Adder	8.05
919581	AA2-030	9.9554	Adder	11.71
920272	AA2-123 E	1.0469	Adder	1.23
924041	AB2-047 C O1	3.3082	50/50	3.3082
924042	AB2-047 E O1	22.1393	50/50	22.1393
924261	AB2-070 C O1	3.8212	50/50	3.8212
924262	AB2-070 E O1	24.2207	50/50	24.2207
924471	AB2-096	18.7544	Adder	22.06
925581	AC1-033 C	0.9699	Adder	1.14

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925582	AC1-033 E	6.4929	Adder	7.64
925771	AC1-053 C	3.8568	50/50	3.8568
925772	AC1-053 E	25.8112	50/50	25.8112
926431	AC1-114	1.1133	Adder	1.31
926821	AC1-168 C O1	0.7021	Adder	0.83
926822	AC1-168 E O1	4.7116	Adder	5.54
926841	AC1-171 C O1	1.0395	50/50	1.0395
926842	AC1-171 E O1	6.9433	50/50	6.9433
927201	AC1-214 C O1	1.3986	Adder	1.65
927202	AC1-214 E O1	4.4460	Adder	5.23
927511	AC1-113 1	0.5567	Adder	0.65
927521	AC1-113 2	0.5567	Adder	0.65
930481	AB1-089	30.3080	Adder	35.66
930741	AB1-122 1O1	30.2194	Adder	35.55
932881	AC2-115 1	1.1133	Adder	1.31
932891	AC2-115 2	1.1133	Adder	1.31
932921	AC2-116	0.3897	Adder	0.46
933911	AD1-013 C	0.8324	Adder	0.98
933912	AD1-013 E	1.3297	Adder	1.56
933931	AD1-016 C	0.3978	Adder	0.47
933932	AD1-016 E	0.6491	Adder	0.76
934051	AD1-031 C O1	1.9693	Adder	2.32
934052	AD1-031 E O1	3.2131	Adder	3.78
934101	AD1-039 1	2.9615	Adder	3.48
934431	AD1-067 C	0.0601	Adder	0.07
934432	AD1-067 E	0.2529	Adder	0.3
934651	AD1-096 C	0.4384	Adder	0.52
934652	AD1-096 E	0.7153	Adder	0.84
934701	AD1-098 C O1	3.1831	Adder	3.74
934702	AD1-098 E O1	2.3240	Adder	2.73
934871	AD1-116 C	0.3984	Adder	0.47
934872	AD1-116 E	0.6500	Adder	0.76
934971	AD1-129 C	0.4055	Adder	0.48
934972	AD1-129 E	0.2703	Adder	0.32
935001	AD1-133 C O1	12.2446	Adder	14.41
935002	AD1-133 E O1	8.1631	Adder	9.6
935141	AD1-148	7.4113	50/50	7.4113
936291	AD2-038 C O1	1.1607	Adder	1.37
936292	AD2-038 E O1	7.7681	Adder	9.14
936511	AD2-066 C O1	4.0625	Adder	4.78
936512	AD2-066 E O1	2.7083	Adder	3.19
936771	AD2-100 C	22.4645	50/50	22.4645
936772	AD2-100 E	14.9764	50/50	14.9764
936791	AD2-102 C	6.7901	Adder	7.99
936792	AD2-102 E	4.5268	Adder	5.33
936971	AD2-131 C	1.4798	50/50	1.4798
936972	AD2-131 E	7.4347	50/50	7.4347
937001	AD2-134 C	1.2522	Adder	1.47
937002	AD2-134 E	5.1728	Adder	6.09
937211	AD2-159 C	4.8853	50/50	4.8853
937212	AD2-159 E	22.8722	50/50	22.8722
937311	AD2-172 C	1.2117	Adder	1.43

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
937312	AD2-172 E	1.6732	Adder	1.97
937531	AD2-214 C	2.7588	Adder	3.25
937532	AD2-214 E	1.8392	Adder	2.16
938851	AE1-113 C	3.8406	Adder	4.52
938852	AE1-113 E	13.6167	Adder	16.02
938861	AE1-114 C O1	2.0247	Adder	2.38
938862	AE1-114 E O1	6.9079	Adder	8.13
939051	AE1-134 1	0.7736	Adder	0.91
939061	AE1-134 2	0.7736	Adder	0.91
939321	AE1-163 C O1	2.9167	Adder	3.43
939322	AE1-163 E O1	17.9172	Adder	21.08
939401	AE1-172 C O1	2.9603	Adder	3.48
939402	AE1-172 E O1	13.8898	Adder	16.34
939741	AE1-205 C O1	8.5504	50/50	8.5504
939742	AE1-205 E O1	11.8076	50/50	11.8076
940101	AE1-252 C O1	5.9471	Adder	7.0
940102	AE1-252 E O1	3.9647	Adder	4.66
940501	AE2-035 C	1.2117	Adder	1.43
940502	AE2-035 E	1.6732	Adder	1.97
941131	AE2-107 C	3.1503	Adder	3.71
941132	AE2-107 E	2.1002	Adder	2.47
941343	AE2-130 BAT	31.8120	50/50	31.8120
941731	AE2-173 O1	5.0895	50/50	5.0895
942111	AE2-223 C	1.9849	50/50	1.9849
942112	AE2-223 E	13.2836	50/50	13.2836
942421	AE2-255 C O1	1.4548	Adder	1.71
942422	AE2-255 E O1	4.3643	Adder	5.13
942481	AE2-261 C	31.0577	50/50	31.0577
942482	AE2-261 E	20.7052	50/50	20.7052
942602	AE2-276 BAT	14.0105	50/50	14.0105
942651	AE2-281 C O1	0.4167	Adder	0.49
942652	AE2-281 E O1	2.5596	Adder	3.01
942991	AE2-321 C	3.5189	Adder	4.14
942992	AE2-321 E	1.7332	Adder	2.04
943381	AF1-009 C	0.2754	Adder	0.32
943382	AF1-009 E	1.1014	Adder	1.3
943401	AF1-011 C	0.7389	Adder	0.87
943402	AF1-011 E	1.2404	Adder	1.46
943411	AF1-012 C	6.4046	Adder	7.53
943412	AF1-012 E	4.2697	Adder	5.02
943801	AF1-048 C	1.6450	Adder	1.94
943802	AF1-048 E	1.0966	Adder	1.29
943921	AF1-060	0.5966	Adder	0.7
944202	AF1-088 FTWR	280.2100	50/50	280.2100
944221	AF1-090 C O1	6.8094	50/50	6.8094
944222	AF1-090 E O1	31.8806	50/50	31.8806
945871	AF1-252 O1	12.0713	50/50	12.0713
945881	AF1-253 O1	8.3570	50/50	8.3570
946151	AF1-280 C O1	8.4217	Adder	9.91
946152	AF1-280 E O1	3.8727	Adder	4.56
946161	AF1-281 C	0.1844	Adder	0.22
946162	AF1-281 E	1.0450	Adder	1.23

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
946321	AF1-296 C O1	2.6152	Adder	3.08
946322	AF1-296 E O1	12.2439	Adder	14.4
946501	AF1-314 C	2.1528	Adder	2.53
946502	AF1-314 E	10.0791	Adder	11.86
946531	AF1-317 C O1	1.2199	Adder	1.44
946541	AF1-318 C O1	3.8549	Adder	4.54
946542	AF1-318 E O1	18.0499	Adder	21.24
946661	AF1-330 C	0.8584	Adder	1.01
946662	AF1-330 E	0.1884	Adder	0.22
946671	AF1-331	1.0810	Adder	1.27
955131	J991	25.9737	PJM External (MISO)	25.9737
957021	AF2-003 C O2	1.6896	Adder	3.75
957022	AF2-003 E O2	7.9105	Adder	17.56
957381	AF2-032 C	2.3285	50/50	2.3285
957382	AF2-032 E	1.0957	50/50	1.0957
957471	AF2-041 C	5.3746	Adder	11.93
957472	AF2-041 E	3.5831	Adder	7.95
957751	AF2-069 C	0.0858	Adder	0.19
957752	AF2-069 E	0.2770	Adder	0.61
957761	AF2-070 C	0.1209	Adder	0.27
957762	AF2-070 E	0.5872	Adder	1.3
958341	AF2-128 C O2	0.5403	Adder	1.2
958342	AF2-128 E O2	2.5297	Adder	5.62
958481	AF2-142 C	2.5004	Adder	5.55
958482	AF2-142 E	1.6669	Adder	3.7
958491	AF2-143 C	2.8394	Adder	6.3
958492	AF2-143 E	1.8929	Adder	4.2
958911	AF2-182	5.8644	Adder	13.02
958921	AF2-183 C	1.0426	Adder	2.31
958922	AF2-183 E	1.5638	Adder	3.47
959081	AF2-199 C O2	1.7915	Adder	3.98
959082	AF2-199 E O2	1.1944	Adder	2.65
959091	AF2-200 C O2	3.5831	Adder	7.95
959092	AF2-200 E O2	2.3887	Adder	5.3
959101	AF2-201 C O2	1.5718	Adder	3.49
959102	AF2-201 E O2	4.5136	Adder	10.02
959341	AF2-225 C	6.4128	50/50	6.4128
959342	AF2-225 E	8.8557	50/50	8.8557
959351	AF2-226 C	0.5502	Adder	1.22
959352	AF2-226 E	0.8252	Adder	1.83
959611	AF2-252 C	2.5708	50/50	2.5708
959612	AF2-252 E	3.8562	50/50	3.8562
959761	AF2-267 C O2	1.1351	Adder	2.52
959762	AF2-267 E O2	5.3142	Adder	11.8
960141	AF2-305	1.3521	50/50	1.3521
960261	AF2-317	2.3716	50/50	2.3716
960281	AF2-319 C	0.5502	Adder	1.22
960282	AF2-319 E	0.8252	Adder	1.83
960551	AF2-346 C	1.4548	Adder	3.23
960552	AF2-346 E	0.9698	Adder	2.15
960581	AF2-349 C	5.0843	Adder	11.29
960582	AF2-349 E	3.3896	Adder	7.52

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960611	AF2-352 C	2.5708	50/50	2.5708
960612	AF2-352 E	3.8562	50/50	3.8562
960623	AF2-353 BAT	31.8120	50/50	31.8120
960721	AF2-363 C O2	1.3831	Adder	3.07
960722	AF2-363 E O2	0.9220	Adder	2.05
960751	AF2-366 C O2	1.5699	Adder	3.48
960752	AF2-366 E O2	1.0466	Adder	2.32
961011	AF2-392 C O2	1.1842	Adder	2.63
961012	AF2-392 E O2	5.5444	Adder	12.31
961021	AF2-393 O2	2.0186	Adder	4.48
961031	AF2-394 O2	1.3457	Adder	2.99
990901	L-005 E	9.1810	Adder	10.8
WEC	WEC	2.0201	Confirmed LTF	2.0201
CPL	CPL	0.5953	Confirmed LTF	0.5953
CBM-W2	CBM-W2	70.4668	Confirmed LTF	70.4668
NY	NY	0.4468	Confirmed LTF	0.4468
CBM-W1	CBM-W1	61.5742	Confirmed LTF	61.5742
TVA	TVA	7.7938	Confirmed LTF	7.7938
O-066	O-066	4.9930	Confirmed LTF	4.9930
CBM-S2	CBM-S2	8.6238	Confirmed LTF	8.6238
CBM-S1	CBM-S1	36.9257	Confirmed LTF	36.9257
G-007	G-007	0.7706	Confirmed LTF	0.7706
MADISON	MADISON	25.0367	Confirmed LTF	25.0367
MEC	MEC	15.7613	Confirmed LTF	15.7613
BLUEG	BLUEG	2.7151	Confirmed LTF	2.7151
TRIMBLE	TRIMBLE	1.0039	Confirmed LTF	1.0039

13.6 Contingency Descriptions - Secondary POI

Contingency Name	Contingency Definition
COMED_P4_080-45-BT4-5__	CONTINGENCY 'COMED_P4_080-45-BT4-5__' TRIP BRANCH FROM BUS 270852 TO BUS 270668 CKT 1 / PONTI; B 345 BLUEM; B 345 TRIP BRANCH FROM BUS 270852 TO BUS 270704 CKT 1 / PONTI; B 345 LORET; B 345 END
COMED_P7_345-L2001__B-S+_345-L2003__R-S-B	CONTINGENCY 'COMED_P7_345-L2001__B-S+_345-L2003__R-S-B' TRIP BRANCH FROM BUS 958020 TO BUS 270728 CKT 1 / AF2-096 TAP 345 E FRA; B 345 TRIP BRANCH FROM BUS 270728 TO BUS 270766 CKT 1 / E FRA; B 345 GOODI;3B 345 TRIP BRANCH FROM BUS 270728 TO BUS 274750 CKT 1 / E FRA; B 345 CRETE;BP 345 TRIP BRANCH FROM BUS 270671 TO BUS 270729 CKT 1 / BRAID; R 345 E FRA; R 345 END
COMED_P4_167-45-BT5-6__	CONTINGENCY 'COMED_P4_167-45-BT5-6__' 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 ELEC JUNC;3R 345 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_P2-2_001_LA-138B__1	CONTINGENCY 'COMED_P2-2_001_LA-138B__1' DISCONNECT BUS 271908 / LASCO STA; B 138 END
COMED_P1-2_345-L0101__B-S	CONTINGENCY 'COMED_P1-2_345-L0101__B-S' TRIP BRANCH FROM BUS 270802 TO BUS 270846 CKT 1 / LASCO STA; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 END
COMED_P7_345-L2001__B-S+_345-L2003__R-S-A	CONTINGENCY 'COMED_P7_345-L2001__B-S+_345-L2003__R-S-A' TRIP BRANCH FROM BUS 270670 TO BUS 958020 CKT 1 / BRAID; B 345 AF2-096 TAP 345 TRIP BRANCH FROM BUS 270728 TO BUS 270766 CKT 1 / E FRA; B 345 GOODI;3B 345 TRIP BRANCH FROM BUS 270728 TO BUS 274750 CKT 1 / E FRA; B 345 CRETE;BP 345 TRIP BRANCH FROM BUS 270671 TO BUS 270729 CKT 1 / BRAID; R 345 E FRA; R 345 END

Contingency Name	Contingency Definition
COMED_P1-2_138-L6101___-S-B	CONTINGENCY 'COMED_P1-2_138-L6101___-S-B' TRIP BRANCH FROM BUS 271655 TO BUS 271835 CKT 1 / HENNEEPIN; T 138 KEWANEE ;23 138 TRIP BRANCH FROM BUS 271655 TO BUS 348918 CKT 1 / HENNEEPIN; T 138 4HENNEPIN S 138 TRIP BRANCH FROM BUS 926820 TO BUS 271655 CKT 1 / AC1-168 TAP 138 HENNEEPIN; T 138 END
COMED_P1-2_695_B2	CONTINGENCY 'COMED_P1-2_695_B2' OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTO; 765 1 END
COMED_P4_080-45-BT7-8__	CONTINGENCY 'COMED_P4_080-45-BT7-8__' TRIP BRANCH FROM BUS 270853 TO BUS 917500 CKT 1 / PONTIAC ; R 345 Z2-087 TAP 345 TRIP BRANCH FROM BUS 270853 TO BUS 935000 CKT 1 / PONTIAC ; R 345 AD1-133 TAP 345 END
COMED_P4_112-65-BT3-4__	CONTINGENCY 'COMED_P4_112-65-BT3-4__' TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 / WILTO; 765 05DUMONT 765 TRIP BRANCH FROM BUS 275232 TO BUS 270644 CKT 1 / WILTO;3M 345 WILTO; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270926 CKT 1 / WILTO;3M 345 WILTO; B 345 TRIP BRANCH FROM BUS 275232 TO BUS 275332 CKT 1 / WILTO;3M 345 WILTO;3C 33 END
COMED_P4_023-65-BT2-3__	CONTINGENCY 'COMED_P4_023-65-BT2-3__' TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 / WILTO; 765 05DUMONT 765 TRIP BRANCH FROM BUS 270607 TO BUS 270630 CKT 1 / COLLI; 765 PLANO; 765 END
COMED_P4_001-38-TR81__	CONTINGENCY 'COMED_P4_001-38-TR81__' TRIP BRANCH FROM BUS 270802 TO BUS 270803 CKT 1 / LASCO STA; B 345 LASCO STA; R 345 TRIP BRANCH FROM BUS 270802 TO BUS 271908 CKT 1 / LASCO STA; B 345 LASCO STA; B 138 DISCONNECT BUS 271908 / LASCO STA; B 138 TRIP BRANCH FROM BUS 270802 TO BUS 270803 CKT 1 / LASCO STA; B 345 LASCO STA; R 345 END

Contingency Name	Contingency Definition
ADD AD1-100 5	CONTINGENCY 'ADD AD1-100 5' OPEN BRANCH FROM BUS 934730 TO BUS 270710 CKT 1 / AD1-100 - DAVIS CREEK OPEN BRANCH FROM BUS 934720 TO BUS 270926 CKT 1 / AD1-100 - WILTON END
COMED_P7_138-L7411__R-R+_138-L7408__R-R_NON_FSA	CONTINGENCY 'COMED_P7_138-L7411__R-R+_138-L7408__R-R_NON_FSA' TRIP BRANCH FROM BUS 348962 TO BUS 271835 CKT 1 / NORMA; R 138 KEWAN; 2 138 TRIP BRANCH FROM BUS 271018 TO BUS 271836 CKT 1 / U4-027 KEWAN; 1 138 TRIP BRANCH FROM BUS 271018 TO BUS 272110 CKT 1 END
AEP_P1-2_#286	CONTINGENCY 'AEP_P1-2_#286' OPEN BRANCH FROM BUS 243221 TO BUS 348885 CKT 1 / 243221 05EUGENE 345 348885 7BUNSONVILLE 345 1 END
COMED_P1-2_345-L2004_AR-S-B	CONTINGENCY 'COMED_P1-2_345-L2004_AR-S-B' TRIP BRANCH FROM BUS 941560 TO BUS 270711 CKT 1 / AE2-153 TAP 345 DAVIS; R 345 END
COMED_P4_167-45-BT9-12_	CONTINGENCY 'COMED_P4_167-45-BT9-12_' TRIP BRANCH FROM BUS 270802 TO BUS 270846 CKT 1 / LASCO STA; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 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
ADD AD1-100 2	CONTINGENCY 'ADD AD1-100 2' OPEN BRANCH FROM BUS 934720 TO BUS 939400 CKT 1 / AD1-100 - AE1-172 TAP (LORETTO) OPEN BRANCH FROM BUS 934730 TO BUS 270670 CKT 1 / AD1-100 - BRAIDWOOD END
AEP_P4_#3128_05EUGENE 345_A2	CONTINGENCY 'AEP_P4_#3128_05EUGENE 345_A2' OPEN BRANCH FROM BUS 243221 TO BUS 249504 CKT 1 / 243221 05EUGENE 345 249504 08CAYSUB 345 1 OPEN BRANCH FROM BUS 243221 TO BUS 348885 CKT 1 / 243221 05EUGENE 345 348885 7BUNSONVILLE 345 1 END

Contingency Name	Contingency Definition
COMED_P7_138-L7411__R-R+_138-L7408__R-R_FSA	CONTINGENCY 'COMED_P7_138-L7411__R-R+_138-L7408__R-R_FSA' TRIP BRANCH FROM BUS 348962 TO BUS 271835 CKT 1 / NORMA; R 138 KEWAN; 2 138 TRIP BRANCH FROM BUS 271018 TO BUS 271836 CKT 1 / U4-027 KEWAN; 1 138 END
COMED_P1-2_138-L15518GB-R-A	CONTINGENCY 'COMED_P1-2_138-L15518GB-R-A' TRIP BRANCH FROM BUS 272094 TO BUS 272366 CKT 1 / NELSO; B 138 R FAL; B 138 TRIP BRANCH FROM BUS 272366 TO BUS 272512 CKT 1 / R FAL; B 138 H71 ;BT 138 TRIP BRANCH FROM BUS 272512 TO BUS 937530 CKT 1 / H71 ;BT 138 AD2-214 TAP 138 TRIP BRANCH FROM BUS 272512 TO BUS 272514 CKT 1 / H71 ;BT 138 H71 ; B 138 MOVE 100 PERCENT LOAD FROM BUS 272514 TO BUS 272515 / H71 ; B 138 H71 ; R 138 CLOSE LINE FROM BUS 272366 TO BUS 272367 CKT 1 / R FAL; B 138 R FAL; R 138 END
COMED_P4_023-65-BT4-5__	CONTINGENCY 'COMED_P4_023-65-BT4-5__' TRIP BRANCH FROM BUS 275168 TO BUS 270607 CKT 1 / COLLI;2M 345 COLLI; 765 TRIP BRANCH FROM BUS 275168 TO BUS 270697 CKT 1 / COLLI;2M 345 COLLI; R 345 TRIP BRANCH FROM BUS 275168 TO BUS 275268 CKT 1 / COLLI;2M 345 COLLI;2C 33 TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 / WILTO; 765 05DUMONT 765 END
COMED_P4_001-38-L0108__	CONTINGENCY 'COMED_P4_001-38-L0108__' TRIP BRANCH FROM BUS 271908 TO BUS 271986 CKT 1 / LASCO; B 138 MAZON; B 138 DISCONNECT BUS 271908 / LASCO; B 138 END
COMED_P4_167-45-BT2-5__	CONTINGENCY 'COMED_P4_167-45-BT2-5__' 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 TRIP BRANCH FROM BUS 270803 TO BUS 270847 CKT 1 / LASCO; R 345 PLANO; R 345 END

Contingency Name	Contingency Definition
COMED_P4_167-45-BT8-12_	CONTINGENCY 'COMED_P4_167-45-BT8-12_' 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 TRIP BRANCH FROM BUS 270846 TO BUS 270730 CKT 1 / PLANO ; B 345 ELEC JUNC; B 345 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 1 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 2 / 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_P7_138-L6101___-S+_138-L7713__R-S-A	CONTINGENCY 'COMED_P7_138-L6101___-S+_138-L7713__R-S-A' TRIP BRANCH FROM BUS 271655 TO BUS 271835 CKT 1 / HENNEEPIN; T 138 KEWANEE ;23 138 TRIP BRANCH FROM BUS 271655 TO BUS 348918 CKT 1 / HENNEEPIN; T 138 4HENNEPIN S 138 TRIP BRANCH FROM BUS 926820 TO BUS 271655 CKT 1 / AC1-168 TAP 138 HENNEEPIN; T 138 TRIP BRANCH FROM BUS 271187 TO BUS 271987 CKT 1 / CHANNAHON; R138 138 MAZON ; R138 END
COMED_P1-2_138-L0108__B-S	CONTINGENCY 'COMED_P1-2_138-L0108__B-S' TRIP BRANCH FROM BUS 271908 TO BUS 271986 CKT 1 / LASCO; B 138 MAZON; B 138 END
COMED_P2-1_061-L6101__B	CONTINGENCY 'COMED_P2-1_061-L6101__B' TRIP BRANCH FROM BUS 926820 TO BUS 271655 CKT 1 / AC1-168 TAP 138 HENNEEPIN; T 138 END
AEP_P4_#2978_05DUMONT_FSA	CONTINGENCY 'AEP_P4_#2978_05DUMONT_FSA' OPEN BRANCH FROM BUS 243206 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 X1-020 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END

Contingency Name	Contingency Definition
COMED_P4_001-45-BT1-9__	CONTINGENCY 'COMED_P4_001-45-BT1-9__' TRIP BRANCH FROM BUS 270802 TO BUS 270803 CKT 1 / LASCO STA; B 345 LASCO STA; R 345 TRIP BRANCH FROM BUS 270802 TO BUS 271908 CKT 1 / LASCO STA; B 345 LASCO STA; B 138 TRIP BRANCH FROM BUS 270802 TO BUS 270846 CKT 1 / LASCO STA; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 END
COMED_P4_001-45-BT1-2__	CONTINGENCY 'COMED_P4_001-45-BT1-2__' TRIP BRANCH FROM BUS 270803 TO BUS 270847 CKT 1 / LASCO; R 345 PLANO; R 345 TRIP BRANCH FROM BUS 270802 TO BUS 270803 CKT 1 / LASCO; B 345 LASCO; R 345 TRIP BRANCH FROM BUS 270802 TO BUS 271908 CKT 1 / LASCO STA; B 345 LASCO STA; B 138 END
Base Case	
AEP_P4_#2978_05DUMONT_NON_FSA	CONTINGENCY 'AEP_P4_#2978_05DUMONT_NON_FSA' OPEN BRANCH FROM BUS 243206 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 X1-020 OPEN BRANCH FROM BUS 243207 TO BUS 907040 CKT 1 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P7_138-L6101__ - S+_138-L7413__R-S-A	CONTINGENCY 'COMED_P7_138-L6101__ - S+_138-L7413__R-S-A' TRIP BRANCH FROM BUS 271655 TO BUS 271835 CKT 1 / HENNEEPIN; T 138 KEWANEE ;23 138 TRIP BRANCH FROM BUS 271655 TO BUS 348918 CKT 1 / HENNEEPIN; T 138 4HENNEPIN S 138 TRIP BRANCH FROM BUS 926820 TO BUS 271655 CKT 1 / AC1-168 TAP 138 HENNEEPIN; T 138 TRIP BRANCH FROM BUS 271836 TO BUS 271241 CKT 1 / KEWANEE ;11 138 CRESCENT ; R 138 END

Contingency Name	Contingency Definition
COMED_P7_138-L1205__B-S+_138-L7719__R-S	CONTINGENCY 'COMED_P7_138-L1205__B-S+_138-L7719__R-S' TRIP BRANCH FROM BUS 271336 TO BUS 272124 CKT 1 / DRESDEN ; B 138 ESS J339 ; B 138 TRIP BRANCH FROM BUS 271986 TO BUS 271908 CKT 1 / MAZON ; B 138 LASCO STA; B 138 TRIP BRANCH FROM BUS 272318 TO BUS 271986 CKT 1 / ESS J375 ; B 138 MAZON ; B 138 TRIP BRANCH FROM BUS 272318 TO BUS 272124 CKT 1 / ESS J375 ; B 138 ESS J339 ; B 138 MOVE 100 PERCENT LOAD FROM BUS 272124 TO BUS 272125 / ESS J339 ; B 138 ESS J339 ; R 138 CLOSE LINE FROM BUS 271986 TO BUS 271987 CKT 1 / MAZON ; B 138 MAZON ; R 138 DISCONNECT BUS 274837 / EQUISTAR ; B 13.8 TRIP BRANCH FROM BUS 271187 TO BUS 271987 CKT 1 / CHANNAHON; R138 138 MAZON ; R138 END
COMED_P1-2_138-L0112__B-S	CONTINGENCY 'COMED_P1-2_138-L0112__B-S' TRIP BRANCH FROM BUS 271844 TO BUS 271908 CKT 1 / KICKA; B 138 LASCO; B 138 END
COMED_P1-3_TR81_LASCO_B-S	CONTINGENCY 'COMED_P1-3_TR81_LASCO_B-S' TRIP BRANCH FROM BUS 270802 TO BUS 270803 CKT 1 / LASCO STA; B 345 LASCO STA; R 345 TRIP BRANCH FROM BUS 270802 TO BUS 271908 CKT 1 / LASCO STA; B 345 LASCO STA; B 138 END
COMED_P4_112-65-BT2-3__	CONTINGENCY 'COMED_P4_112-65-BT2-3__' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 / WILTO; 765 COLLI; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270644 CKT 1 / WILTO;3M 345 WILTO; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270926 CKT 1 / WILTO;3M 345 WILTO; B 345 TRIP BRANCH FROM BUS 275232 TO BUS 275332 CKT 1 / WILTO;3M 345 WILTO;3C 33 END
COMED_P4_112-65-BT4-5__	CONTINGENCY 'COMED_P4_112-65-BT4-5__' TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 / WILTO; 765 05DUMONT 765 TRIP BRANCH FROM BUS 275233 TO BUS 270644 CKT 1 / WILTO;4M 345 WILTO; 765 TRIP BRANCH FROM BUS 275233 TO BUS 270927 CKT 1 / WILTO;4M 345 WILTO; R 345 TRIP BRANCH FROM BUS 275233 TO BUS 275333 CKT 1 / WILTO;4M 345 WILTO;4C 33 END

Contingency Name	Contingency Definition
COMED_P1-2_345-L0102__R-S	CONTINGENCY 'COMED_P1-2_345-L0102__R-S' TRIP BRANCH FROM BUS 270803 TO BUS 270847 CKT 1 / LASCO; R 345 PLANO; R 345 END
COMED_P4_155-38-L15508__	CONTINGENCY 'COMED_P4_155-38-L15508__' TRIP BRANCH FROM BUS 271331 TO BUS 271333 CKT 1 / DIXON;8R 138 DIXON; R 138 TRIP BRANCH FROM BUS 272097 TO BUS 271331 CKT 1 / NELSO;RT 138 DIXON;8R 138 TRIP BRANCH FROM BUS 272097 TO BUS 272095 CKT 1 / NELSO;RT 138 NELSO; R 138 TRIP BRANCH FROM BUS 272097 TO BUS 272505 CKT 1 / NELSO;RT 138 SCHAUFF 138 MOVE 100 PERCENT LOAD FROM BUS 271331 TO BUS 271330 / DIXON;8R 138 DIXON;7B 138 DISCONNECT BUS 272095 / NELSO; R 138 END
COMED_P4_112-65-BT5-6__	CONTINGENCY 'COMED_P4_112-65-BT5-6__' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 / WILTO; 765 COLLI; 765 TRIP BRANCH FROM BUS 275233 TO BUS 270644 CKT 1 / WILTO;4M 345 WILTO; 765 TRIP BRANCH FROM BUS 275233 TO BUS 270927 CKT 1 / WILTO;4M 345 WILTO; R 345 TRIP BRANCH FROM BUS 275233 TO BUS 275333 CKT 1 / WILTO;4M 345 WILTO;4C 33 END
COMED_P7_138-L1205__B-S+_138-L1206__R-S	CONTINGENCY 'COMED_P7_138-L1205__B-S+_138-L1206__R-S' TRIP BRANCH FROM BUS 271336 TO BUS 272124 CKT 1 / DRESDEN ; B 138 ESS J339 ; B 138 TRIP BRANCH FROM BUS 271986 TO BUS 271908 CKT 1 / MAZON ; B 138 LASCO STA; B 138 TRIP BRANCH FROM BUS 272318 TO BUS 271986 CKT 1 / ESS J375 ; B 138 MAZON ; B 138 TRIP BRANCH FROM BUS 272318 TO BUS 272124 CKT 1 / ESS J375 ; B 138 ESS J339 ; B 138 MOVE 100 PERCENT LOAD FROM BUS 272124 TO BUS 272125 / ESS J339 ; B 138 ESS J339 ; R 138 CLOSE LINE FROM BUS 271986 TO BUS 271987 CKT 1 / MAZON ; B 138 MAZON ; R 138 DISCONNECT BUS 274837 / EQUISTAR ; B 13.8 TRIP BRANCH FROM BUS 271337 TO BUS 272125 CKT 1 / DRESDEN ; R 138 ESS J339 ; R 138 TRIP BRANCH FROM BUS 272319 TO BUS 271187 CKT 1 / ESS J375 ; R 138 CHANNAHON; R 138 TRIP BRANCH FROM BUS 272319 TO BUS 272125 CKT 1 / ESS J375 ; R 138 ESS J339 ; R 138 MOVE 100 PERCENT LOAD FROM BUS 272125 TO BUS 272124 / ESS J339 ; R 138 ESS J339 ; B 138 DISCONNECT BUS 274836 / EQUISTAR ; R 13.8 END

14 Affected Systems

14.1 MISO

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