



**Generation Interconnection
Feasibility Study Report
for
Queue Project AE1-113
MOLE CREEK 345 KV
85 MW Capacity / 300 MW Energy**

June, 2019

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.

PJM utilizes manufacturer models to ensure the performance of turbines is properly captured during the simulations performed for stability verification and, where applicable, for compliance with low voltage ride through requirements. Turbine manufacturers provide such models to their customers. The list of manufacturer models PJM has already validated is contained in Attachment B of Manual 14G. Manufacturer models may be updated from time to time, for various reasons such as to reflect changes to the control systems or to more accurately represent the capabilities turbines and controls which are currently available in the field. Additionally, as new turbine models are developed, turbine manufacturers provide such new models which must be used in the conduct of these studies. PJM needs adequate time to evaluate the new models in order to reduce delays to the System Impact Study process timeline for the Interconnection Customer as well as other Interconnection Customers in the study group. Therefore, PJM will require that any Interconnection Customer with a new manufacturer model must supply that model to PJM, along with a \$10,000 fully refundable deposit, no later than three (3) months prior to the starting date of the System Impact Study (See Section 4.3 for starting dates) for the Interconnection Request which shall specify the use of the new model.

The Interconnection Customer will be required to submit a completed dynamic model study request form (Attachment B-1 of Manual 14G) in order to document the request for the study.

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 well as Affected Systems 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 System Impact Study.

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 300 MW with 85 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is 12/31/2021. This study does not imply a TO commitment to this in-service date.

Queue Number	AE1-113
Project Name	MOLE CREEK 345 KV
State	None
County	Woodford
Transmission Owner	ComEd
MFO	300
MWE	300
MWC	85
Fuel	Wind
Basecase Study Year	2022

Primary Point of Interconnection

AE1-113 will interconnect with the ComEd transmission system at the MoleCreek; B 345 kV substation.

Cost Summary

The AE1-113 project will be responsible for the following costs:

Description	Total Cost
Attachment Facilities	\$1,000,000
Direct Connection Network Upgrade	\$0
Non Direct Connection Network Upgrades	\$4,000,000
Total Costs	\$5,000,000

In addition, the AE1-113 project may be responsible for a contribution to the following costs (see later sections of this report.

Description	Total Cost
System Upgrades	\$179,218,920

Cost allocations for these upgrades will be provided in the System Impact Study Report.

Interconnected Transmission Owner Scope of Work

Attachment Facilities

The total preliminary cost estimate for the Attachment work is given in the table below. These costs do not include CIAC Tax Gross-up.

Description	Total Cost
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 Attachment Facility Costs	\$1,000,000

Direct Connection Cost Estimate

The total preliminary cost estimate for the Direct Connection work is given in the table below. These costs do not include CIAC Tax Gross-up.

Description	Total Cost
Not Applicable	\$0
Total Direct Connection Facility Costs	\$0

Non-Direct Connection Cost Estimate

The total preliminary cost estimate for the Non-Direct Connection work is given in the table below. These costs do not include CIAC Tax Gross-up.

In order to accommodate interconnection of AE1-113, Mole Creek TSS 908 would need to be expanded to create a bus position.

The scope of work includes installation of one 345kV circuit breaker and relocating termination of 345kV line 1202 at TSS 908 Mole Creek, as shown in the one-line diagram below.

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

ComEd would design, engineer and construct expansion of Mole Creek TSS 908.

Description	Total Cost
Installation of one 345kV circuit breakers and relocating termination of 345kV line 1202 at TSS 908 Mole Creek	\$4,000,000
Total Non-Direct Connection Facility Costs	\$4,000,000

Schedule

Normally it takes about 24-months to engineer, design, procure material and construct 345kV facilities after ISA/ICSA are signed.

Transmission Owner Analysis

Notes on Cost Estimate:

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

Interconnection Customer Requirements

Exelon Utilities Transmission Bus Configuration Design Philosophy, ComEd Interconnection Guidelines, and Exelon Utilities Transmission Facility Interconnection Requirements shall apply. They are available on the PJM website. To the extent that these Applicable Technical Requirements and Standards conflict with the terms and conditions of the Tariff, the Tariff shall control.

Revenue Metering and SCADA 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.

Primary Point of Interconnection Network Impacts

The Queue Project AE1-113 was evaluated as a 300 MW (Capacity 85 MW) injection at the MoleCreek; B 345 kV substation in the ComEd area. Project AE1-113 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AE1-113 was studied with a commercial probability of 53%. Potential network impacts were as follows:

Summer Peak Load Flow

Generation Deliverability

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

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
55940	270716	DRESDEN ; B	CE	275179	DRESDEN ;1M	CE	1	COMED_P1-2_345-L1220__B-S	single	442.0	81.84	83.04	DC	5.29
56049	270716	DRESDEN ; B	CE	274702	KENDALL ;BU	CE	1	COMED_P1-2_345-L1221__B-S	single	1195.0	86.54	87.62	DC	12.83
56050	270716	DRESDEN ; B	CE	274702	KENDALL ;BU	CE	1	COMED_P1-2_345-L14321TB-N	single	1195.0	86.23	87.31	DC	12.83
55733	270855	POWERTON ; R	CE	349662	7TAZEWELL	AMIL	1	COMED_P1-2_345-L1202__B-S-A	single	1479.0	75.38	78.41	DC	45.0
55950	275179	DRESDEN ;1M	CE	271337	DRESDEN ; R	CE	1	COMED_P1-2_345-L1220__B-S	single	442.0	81.82	83.02	DC	5.29
55621	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P1-2_345-L1202__B-S-B	single	1195.0	92.83	93.95	DC	13.47
55703	930750	AB1-122 TAP	CE	270716	DRESDEN ; B	CE	1	Base Case	single	1201.0	86.94	89.96	DC	36.27
55704	930750	AB1-122 TAP	CE	270716	DRESDEN ; B	CE	1	COMED_P1-2_345-L19601__B-S	single	1479.0	79.44	82.0	DC	37.8

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	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
55344	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	AEP_P4_#8805_05OLIVE345_D	breaker	4105.0	95.22	95.84	DC	84.77
653178	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	AEP_P4_#8805_05OLIVE345_D	breaker	4105.0	95.22	95.84	DC	84.77
54708	270716	DRESDEN ;B	CE	274702	KENDALL ;BU	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1195.0	85.4	89.76	DC	52.74
55212	270716	DRESDEN ;B	CE	270928	WOLFS ;B	CE	1	COMED_P4_012-45-BT5-6	breaker	1479.0	89.77	96.03	DC	92.41
55327	270716	DRESDEN ;B	CE	274702	KENDALL ;BU	CE	1	COMED_P4_111-45-L16704T	breaker	1195.0	85.78	90.15	DC	52.7
55328	270716	DRESDEN ;B	CE	274702	KENDALL ;BU	CE	1	COMED_P4_111-45-L11126	breaker	1195.0	85.44	89.81	DC	52.73
56317	270716	DRESDEN ;B	CE	274702	KENDALL ;BU	CE	1	COMED_P7_345-L1221__B-S_+_345-L1223_TR-S	tower	1195.0	90.8	95.26	DC	53.91
56499	270716	DRESDEN ;B	CE	275179	DRESDEN ;1M	CE	1	COMED_P7_345-L1223_TR-S_+_345-L14321TB-N	tower	530.0	88.59	90.11	DC	17.88
56500	270716	DRESDEN ;B	CE	275179	DRESDEN ;1M	CE	1	COMED_P7_345-L1221__B-S_+_345-L1223_TR-S	tower	530.0	88.01	89.53	DC	17.88
55260	270717	DRESDEN ;R	CE	270697	COLLINS ;R	CE	1	COMED_P4_111-45-L1223T_	breaker	1528.0	98.81	99.43	DC	20.81
56380	274702	KENDALL ;BU	CE	270810	LOCKPORT ;B	CE	1	COMED_P7_345-L1221__B-S_+_345-L1223_TR-S	tower	1768.0	91.62	94.59	DC	52.94
56502	275179	DRESDEN ;1M	CE	271337	DRESDEN ;R	CE	1	COMED_P7_345-L1223_TR-S_+_345-L14321TB-N	tower	530.0	88.57	90.09	DC	17.88
56503	275179	DRESDEN ;1M	CE	271337	DRESDEN ;R	CE	1	COMED_P7_345-L1221__B-S_+_345-L1223_TR-S	tower	530.0	87.99	89.51	DC	17.88
56423	918050	AA1-018 TAP	CE	270769	GOODINGS ;2R	CE	1	COMED_P7_345-L1202__B-S_+_345-L1227_R-S-A	tower	1494.0	79.54	83.77	DC	63.15
56287	930750	AB1-122 TAP	CE	270716	DRESDEN ;B	CE	1	COMED_P7_345-L19601__B-S_+_345-L9801__R-S_FSA	tower	1768.0	88.73	98.06	DC	164.98
56288	930750	AB1-122 TAP	CE	270716	DRESDEN ;B	CE	1	COMED_P7_345-L0301__B-S_+_345-L9801__R-S_FSA	tower	1768.0	84.26	93.59	DC	165.01
56479	936290	AD2-038 TAP	CE	918050	AA1-018 TAP	CE	1	COMED_P7_345-L1202__B-S_+_345-L1227__R-S-A	tower	1494.0	73.18	77.42	DC	63.18

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	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
652875	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	AEP_P4_#2978_05DUMONT765_B	breaker	1409.0	115.21	115.89	DC	21.48
652876	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	COMED_P4_112-65-BT4-5	breaker	1409.0	106.69	107.24	DC	23.14
652877	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	COMED_P4_112-65-BT3-4	breaker	1409.0	106.69	107.24	DC	23.14

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
652878	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	COMED_P4_023-65-BT2-3__	breaker	1409.0	106.69	107.24	DC	23.15
55233	255104	17GREEN_ACR E	NIPS	270771	GREENACRE; T	CE	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1091.0	101.09	101.76	DC	24.35
55062	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1091.0	106.02	106.95	DC	27.28
55063	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_023-65-BT2-3__	breaker	1091.0	108.54	109.41	DC	27.47
55064	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_112-65-BT4-5__	breaker	1091.0	106.27	107.19	DC	27.47
55065	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_112-65-BT3-4__	breaker	1091.0	106.27	107.19	DC	27.47
652550	255113	17STILLWELL	NIPS	243219	05DUMONT	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1409.0	171.32	172.07	DC	41.84
56429	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L94507_B-S_+ 345-L97008_R-S	tower	4105.0	102.11	102.64	DC	92.33
56430	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L6607_B-S_+ 345-L97008_R-S	tower	4105.0	101.16	101.74	DC	92.46
654403	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L94507_B-S_+ 345-L97008_R-S	tower	4105.0	102.11	102.64	DC	92.33
654404	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L6607_B-S_+ 345-L97008_R-S	tower	4105.0	101.16	101.74	DC	92.46
55238	270677	BURNHAM ;OR	CE	255109	17MUNSTER	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1441.0	110.86	111.52	DC	34.81
54965	270716	DRESDEN ;B	CE	275179	DRESDEN ;1M	CE	1	COMED_P4_012-45-BT5-6__	breaker	442.0	120.49	128.77	DC	36.61
56316	270716	DRESDEN ;B	CE	274702	KENDALL ;BU	CE	1	COMED_P7_345-L11620_B-S_+ 345-L11622_R-S	tower	1195.0	111.87	113.76	DC	50.07
55221	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1399.0	107.86	108.89	DC	38.99
55222	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	COMED_P4_023-65-BT2-3__	breaker	1399.0	107.56	108.58	DC	39.18
55223	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	COMED_P4_112-65-BT4-5__	breaker	1399.0	107.49	108.51	DC	39.17
55224	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	COMED_P4_112-65-BT3-4__	breaker	1399.0	107.48	108.5	DC	39.17
54624	270736	ELWOOD ;B	CE	270770	GOODINGS ;4B	CE	1	COMED_P2-2_116_GG-345R_2_NO_FSA	bus	1479.0	116.33	117.16	DC	26.99
54625	270736	ELWOOD ;B	CE	270770	GOODINGS ;4B	CE	1	COMED_P2-2_116_GG-345R_2_FSA	bus	1479.0	116.29	117.12	DC	26.99
55183	270736	ELWOOD ;B	CE	270770	GOODINGS ;4B	CE	1	COMED_P4_116-45-L11614__	breaker	1479.0	117.18	118.01	DC	26.97
55184	270736	ELWOOD ;B	CE	270770	GOODINGS ;4B	CE	1	COMED_P4_116-45-L9801_FSA	breaker	1479.0	116.33	117.16	DC	26.99
55185	270736	ELWOOD ;B	CE	270770	GOODINGS ;4B	CE	1	COMED_P4_116-45-TR82__	breaker	1479.0	116.32	117.15	DC	26.99
54598	270737	ELWOOD ;R	CE	270769	GOODINGS ;2R	CE	1	COMED_P2-2_116_GG-345B_4	bus	1479.0	118.97	119.94	DC	31.53
55143	270737	ELWOOD ;R	CE	270769	GOODINGS ;2R	CE	1	COMED_P4_116-45-L11613__	breaker	1479.0	119.79	120.76	DC	31.5
55144	270737	ELWOOD ;R	CE	270769	GOODINGS ;2R	CE	1	COMED_P4_116-45-TR84__	breaker	1479.0	118.97	119.94	DC	31.53
55145	270737	ELWOOD ;R	CE	270769	GOODINGS ;2R	CE	1	COMED_P4_116-45-L11617__	breaker	1479.0	118.97	119.94	DC	31.53
54620	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P2-2_116_GG-345R_2_NO_FSA	bus	1802.0	114.21	115.42	DC	48.22
54621	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P2-2_116_GG-345R_2_FSA	bus	1802.0	112.99	114.21	DC	48.23
55133	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-L11614__	breaker	1802.0	117.95	119.16	DC	48.1
55134	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-L9801_FSA	breaker	1802.0	114.21	115.42	DC	48.22

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
55135	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-TR82	breaker	1802.0	114.17	115.39	DC	48.22
55136	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_112-45-BT4-5	breaker	1802.0	106.16	107.45	DC	50.87
55104	270771	GREENACRE; T	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	113.56	114.32	DC	24.35
652814	270771	GREENACRE; T	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	113.56	114.32	DC	24.35
55067	270886	ST JOHN ; T	CE	255104	17GREEN_ACR E	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1091.0	106.02	106.95	DC	27.28
55068	270886	ST JOHN ; T	CE	255104	17GREEN_ACR E	NIPS	1	COMED_P4_023-65-BT2-3	breaker	1091.0	108.54	109.41	DC	27.47
55069	270886	ST JOHN ; T	CE	255104	17GREEN_ACR E	NIPS	1	COMED_P4_112-65-BT4-5	breaker	1091.0	106.27	107.19	DC	27.47
55070	270886	ST JOHN ; T	CE	255104	17GREEN_ACR E	NIPS	1	COMED_P4_112-65-BT3-4	breaker	1091.0	106.27	107.19	DC	27.47
54928	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6	breaker	1379.0	164.37	164.9	DC	44.53
54930	270927	WILTON ; R	CE	275233	WILTON ;4M	CE	1	COMED_P4_112-65-BT2-3	breaker	1379.0	161.42	162.2	DC	45.48
54634	274702	KENDALL ;BU	CE	270810	LOCKPORT ; B	CE	1	COMED_P2-2_111_EJ-345B_2	bus	1479.0	104.61	108.11	DC	51.76
55202	274702	KENDALL ;BU	CE	270810	LOCKPORT ; B	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	104.91	108.41	DC	51.72
55203	274702	KENDALL ;BU	CE	270810	LOCKPORT ; B	CE	1	COMED_P4_111-45-L11126	breaker	1479.0	104.65	108.15	DC	51.76
56379	274702	KENDALL ;BU	CE	270810	LOCKPORT ; B	CE	1	COMED_P7_345-L11620_B-S_+_345-L11622_R-S	tower	1768.0	104.49	105.72	DC	49.1
54960	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1399.0	120.88	122.0	DC	38.51
54961	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_023-65-BT2-3	breaker	1399.0	120.28	121.4	DC	38.7
54962	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_112-65-BT4-5	breaker	1399.0	120.22	121.34	DC	38.69
54963	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_112-65-BT3-4	breaker	1399.0	120.21	121.34	DC	38.69
55017	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	131.68	132.68	DC	29.29
55018	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_023-65-BT2-3	breaker	971.0	129.33	130.43	DC	29.51
55019	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT4-5	breaker	971.0	130.42	131.43	DC	29.51
55020	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT3-4	breaker	971.0	130.42	131.43	DC	29.51
55021	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_023-65-BT4-5	breaker	971.0	130.41	131.42	DC	29.5
652683	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	131.68	132.68	DC	29.29
652684	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_023-65-BT2-3	breaker	971.0	129.33	130.43	DC	29.51
652685	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT4-5	breaker	971.0	130.42	131.43	DC	29.51
652686	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT3-4	breaker	971.0	130.42	131.43	DC	29.51
652687	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_023-65-BT4-5	breaker	971.0	130.41	131.42	DC	29.5
54970	275179	DRESDEN ;1M	CE	271337	DRESDEN ; R	CE	1	COMED_P4_012-45-BT5-6	breaker	442.0	120.46	128.75	DC	36.61
54927	275232	WILTON ;3M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT5-6	breaker	1379.0	164.37	164.9	DC	44.53
54932	275233	WILTON ;4M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT2-3	breaker	1379.0	161.42	162.2	DC	45.48
652650	346809	7CASEY	AMIL	247712	05SULLIVAN	AEP	1	AEP_P4_#3128_05EUGEN E 345_A2	breaker	1466.0	141.83	142.47	DC	20.21
55615	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P1-2_345-L1202_B-S-A	single	1195.0	102.65	103.77	DC	13.47

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
56139	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P7_345-L19601_B-S_+345-L9801_R-S_FSA	tower	1195.0	122.56	125.61	DC	36.44
56140	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P7_345-L0301_B-S_+345-L9801_R-S_FSA	tower	1195.0	117.9	120.95	DC	36.46
653123	932800	AC2-104 TAP	AEP	242928	05MARYSV	AEP	1	AEP_P4_#7334_05JEFRSO765_A2	breaker	4571.0	103.14	103.17	DC	74.67
652800	938670	AE1-089 TAP	AEP	243219	05DUMONT	AEP	1	AEP_P4_#2978_05DUMONT765_B	breaker	1409.0	123.89	124.58	DC	21.48

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	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
653839	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	AEP_P1-2_#695A	operation	1409.0	106.69	107.24	DC	23.14
55964	255104	17GREEN_ACRE	NIPS	270771	GREENACRE; T	CE	1	AEP_P1-2_#695A	operation	1091.0	99.78	100.46	DC	24.6
55770	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	AEP_P1-2_#695A	operation	1091.0	106.26	107.18	DC	27.46
653374	255113	17STILLWELL	NIPS	243219	05DUMONT	AEP	1	AEP_P1-2_#695A	operation	1409.0	167.72	168.5	DC	42.87
653380	255113	17STILLWELL	NIPS	243219	05DUMONT	AEP	1	Base Case	operation	1409.0	109.7	110.16	DC	24.6
56020	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	Base Case	operation	3555.0	104.26	104.75	DC	78.26
56021	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	AEP_P1-2_#697A	operation	4105.0	95.19	95.8	DC	84.81
653903	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	Base Case	operation	3555.0	104.26	104.75	DC	78.26
653904	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	AEP_P1-2_#697A	operation	4105.0	95.19	95.8	DC	84.81
55963	270677	BURNHAM ;OR	CE	255109	17MUNSTER	NIPS	1	AEP_P1-2_#695A	operation	1441.0	110.01	110.68	DC	35.03
55932	270716	DRESDEN ; B	CE	275179	DRESDEN ;1M	CE	1	COMED_P1-2_345-L10805_B-S	operation	442.0	100.91	102.74	DC	17.98
56047	270716	DRESDEN ; B	CE	274702	KENDALL ;BU	CE	1	COMED_P1-2_345-L1221_B-S	operation	1195.0	84.56	88.97	DC	53.15
55973	270717	DRESDEN ; R	CE	270697	COLLINS ; R	CE	1	COMED_P1-2_345-L1223_TR-S	operation	1528.0	98.67	99.29	DC	20.72
55931	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	AEP_P1-2_#695A	operation	1399.0	107.44	108.46	DC	39.15

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
55793	270736	ELWOOD ;B	CE	270770	GOODINGS ;4B	CE	1	COMED_P1-2_345-L11622_R-S	operation	1479.0	112.08	112.85	DC	25.02
55797	270736	ELWOOD ;B	CE	270770	GOODINGS ;4B	CE	1	Base Case	operation	1201.0	100.08	100.75	DC	17.76
55782	270737	ELWOOD ;R	CE	270769	GOODINGS ;2R	CE	1	COMED_P1-2_345-L11620_B-S	operation	1479.0	113.42	114.24	DC	26.69
55786	270737	ELWOOD ;R	CE	270769	GOODINGS ;2R	CE	1	Base Case	operation	1201.0	103.4	104.17	DC	20.42
56010	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P1-2_345-L11622_R-S	operation	1802.0	101.52	102.63	DC	43.76
56015	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	Base Case	operation	1560.0	94.36	95.48	DC	38.35
55819	270771	GREENACRE ;T	CE	243229	05OLIVE	AEP	1	AEP_P1-2_#695A	operation	971.0	112.09	112.86	DC	24.6
653619	270771	GREENACRE ;T	CE	243229	05OLIVE	AEP	1	AEP_P1-2_#695A	operation	971.0	112.09	112.86	DC	24.6
55930	270822	MOLECREEK ;B	CE	270854	POWERTON ;B	CE	1	COMED_P1-2_345-L1202_B-S-A	operation	1479.0	56.04	76.32	DC	299.94
55732	270855	POWERTON ;R	CE	349662	7TAZEWELL	AMIL	1	COMED_P1-2_345-L1202_B-S-A	operation	1479.0	93.76	106.34	DC	186.45
55766	270886	ST JOHN ;T	CE	255104	17GREEN_ACRE	NIPS	1	AEP_P1-2_#695A	operation	1091.0	106.26	107.18	DC	27.46
56045	270926	WILTON ;B	CE	275232	WILTON ;3M	CE	1	COMED_P1-2_765-L11216_S	operation	1379.0	103.19	103.52	DC	27.93
56019	270927	WILTON ;R	CE	275233	WILTON ;4M	CE	1	COMED_P1-2_765-L11216_S	operation	1379.0	104.1	104.61	DC	29.34
55911	274702	KENDALL ;BU	CE	270810	LOCKPORT ;B	CE	1	COMED_P1-2_345-L1221_B-S	operation	1479.0	103.82	107.35	DC	52.18
55913	274702	KENDALL ;BU	CE	270810	LOCKPORT ;B	CE	1	Base Case	operation	1201.0	104.38	107.71	DC	40.01
55688	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	AEP_P1-2_#695A	operation	1399.0	120.18	121.3	DC	38.67
55689	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	Base Case	operation	1091.0	77.84	78.9	DC	25.71
55752	274804	UNIV PK N ;RP	CE	243229	05OLIVE	AEP	1	AEP_P1-2_#695A	operation	971.0	130.4	131.41	DC	29.5
653544	274804	UNIV PK N ;RP	CE	243229	05OLIVE	AEP	1	AEP_P1-2_#695A	operation	971.0	130.4	131.41	DC	29.5
55942	275179	DRESDEN ;1M	CE	271337	DRESDEN ;R	CE	1	COMED_P1-2_345-L10805_B-S	operation	442.0	100.89	102.72	DC	17.98
653538	346809	7CASEY	AMIL	247712	05SULLIVAN	AEP	1	AEP_P1-2_#286	operation	1466.0	136.13	136.77	DC	20.73
653539	346809	7CASEY	AMIL	247712	05SULLIVAN	AEP	1	Base Case	operation	1334.0	120.5	121.08	DC	16.91
654013	348885	7BUNSONVILLE	AMIL	243221	05EUGENE	AEP	1	AEP_P1-2_#8907	operation	1793.0	100.09	100.45	DC	18.96
55614	930740	AB1-122 TAP	CE	270717	DRESDEN ;R	CE	1	COMED_P1-2_345-L1202_B-S-A	operation	1195.0	107.32	111.99	DC	55.81
55624	930740	AB1-122 TAP	CE	270717	DRESDEN ;R	CE	1	Base Case	operation	1195.0	85.38	86.29	DC	23.96
55698	930750	AB1-122 TAP	CE	270716	DRESDEN ;B	CE	1	Base Case	operation	1201.0	94.81	107.32	DC	150.3
55699	930750	AB1-122 TAP	CE	270716	DRESDEN ;B	CE	1	COMED_P1-2_345-L19601_B-S	operation	1479.0	90.43	101.02	DC	156.62
653702	938670	AE1-089 TAP	AEP	243219	05DUMONT	AEP	1	AEP_P1-2_#695A	operation	1409.0	114.22	114.96	DC	23.14

System Reinforcements

ID	Index	Facility	Upgrade Description	Cost
54624,54625,55184, 55185,55183	19	ELWOOD ; B 345.0 kV - GOODINGS ;4B 345.0 kV Ckt 1	<u>CE</u> Description : Line conductor upgrades along with station conductor upgrades. Note that there may be additional 345kV line tower costs as a result of this upgrade. This estimate does not include potential tower work. The tower costs will be determined during the Facility Study. Time Estimate : 30.0 Months Cost : \$22,100,000	\$22,100,000
55733	3	POWERTON ; R 345.0 kV - 7TAZEWELL 345.0 kV Ckt 1	<u>CE</u> Description : No Violation. Facility loading does not exceed 100%. <u>AMIL</u> Description : The external (i.e. Non-PJM) Transmission Owner, AMIL, will not evaluate this violation until the impact study phase.	\$0
54932	29	WILTON ;4M 345.0 kV - WILTON ; 765.0 kV Ckt 1	<u>CE</u> Description : 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 CB's (6-8 & 8-2). The baseline project has an projected in-service date of 06/30/2019. Time Estimate : 36.0 Months Cost : \$ 11,000,000	\$11,000,000
54927	28	WILTON ;3M 345.0 kV - WILTON ; 765.0 kV Ckt 1		
54930	25	WILTON ; R 345.0 kV - WILTON ;4M 345.0 kV Ckt 1		
54928	24	WILTON ; B 345.0 kV - WILTON ;3M 345.0 kV Ckt 1		
55238	17	BURNHAM ;OR 345.0 kV - 17MUNSTER 345.0 kV Ckt 1	<u>CE</u> Description : Line conductor & station conductor upgrades. (Note that there may be additional 345kV line tower costs as a result of this upgrade. This estimate does not include potential tower work. The tower costs will be determined during the Facility Study). Time Estimate : 36.0 Months Cost : \$9,200,000 <u>NIPS</u> Description : The external (i.e. Non-PJM) Transmission Owner, NIPS, will not evaluate this violation until the impact study phase.	\$9,200,000

ID	Index	Facility	Upgrade Description	Cost
55067,55068,55069, 55070	23	ST JOHN ; T 345.0 kV - 17GREEN_ACRE 345.0 kV Ckt 1	<u>CE</u> Description : The upgrade will be to mitigate the sag on the line. Note, the estimate provided does not include potential transmission tower pole upgrades. This cost will be determined during the Facilities Studies. Time Estimate : 24-30 Months Cost : \$2,600,000	\$2,600,000
55064,55065,55062, 55063	15	17STJOHN 345.0 kV - ST JOHN ; T 345.0 kV Ckt 1	<u>NIPS</u> Description : The external (i.e. Non-PJM) Transmission Owner, NIPS, will not evaluate this violation until the impact study phase.	
55704,56288,56287, 55703	6	AB1-122 TAP 345.0 kV - DRESDEN ; B 345.0 kV Ckt 1	<u>CE</u> Description : No Violation. The ALDR rating is 2033 MVA. Time Estimate : Months Cost : \$0	\$0
55224,55221,55222, 55223	18	E FRANKFO; B 345.0 kV - CRETE EC ;BP 345.0 kV Ckt 1	<u>CE</u> Description : Line conductor upgrade. Note that there may be additional 345kV line tower costs as a result of this upgrade. This estimate does not include potential tower work. The tower costs will be determined during the Facility Study. Time Estimate : 30.0 Months Cost : \$14,400,000	\$14,400,000
654403,654404,5642 9,56430,55344,6531 78	7	WILTON ; 765.0 kV - 05DUMONT 765.0 kV Ckt 1	<u>CE</u> Description : No Violation. The SLD rating is 4802 MVA. <u>AEP</u> Description : 1) Replace Dumont Circuit Breaker [Breaker (3000A) Non oil - Dumont] Time Estimate : 24-36 Months Cost : \$3,000,000	\$3,000,000
55212	8	DRESDEN ; B 345.0 kV - WOLFS ; B 345.0 kV Ckt 1	<u>CE</u> Description : No Violation. Facility loading does not exceed 100%.	\$0
56379,54634,55203, 56380,55202	10	KENDALL ;BU 345.0 kV - LOCKPORT ; B 345.0 kV Ckt 1	<u>CE</u> Description : Line conductor upgrade & station conductor upgrade. Note that there may be additional 345kV line tower costs as a result of this upgrade. This estimate does not include potential tower work. The tower costs will be determined during the Facility Study. Time Estimate : 30.0 Months Cost : \$18,600,000	\$18,600,000

ID	Index	Facility	Upgrade Description	Cost
652683,55017,55018,55019,55020,55021,652686,652685,652684,652687	27	UNIV PK N;RP 345.0 kV - 05OLIVE 345.0 kV Ckt 1	<p>CE Description : Line sag mitigation. Note that there may be additional 345kV line tower costs as a result of this upgrade. This estimate does not include potential tower work. The tower costs will be determined during the Facility Study Time Estimate : 24-30 Months Cost : \$13,800,000</p> <p>AEP Description : 1) 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. Time Estimate : 6-12 Months Cost : \$162,560</p>	\$ 13,962,560
55233	14	17GREEN_ACRE 345.0 kV - GREENACRE; T 345.0 kV Ckt 1	<p>CE Description : No Violation. The SSTE rating is 1134 MVA.</p> <p>NIPS Description : The external (i.e. Non-PJM) Transmission Owner, NIPS, will not evaluate this violation until the impact study phase.</p>	\$0
54960,54961,54962,54963	26	CRETE EC ;BP 345.0 kV - 17STJOHN 345.0 kV Ckt 1	<p>CE Description : The upgrade will be to re-conductor the line and upgrade station conductor. Time Estimate : 24-30 Months Cost : \$5,500,000</p> <p>NIPS Description : The external (i.e. Non-PJM) Transmission Owner, NIPS, will not evaluate this violation until the impact study phase.</p>	\$5,500,000
652650	30	7CASEY 345.0 kV - 05SULLIVAN 345.0 kV Ckt 1	<p>AEP Description : 1) Rebuild / reconductor 0.6 miles of conductor (ACAR ~ 1024.5 ~ 30/7 ~ RAIL1 - Condcutor section 5), estimated cost : \$1.2 million 2) Rebuild / reconductor 1.44 miles of conductor (ACSR/PE ~ 1414 ~ 62/19 ~ - Conductor section 2), estimated cost : \$2.88 million. 3) Replace two Sullivan 3000A Wavetraps , Estimated cost : \$225, 000. Time Estimate : 24-36 Months Cost : \$4,305,000</p> <p>AMIL Description : The external (i.e. Non-PJM) Transmission Owner, AMIL, will not evaluate this violation until the impact study phase.</p>	\$4,305,000

ID	Index	Facility	Upgrade Description	Cost
652800	32	AE1-089 TAP 345.0 kV - 05DUMONT 345.0 kV Ckt 1	<u>AEP</u> Description : 1) A Sag Study will be required on the 7.2 miles of ACSR ~ 954 ~ 45/7 ~ RAIL - Conductor section 1 conductor to mitigate the overload. The new ratings after sag study will be: S/N: 1409 MVA, S/E: 1888 MVA, Depending on the sag study results, the cost for this upgrade is expected to be between \$28,800 (no remediation required, just sag study) and \$14.4million (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. Time Estimate : 6-12 Months Cost : \$28,800	\$28,800
652875,652876,652877,652878	13	05ELDERBRYSS 345.0 kV - AE1-089 TAP 345.0 kV Ckt 1	<u>AEP</u> Description : 1) A Sag Study will be required on the 7.2 miles of ACSR ~ 954 ~ 45/7 ~ RAIL - Conductor section 1 conductor to mitigate the overload. The new ratings after sag study will be: S/N: 1409 MVA, S/E: 1888 MVA, Depending on the sag study results, the cost for this upgrade is expected to be between \$28,800 (no remediation required, just sag study) and \$14.4million (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. Time Estimate : 6-12 Months Cost : \$28,800	\$28,800
55136,55133,54620,54621,55134,55135	21	GOODINGS ;4B 345.0 kV - GOODINGS ;3B 345.0 kV Ckt 1	<u>CE</u> Description : Upgrade 1-345kV circuit breaker & associated equipment, station conductor upgrade required. Time Estimate : 24-30 Months Cost : \$3,600,000	\$3,600,000
56139,56140,55621,55615	5	AB1-122 TAP 345.0 kV - DRESDEN ; R 345.0 kV Ckt 1	<u>CE</u> Description : Line sag mitigation Time Estimate : 36.0 Months Cost : \$31,500,000	\$31,500,000
55260	9	DRESDEN ; R 345.0 kV - COLLINS ; R 345.0 kV Ckt 1	<u>CE</u> Description : No Violation. The SSTE rating is 1837 MVA.	\$0
55104,652814	22	GREENACRE; T 345.0 kV - 05OLIVE 345.0 kV Ckt 1	<u>CE</u> Description : No Violation. ComEd 345kV L6615 SSTE rating is 1134 MVA. <u>AEP</u> Description : Replace ACSR/PE 1414 62/19 - Conductor Section 1. A Sag Study will be required on the 40.64 miles of 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. Time Estimate : 6-12 Months Cost : \$162,560	\$162,560
56423	11	AA1-018 TAP 345.0 kV - GOODINGS ;2R 345.0 kV Ckt 1	<u>CE</u> Description : No Violation. The ALDR rating is 1718 MVA.	\$0

ID	Index	Facility	Upgrade Description	Cost
653123	31	AC2-104 TAP 765.0 kV - 05MARYSV 765.0 kV Ckt 1	<u>AEP</u> Description : Replace three 3000A wavetraps at Marysville. Estimated cost: \$675,000 Time Estimate : 24-36 Months Cost : \$675,000	\$675,000
55328,56049,56050, 54708,56316,56317, 55327	2	DRESDEN ; B 345.0 kV - KENDALL ;BU 345.0 kV Ckt 1	<u>CE</u> Description : No Violation. The ALDR rating is 1572 MVA.	\$0
54970,56502,55950, 56503	4	DRESDEN ;1M 138.0 kV - DRESDEN ; R 138.0 kV Ckt 1	<u>CE</u> Description : No Violation. Current ALDR rating is 598 MVA.	\$0
55144,55145,54598, 55143	20	ELWOOD ; R 345.0 kV - GOODINGS ;2R 345.0 kV Ckt 1	<u>CE</u> Description : Line conductor upgrades along with station conductor upgrades. Note that there may be additional 345kV line tower costs as a result of this upgrade. This estimate does not include potential tower work. The tower costs will be determined during the Facility Study. Time Estimate : 24-30 Months Cost : \$16,600,000	\$16,600,000
56479	12	AD2-038 TAP 345.0 kV - AA1-018 TAP 345.0 kV Ckt 1	<u>CE</u> Description : No Violation. No Violation. Facility loading does not exceed 100%.	\$0
652550	16	17STILLWELL 345.0 kV - 05DUMONT 345.0 kV Ckt 1	<u>AEP</u> Description : 1) Rebuild / reconductor 8.58 miles of conductor (ACSR ~ 954 ~ 45/7 ~ RAIL - Conductor section 1), Estimated Cost : \$17.16 million . 2) Replace Dumont Wavetrap , Estimated Cost : \$200k. 3) An Engineering study will need to be conducted to determine if the CT Thermal Limits can be adjusted to mitigate the overload. Estimated Cost: \$25,000. 4) Replace two Dumont Breakers , Estimated Cost: \$2.4 million 5) Replace 11 Dumont risers (11 Sub cond 2-1700 kcm AAC 61 Str.- Dumont) , Estimated Cost : \$ 175,000 6) Replace four 3000 A Dumont Switches , Estimated Cost : \$2,000,000 7) An Engineering study will need to be conducted to determine if the CT Thermal Limit settings can be adjusted to mitigate the overload. Estimated Cost: \$25,000. New relay package will be required if the settings cannot be adjusted, Estimated Cost: \$600,000. Time Estimate : 24-36 Months Cost : \$21,985,000 <u>NIPS</u> Description : The external (i.e. Non-PJM) Transmission Owner, NIPS, will not evaluate this violation until the impact study phase.	\$21,985,000
56500,56499,55940, 54965	1	DRESDEN ; B 345.0 kV - DRESDEN ;1M 138.0 kV Ckt 1	<u>CE</u> Description : No Violation. The ALDR rating is 609 MVA.	\$0
			TOTAL COST	\$179,218,920

Flow Gate Details

The following appendices contain additional information about each flowgate presented in the body of the report. For each appendix, a description of the flowgate and its contingency was included for convenience. However, the intent of the appendix section is to provide more information on which projects/generators have contributions to the flowgate in question. Although this information is not used "as is" for cost allocation purposes, it can be used to gage other generators impact. It should be noted the generator contributions presented in the appendices sections are full contributions, whereas in the body of the report, those contributions take into consideration the commercial probability of each project.

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
54965	270716	DRESDEN ; B	CE	275179	DRESDEN ;1M	CE	1	COMED_P4_012-45-BT5-6__	breaker	442.0	120.49	128.77	DC	36.61

Bus #	Bus	MW Impact
274658	DRESDEN ;2U	31.45
274879	MINONK ;1U	0.75
290021	O50 E	19.53
916512	Z1-107 E	1.49
930751	AB1-122 2O1	128.54
934111	AD1-039 2	12.6
938851	AE1-113 C O1	8.84
938852	AE1-113 E O1	27.78
939871	AE1-222 2	141.95
BLUEG	BLUEG	0.89
CALDERWOOD	CALDERWOOD	0.02
CANNELTON	CANNELTON	0.04
CARR	CARR	0.07
CATAWBA	CATAWBA	0.03
CBM-S1	CBM-S1	0.05
CBM-W1	CBM-W1	4.04
CBM-W2	CBM-W2	3.47
CHEOAH	CHEOAH	0.02
CHILHOWEE	CHILHOWEE	0.01
DEARBORN	DEARBORN	0.25
ELMERSMITH	ELMERSMITH	0.05
G-007	G-007	0.2
GIBSON	GIBSON	0.03
HAMLET	HAMLET	0.12
MEC	MEC	5.41
NEWTON	NEWTON	0.02
O-066	O-066	0.67
RENSELAER	RENSELAER	0.06
SANTEETLA	SANTEETLA	0.0
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.1
WEC	WEC	1.06

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
56316	270716	DRESDEN ; B	CE	274702	KENDALL ;BU	CE	1	COMED_P7_345-L11620_B-S+_345-L11622_R-S	tower	1195.0	111.87	113.76	DC	50.07

Bus #	Bus	MW Impact
274658	DRESDEN ;2U	41.47
274728	ELWOOD EC;5P	4.36
274730	ELWOOD EC;6P	4.36
274732	ELWOOD EC;7P	4.36
274734	ELWOOD EC;8P	4.36
274736	ELWOOD EC;9P	4.36
290021	O50 E	26.71
927091	AC1-204 1	105.7
927101	AC1-204 2	104.98
930741	AB1-122 1O1	46.99
930751	AB1-122 2O1	169.63
934101	AD1-039 1	4.61
934111	AD1-039 2	16.62
936511	AD2-066 C O1	9.2
936512	AD2-066 E O1	6.13
937401	AD2-194 1	11.37
937411	AD2-194 2	11.29
938511	AE1-070 1	13.36
938521	AE1-070 2	12.14
938851	AE1-113 C O1	12.08
938852	AE1-113 E O1	37.99
939861	AE1-222 1	51.9
939871	AE1-222 2	187.32
AB2-013	AB2-013	7.79
BLUEG	BLUEG	0.18
CARR	CARR	0.08
CBM-S1	CBM-S1	1.15
CBM-S2	CBM-S2	0.1
CBM-W1	CBM-W1	0.56
CBM-W2	CBM-W2	20.18
CIN	CIN	0.48
DEARBORN	DEARBORN	0.52
G-007	G-007	0.23
IPL	IPL	0.18
MEC	MEC	7.99
O-066	O-066	0.78
RENSSELAER	RENSSELAER	0.07
TRIMBLE	TRIMBLE	0.03
Z1-043	Z1-043	13.41

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
55733	270855	POWERTON ;R	CE	349662	7TAZEWELL	AMIL	1	COMED_P1-2_345-L1202_B-S-A	single	1479.0	75.38	78.41	DC	45.0

Bus #	Bus	MW Impact
274677	POWERTON ;5U	73.29
274678	POWERTON ;6U	73.44
274861	TOP CROP ;1U	0.9
274862	TOP CROP ;2U	1.75
274879	MINONK ;1U	3.81
918051	AA1-018 C	0.89
930751	AB1-122 2O1	357.35
934111	AD1-039 2	35.02
934871	AD1-116 C	2.26
936291	AD2-038 C O1	8.97
938851	AE1-113 C O1	45.0
939321	AE1-163 C O1	22.55
939871	AE1-222 2	394.63
AC1-056	AC1-056	6.51
AE1-080A	AE1-080A	18.52
BAYOU	BAYOU	3.24
BIG_CAJUN1	BIG_CAJUN1	4.77
BIG_CAJUN2	BIG_CAJUN2	9.61
BLUEG	BLUEG	5.05
CALDERWOOD	CALDERWOOD	0.97
CANNELTON	CANNELTON	0.47
CARR	CARR	0.23
CATAWBA	CATAWBA	0.47
CHEOAH	CHEOAH	0.88
CHILHOWEE	CHILHOWEE	0.32
CHOCTAW	CHOCTAW	2.89
COFFEEN	COFFEEN	2.36
COTTONWOOD	COTTONWOOD	13.17
DUCKCREEK	DUCKCREEK	24.17
EDWARDS	EDWARDS	12.15
ELMERSMITH	ELMERSMITH	0.86
FARMERCITY	FARMERCITY	1.94
GIBSON	GIBSON	0.32
HAMLET	HAMLET	1.47
MECS	MECS	0.98
NEWTON	NEWTON	4.2
PRAIRIE	PRAIRIE	11.16
RENSSELAER	RENSSELAER	0.18
SANTEETLA	SANTEETLA	0.26
SMITHLAND	SMITHLAND	0.6

Bus #	Bus	MW Impact
TATANKA	TATANKA	3.01
TILTON	TILTON	1.46
TRIMBLE	TRIMBLE	0.53
TVA	TVA	4.17
UNIONPOWER	UNIONPOWER	2.25

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
54970	275179	DRESDEN ;1M	CE	271337	DRESDEN ; R	CE	1	COMED_P4_012-45-BT5-6__	breaker	442.0	120.46	128.75	DC	36.61

Bus #	Bus	MW Impact
274658	DRESDEN ;2U	31.45
274879	MINONK ;1U	0.75
290021	O50 E	19.53
916512	Z1-107 E	1.49
930751	AB1-122 2O1	128.54
934111	AD1-039 2	12.6
938851	AE1-113 C O1	8.84
938852	AE1-113 E O1	27.78
939871	AE1-222 2	141.95
BLUEG	BLUEG	0.89
CALDERWOOD	CALDERWOOD	0.02
CANNELTON	CANNELTON	0.04
CARR	CARR	0.07
CATAWBA	CATAWBA	0.03
CBM-S1	CBM-S1	0.05
CBM-W1	CBM-W1	4.04
CBM-W2	CBM-W2	3.47
CHEOAH	CHEOAH	0.02
CHILHOWEE	CHILHOWEE	0.01
DEARBORN	DEARBORN	0.25
ELMERSMITH	ELMERSMITH	0.05
G-007	G-007	0.2
GIBSON	GIBSON	0.03
HAMLET	HAMLET	0.12
MEC	MEC	5.41
NEWTON	NEWTON	0.02
O-066	O-066	0.67
RENSELAER	RENSELAER	0.06
SANTEETLA	SANTEETLA	0.0
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.1
WEC	WEC	1.06

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
56139	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P7_345-L19601_B-S+_345-L9801__R-S_FSA	tower	1195.0	122.56	125.61	DC	36.44

Bus #	Bus	MW Impact
274677	POWERTON ;5U	26.24
274678	POWERTON ;6U	26.31
274861	TOP CROP ;1U	0.7
274862	TOP CROP ;2U	1.35
274879	MINONK ;1U	0.74
290021	O50 E	19.44
293644	O22 E1	18.15
293645	O22 E2	35.22
294401	BSHIL;1U E	6.21
294410	BSHIL;2U E	6.21
918051	AA1-018 C	0.67
918052	AA1-018 E	29.1
919621	AA2-039 C	1.51
919622	AA2-039 E	10.13
925581	AC1-033 C	1.02
925582	AC1-033 E	6.81
926841	AC1-171 C O1	0.85
926842	AC1-171 E O1	5.66
930741	AB1-122 1O1	524.81
934051	AD1-031 C O1	2.06
934052	AD1-031 E O1	3.37
934101	AD1-039 1	51.43
934871	AD1-116 C	1.69
934872	AD1-116 E	2.77
936291	AD2-038 C O1	4.35
936292	AD2-038 E O1	29.11
938851	AE1-113 C O1	8.79
938852	AE1-113 E O1	27.65
939321	AE1-163 C O1	10.93
939322	AE1-163 E O1	67.15
939631	AE1-193 C O1	5.04
939632	AE1-193 E O1	33.74
939681	AE1-198 C O1	14.97
939682	AE1-198 E O1	12.72
939861	AE1-222 1	579.57
954702	J844 E	27.32
990901	L-005 E	9.43
AB2-013	AB2-013	28.99
CARR	CARR	0.04
CBM-S1	CBM-S1	3.25

Bus #	Bus	MW Impact
CBM-S2	CBM-S2	0.73
CBM-W1	CBM-W1	6.57
CBM-W2	CBM-W2	48.55
CIN	CIN	1.0
CPL	CPL	0.21
DEARBORN	DEARBORN	0.55
G-007	G-007	0.1
IPL	IPL	0.49
LGEE	LGEE	0.12
MEC	MEC	20.19
O-066	O-066	0.35
RENSELAER	RENSELAER	0.03
Z1-043	Z1-043	18.2

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
56287	930750	AB1-122 TAP	CE	270716	DRESDEN ; B	CE	1	COMED_P7_345-L19601_B-S+_345-L9801__R-S_FSA	tower	1768.0	88.73	98.06	DC	164.98

Bus #	Bus	MW Impact
274677	POWERTON ;5U	30.9
274678	POWERTON ;6U	30.69
274861	TOP CROP ;1U	0.82
274862	TOP CROP ;2U	1.59
274879	MINONK ;1U	3.37
290021	O50 E	87.99
293644	O22 E1	21.38
293645	O22 E2	41.5
918051	AA1-018 C	0.78
918052	AA1-018 E	33.95
930751	AB1-122 2O1	521.0
934111	AD1-039 2	51.06
934871	AD1-116 C	1.98
934872	AD1-116 E	3.23
936291	AD2-038 C O1	5.07
936292	AD2-038 E O1	33.96
938851	AE1-113 C O1	39.81
938852	AE1-113 E O1	125.16
939321	AE1-163 C O1	12.75
939322	AE1-163 E O1	78.33
939871	AE1-222 2	575.36
AB2-013	AB2-013	23.94
CARR	CARR	0.03
CBM-S1	CBM-S1	2.85
CBM-S2	CBM-S2	0.66
CBM-W1	CBM-W1	3.44
CBM-W2	CBM-W2	42.04
CIN	CIN	1.13
CPL	CPL	0.2
DEARBORN	DEARBORN	0.47
G-007	G-007	0.06
IPL	IPL	0.57
LGEE	LGEE	0.14
MEC	MEC	15.32
O-066	O-066	0.21
RENSSELAER	RENSSELAER	0.02
Z1-043	Z1-043	13.56

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
654403	270644	WILTON	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L94507_B-S+_345-L97008_R-S	tower	4105.0	102.11	102.64	DC	92.33

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	32.17
274722	S-055 E	29.55
274772	LINCOLN ;3U	4.7
274773	LINCOLN ;4U	4.7
274774	LINCOLN ;5U	4.7
274775	LINCOLN ;6U	4.7
274776	LINCOLN ;7U	4.7
274777	LINCOLN ;8U	4.7
274832	U4-027	28.06
274859	EASYR;U1 E	29.13
274860	EASYR;U2 E	29.13
274888	PILOT HIL;1E	44.3
274890	CAYUG;1U E	36.07
274891	CAYUG;2U E	36.07
275149	KEMPTON ;1E	44.3
290021	O50 E	49.24
290051	GSG-6; E	28.08
290108	LEEDK;1U E	65.57
293061	N-015 E	41.22
293516	O-009 E1	23.79
293517	O-009 E2	12.09
293518	O-009 E3	13.31
293644	O22 E1	25.31
293645	O22 E2	49.12
293715	O-029 E	25.78
293716	O-029 E	14.13
293717	O-029 E	12.99
293771	O-035 E	16.49
294392	P-010 E	52.34
294763	P-046 E	24.88
295109	WESTBROOK E	15.03
295111	SUBLETTE E	6.87
296125	R-030 C3	9.31
296128	R-030 E3	37.24
296271	R-030 C2	9.2
296272	R-030 E2	36.8
296308	R-030 C1	9.2
296309	R-030 E1	36.8
910542	X3-005 E	1.57
914641	Y2-103	118.19

Bus #	Bus	MW Impact
915011	Y3-013 1	9.85
915021	Y3-013 2	9.85
915031	Y3-013 3	9.85
916211	Z1-072 E	12.48
916221	Z1-073 E	14.49
916502	Z1-106 E1	3.41
916504	Z1-106 E2	3.41
916512	Z1-107 E	6.53
916522	Z1-108 E	6.62
917502	Z2-087 E	48.13
918052	AA1-018 E	40.41
919221	AA1-146	46.5
919581	AA2-030	46.5
919621	AA2-039 C	3.78
919622	AA2-039 E	25.31
920272	AA2-123 E	6.51
924471	AB2-096	112.6
925161	AB2-173	8.29
925302	AB2-191 E	3.72
925581	AC1-033 C	3.62
925582	AC1-033 E	24.22
926311	AC1-109 1	5.21
926321	AC1-109 2	5.21
926331	AC1-110 1	5.12
926341	AC1-110 2	5.12
926351	AC1-111 1	2.07
926361	AC1-111 2	2.07
926371	AC1-111 3	2.07
926381	AC1-111 4	2.07
926391	AC1-111 5	2.07
926401	AC1-111 6	2.07
926431	AC1-114	6.32
926821	AC1-168 C O1	2.98
926822	AC1-168 E O1	20.01
927091	AC1-204 1	184.27
927101	AC1-204 2	184.31
927201	AC1-214 C O1	5.29
927202	AC1-214 E O1	16.83
927451	AC1-142A 1	10.61
927461	AC1-142A 2	10.61
927511	AC1-113 1	3.16
927521	AC1-113 2	3.16
927531	AC1-185 1	1.82
927541	AC1-185 2	1.82
927551	AC1-185 3	1.82
927561	AC1-185 4	1.82
927571	AC1-185 5	1.82
927581	AC1-185 6	1.82
927591	AC1-185 7	1.82
927601	AC1-185 8	1.82
930481	AB1-089	175.15
930501	AB1-091 O1	173.97

Bus #	Bus	MW Impact
930741	AB1-122 1O1	194.95
930751	AB1-122 2O1	188.67
932881	AC2-115 1	6.32
932891	AC2-115 2	6.32
932921	AC2-116	2.21
932931	AC2-117	14.95
933341	AC2-147 C	2.31
933342	AC2-147 E	3.77
933411	AC2-154 C	6.01
933412	AC2-154 E	9.81
933431	AC2-156 C O1	2.64
933432	AC2-156 E O1	4.3
933911	AD1-013 C	4.95
933912	AD1-013 E	7.9
933931	AD1-016 C	2.47
933932	AD1-016 E	4.03
934051	AD1-031 C O1	7.35
934052	AD1-031 E O1	11.99
934101	AD1-039 1	19.1
934111	AD1-039 2	18.49
934401	AD1-064 C O1	8.56
934402	AD1-064 E O1	40.08
934431	AD1-067 C	0.35
934432	AD1-067 E	1.48
934651	AD1-096 C	2.37
934652	AD1-096 E	3.86
934701	AD1-098 C O1	18.47
934702	AD1-098 E O1	13.48
934721	AD1-100 C	51.04
934722	AD1-100 E	238.17
934871	AD1-116 C	2.35
934872	AD1-116 E	3.84
934881	AD1-117 C	14.23
934882	AD1-117 E	9.49
934971	AD1-129 C	2.4
934972	AD1-129 E	1.6
935001	AD1-133 C O1	55.95
935002	AD1-133 E O1	37.3
936291	AD2-038 C O1	5.86
936292	AD2-038 E O1	39.2
936371	AD2-047 C O1	5.38
936372	AD2-047 E O1	57.91
936461	AD2-060	6.33
936511	AD2-066 C O1	21.47
936512	AD2-066 E O1	14.31
936781	AD2-101 C	10.68
936782	AD2-101 E	49.98
936791	AD2-102 C	31.89
936792	AD2-102 E	30.64
936961	AD2-130	1.4
937001	AD2-134 C	7.34
937002	AD2-134 E	30.33

Bus #	Bus	MW Impact
937031	AD2-137 C O1	10.26
937032	AD2-137 E O1	48.01
937051	AD2-140 C O1	10.5
937052	AD2-140 E O1	49.17
937061	AD2-141 C O1	10.44
937062	AD2-141 E O1	49.23
937071	AD2-142 C O1	21.0
937072	AD2-142 E O1	98.34
937121	AD2-148 C O1	8.35
937122	AD2-148 E O1	39.1
937131	AD2-149 C O1	8.35
937132	AD2-149 E O1	39.1
937141	AD2-150 C O1	8.35
937142	AD2-150 E O1	39.1
937181	AD2-155 C O1	8.35
937182	AD2-155 E O1	39.1
937311	AD2-172 C	6.53
937312	AD2-172 E	9.02
937321	AD2-175 C	38.91
937322	AD2-175 E	25.94
937331	AD2-176 C O1	19.52
937332	AD2-176 E O1	13.01
937401	AD2-194 1	19.82
937411	AD2-194 2	19.82
937531	AD2-214 C	11.6
937532	AD2-214 E	5.46
938012	AE1-002 E O1	20.59
938511	AE1-070 1	23.28
938521	AE1-070 2	21.31
938851	AE1-113 C O1	22.28
938852	AE1-113 E O1	70.05
938861	AE1-114 C O1	9.53
938862	AE1-114 E O1	36.45
939051	AE1-134 1	3.61
939061	AE1-134 2	3.61
939321	AE1-163 C O1	14.72
939322	AE1-163 E O1	90.42
939351	AE1-166 C O1	26.27
939352	AE1-166 E O1	24.25
939401	AE1-172 C O1	16.57
939402	AE1-172 E O1	77.57
939631	AE1-193 C O1	17.95
939632	AE1-193 E O1	120.14
939641	AE1-194 C	21.1
939642	AE1-194 E	141.24
939651	AE1-195 C	21.1
939652	AE1-195 E	141.24
939681	AE1-198 C O1	53.3
939682	AE1-198 E O1	45.3
939691	AE1-199	6.42
939701	AE1-201 C	5.34
939702	AE1-201 E	1.17

Bus #	Bus	MW Impact
939732	AE1-204 E	0.77
939741	AE1-205 C O1	23.29
939742	AE1-205 E O1	32.16
939861	AE1-222 1	215.29
939871	AE1-222 2	208.36
939921	AE1-228 C O1	27.02
939922	AE1-228 E O1	18.01
939961	AE1-233 C O1	6.29
939962	AE1-233 E O1	25.97
940101	AE1-252 C O1	28.24
940102	AE1-252 E O1	18.83
AB2-013	AB2-013	41.07
AE1-033	AE1-033	47.69
BLUEG	BLUEG	16.82
CALDERWOOD	CALDERWOOD	0.23
CANNELTON	CANNELTON	0.26
CARR	CARR	1.97
CATAWBA	CATAWBA	0.8
CBM-S1	CBM-S1	3.44
CBM-W1	CBM-W1	76.96
CBM-W2	CBM-W2	140.68
CHEOAH	CHEOAH	0.24
CHILHOWEE	CHILHOWEE	0.07
DEARBORN	DEARBORN	6.43
ELMERSMITH	ELMERSMITH	0.27
G-007	G-007	5.53
GIBSON	GIBSON	0.08
HAMLET	HAMLET	3.02
MEC	MEC	98.2
O-066	O-066	18.61
RENSSELAER	RENSSELAER	1.56
SANTEETLA	SANTEETLA	0.08
TRIMBLE	TRIMBLE	1.99
WEC	WEC	20.94
Z1-043	Z1-043	73.86

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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
55212	270716	DRESDEN ;B	CE	270928	WOLFS ;B	CE	1	COMED_P4_012-45-BT5-6__	breaker	1479.0	89.77	96.03	DC	92.41

Bus #	Bus	MW Impact
274658	DRESDEN ;2U	78.0
274677	POWERTON ;5U	12.82
274678	POWERTON ;6U	12.7
274836	EQUISTAR ;R	4.45
274879	MINONK ;1U	1.89
290021	O50 E	49.28
904211	W3-135	0.36
916502	Z1-106 E1	0.62
916504	Z1-106 E2	0.61
930751	AB1-122 2O1	318.92
934111	AD1-039 2	31.25
936291	AD2-038 C O1	1.49
936292	AD2-038 E O1	9.96
936511	AD2-066 C O1	15.81
936512	AD2-066 E O1	10.54
938851	AE1-113 C O1	22.3
938852	AE1-113 E O1	70.11
939321	AE1-163 C O1	3.74
939322	AE1-163 E O1	22.98
939871	AE1-222 2	352.2
953201	J715 C	1.34
953202	J715 E	7.25
AB2-013	AB2-013	10.17
BLUEG	BLUEG	0.42
CALDERWOOD	CALDERWOOD	0.01
CARR	CARR	0.07
CATAWBA	CATAWBA	0.03
CBM-S1	CBM-S1	0.09
CBM-W2	CBM-W2	7.73
CHEOAH	CHEOAH	0.01
CHILHOWEE	CHILHOWEE	0.0
CIN	CIN	0.16
DEARBORN	DEARBORN	0.27
FARMERCITY	FARMERCITY	0.1
G-007	G-007	0.2
HAMLET	HAMLET	0.12
IPL	IPL	0.03
O-066	O-066	0.67
RENSSELAER	RENSSELAER	0.06
SANTEETLA	SANTEETLA	0.0
TATANKA	TATANKA	0.72

Bus #	Bus	MW Impact
TRIMBLE	TRIMBLE	0.05
Z1-043	Z1-043	16.14

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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
55260	270717	DRESDEN ;R	CE	270697	COLLINS ;R	CE	1	COMED_P4_111-45-L1223T_	breaker	1528.0	98.81	99.43	DC	20.81

Bus #	Bus	MW Impact
274659	DRESDEN ;3U	42.28
274729	ELWOOD EC;1P	2.69
274731	ELWOOD EC;2P	2.69
274733	ELWOOD EC;3P	2.69
274735	ELWOOD EC;4P	2.69
274736	ELWOOD EC;9P	2.66
274890	CAYUG;1U E	9.67
274891	CAYUG;2U E	9.67
276150	W2-048 E	0.97
290021	O50 E	11.1
290261	S-027 E	15.15
290265	S-028 E	15.15
296125	R-030 C3	3.8
296128	R-030 E3	15.19
296271	R-030 C2	3.75
296272	R-030 E2	15.01
296308	R-030 C1	3.75
296309	R-030 E1	15.01
905082	W4-005 E	25.39
909052	X2-022 E	13.53
917502	Z2-087 E	19.63
924041	AB2-047 C O1	3.61
924042	AB2-047 E O1	24.18
924261	AB2-070 C O1	1.95
924262	AB2-070 E O1	13.08
925771	AC1-053 C	1.93
925772	AC1-053 E	12.91
926841	AC1-171 C O1	0.6
926842	AC1-171 E O1	4.0
927091	AC1-204 1	64.57
927101	AC1-204 2	65.35
930741	AB1-122 1O1	173.78
930751	AB1-122 2O1	33.89
934101	AD1-039 1	17.03
934111	AD1-039 2	3.32
935001	AD1-133 C O1	39.0
935002	AD1-133 E O1	26.0
935141	AD1-148	3.54
936291	AD2-038 C O1	1.13
936292	AD2-038 E O1	7.56
936771	AD2-100 C O1	7.92

Bus #	Bus	MW Impact
936772	AD2-100 E O1	5.28
936972	AD2-131 E O1	1.67
937161	AD2-153 C O1	2.52
937162	AD2-153 E O1	11.79
937171	AD2-154 C O1	2.52
937172	AD2-154 E O1	11.79
937211	AD2-159 C	2.74
937212	AD2-159 E	12.84
937401	AD2-194 1	6.94
937411	AD2-194 2	7.03
938511	AE1-070 1	8.16
938521	AE1-070 2	7.55
938851	AE1-113 C O1	5.02
938852	AE1-113 E O1	15.79
939321	AE1-163 C O1	2.84
939322	AE1-163 E O1	17.43
939401	AE1-172 C O1	3.31
939402	AE1-172 E O1	15.48
939741	AE1-205 C O1	9.44
939742	AE1-205 E O1	13.03
939861	AE1-222 1	191.92
939871	AE1-222 2	37.43
940101	AE1-252 C O1	5.64
940102	AE1-252 E O1	3.76
951741	J474 C	1.23
951742	J474 E	6.63
952651	J756 C	1.67
952652	J756 E	9.05
954181	J884	6.11
AB2-013	AB2-013	11.51
CARR	CARR	0.16
CBM-S1	CBM-S1	2.68
CBM-S2	CBM-S2	0.28
CBM-W1	CBM-W1	3.41
CBM-W2	CBM-W2	44.28
CIN	CIN	2.13
CPL	CPL	0.02
DEARBORN	DEARBORN	0.86
G-007	G-007	0.45
IPL	IPL	0.97
LGEE	LGEE	0.09
MEC	MEC	12.36
O-066	O-066	1.51
RENSSELAER	RENSSELAER	0.13
Z1-043	Z1-043	11.82

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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
55203	274702	KENDALL ;BU	CE	270810	LOCKPORT ; B	CE	1	COMED_P4_111-45-L11126_	breaker	1479.0	104.65	108.15	DC	51.76

Bus #	Bus	MW Impact
274658	DRESDEN ;2U	43.58
274704	KENDALL ;1C	13.79
274705	KENDALL ;1S	9.19
274706	KENDALL ;2C	13.79
274707	KENDALL ;2S	9.19
274836	EQUISTAR ; R	2.51
274879	MINONK ;1U	1.06
290021	O50 E	27.61
904211	W3-135	0.22
927091	AC1-204 1	54.14
927101	AC1-204 2	53.31
930751	AB1-122 2O1	178.2
934111	AD1-039 2	17.46
936511	AD2-066 C O1	9.0
936512	AD2-066 E O1	6.0
937401	AD2-194 1	5.82
937411	AD2-194 2	5.73
938511	AE1-070 1	6.84
938521	AE1-070 2	6.16
938851	AE1-113 C O1	12.49
938852	AE1-113 E O1	39.27
939871	AE1-222 2	196.8
953201	J715 C	0.86
953202	J715 E	4.67
AB2-013	AB2-013	6.09
BAYOU	BAYOU	0.12
BIG_CAJUN1	BIG_CAJUN1	0.18
BIG_CAJUN2	BIG_CAJUN2	0.37
BLUEG	BLUEG	0.97
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.03
CARR	CARR	0.11
CATAWBA	CATAWBA	0.08
CBM-W2	CBM-W2	2.33
CHEOAH	CHEOAH	0.08
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.12
COTTONWOOD	COTTONWOOD	0.47
DEARBORN	DEARBORN	0.37
ELMERSMITH	ELMERSMITH	0.05
FARMERCITY	FARMERCITY	0.17

Bus #	Bus	MW Impact
G-007	G-007	0.31
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.26
O-066	O-066	1.04
RENSELAER	RENSELAER	0.09
SANTEETLA	SANTEETLA	0.02
TATANKA	TATANKA	0.81
TRIMBLE	TRIMBLE	0.11
TVA	TVA	0.18
UNIONPOWER	UNIONPOWER	0.1
Z1-043	Z1-043	9.58

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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
56423	918050	AA1-018 TAP	CE	270769	GOODINGS ;2R	CE	1	COMED_P7_345-L1202__B-S+_345-L1227__R-S-A	tower	1494.0	79.54	83.77	DC	63.15

Bus #	Bus	MW Impact
274677	POWERTON ;5U	24.82
274678	POWERTON ;6U	24.88
274879	MINONK ;1U	1.29
290021	O50 E	33.68
293644	O22 E1	6.5
293645	O22 E2	12.61
294401	BSHIL;1U E	4.59
294410	BSHIL;2U E	4.59
918051	AA1-018 C	1.89
918052	AA1-018 E	82.43
919621	AA2-039 C	1.12
919622	AA2-039 E	7.49
925581	AC1-033 C	0.75
925582	AC1-033 E	5.03
926841	AC1-171 C O1	0.64
926842	AC1-171 E O1	4.29
930741	AB1-122 1O1	102.48
930751	AB1-122 2O1	121.04
934051	AD1-031 C O1	1.53
934052	AD1-031 E O1	2.49
934101	AD1-039 1	10.04
934111	AD1-039 2	11.86
934871	AD1-116 C	4.8
934872	AD1-116 E	7.83
936291	AD2-038 C O1	8.22
936292	AD2-038 E O1	54.98
938851	AE1-113 C O1	15.24
938852	AE1-113 E O1	47.91
939321	AE1-163 C O1	20.65
939322	AE1-163 E O1	126.82
939631	AE1-193 C O1	3.73
939632	AE1-193 E O1	24.94
939681	AE1-198 C O1	11.07
939682	AE1-198 E O1	9.4
939861	AE1-222 1	113.17
939871	AE1-222 2	133.67
951631	J456 C	1.31
951632	J456 E	7.1
954702	J844 E	20.17
990901	L-005 E	7.01

Bus #	Bus	MW Impact
AB2-013	AB2-013	21.27
CARR	CARR	0.05
CBM-S1	CBM-S1	2.46
CBM-S2	CBM-S2	0.52
CBM-W1	CBM-W1	4.37
CBM-W2	CBM-W2	37.42
CIN	CIN	0.84
CPLE	CPLE	0.14
DEARBORN	DEARBORN	0.49
G-007	G-007	0.12
IPL	IPL	0.4
LGEE	LGEE	0.09
MEC	MEC	14.95
O-066	O-066	0.42
RENSSELAER	RENSSELAER	0.04
Z1-043	Z1-043	13.46

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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
56479	936290	AD2-038 TAP	CE	918050	AA1-018 TAP	CE	1	COMED_P7_345-L1202_B-S+_345-L1227__R-S-A	tower	1494.0	73.18	77.42	DC	63.18

Bus #	Bus	MW Impact
274677	POWERTON ;5U	24.83
274678	POWERTON ;6U	24.89
274879	MINONK ;1U	1.29
290021	O50 E	33.7
293644	O22 E1	6.5
293645	O22 E2	12.63
293771	O-035 E	3.1
294401	BSHIL;1U E	4.6
294410	BSHIL;2U E	4.6
916211	Z1-072 E	2.34
919621	AA2-039 C	1.12
919622	AA2-039 E	7.5
925581	AC1-033 C	0.75
925582	AC1-033 E	5.04
926841	AC1-171 C O1	0.64
926842	AC1-171 E O1	4.29
927201	AC1-214 C O1	0.99
927202	AC1-214 E O1	3.16
930741	AB1-122 1O1	102.53
930751	AB1-122 2O1	121.11
934051	AD1-031 C O1	1.53
934052	AD1-031 E O1	2.49
934101	AD1-039 1	10.05
934111	AD1-039 2	11.87
936291	AD2-038 C O1	8.22
936292	AD2-038 E O1	55.0
938851	AE1-113 C O1	15.25
938852	AE1-113 E O1	47.93
939321	AE1-163 C O1	20.65
939322	AE1-163 E O1	126.85
939631	AE1-193 C O1	3.73
939632	AE1-193 E O1	24.99
939681	AE1-198 C O1	11.09
939682	AE1-198 E O1	9.42
939861	AE1-222 1	113.23
939871	AE1-222 2	133.74
951631	J456 C	1.31
951632	J456 E	7.1
953951	J859	8.13
954702	J844 E	20.17

Bus #	Bus	MW Impact
990901	L-005 E	7.02
AB2-013	AB2-013	21.29
CARR	CARR	0.04
CBM-S1	CBM-S1	2.49
CBM-S2	CBM-S2	0.53
CBM-W1	CBM-W1	4.43
CBM-W2	CBM-W2	37.66
CIN	CIN	0.86
CPLE	CPLE	0.15
DEARBORN	DEARBORN	0.48
G-007	G-007	0.11
IPL	IPL	0.42
LGEE	LGEE	0.09
MEC	MEC	15.0
O-066	O-066	0.38
RENSSELAER	RENSSELAER	0.04
Z1-043	Z1-043	13.48

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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
652875	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1409.0	115.21	115.89	DC	21.48

Bus #	Bus	MW Impact
247900	05FR-11G E	6.85
247901	05FR-12G E	6.74
247902	05FR-21G E	7.2
247903	05FR-22G E	6.89
247904	05FR-3G E	13.96
247905	05FR-4G E	10.5
247906	05MDL-1G E	15.63
247907	05MDL-2G E	7.75
247912	05MDL-3G E	8.11
247913	05MDL-4G E	7.83
247943	T-127 E	7.83
270859	PWR VTR EC;R	7.11
274722	S-055 E	6.55
274809	UNIV PK N;5U	0.8
274811	UNIV PK N;7U	0.8
274812	UNIV PK N;8U	0.8
274814	UNIV PK N;0U	0.8
274815	UNIV PK N;XU	0.8
274859	EASYR;U1 E	5.56
274860	EASYR;U2 E	5.56
274888	PILOT HIL;1E	10.32
274890	CAYUG;1U E	8.28
274891	CAYUG;2U E	8.28
275149	KEMPTON ;1E	10.32
290021	O50 E	11.46
290051	GSG-6; E	6.16
290108	LEEDK;1U E	14.23
293061	N-015 E	8.96
293644	O22 E1	5.93
293645	O22 E2	11.51
294392	P-010 E	11.37
294763	P-046 E	5.56
295109	WESTBROOK E	3.3
909145	X2-052	36.23
914641	Y2-103	26.18
915011	Y3-013 1	2.18
915021	Y3-013 2	2.18
915031	Y3-013 3	2.18
916221	Z1-073 E	3.18
916502	Z1-106 E1	0.73

Bus #	Bus	MW Impact
916504	Z1-106 E2	0.73
916512	Z1-107 E	1.5
916522	Z1-108 E	1.45
917711	Z2-114 C	0.06
917712	Z2-114 E	0.4
918052	AA1-018 E	9.8
920272	AA2-123 E	1.43
924471	AB2-096	24.87
925302	AB2-191 E	0.82
926311	AC1-109 1	1.1
926321	AC1-109 2	1.1
926331	AC1-110 1	1.1
926341	AC1-110 2	1.1
926351	AC1-111 1	0.44
926361	AC1-111 2	0.44
926371	AC1-111 3	0.44
926381	AC1-111 4	0.44
926391	AC1-111 5	0.44
926401	AC1-111 6	0.44
926431	AC1-114	1.4
926821	AC1-168 C O1	0.7
926822	AC1-168 E O1	4.71
927091	AC1-204 1	41.9
927101	AC1-204 2	41.91
927451	AC1-142A 1	2.42
927461	AC1-142A 2	2.42
927511	AC1-113 1	0.7
927521	AC1-113 2	0.7
927531	AC1-185 1	0.41
927541	AC1-185 2	0.41
927551	AC1-185 3	0.41
927561	AC1-185 4	0.41
927571	AC1-185 5	0.41
927581	AC1-185 6	0.41
927591	AC1-185 7	0.41
927601	AC1-185 8	0.41
930042	AB1-006 E	17.03
930391	AB1-080	2.15
930481	AB1-089	38.75
930501	AB1-091 O1	40.14
930741	AB1-122 1O1	41.99
930751	AB1-122 2O1	42.66
932601	AC2-080 C O1	3.72
932602	AC2-080 E O1	24.91
932881	AC2-115 1	1.4
932891	AC2-115 2	1.4
932921	AC2-116	0.49
932931	AC2-117	5.17
933341	AC2-147 C	0.52
933342	AC2-147 E	0.85
933411	AC2-154 C	1.4
933412	AC2-154 E	2.28

Bus #	Bus	MW Impact
933431	AC2-156 C O1	0.55
933432	AC2-156 E O1	0.9
933911	AD1-013 C	1.08
933912	AD1-013 E	1.73
933931	AD1-016 C	0.54
933932	AD1-016 E	0.89
934101	AD1-039 1	4.12
934111	AD1-039 2	4.18
934401	AD1-064 C O1	1.88
934402	AD1-064 E O1	8.8
934431	AD1-067 C	0.08
934432	AD1-067 E	0.33
934651	AD1-096 C	0.53
934652	AD1-096 E	0.86
934701	AD1-098 C O1	4.06
934702	AD1-098 E O1	2.96
934721	AD1-100 C	11.12
934722	AD1-100 E	51.9
934871	AD1-116 C	0.57
934872	AD1-116 E	0.93
934881	AD1-117 C	3.21
934882	AD1-117 E	2.14
934971	AD1-129 C	0.53
934972	AD1-129 E	0.35
935001	AD1-133 C O1	12.63
935002	AD1-133 E O1	8.42
935271	AD1-137 C	5.69
935272	AD1-137 E	38.05
936291	AD2-038 C O1	1.41
936292	AD2-038 E O1	9.44
936371	AD2-047 C O1	1.25
936372	AD2-047 E O1	13.49
936461	AD2-060	1.47
936511	AD2-066 C O1	4.99
936512	AD2-066 E O1	3.33
936781	AD2-101 C	2.48
936782	AD2-101 E	11.59
936791	AD2-102 C	7.12
936792	AD2-102 E	6.84
936961	AD2-130	0.32
936981	AD2-132 C	5.04
936982	AD2-132 E	23.6
937001	AD2-134 C	1.61
937002	AD2-134 E	6.66
937031	AD2-137 C O1	1.92
937032	AD2-137 E O1	9.0
937041	AD2-138 C	5.04
937042	AD2-138 E	23.6
937051	AD2-140 C O1	1.92
937052	AD2-140 E O1	8.99
937061	AD2-141 C O1	1.91
937062	AD2-141 E O1	9.0

Bus #	Bus	MW Impact
937071	AD2-142 C O1	3.84
937072	AD2-142 E O1	17.98
937121	AD2-148 C O1	1.93
937122	AD2-148 E O1	9.02
937131	AD2-149 C O1	1.93
937132	AD2-149 E O1	9.02
937141	AD2-150 C O1	1.93
937142	AD2-150 E O1	9.02
937181	AD2-155 C O1	1.93
937182	AD2-155 E O1	9.02
937311	AD2-172 C	1.46
937312	AD2-172 E	2.02
937321	AD2-175 C	8.98
937322	AD2-175 E	5.98
937331	AD2-176 C O1	4.29
937332	AD2-176 E O1	2.86
937401	AD2-194 1	4.51
937411	AD2-194 2	4.51
938012	AE1-002 E O1	3.86
938511	AE1-070 1	5.29
938521	AE1-070 2	4.84
938851	AE1-113 C O1	5.18
938852	AE1-113 E O1	16.3
938861	AE1-114 C O1	2.14
938862	AE1-114 E O1	8.19
939321	AE1-163 C O1	3.54
939322	AE1-163 E O1	21.77
939351	AE1-166 C O1	5.85
939352	AE1-166 E O1	5.4
939401	AE1-172 C O1	3.71
939402	AE1-172 E O1	17.38
939641	AE1-194 C	5.61
939642	AE1-194 E	37.52
939651	AE1-195 C	5.61
939652	AE1-195 E	37.52
939691	AE1-199	1.41
939701	AE1-201 C	1.17
939702	AE1-201 E	0.26
939732	AE1-204 E	0.17
939861	AE1-222 1	46.37
939871	AE1-222 2	47.11
939921	AE1-228 C O1	5.92
939922	AE1-228 E O1	3.95
939961	AE1-233 C O1	1.36
939962	AE1-233 E O1	5.62
940101	AE1-252 C O1	6.33
940102	AE1-252 E O1	4.22
AB2-013	AB2-013	10.01
AE1-033	AE1-033	10.77
CARR	CARR	0.59
CATAWBA	CATAWBA	0.05
CBM-S1	CBM-S1	4.6

Bus #	Bus	MW Impact
CBM-W1	CBM-W1	19.73
CBM-W2	CBM-W2	68.15
CIN	CIN	7.05
DEARBORN	DEARBORN	1.82
G-007	G-007	1.64
HAMLET	HAMLET	0.34
IPL	IPL	3.28
LGEE	LGEE	0.73
MEC	MEC	25.32
O-066	O-066	5.54
RENSSELAER	RENSSELAER	0.47
WEC	WEC	4.7
Z1-043	Z1-043	17.65

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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
55233	255104	17GREEN_ACR E	NIPS	270771	GREENACRE ;T	CE	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1091.0	101.09	101.76	DC	24.35

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	8.06
274722	S-055 E	7.52
274751	CRETE EC ;1U	1.93
274752	CRETE EC ;2U	1.93
274753	CRETE EC ;3U	1.93
274754	CRETE EC ;4U	1.93
274832	U4-027	7.11
274859	EASYR;U1 E	7.3
274860	EASYR;U2 E	7.3
274888	PILOT HIL;1E	12.4
274890	CAYUG;1U E	8.92
274891	CAYUG;2U E	8.92
275149	KEMPTON ;1E	12.4
290021	O50 E	12.98
290051	GSG-6; E	6.94
290108	LEEDK;1U E	16.14
293061	N-015 E	10.24
293516	O-009 E1	5.99
293517	O-009 E2	3.04
293518	O-009 E3	3.35
293644	O22 E1	7.24
293645	O22 E2	14.06
293715	O-029 E	6.47
293716	O-029 E	3.55
293717	O-029 E	3.26
294392	P-010 E	13.0
294763	P-046 E	6.23
295109	WESTBROOK E	3.72
295111	SUBLETTE E	1.72
910542	X3-005 E	0.52
914641	Y2-103	30.09
915011	Y3-013 1	2.51
915021	Y3-013 2	2.51
915031	Y3-013 3	2.51
916221	Z1-073 E	3.58
916502	Z1-106 E1	0.84
916504	Z1-106 E2	0.84
916512	Z1-107 E	1.71
916522	Z1-108 E	1.66
918052	AA1-018 E	10.62
919221	AA1-146	11.67

Bus #	Bus	MW Impact
919581	AA2-030	11.67
920272	AA2-123 E	1.63
924471	AB2-096	28.21
925161	AB2-173	2.08
925302	AB2-191 E	0.92
925881	AC1-067 O1	102.57
926311	AC1-109 1	1.27
926321	AC1-109 2	1.27
926331	AC1-110 1	1.27
926341	AC1-110 2	1.27
926351	AC1-111 1	0.51
926361	AC1-111 2	0.51
926371	AC1-111 3	0.51
926381	AC1-111 4	0.51
926391	AC1-111 5	0.51
926401	AC1-111 6	0.51
926431	AC1-114	1.58
926821	AC1-168 C O1	0.76
926822	AC1-168 E O1	5.08
927091	AC1-204 1	48.76
927101	AC1-204 2	48.73
927201	AC1-214 C O1	0.74
927202	AC1-214 E O1	2.34
927451	AC1-142A 1	2.83
927461	AC1-142A 2	2.83
927511	AC1-113 1	0.79
927521	AC1-113 2	0.79
927531	AC1-185 1	0.46
927541	AC1-185 2	0.46
927551	AC1-185 3	0.46
927561	AC1-185 4	0.46
927571	AC1-185 5	0.46
927581	AC1-185 6	0.46
927591	AC1-185 7	0.46
927601	AC1-185 8	0.46
930481	AB1-089	43.76
930501	AB1-091 O1	49.15
930741	AB1-122 1O1	47.58
930751	AB1-122 2O1	49.75
932881	AC2-115 1	1.58
932891	AC2-115 2	1.58
932921	AC2-116	0.55
933341	AC2-147 C	0.58
933342	AC2-147 E	0.94
933411	AC2-154 C	1.68
933412	AC2-154 E	2.75
933431	AC2-156 C O1	0.64
933432	AC2-156 E O1	1.04
933911	AD1-013 C	1.22
933912	AD1-013 E	1.95
933931	AD1-016 C	0.62
933932	AD1-016 E	1.01

Bus #	Bus	MW Impact
934101	AD1-039 1	4.66
934111	AD1-039 2	4.88
934401	AD1-064 C O1	2.13
934402	AD1-064 E O1	9.99
934431	AD1-067 C	0.09
934432	AD1-067 E	0.37
934651	AD1-096 C	0.59
934652	AD1-096 E	0.97
934701	AD1-098 C O1	4.57
934702	AD1-098 E O1	3.34
934721	AD1-100 C	12.94
934722	AD1-100 E	60.39
934871	AD1-116 C	0.62
934872	AD1-116 E	1.01
934881	AD1-117 C	3.57
934882	AD1-117 E	2.38
934971	AD1-129 C	0.6
934972	AD1-129 E	0.4
935001	AD1-133 C O1	13.73
935002	AD1-133 E O1	9.15
936291	AD2-038 C O1	1.54
936292	AD2-038 E O1	10.32
936371	AD2-047 C O1	1.51
936372	AD2-047 E O1	16.21
936461	AD2-060	1.77
936511	AD2-066 C O1	5.56
936512	AD2-066 E O1	3.71
936781	AD2-101 C	3.17
936782	AD2-101 E	14.84
936791	AD2-102 C	8.0
936792	AD2-102 E	7.69
936961	AD2-130	0.38
937001	AD2-134 C	1.82
937002	AD2-134 E	7.5
937031	AD2-137 C O1	2.31
937032	AD2-137 E O1	10.8
937051	AD2-140 C O1	2.32
937052	AD2-140 E O1	10.87
937061	AD2-141 C O1	2.31
937062	AD2-141 E O1	10.88
937071	AD2-142 C O1	4.64
937072	AD2-142 E O1	21.73
937121	AD2-148 C O1	2.36
937122	AD2-148 E O1	11.04
937131	AD2-149 C O1	2.36
937132	AD2-149 E O1	11.04
937141	AD2-150 C O1	2.36
937142	AD2-150 E O1	11.04
937181	AD2-155 C O1	2.36
937182	AD2-155 E O1	11.04
937311	AD2-172 C	1.64
937312	AD2-172 E	2.26

Bus #	Bus	MW Impact
937321	AD2-175 C	10.99
937322	AD2-175 E	7.33
937331	AD2-176 C O1	4.89
937332	AD2-176 E O1	3.26
937401	AD2-194 1	5.24
937411	AD2-194 2	5.24
937531	AD2-214 C	2.92
937532	AD2-214 E	1.37
938012	AE1-002 E O1	4.63
938511	AE1-070 1	6.16
938521	AE1-070 2	5.63
938851	AE1-113 C O1	5.88
938852	AE1-113 E O1	18.47
938861	AE1-114 C O1	2.39
938862	AE1-114 E O1	9.13
939051	AE1-134 1	0.91
939061	AE1-134 2	0.91
939321	AE1-163 C O1	3.87
939322	AE1-163 E O1	23.79
939351	AE1-166 C O1	6.84
939352	AE1-166 E O1	6.31
939401	AE1-172 C O1	4.1
939402	AE1-172 E O1	19.18
939641	AE1-194 C	10.88
939642	AE1-194 E	72.84
939651	AE1-195 C	10.88
939652	AE1-195 E	72.84
939691	AE1-199	1.59
939701	AE1-201 C	1.34
939702	AE1-201 E	0.29
939732	AE1-204 E	0.2
939861	AE1-222 1	52.55
939871	AE1-222 2	54.95
939921	AE1-228 C O1	6.68
939922	AE1-228 E O1	4.45
939961	AE1-233 C O1	1.55
939962	AE1-233 E O1	6.39
940101	AE1-252 C O1	6.98
940102	AE1-252 E O1	4.65
951721	J643	15.51
952581	J740 C	3.4
952582	J740 E	18.42
953871	J847	8.38
AB2-013	AB2-013	10.64
AE1-033	AE1-033	12.03
BLUEG	BLUEG	2.86
CANNELTON	CANNELTON	0.0
CARR	CARR	0.5
CATAWBA	CATAWBA	0.16
CBM-S1	CBM-S1	1.36
CBM-W1	CBM-W1	19.98
CBM-W2	CBM-W2	38.44

Bus #	Bus	MW Impact
CIN	CIN	0.12
DEARBORN	DEARBORN	2.29
G-007	G-007	1.38
HAMLET	HAMLET	0.65
MEC	MEC	25.05
O-066	O-066	4.65
RENSELAER	RENSELAER	0.39
SANTEETLA	SANTEETLA	0.0
TRIMBLE	TRIMBLE	0.34
WEC	WEC	5.32
Z1-043	Z1-043	18.82

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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
55063	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_023-65-BT2-3__	breaker	1091.0	108.54	109.41	DC	27.47

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	9.04
274654	BRAIDWOOD;1U	19.05
274655	BRAIDWOOD;2U	18.24
274661	LASCO STA;2U	17.6
274687	WILL CNTY;4U	8.03
274704	KENDALL ;1C	2.81
274705	KENDALL ;1S	1.88
274706	KENDALL ;2C	2.81
274707	KENDALL ;2S	1.88
274722	S-055 E	8.45
274751	CRETE EC ;1U	3.36
274752	CRETE EC ;2U	3.36
274753	CRETE EC ;3U	3.36
274754	CRETE EC ;4U	3.36
274859	EASYR;U1 E	8.17
274860	EASYR;U2 E	8.17
274861	TOP CROP ;1U	0.33
274862	TOP CROP ;2U	0.63
274888	PILOT HIL;1E	12.81
274890	CAYUG;1U E	9.74
274891	CAYUG;2U E	9.74
275149	KEMPTON ;1E	12.81
290021	O50 E	14.65
290051	GSG-6; E	7.78
290108	LEEDK;1U E	18.09
293061	N-015 E	11.61
293516	O-009 E1	6.69
293517	O-009 E2	3.4
293518	O-009 E3	3.74
293644	O22 E1	8.5
293645	O22 E2	16.51
293715	O-029 E	7.24
293716	O-029 E	3.97
293717	O-029 E	3.65
294392	P-010 E	14.75
294763	P-046 E	6.98
295109	WESTBROOK E	4.16
295111	SUBLETTE E	1.92
914641	Y2-103	33.8
915011	Y3-013 1	2.82

Bus #	Bus	MW Impact
915021	Y3-013 2	2.82
915031	Y3-013 3	2.82
916221	Z1-073 E	4.01
916502	Z1-106 E1	0.94
916504	Z1-106 E2	0.94
916512	Z1-107 E	1.85
916522	Z1-108 E	1.86
918052	AA1-018 E	11.64
919221	AA1-146	13.04
919581	AA2-030	13.04
920272	AA2-123 E	1.83
924471	AB2-096	31.63
925161	AB2-173	2.33
925302	AB2-191 E	1.03
926311	AC1-109 1	1.42
926321	AC1-109 2	1.42
926331	AC1-110 1	1.42
926341	AC1-110 2	1.42
926351	AC1-111 1	0.57
926361	AC1-111 2	0.57
926371	AC1-111 3	0.57
926381	AC1-111 4	0.57
926391	AC1-111 5	0.57
926401	AC1-111 6	0.57
926431	AC1-114	1.77
926821	AC1-168 C O1	0.85
926822	AC1-168 E O1	5.68
927091	AC1-204 1	55.19
927101	AC1-204 2	55.12
927451	AC1-142A 1	3.2
927461	AC1-142A 2	3.2
927511	AC1-113 1	0.89
927521	AC1-113 2	0.89
927531	AC1-185 1	0.51
927541	AC1-185 2	0.51
927551	AC1-185 3	0.51
927561	AC1-185 4	0.51
927571	AC1-185 5	0.51
927581	AC1-185 6	0.51
927591	AC1-185 7	0.51
927601	AC1-185 8	0.51
930481	AB1-089	49.05
930501	AB1-091 O1	50.61
930741	AB1-122 1O1	52.99
930751	AB1-122 2O1	56.33
932881	AC2-115 1	1.77
932891	AC2-115 2	1.77
932921	AC2-116	0.62
933341	AC2-147 C	0.65
933342	AC2-147 E	1.06
933411	AC2-154 C	1.74
933412	AC2-154 E	2.84

Bus #	Bus	MW Impact
933431	AC2-156 C O1	0.71
933432	AC2-156 E O1	1.16
933911	AD1-013 C	1.37
933912	AD1-013 E	2.19
933931	AD1-016 C	0.69
933932	AD1-016 E	1.13
934101	AD1-039 1	5.19
934111	AD1-039 2	5.52
934401	AD1-064 C O1	2.39
934402	AD1-064 E O1	11.2
934431	AD1-067 C	0.1
934432	AD1-067 E	0.41
934651	AD1-096 C	0.66
934652	AD1-096 E	1.08
934701	AD1-098 C O1	5.12
934702	AD1-098 E O1	3.74
934721	AD1-100 C	14.27
934722	AD1-100 E	66.6
934871	AD1-116 C	0.68
934872	AD1-116 E	1.11
934881	AD1-117 C	3.99
934882	AD1-117 E	2.66
934971	AD1-129 C	0.67
934972	AD1-129 E	0.45
935001	AD1-133 C O1	15.16
935002	AD1-133 E O1	10.11
936291	AD2-038 C O1	1.71
936292	AD2-038 E O1	11.45
936371	AD2-047 C O1	1.56
936372	AD2-047 E O1	16.75
936461	AD2-060	1.83
936511	AD2-066 C O1	6.19
936512	AD2-066 E O1	4.13
936781	AD2-101 C	3.09
936782	AD2-101 E	14.46
936791	AD2-102 C	8.96
936792	AD2-102 E	8.61
936961	AD2-130	0.42
937001	AD2-134 C	2.03
937002	AD2-134 E	8.4
937031	AD2-137 C O1	2.44
937032	AD2-137 E O1	11.43
937051	AD2-140 C O1	2.44
937052	AD2-140 E O1	11.42
937061	AD2-141 C O1	2.43
937062	AD2-141 E O1	11.44
937071	AD2-142 C O1	4.88
937072	AD2-142 E O1	22.85
937121	AD2-148 C O1	2.43
937122	AD2-148 E O1	11.37
937131	AD2-149 C O1	2.43
937132	AD2-149 E O1	11.37

Bus #	Bus	MW Impact
937141	AD2-150 C O1	2.43
937142	AD2-150 E O1	11.37
937181	AD2-155 C O1	2.43
937182	AD2-155 E O1	11.37
937311	AD2-172 C	1.83
937312	AD2-172 E	2.53
937321	AD2-175 C	11.32
937322	AD2-175 E	7.55
937331	AD2-176 C O1	5.48
937332	AD2-176 E O1	3.65
937401	AD2-194 1	5.94
937411	AD2-194 2	5.93
937531	AD2-214 C	0.8
937532	AD2-214 E	0.38
938012	AE1-002 E O1	4.9
938511	AE1-070 1	6.97
938521	AE1-070 2	6.37
938851	AE1-113 C O1	6.63
938852	AE1-113 E O1	20.84
938861	AE1-114 C O1	2.67
938862	AE1-114 E O1	10.22
939051	AE1-134 1	1.01
939061	AE1-134 2	1.01
939321	AE1-163 C O1	4.3
939322	AE1-163 E O1	26.41
939351	AE1-166 C O1	7.6
939352	AE1-166 E O1	7.02
939401	AE1-172 C O1	4.47
939402	AE1-172 E O1	20.95
939641	AE1-194 C	18.96
939642	AE1-194 E	126.86
939651	AE1-195 C	18.96
939652	AE1-195 E	126.86
939691	AE1-199	1.78
939701	AE1-201 C	1.5
939702	AE1-201 E	0.33
939732	AE1-204 E	0.22
939861	AE1-222 1	58.52
939871	AE1-222 2	62.2
939921	AE1-228 C O1	7.48
939922	AE1-228 E O1	4.99
939961	AE1-233 C O1	1.73
939962	AE1-233 E O1	7.16
940101	AE1-252 C O1	7.63
940102	AE1-252 E O1	5.08
AB2-013	AB2-013	11.87
AE1-033	AE1-033	13.47
BLUEG	BLUEG	5.05
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.11
CARR	CARR	0.56
CATAWBA	CATAWBA	0.23

Bus #	Bus	MW Impact
CBM-S1	CBM-S1	0.77
CBM-W1	CBM-W1	20.04
CBM-W2	CBM-W2	37.14
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.24
ELMERSMITH	ELMERSMITH	0.14
G-007	G-007	1.57
GIBSON	GIBSON	0.06
HAMLET	HAMLET	0.87
MEC	MEC	27.58
O-066	O-066	5.3
RENSELAER	RENSELAER	0.45
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.59
WEC	WEC	5.97
Z1-043	Z1-043	20.98

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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
652550	255113	17STILLWEL L	NIPS	243219	05DUMON T	AEP	1	AEP_P4_#2978_05DUMON T 765_B	breaker	1409.0	171.32	172.07	DC	41.84

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	13.92
274722	S-055 E	12.95
274724	RIVER EC ;11	4.75
274788	SE CHICAG;5U	1.14
274789	SE CHICAG;6U	1.14
274790	SE CHICAG;7U	1.14
274791	SE CHICAG;8U	1.14
274795	SE CHICAG;2U	1.12
274832	U4-027	12.45
274859	EASYR;U1 E	12.67
274860	EASYR;U2 E	12.67
274888	PILOT HIL;1E	22.3
274890	CAYUG;1U E	15.76
274891	CAYUG;2U E	15.76
275149	KEMPTON ;1E	22.3
290021	O50 E	22.31
290051	GSG-6; E	12.02
290108	LEEDK;1U E	27.92
293061	N-015 E	17.54
293516	O-009 E1	10.45
293517	O-009 E2	5.31
293518	O-009 E3	5.85
293644	O22 E1	11.95
293645	O22 E2	23.2
293715	O-029 E	11.27
293716	O-029 E	6.18
293717	O-029 E	5.68
293771	O-035 E	7.36
294392	P-010 E	22.27
294763	P-046 E	10.8
295109	WESTBROOK E	6.44
295111	SUBLETTE E	2.99
910542	X3-005 E	1.0
914641	Y2-103	51.8
915011	Y3-013 1	4.32
915021	Y3-013 2	4.32
915031	Y3-013 3	4.32
916211	Z1-072 E	5.57
916221	Z1-073 E	6.2
916502	Z1-106 E1	1.45
916504	Z1-106 E2	1.45

Bus #	Bus	MW Impact
916512	Z1-107 E	3.03
916522	Z1-108 E	2.86
918052	AA1-018 E	18.74
919221	AA1-146	20.28
919581	AA2-030	20.28
920272	AA2-123 E	2.81
924471	AB2-096	48.73
925161	AB2-173	3.62
925302	AB2-191 E	1.59
925581	AC1-033 C	1.61
925582	AC1-033 E	10.81
925881	AC1-067 O1	198.49
926311	AC1-109 1	2.19
926321	AC1-109 2	2.19
926331	AC1-110 1	2.18
926341	AC1-110 2	2.18
926351	AC1-111 1	0.88
926361	AC1-111 2	0.88
926371	AC1-111 3	0.88
926381	AC1-111 4	0.88
926391	AC1-111 5	0.88
926401	AC1-111 6	0.88
926431	AC1-114	2.74
926821	AC1-168 C O1	1.32
926822	AC1-168 E O1	8.85
927091	AC1-204 1	83.26
927101	AC1-204 2	83.23
927201	AC1-214 C O1	2.36
927202	AC1-214 E O1	7.51
927451	AC1-142A 1	4.83
927461	AC1-142A 2	4.84
927511	AC1-113 1	1.37
927521	AC1-113 2	1.37
927531	AC1-185 1	0.79
927541	AC1-185 2	0.79
927551	AC1-185 3	0.79
927561	AC1-185 4	0.79
927571	AC1-185 5	0.79
927581	AC1-185 6	0.79
927591	AC1-185 7	0.79
927601	AC1-185 8	0.79
930481	AB1-089	75.67
930501	AB1-091 O1	88.22
930741	AB1-122 1O1	82.42
930751	AB1-122 2O1	84.95
932881	AC2-115 1	2.74
932891	AC2-115 2	2.74
932921	AC2-116	0.96
932931	AC2-117	5.81
933341	AC2-147 C	1.0
933342	AC2-147 E	1.64
933411	AC2-154 C	3.03

Bus #	Bus	MW Impact
933412	AC2-154 E	4.94
933431	AC2-156 C O1	1.1
933432	AC2-156 E O1	1.79
933911	AD1-013 C	2.12
933912	AD1-013 E	3.38
933931	AD1-016 C	1.07
933932	AD1-016 E	1.74
934101	AD1-039 1	8.08
934111	AD1-039 2	8.33
934401	AD1-064 C O1	3.69
934402	AD1-064 E O1	17.25
934431	AD1-067 C	0.15
934432	AD1-067 E	0.63
934651	AD1-096 C	1.03
934652	AD1-096 E	1.67
934701	AD1-098 C O1	7.91
934702	AD1-098 E O1	5.78
934721	AD1-100 C	22.45
934722	AD1-100 E	104.76
934871	AD1-116 C	1.09
934872	AD1-116 E	1.78
934881	AD1-117 C	6.19
934882	AD1-117 E	4.13
934971	AD1-129 C	1.04
934972	AD1-129 E	0.69
935001	AD1-133 C O1	24.06
935002	AD1-133 E O1	16.04
936291	AD2-038 C O1	2.69
936292	AD2-038 E O1	18.02
936371	AD2-047 C O1	2.71
936372	AD2-047 E O1	29.15
936461	AD2-060	3.19
936511	AD2-066 C O1	9.67
936512	AD2-066 E O1	6.45
936781	AD2-101 C	5.9
936782	AD2-101 E	27.62
936791	AD2-102 C	13.85
936792	AD2-102 E	13.3
936961	AD2-130	0.66
937001	AD2-134 C	3.14
937002	AD2-134 E	12.98
937031	AD2-137 C O1	4.08
937032	AD2-137 E O1	19.09
937051	AD2-140 C O1	4.11
937052	AD2-140 E O1	19.25
937061	AD2-141 C O1	4.09
937062	AD2-141 E O1	19.27
937071	AD2-142 C O1	8.22
937072	AD2-142 E O1	38.5
937121	AD2-148 C O1	4.23
937122	AD2-148 E O1	19.82
937131	AD2-149 C O1	4.23

Bus #	Bus	MW Impact
937132	AD2-149 E O1	19.82
937141	AD2-150 C O1	4.23
937142	AD2-150 E O1	19.82
937181	AD2-155 C O1	4.23
937182	AD2-155 E O1	19.82
937311	AD2-172 C	2.83
937312	AD2-172 E	3.91
937321	AD2-175 C	19.73
937322	AD2-175 E	13.15
937331	AD2-176 C O1	8.43
937332	AD2-176 E O1	5.62
937401	AD2-194 1	8.95
937411	AD2-194 2	8.95
937531	AD2-214 C	5.1
937532	AD2-214 E	2.4
938012	AE1-002 E O1	8.18
938511	AE1-070 1	10.52
938521	AE1-070 2	9.62
938851	AE1-113 C O1	10.1
938852	AE1-113 E O1	31.74
938861	AE1-114 C O1	4.14
938862	AE1-114 E O1	15.83
939051	AE1-134 1	1.58
939061	AE1-134 2	1.58
939321	AE1-163 C O1	6.77
939322	AE1-163 E O1	41.57
939351	AE1-166 C O1	11.8
939352	AE1-166 E O1	10.89
939401	AE1-172 C O1	7.21
939402	AE1-172 E O1	33.74
939631	AE1-193 C O1	4.73
939632	AE1-193 E O1	31.63
939641	AE1-194 C	10.24
939642	AE1-194 E	68.55
939651	AE1-195 C	10.24
939652	AE1-195 E	68.55
939681	AE1-198 C O1	23.78
939682	AE1-198 E O1	20.2
939691	AE1-199	2.75
939701	AE1-201 C	2.31
939702	AE1-201 E	0.51
939732	AE1-204 E	0.34
939861	AE1-222 1	91.02
939871	AE1-222 2	93.81
939921	AE1-228 C O1	11.56
939922	AE1-228 E O1	7.71
939961	AE1-233 C O1	2.67
939962	AE1-233 E O1	11.05
940101	AE1-252 C O1	12.28
940102	AE1-252 E O1	8.19
951721	J643	25.73
952581	J740 C	4.3

Bus #	Bus	MW Impact
952582	J740 E	23.28
953871	J847	13.1
954751	J351	434.54
AB2-013	AB2-013	18.6
AE1-033	AE1-033	20.85
BLUEG	BLUEG	1.07
CARR	CARR	0.9
CATAWBA	CATAWBA	0.22
CBM-S1	CBM-S1	3.95
CBM-W1	CBM-W1	35.83
CBM-W2	CBM-W2	81.92
CIN	CIN	3.3
DEARBORN	DEARBORN	4.0
G-007	G-007	2.51
HAMLET	HAMLET	0.96
IPL	IPL	1.12
MEC	MEC	44.69
O-066	O-066	8.44
RENSSELAER	RENSSELAER	0.71
TRIMBLE	TRIMBLE	0.16
WEC	WEC	9.2
Z1-043	Z1-043	32.93

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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
55238	270677	BURNHAM ;OR	CE	255109	17MUNSTER	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1441.0	110.86	111.52	DC	34.81

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	11.75
274722	S-055 E	10.96
274723	RIVER EC ;12	4.32
274792	SE CHICAG;9U	0.96
274793	SE CHICAG;0U	0.96
274794	SE CHICAG;1U	0.96
274795	SE CHICAG;2U	0.96
274832	U4-027	10.31
274859	EASYR;U1 E	10.61
274860	EASYR;U2 E	10.61
274888	PILOT HIL;1E	20.48
274890	CAYUG;1U E	13.4
274891	CAYUG;2U E	13.4
275149	KEMPTON ;1E	20.48
290021	O50 E	18.57
290051	GSG-6; E	10.13
290108	LEEDK;1U E	23.57
293061	N-015 E	14.82
293516	O-009 E1	8.7
293517	O-009 E2	4.42
293518	O-009 E3	4.87
293644	O22 E1	9.26
293645	O22 E2	17.98
293715	O-029 E	9.4
293716	O-029 E	5.15
293717	O-029 E	4.74
293771	O-035 E	6.09
294392	P-010 E	18.82
294763	P-046 E	9.07
295109	WESTBROOK E	5.42
295111	SUBLETTE E	2.5
296125	R-030 C3	3.43
296128	R-030 E3	13.71
296271	R-030 C2	3.39
296272	R-030 E2	13.54
296308	R-030 C1	3.39
296309	R-030 E1	13.54
910541	X3-005 C	0.08
910542	X3-005 E	0.91
914641	Y2-103	43.82
915011	Y3-013 1	3.65

Bus #	Bus	MW Impact
915021	Y3-013 2	3.65
915031	Y3-013 3	3.65
916211	Z1-072 E	4.61
916221	Z1-073 E	5.23
916502	Z1-106 E1	1.23
916504	Z1-106 E2	1.23
916512	Z1-107 E	2.58
916522	Z1-108 E	2.42
917502	Z2-087 E	8.96
918052	AA1-018 E	16.81
919221	AA1-146	16.93
919581	AA2-030	16.93
920272	AA2-123 E	2.37
924471	AB2-096	41.11
925161	AB2-173	3.02
925302	AB2-191 E	1.34
925881	AC1-067 O1	301.08
926311	AC1-109 1	1.86
926321	AC1-109 2	1.86
926331	AC1-110 1	1.85
926341	AC1-110 2	1.85
926351	AC1-111 1	0.75
926361	AC1-111 2	0.75
926371	AC1-111 3	0.75
926381	AC1-111 4	0.75
926391	AC1-111 5	0.75
926401	AC1-111 6	0.75
926431	AC1-114	2.31
926821	AC1-168 C O1	1.1
926822	AC1-168 E O1	7.36
927091	AC1-204 1	70.09
927101	AC1-204 2	70.14
927201	AC1-214 C O1	1.95
927202	AC1-214 E O1	6.21
927451	AC1-142A 1	4.09
927461	AC1-142A 2	4.09
927511	AC1-113 1	1.15
927521	AC1-113 2	1.15
927531	AC1-185 1	0.66
927541	AC1-185 2	0.66
927551	AC1-185 3	0.66
927561	AC1-185 4	0.66
927571	AC1-185 5	0.66
927581	AC1-185 6	0.66
927591	AC1-185 7	0.66
927601	AC1-185 8	0.66
930481	AB1-089	63.73
930501	AB1-091 O1	82.27
930741	AB1-122 1O1	70.02
930751	AB1-122 2O1	70.99
932881	AC2-115 1	2.31
932891	AC2-115 2	2.31

Bus #	Bus	MW Impact
932921	AC2-116	0.81
932931	AC2-117	5.3
933341	AC2-147 C	0.84
933342	AC2-147 E	1.37
933411	AC2-154 C	2.78
933412	AC2-154 E	4.53
933431	AC2-156 C O1	0.93
933432	AC2-156 E O1	1.52
933911	AD1-013 C	1.78
933912	AD1-013 E	2.85
933931	AD1-016 C	0.9
933932	AD1-016 E	1.47
934101	AD1-039 1	6.86
934111	AD1-039 2	6.96
934401	AD1-064 C O1	3.11
934402	AD1-064 E O1	14.56
934431	AD1-067 C	0.13
934432	AD1-067 E	0.53
934651	AD1-096 C	0.86
934652	AD1-096 E	1.41
934701	AD1-098 C O1	6.66
934702	AD1-098 E O1	4.86
934721	AD1-100 C	19.54
934722	AD1-100 E	91.19
934871	AD1-116 C	0.98
934872	AD1-116 E	1.6
934881	AD1-117 C	5.18
934882	AD1-117 E	3.46
934971	AD1-129 C	0.88
934972	AD1-129 E	0.58
935001	AD1-133 C O1	20.3
935002	AD1-133 E O1	13.53
936291	AD2-038 C O1	2.33
936292	AD2-038 E O1	15.58
936371	AD2-047 C O1	2.49
936372	AD2-047 E O1	26.77
936461	AD2-060	2.93
936511	AD2-066 C O1	8.14
936512	AD2-066 E O1	5.43
936781	AD2-101 C	4.75
936782	AD2-101 E	22.22
936791	AD2-102 C	11.64
936792	AD2-102 E	11.19
936961	AD2-130	0.56
937001	AD2-134 C	2.65
937002	AD2-134 E	10.94
937031	AD2-137 C O1	3.67
937032	AD2-137 E O1	17.17
937051	AD2-140 C O1	3.72
937052	AD2-140 E O1	17.42
937061	AD2-141 C O1	3.7
937062	AD2-141 E O1	17.44

Bus #	Bus	MW Impact
937071	AD2-142 C O1	7.44
937072	AD2-142 E O1	34.83
937121	AD2-148 C O1	3.94
937122	AD2-148 E O1	18.43
937131	AD2-149 C O1	3.94
937132	AD2-149 E O1	18.43
937141	AD2-150 C O1	3.94
937142	AD2-150 E O1	18.43
937181	AD2-155 C O1	3.94
937182	AD2-155 E O1	18.43
937311	AD2-172 C	2.38
937312	AD2-172 E	3.29
937321	AD2-175 C	18.34
937322	AD2-175 E	12.23
937331	AD2-176 C O1	7.12
937332	AD2-176 E O1	4.75
937401	AD2-194 1	7.54
937411	AD2-194 2	7.54
937531	AD2-214 C	4.24
937532	AD2-214 E	1.99
938012	AE1-002 E O1	7.36
938511	AE1-070 1	8.86
938521	AE1-070 2	8.11
938851	AE1-113 C O1	8.4
938852	AE1-113 E O1	26.41
938861	AE1-114 C O1	3.47
938862	AE1-114 E O1	13.28
939051	AE1-134 1	1.32
939061	AE1-134 2	1.32
939321	AE1-163 C O1	5.85
939322	AE1-163 E O1	35.94
939351	AE1-166 C O1	10.23
939352	AE1-166 E O1	9.45
939401	AE1-172 C O1	6.18
939402	AE1-172 E O1	28.94
939691	AE1-199	2.32
939701	AE1-201 C	1.95
939702	AE1-201 E	0.43
939732	AE1-204 E	0.28
939741	AE1-205 C O1	8.57
939742	AE1-205 E O1	11.84
939861	AE1-222 1	77.33
939871	AE1-222 2	78.4
939921	AE1-228 C O1	9.74
939922	AE1-228 E O1	6.49
939961	AE1-233 C O1	2.26
939962	AE1-233 E O1	9.34
940101	AE1-252 C O1	10.54
940102	AE1-252 E O1	7.02
AB2-013	AB2-013	15.32
AE1-033	AE1-033	17.49
BLUEG	BLUEG	5.47

Bus #	Bus	MW Impact
CALDERWOOD	CALDERWOOD	0.06
CANNELTON	CANNELTON	0.08
CARR	CARR	0.73
CATAWBA	CATAWBA	0.27
CBM-S1	CBM-S1	1.44
CBM-W1	CBM-W1	23.88
CBM-W2	CBM-W2	51.81
CHEOAH	CHEOAH	0.06
CHILHOWEE	CHILHOWEE	0.02
DEARBORN	DEARBORN	2.93
ELMERSMITH	ELMERSMITH	0.08
G-007	G-007	2.03
GIBSON	GIBSON	0.04
HAMLET	HAMLET	1.05
MEC	MEC	36.09
O-066	O-066	6.84
RENSSELAER	RENSSELAER	0.58
SANTEETLA	SANTEETLA	0.02
TRIMBLE	TRIMBLE	0.65
WEC	WEC	7.74
Z1-043	Z1-043	27.27

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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
55224	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	COMED_P4_112- 65-BT3-4__	breaker	1399.0	107.48	108.5	DC	39.17

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	12.8
274654	BRAIDWOOD;1U	27.4
274655	BRAIDWOOD;2U	26.22
274660	LASCO STA;1U	25.04
274661	LASCO STA;2U	25.08
274675	JOLIET 29;7U	11.31
274676	JOLIET 29;8U	11.32
274687	WILL CNTY;4U	11.43
274704	KENDALL ;1C	4.02
274705	KENDALL ;1S	2.68
274706	KENDALL ;2C	4.02
274707	KENDALL ;2S	2.68
274722	S-055 E	11.98
274736	ELWOOD EC;9P	3.25
274832	U4-027	11.25
274859	EASYR;U1 E	11.58
274860	EASYR;U2 E	11.58
274861	TOP CROP ;1U	0.48
274862	TOP CROP ;2U	0.92
274888	PILOT HIL;1E	17.21
274890	CAYUG;1U E	13.68
274891	CAYUG;2U E	13.68
275149	KEMPTON ;1E	17.21
290021	O50 E	20.89
290051	GSG-6; E	11.0
290108	LEEDK;1U E	25.57
293061	N-015 E	16.52
293516	O-009 E1	9.49
293517	O-009 E2	4.82
293518	O-009 E3	5.31
293644	O22 E1	12.4
293645	O22 E2	24.06
293715	O-029 E	10.26
293716	O-029 E	5.62
293717	O-029 E	5.17
293771	O-035 E	6.63
294392	P-010 E	20.98
294763	P-046 E	9.89
295109	WESTBROOK E	5.89
295111	SUBLETTE E	2.72

Bus #	Bus	MW Impact
914641	Y2-103	47.9
915011	Y3-013 1	3.99
915021	Y3-013 2	3.99
915031	Y3-013 3	3.99
916211	Z1-072 E	5.02
916221	Z1-073 E	5.68
916502	Z1-106 E1	1.34
916504	Z1-106 E2	1.34
916512	Z1-107 E	2.57
916522	Z1-108 E	2.64
918052	AA1-018 E	16.28
919221	AA1-146	18.49
919581	AA2-030	18.49
920272	AA2-123 E	2.59
924471	AB2-096	44.79
925161	AB2-173	3.3
925302	AB2-191 E	1.46
925581	AC1-033 C	1.45
925582	AC1-033 E	9.74
926311	AC1-109 1	2.01
926321	AC1-109 2	2.01
926331	AC1-110 1	2.01
926341	AC1-110 2	2.01
926351	AC1-111 1	0.8
926361	AC1-111 2	0.8
926371	AC1-111 3	0.8
926381	AC1-111 4	0.8
926391	AC1-111 5	0.8
926401	AC1-111 6	0.8
926431	AC1-114	2.51
926821	AC1-168 C O1	1.2
926822	AC1-168 E O1	8.06
927091	AC1-204 1	78.74
927101	AC1-204 2	78.6
927201	AC1-214 C O1	2.13
927202	AC1-214 E O1	6.77
927451	AC1-142A 1	4.56
927461	AC1-142A 2	4.56
927511	AC1-113 1	1.26
927521	AC1-113 2	1.26
927531	AC1-185 1	0.72
927541	AC1-185 2	0.72
927551	AC1-185 3	0.72
927561	AC1-185 4	0.72
927571	AC1-185 5	0.72
927581	AC1-185 6	0.72
927591	AC1-185 7	0.72
927601	AC1-185 8	0.72
930481	AB1-089	69.46
930501	AB1-091 O1	67.8
930741	AB1-122 1O1	75.1
930751	AB1-122 2O1	80.29

Bus #	Bus	MW Impact
932881	AC2-115 1	2.51
932891	AC2-115 2	2.51
932921	AC2-116	0.88
933341	AC2-147 C	0.92
933342	AC2-147 E	1.5
933411	AC2-154 C	2.34
933412	AC2-154 E	3.81
933431	AC2-156 C O1	1.0
933432	AC2-156 E O1	1.64
933911	AD1-013 C	1.94
933912	AD1-013 E	3.09
933931	AD1-016 C	0.98
933932	AD1-016 E	1.6
934101	AD1-039 1	7.36
934111	AD1-039 2	7.87
934401	AD1-064 C O1	3.39
934402	AD1-064 E O1	15.86
934431	AD1-067 C	0.14
934432	AD1-067 E	0.58
934651	AD1-096 C	0.94
934652	AD1-096 E	1.53
934701	AD1-098 C O1	7.24
934702	AD1-098 E O1	5.29
934721	AD1-100 C	20.04
934722	AD1-100 E	93.51
934871	AD1-116 C	0.95
934872	AD1-116 E	1.55
934881	AD1-117 C	5.65
934882	AD1-117 E	3.77
934971	AD1-129 C	0.96
934972	AD1-129 E	0.64
935001	AD1-133 C O1	21.43
935002	AD1-133 E O1	14.28
936291	AD2-038 C O1	2.42
936292	AD2-038 E O1	16.17
936371	AD2-047 C O1	2.09
936372	AD2-047 E O1	22.5
936461	AD2-060	2.46
936511	AD2-066 C O1	8.76
936512	AD2-066 E O1	5.84
936781	AD2-101 C	3.99
936782	AD2-101 E	18.7
936791	AD2-102 C	12.7
936792	AD2-102 E	12.2
936961	AD2-130	0.6
937001	AD2-134 C	2.88
937002	AD2-134 E	11.88
937031	AD2-137 C O1	3.35
937032	AD2-137 E O1	15.69
937051	AD2-140 C O1	3.33
937052	AD2-140 E O1	15.61
937061	AD2-141 C O1	3.32

Bus #	Bus	MW Impact
937062	AD2-141 E O1	15.63
937071	AD2-142 C O1	6.67
937072	AD2-142 E O1	31.23
937121	AD2-148 C O1	3.26
937122	AD2-148 E O1	15.24
937131	AD2-149 C O1	3.26
937132	AD2-149 E O1	15.24
937141	AD2-150 C O1	3.26
937142	AD2-150 E O1	15.24
937181	AD2-155 C O1	3.26
937182	AD2-155 E O1	15.24
937311	AD2-172 C	2.6
937312	AD2-172 E	3.58
937321	AD2-175 C	15.17
937322	AD2-175 E	10.11
937331	AD2-176 C O1	7.76
937332	AD2-176 E O1	5.17
937401	AD2-194 1	8.47
937411	AD2-194 2	8.45
937531	AD2-214 C	4.62
937532	AD2-214 E	2.18
938012	AE1-002 E O1	6.73
938511	AE1-070 1	9.95
938521	AE1-070 2	9.09
938851	AE1-113 C O1	9.45
938852	AE1-113 E O1	29.72
938861	AE1-114 C O1	3.79
938862	AE1-114 E O1	14.48
939051	AE1-134 1	1.44
939061	AE1-134 2	1.44
939321	AE1-163 C O1	6.07
939322	AE1-163 E O1	37.3
939351	AE1-166 C O1	10.72
939352	AE1-166 E O1	9.89
939401	AE1-172 C O1	6.27
939402	AE1-172 E O1	29.37
939631	AE1-193 C O1	1.03
939632	AE1-193 E O1	6.92
939681	AE1-198 C O1	21.43
939682	AE1-198 E O1	18.21
939691	AE1-199	2.52
939701	AE1-201 C	2.12
939702	AE1-201 E	0.47
939732	AE1-204 E	0.31
939861	AE1-222 1	82.94
939871	AE1-222 2	88.67
939921	AE1-228 C O1	10.58
939922	AE1-228 E O1	7.05
939961	AE1-233 C O1	2.45
939962	AE1-233 E O1	10.13
940101	AE1-252 C O1	10.69
940102	AE1-252 E O1	7.13

Bus #	Bus	MW Impact
AB2-013	AB2-013	16.9
AE1-033	AE1-033	19.08
BLUEG	BLUEG	6.65
CALDERWOOD	CALDERWOOD	0.07
CANNELTON	CANNELTON	0.13
CARR	CARR	0.74
CATAWBA	CATAWBA	0.28
CBM-S1	CBM-S1	1.38
CBM-W1	CBM-W1	26.87
CBM-W2	CBM-W2	54.0
CHEOAH	CHEOAH	0.07
CHILHOWEE	CHILHOWEE	0.02
DEARBORN	DEARBORN	2.91
ELMERSMITH	ELMERSMITH	0.15
G-007	G-007	2.06
GIBSON	GIBSON	0.08
HAMLET	HAMLET	1.08
MEC	MEC	39.21
O-066	O-066	6.95
RENSSELAER	RENSSELAER	0.58
SANTEETLA	SANTEETLA	0.02
TRIMBLE	TRIMBLE	0.78
WEC	WEC	8.47
Z1-043	Z1-043	29.78

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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
55183	270736	ELWOOD ; B	CE	270770	GOODINGS ;4B	CE	1	COMED_P4_116-45-L11614_	breaker	1479.0	117.18	118.01	DC	26.97

Bus #	Bus	MW Impact
274728	ELWOOD EC;5P	7.55
274730	ELWOOD EC;6P	7.55
274732	ELWOOD EC;7P	7.55
274734	ELWOOD EC;8P	7.55
274735	ELWOOD EC;4P	7.5
274736	ELWOOD EC;9P	7.55
290021	O50 E	14.38
927091	AC1-204 1	183.09
927101	AC1-204 2	181.85
930741	AB1-122 1O1	81.03
930751	AB1-122 2O1	82.94
934101	AD1-039 1	7.94
934111	AD1-039 2	8.13
935001	AD1-133 C O1	17.5
935002	AD1-133 E O1	11.67
936511	AD2-066 C O1	5.22
936512	AD2-066 E O1	3.48
937401	AD2-194 1	19.69
937411	AD2-194 2	19.56
938511	AE1-070 1	23.13
938521	AE1-070 2	21.02
938851	AE1-113 C O1	6.51
938852	AE1-113 E O1	20.46
939861	AE1-222 1	89.48
939871	AE1-222 2	91.6
AB2-013	AB2-013	6.86
BLUEG	BLUEG	1.77
CANNELTON	CANNELTON	0.01
CARR	CARR	0.23
CATAWBA	CATAWBA	0.08
CBM-S1	CBM-S1	0.61
CBM-W1	CBM-W1	3.77
CBM-W2	CBM-W2	19.48
DEARBORN	DEARBORN	0.99
ELMERSMITH	ELMERSMITH	0.0
G-007	G-007	0.63
GIBSON	GIBSON	0.0
HAMLET	HAMLET	0.3
MEC	MEC	10.68
O-066	O-066	2.13
RENSELAER	RENSELAER	0.18

Bus #	Bus	MW Impact
SANTEETLA	SANTEETLA	0.0
TRIMBLE	TRIMBLE	0.21
WEC	WEC	1.05
Z1-043	Z1-043	10.56

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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
55143	270737	ELWOOD ;R	CE	270769	GOODINGS ;2R	CE	1	COMED_P4_116-45-L11613_	breaker	1479.0	119.79	120.76	DC	31.5

Bus #	Bus	MW Impact
274729	ELWOOD EC;1P	7.74
274731	ELWOOD EC;2P	7.74
274733	ELWOOD EC;3P	7.74
274734	ELWOOD EC;8P	7.69
274735	ELWOOD EC;4P	7.74
274736	ELWOOD EC;9P	7.69
290021	O50 E	16.8
927091	AC1-204 1	186.61
927101	AC1-204 2	187.71
930741	AB1-122 1O1	82.56
930751	AB1-122 2O1	94.81
934101	AD1-039 1	8.09
934111	AD1-039 2	9.29
935001	AD1-133 C O1	17.74
935002	AD1-133 E O1	11.83
936511	AD2-066 C O1	5.76
936512	AD2-066 E O1	3.84
937401	AD2-194 1	20.07
937411	AD2-194 2	20.19
938511	AE1-070 1	23.58
938521	AE1-070 2	21.7
938851	AE1-113 C O1	7.6
938852	AE1-113 E O1	23.9
939861	AE1-222 1	91.18
939871	AE1-222 2	104.7
AB2-013	AB2-013	8.04
AE1-033	AE1-033	4.94
BLUEG	BLUEG	2.06
CANNELTON	CANNELTON	0.02
CARR	CARR	0.26
CATAWBA	CATAWBA	0.08
CBM-S1	CBM-S1	0.75
CBM-W1	CBM-W1	6.29
CBM-W2	CBM-W2	22.71
DEARBORN	DEARBORN	1.13
ELMERSMITH	ELMERSMITH	0.01
G-007	G-007	0.72
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.33
MEC	MEC	13.49
O-066	O-066	2.42

Bus #	Bus	MW Impact
RENSELAER	RENSELAER	0.2
TRIMBLE	TRIMBLE	0.25
WEC	WEC	1.76
Z1-043	Z1-043	12.04

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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
55133	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-L11614_	breaker	1802.0	117.95	119.16	DC	48.1

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	7.96
274722	S-055 E	7.38
274728	ELWOOD EC;5P	4.75
274730	ELWOOD EC;6P	4.75
274732	ELWOOD EC;7P	4.75
274734	ELWOOD EC;8P	4.75
274735	ELWOOD EC;4P	4.72
274736	ELWOOD EC;9P	4.75
274832	U4-027	8.21
274859	EASYR;U1 E	7.73
274860	EASYR;U2 E	7.73
274861	TOP CROP ;1U	0.95
274862	TOP CROP ;2U	1.84
290021	O50 E	25.65
290051	GSG-6; E	6.67
293516	O-009 E1	6.67
293517	O-009 E2	3.39
293518	O-009 E3	3.73
293644	O22 E1	24.77
293645	O22 E2	48.08
293715	O-029 E	7.07
293716	O-029 E	3.88
293717	O-029 E	3.56
293771	O-035 E	4.74
294401	BSHIL;1U E	6.6
294410	BSHIL;2U E	6.6
294763	P-046 E	6.37
295109	WESTBROOK E	3.57
295111	SUBLETTE E	1.82
914641	Y2-103	29.53
915011	Y3-013 1	2.46
915021	Y3-013 2	2.46
915031	Y3-013 3	2.46
916211	Z1-072 E	3.58
916221	Z1-073 E	3.44
916502	Z1-106 E1	0.78
916504	Z1-106 E2	0.78
916522	Z1-108 E	1.6
918052	AA1-018 E	19.58
919221	AA1-146	12.7
919581	AA2-030	12.7

Bus #	Bus	MW Impact
919621	AA2-039 C	1.61
919622	AA2-039 E	10.77
920272	AA2-123 E	1.59
924471	AB2-096	27.85
925161	AB2-173	2.27
925302	AB2-191 E	0.88
925581	AC1-033 C	1.08
925582	AC1-033 E	7.24
926331	AC1-110 1	1.2
926341	AC1-110 2	1.2
926431	AC1-114	1.59
926841	AC1-171 C O1	0.79
926842	AC1-171 E O1	5.24
927091	AC1-204 1	115.11
927101	AC1-204 2	114.46
927201	AC1-214 C O1	1.52
927202	AC1-214 E O1	4.83
927451	AC1-142A 1	3.64
927461	AC1-142A 2	3.67
927511	AC1-113 1	0.79
927521	AC1-113 2	0.79
927531	AC1-185 1	0.48
927541	AC1-185 2	0.48
927551	AC1-185 3	0.48
927561	AC1-185 4	0.48
927571	AC1-185 5	0.48
927581	AC1-185 6	0.48
927591	AC1-185 7	0.48
927601	AC1-185 8	0.48
930481	AB1-089	43.91
930741	AB1-122 1O1	65.29
930751	AB1-122 2O1	95.35
932881	AC2-115 1	1.59
932891	AC2-115 2	1.59
932921	AC2-116	0.56
933341	AC2-147 C	0.61
933342	AC2-147 E	0.99
933911	AD1-013 C	1.17
933912	AD1-013 E	1.87
933931	AD1-016 C	0.61
933932	AD1-016 E	0.99
934051	AD1-031 C O1	2.2
934052	AD1-031 E O1	3.58
934101	AD1-039 1	6.4
934111	AD1-039 2	9.34
934401	AD1-064 C O1	2.11
934402	AD1-064 E O1	9.87
934431	AD1-067 C	0.08
934432	AD1-067 E	0.35
934651	AD1-096 C	0.6
934652	AD1-096 E	0.99
934701	AD1-098 C O1	4.41

Bus #	Bus	MW Impact
934702	AD1-098 E O1	3.22
934871	AD1-116 C	1.14
934872	AD1-116 E	1.86
934881	AD1-117 C	3.74
934882	AD1-117 E	2.49
934971	AD1-129 C	0.6
934972	AD1-129 E	0.4
935001	AD1-133 C O1	14.7
935002	AD1-133 E O1	9.8
936291	AD2-038 C O1	2.98
936292	AD2-038 E O1	19.92
936511	AD2-066 C O1	6.45
936512	AD2-066 E O1	4.3
936791	AD2-102 C	8.1
936792	AD2-102 E	7.78
937001	AD2-134 C	1.74
937002	AD2-134 E	7.2
937311	AD2-172 C	1.67
937312	AD2-172 E	2.31
937331	AD2-176 C O1	4.78
937332	AD2-176 E O1	3.18
937401	AD2-194 1	12.38
937411	AD2-194 2	12.31
937531	AD2-214 C	3.27
937532	AD2-214 E	1.54
938511	AE1-070 1	14.54
938521	AE1-070 2	13.23
938851	AE1-113 C O1	11.61
938852	AE1-113 E O1	36.49
938861	AE1-114 C O1	2.48
938862	AE1-114 E O1	9.49
939051	AE1-134 1	0.99
939061	AE1-134 2	0.99
939321	AE1-163 C O1	7.48
939322	AE1-163 E O1	45.95
939631	AE1-193 C O1	5.36
939632	AE1-193 E O1	35.9
939681	AE1-198 C O1	15.93
939682	AE1-198 E O1	13.53
939691	AE1-199	1.52
939701	AE1-201 C	1.31
939702	AE1-201 E	0.29
939732	AE1-204 E	0.19
939861	AE1-222 1	72.1
939871	AE1-222 2	105.3
939921	AE1-228 C O1	6.37
939922	AE1-228 E O1	4.25
990901	L-005 E	9.75
AB2-013	AB2-013	17.74
AE1-033	AE1-033	12.31
BLUEG	BLUEG	2.87
CANNELTON	CANNELTON	0.0

Bus #	Bus	MW Impact
CARR	CARR	0.36
CATAWBA	CATAWBA	0.06
CBM-S1	CBM-S1	2.13
CBM-W1	CBM-W1	18.07
CBM-W2	CBM-W2	45.91
DEARBORN	DEARBORN	1.82
G-007	G-007	0.99
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.28
MEC	MEC	29.52
O-066	O-066	3.34
RENSELAER	RENSELAER	0.28
TRIMBLE	TRIMBLE	0.35
WEC	WEC	5.37
Z1-043	Z1-043	19.7

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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
652814	270771	GREENACRE;	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	113.56	114.32	DC	24.35

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	8.06
274722	S-055 E	7.52
274751	CRETE EC ;1U	1.93
274752	CRETE EC ;2U	1.93
274753	CRETE EC ;3U	1.93
274754	CRETE EC ;4U	1.93
274832	U4-027	7.11
274859	EASYR;U1 E	7.3
274860	EASYR;U2 E	7.3
274888	PILOT HIL;1E	12.4
274890	CAYUG;1U E	8.92
274891	CAYUG;2U E	8.92
275149	KEMPTON ;1E	12.4
290021	O50 E	12.98
290051	GSG-6; E	6.94
290108	LEEDK;1U E	16.14
293061	N-015 E	10.24
293516	O-009 E1	5.99
293517	O-009 E2	3.04
293518	O-009 E3	3.35
293644	O22 E1	7.24
293645	O22 E2	14.06
293715	O-029 E	6.47
293716	O-029 E	3.55
293717	O-029 E	3.26
294392	P-010 E	13.0
294763	P-046 E	6.23
295109	WESTBROOK E	3.72
295111	SUBLETTE E	1.72
910542	X3-005 E	0.52
914641	Y2-103	30.09
915011	Y3-013 1	2.51
915021	Y3-013 2	2.51
915031	Y3-013 3	2.51
916221	Z1-073 E	3.58
916502	Z1-106 E1	0.84
916504	Z1-106 E2	0.84
916512	Z1-107 E	1.71
916522	Z1-108 E	1.66
918052	AA1-018 E	10.62
919221	AA1-146	11.67

Bus #	Bus	MW Impact
919581	AA2-030	11.67
920272	AA2-123 E	1.63
924471	AB2-096	28.21
925161	AB2-173	2.08
925302	AB2-191 E	0.92
925881	AC1-067 O1	102.57
926311	AC1-109 1	1.27
926321	AC1-109 2	1.27
926331	AC1-110 1	1.27
926341	AC1-110 2	1.27
926351	AC1-111 1	0.51
926361	AC1-111 2	0.51
926371	AC1-111 3	0.51
926381	AC1-111 4	0.51
926391	AC1-111 5	0.51
926401	AC1-111 6	0.51
926431	AC1-114	1.58
926821	AC1-168 C O1	0.76
926822	AC1-168 E O1	5.08
927091	AC1-204 1	48.76
927101	AC1-204 2	48.73
927201	AC1-214 C O1	0.74
927202	AC1-214 E O1	2.34
927451	AC1-142A 1	2.83
927461	AC1-142A 2	2.83
927511	AC1-113 1	0.79
927521	AC1-113 2	0.79
927531	AC1-185 1	0.46
927541	AC1-185 2	0.46
927551	AC1-185 3	0.46
927561	AC1-185 4	0.46
927571	AC1-185 5	0.46
927581	AC1-185 6	0.46
927591	AC1-185 7	0.46
927601	AC1-185 8	0.46
930481	AB1-089	43.76
930501	AB1-091 O1	49.15
930741	AB1-122 1O1	47.58
930751	AB1-122 2O1	49.75
932881	AC2-115 1	1.58
932891	AC2-115 2	1.58
932921	AC2-116	0.55
933341	AC2-147 C	0.58
933342	AC2-147 E	0.94
933411	AC2-154 C	1.68
933412	AC2-154 E	2.75
933431	AC2-156 C O1	0.64
933432	AC2-156 E O1	1.04
933911	AD1-013 C	1.22
933912	AD1-013 E	1.95
933931	AD1-016 C	0.62
933932	AD1-016 E	1.01

Bus #	Bus	MW Impact
934101	AD1-039 1	4.66
934111	AD1-039 2	4.88
934401	AD1-064 C O1	2.13
934402	AD1-064 E O1	9.99
934431	AD1-067 C	0.09
934432	AD1-067 E	0.37
934651	AD1-096 C	0.59
934652	AD1-096 E	0.97
934701	AD1-098 C O1	4.57
934702	AD1-098 E O1	3.34
934721	AD1-100 C	12.94
934722	AD1-100 E	60.39
934871	AD1-116 C	0.62
934872	AD1-116 E	1.01
934881	AD1-117 C	3.57
934882	AD1-117 E	2.38
934971	AD1-129 C	0.6
934972	AD1-129 E	0.4
935001	AD1-133 C O1	13.73
935002	AD1-133 E O1	9.15
936291	AD2-038 C O1	1.54
936292	AD2-038 E O1	10.32
936371	AD2-047 C O1	1.51
936372	AD2-047 E O1	16.21
936461	AD2-060	1.77
936511	AD2-066 C O1	5.56
936512	AD2-066 E O1	3.71
936781	AD2-101 C	3.17
936782	AD2-101 E	14.84
936791	AD2-102 C	8.0
936792	AD2-102 E	7.69
936961	AD2-130	0.38
937001	AD2-134 C	1.82
937002	AD2-134 E	7.5
937031	AD2-137 C O1	2.31
937032	AD2-137 E O1	10.8
937051	AD2-140 C O1	2.32
937052	AD2-140 E O1	10.87
937061	AD2-141 C O1	2.31
937062	AD2-141 E O1	10.88
937071	AD2-142 C O1	4.64
937072	AD2-142 E O1	21.73
937121	AD2-148 C O1	2.36
937122	AD2-148 E O1	11.04
937131	AD2-149 C O1	2.36
937132	AD2-149 E O1	11.04
937141	AD2-150 C O1	2.36
937142	AD2-150 E O1	11.04
937181	AD2-155 C O1	2.36
937182	AD2-155 E O1	11.04
937311	AD2-172 C	1.64
937312	AD2-172 E	2.26

Bus #	Bus	MW Impact
937321	AD2-175 C	10.99
937322	AD2-175 E	7.33
937331	AD2-176 C O1	4.89
937332	AD2-176 E O1	3.26
937401	AD2-194 1	5.24
937411	AD2-194 2	5.24
937531	AD2-214 C	2.92
937532	AD2-214 E	1.37
938012	AE1-002 E O1	4.63
938511	AE1-070 1	6.16
938521	AE1-070 2	5.63
938851	AE1-113 C O1	5.88
938852	AE1-113 E O1	18.47
938861	AE1-114 C O1	2.39
938862	AE1-114 E O1	9.13
939051	AE1-134 1	0.91
939061	AE1-134 2	0.91
939321	AE1-163 C O1	3.87
939322	AE1-163 E O1	23.79
939351	AE1-166 C O1	6.84
939352	AE1-166 E O1	6.31
939401	AE1-172 C O1	4.1
939402	AE1-172 E O1	19.18
939641	AE1-194 C	10.88
939642	AE1-194 E	72.84
939651	AE1-195 C	10.88
939652	AE1-195 E	72.84
939691	AE1-199	1.59
939701	AE1-201 C	1.34
939702	AE1-201 E	0.29
939732	AE1-204 E	0.2
939861	AE1-222 1	52.55
939871	AE1-222 2	54.95
939921	AE1-228 C O1	6.68
939922	AE1-228 E O1	4.45
939961	AE1-233 C O1	1.55
939962	AE1-233 E O1	6.39
940101	AE1-252 C O1	6.98
940102	AE1-252 E O1	4.65
951721	J643	15.51
952581	J740 C	3.4
952582	J740 E	18.42
953871	J847	8.38
AB2-013	AB2-013	10.64
AE1-033	AE1-033	12.03
BLUEG	BLUEG	2.86
CANNELTON	CANNELTON	0.0
CARR	CARR	0.5
CATAWBA	CATAWBA	0.16
CBM-S1	CBM-S1	1.36
CBM-W1	CBM-W1	19.98
CBM-W2	CBM-W2	38.44

Bus #	Bus	MW Impact
CIN	CIN	0.12
DEARBORN	DEARBORN	2.29
G-007	G-007	1.38
HAMLET	HAMLET	0.65
MEC	MEC	25.05
O-066	O-066	4.65
RENSELAER	RENSELAER	0.39
SANTEETLA	SANTEETLA	0.0
TRIMBLE	TRIMBLE	0.34
WEC	WEC	5.32
Z1-043	Z1-043	18.82

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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
55068	270886	ST JOHN ; T	CE	255104	17GREEN_ACRE	NIPS	1	COMED_P4_023-65-BT2-3__	breaker	1091.0	108.54	109.41	DC	27.47

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	9.04
274654	BRAIDWOOD;1U	19.05
274655	BRAIDWOOD;2U	18.24
274661	LASCO STA;2U	17.6
274687	WILL CNTY;4U	8.03
274704	KENDALL ;1C	2.81
274705	KENDALL ;1S	1.88
274706	KENDALL ;2C	2.81
274707	KENDALL ;2S	1.88
274722	S-055 E	8.45
274751	CRETE EC ;1U	3.36
274752	CRETE EC ;2U	3.36
274753	CRETE EC ;3U	3.36
274754	CRETE EC ;4U	3.36
274859	EASYR;U1 E	8.17
274860	EASYR;U2 E	8.17
274861	TOP CROP ;1U	0.33
274862	TOP CROP ;2U	0.63
274888	PILOT HIL;1E	12.81
274890	CAYUG;1U E	9.74
274891	CAYUG;2U E	9.74
275149	KEMPTON ;1E	12.81
290021	O50 E	14.65
290051	GSG-6; E	7.78
290108	LEEDK;1U E	18.09
293061	N-015 E	11.61
293516	O-009 E1	6.69
293517	O-009 E2	3.4
293518	O-009 E3	3.74
293644	O22 E1	8.5
293645	O22 E2	16.51
293715	O-029 E	7.24
293716	O-029 E	3.97
293717	O-029 E	3.65
294392	P-010 E	14.75
294763	P-046 E	6.98
295109	WESTBROOK E	4.16
295111	SUBLETTE E	1.92
914641	Y2-103	33.8
915011	Y3-013 1	2.82

Bus #	Bus	MW Impact
915021	Y3-013 2	2.82
915031	Y3-013 3	2.82
916221	Z1-073 E	4.01
916502	Z1-106 E1	0.94
916504	Z1-106 E2	0.94
916512	Z1-107 E	1.85
916522	Z1-108 E	1.86
918052	AA1-018 E	11.64
919221	AA1-146	13.04
919581	AA2-030	13.04
920272	AA2-123 E	1.83
924471	AB2-096	31.63
925161	AB2-173	2.33
925302	AB2-191 E	1.03
926311	AC1-109 1	1.42
926321	AC1-109 2	1.42
926331	AC1-110 1	1.42
926341	AC1-110 2	1.42
926351	AC1-111 1	0.57
926361	AC1-111 2	0.57
926371	AC1-111 3	0.57
926381	AC1-111 4	0.57
926391	AC1-111 5	0.57
926401	AC1-111 6	0.57
926431	AC1-114	1.77
926821	AC1-168 C O1	0.85
926822	AC1-168 E O1	5.68
927091	AC1-204 1	55.19
927101	AC1-204 2	55.12
927451	AC1-142A 1	3.2
927461	AC1-142A 2	3.2
927511	AC1-113 1	0.89
927521	AC1-113 2	0.89
927531	AC1-185 1	0.51
927541	AC1-185 2	0.51
927551	AC1-185 3	0.51
927561	AC1-185 4	0.51
927571	AC1-185 5	0.51
927581	AC1-185 6	0.51
927591	AC1-185 7	0.51
927601	AC1-185 8	0.51
930481	AB1-089	49.05
930501	AB1-091 O1	50.61
930741	AB1-122 1O1	52.99
930751	AB1-122 2O1	56.33
932881	AC2-115 1	1.77
932891	AC2-115 2	1.77
932921	AC2-116	0.62
933341	AC2-147 C	0.65
933342	AC2-147 E	1.06
933411	AC2-154 C	1.74
933412	AC2-154 E	2.84

Bus #	Bus	MW Impact
933431	AC2-156 C O1	0.71
933432	AC2-156 E O1	1.16
933911	AD1-013 C	1.37
933912	AD1-013 E	2.19
933931	AD1-016 C	0.69
933932	AD1-016 E	1.13
934101	AD1-039 1	5.19
934111	AD1-039 2	5.52
934401	AD1-064 C O1	2.39
934402	AD1-064 E O1	11.2
934431	AD1-067 C	0.1
934432	AD1-067 E	0.41
934651	AD1-096 C	0.66
934652	AD1-096 E	1.08
934701	AD1-098 C O1	5.12
934702	AD1-098 E O1	3.74
934721	AD1-100 C	14.27
934722	AD1-100 E	66.6
934871	AD1-116 C	0.68
934872	AD1-116 E	1.11
934881	AD1-117 C	3.99
934882	AD1-117 E	2.66
934971	AD1-129 C	0.67
934972	AD1-129 E	0.45
935001	AD1-133 C O1	15.16
935002	AD1-133 E O1	10.11
936291	AD2-038 C O1	1.71
936292	AD2-038 E O1	11.45
936371	AD2-047 C O1	1.56
936372	AD2-047 E O1	16.75
936461	AD2-060	1.83
936511	AD2-066 C O1	6.19
936512	AD2-066 E O1	4.13
936781	AD2-101 C	3.09
936782	AD2-101 E	14.46
936791	AD2-102 C	8.96
936792	AD2-102 E	8.61
936961	AD2-130	0.42
937001	AD2-134 C	2.03
937002	AD2-134 E	8.4
937031	AD2-137 C O1	2.44
937032	AD2-137 E O1	11.43
937051	AD2-140 C O1	2.44
937052	AD2-140 E O1	11.42
937061	AD2-141 C O1	2.43
937062	AD2-141 E O1	11.44
937071	AD2-142 C O1	4.88
937072	AD2-142 E O1	22.85
937121	AD2-148 C O1	2.43
937122	AD2-148 E O1	11.37
937131	AD2-149 C O1	2.43
937132	AD2-149 E O1	11.37

Bus #	Bus	MW Impact
937141	AD2-150 C O1	2.43
937142	AD2-150 E O1	11.37
937181	AD2-155 C O1	2.43
937182	AD2-155 E O1	11.37
937311	AD2-172 C	1.83
937312	AD2-172 E	2.53
937321	AD2-175 C	11.32
937322	AD2-175 E	7.55
937331	AD2-176 C O1	5.48
937332	AD2-176 E O1	3.65
937401	AD2-194 1	5.94
937411	AD2-194 2	5.93
937531	AD2-214 C	0.8
937532	AD2-214 E	0.38
938012	AE1-002 E O1	4.9
938511	AE1-070 1	6.97
938521	AE1-070 2	6.37
938851	AE1-113 C O1	6.63
938852	AE1-113 E O1	20.84
938861	AE1-114 C O1	2.67
938862	AE1-114 E O1	10.22
939051	AE1-134 1	1.01
939061	AE1-134 2	1.01
939321	AE1-163 C O1	4.3
939322	AE1-163 E O1	26.41
939351	AE1-166 C O1	7.6
939352	AE1-166 E O1	7.02
939401	AE1-172 C O1	4.47
939402	AE1-172 E O1	20.95
939641	AE1-194 C	18.96
939642	AE1-194 E	126.86
939651	AE1-195 C	18.96
939652	AE1-195 E	126.86
939691	AE1-199	1.78
939701	AE1-201 C	1.5
939702	AE1-201 E	0.33
939732	AE1-204 E	0.22
939861	AE1-222 1	58.52
939871	AE1-222 2	62.2
939921	AE1-228 C O1	7.48
939922	AE1-228 E O1	4.99
939961	AE1-233 C O1	1.73
939962	AE1-233 E O1	7.16
940101	AE1-252 C O1	7.63
940102	AE1-252 E O1	5.08
AB2-013	AB2-013	11.87
AE1-033	AE1-033	13.47
BLUEG	BLUEG	5.05
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.11
CARR	CARR	0.56
CATAWBA	CATAWBA	0.23

Bus #	Bus	MW Impact
CBM-S1	CBM-S1	0.77
CBM-W1	CBM-W1	20.04
CBM-W2	CBM-W2	37.14
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.24
ELMERSMITH	ELMERSMITH	0.14
G-007	G-007	1.57
GIBSON	GIBSON	0.06
HAMLET	HAMLET	0.87
MEC	MEC	27.58
O-066	O-066	5.3
RENSELAER	RENSELAER	0.45
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.59
WEC	WEC	5.97
Z1-043	Z1-043	20.98

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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
54928	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	164.37	164.9	DC	44.53

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	14.81
274722	S-055 E	13.75
274772	LINCOLN ;3U	3.36
274773	LINCOLN ;4U	3.36
274774	LINCOLN ;5U	3.36
274775	LINCOLN ;6U	3.36
274776	LINCOLN ;7U	3.36
274777	LINCOLN ;8U	3.36
274859	EASYR;U1 E	13.46
274860	EASYR;U2 E	13.46
274888	PILOT HIL;1E	23.62
274890	CAYUG;1U E	20.25
274891	CAYUG;2U E	20.25
275149	KEMPTON ;1E	23.62
290021	O50 E	23.75
290051	GSG-6; E	12.8
290108	LEEDK;1U E	29.74
293061	N-015 E	19.44
293516	O-009 E1	1.0
293517	O-009 E2	0.51
293518	O-009 E3	0.56
293644	O22 E1	12.55
293645	O22 E2	24.37
293715	O-029 E	11.98
293716	O-029 E	6.57
293717	O-029 E	6.04
294392	P-010 E	24.69
294763	P-046 E	11.48
295109	WESTBROOK E	6.85
295111	SUBLETTE E	3.18
296125	R-030 C3	4.98
296128	R-030 E3	19.93
296271	R-030 C2	4.92
296272	R-030 E2	19.7
296308	R-030 C1	4.92
296309	R-030 E1	19.7
910542	X3-005 E	0.9
914641	Y2-103	55.02
915011	Y3-013 1	4.58
915021	Y3-013 2	4.58
915031	Y3-013 3	4.58

Bus #	Bus	MW Impact
916221	Z1-073 E	6.61
916502	Z1-106 E1	1.55
916504	Z1-106 E2	1.55
916512	Z1-107 E	3.17
916522	Z1-108 E	3.04
917502	Z2-087 E	25.76
918052	AA1-018 E	20.13
919221	AA1-146	21.54
919581	AA2-030	21.54
920272	AA2-123 E	2.99
924041	AB2-047 C O1	4.75
924042	AB2-047 E O1	31.79
924471	AB2-096	51.84
925161	AB2-173	3.84
925302	AB2-191 E	1.7
925881	AC1-067 O1	168.51
926311	AC1-109 1	2.34
926321	AC1-109 2	2.34
926331	AC1-110 1	2.33
926341	AC1-110 2	2.33
926351	AC1-111 1	0.94
926361	AC1-111 2	0.94
926371	AC1-111 3	0.94
926381	AC1-111 4	0.94
926391	AC1-111 5	0.94
926401	AC1-111 6	0.94
926431	AC1-114	2.91
926821	AC1-168 C O1	1.43
926822	AC1-168 E O1	9.59
927091	AC1-204 1	88.93
927101	AC1-204 2	88.93
927451	AC1-142A 1	5.12
927461	AC1-142A 2	5.12
927511	AC1-113 1	1.46
927521	AC1-113 2	1.46
927531	AC1-185 1	0.84
927541	AC1-185 2	0.84
927551	AC1-185 3	0.84
927561	AC1-185 4	0.84
927571	AC1-185 5	0.84
927581	AC1-185 6	0.84
927591	AC1-185 7	0.84
927601	AC1-185 8	0.84
930481	AB1-089	80.5
930501	AB1-091 O1	93.97
930741	AB1-122 1O1	89.35
930751	AB1-122 2O1	90.31
932881	AC2-115 1	2.91
932891	AC2-115 2	2.91
932921	AC2-116	1.02
932931	AC2-117	6.52
933341	AC2-147 C	1.07

Bus #	Bus	MW Impact
933342	AC2-147 E	1.74
933411	AC2-154 C	3.21
933412	AC2-154 E	5.23
933431	AC2-156 C O1	1.17
933432	AC2-156 E O1	1.91
933911	AD1-013 C	2.25
933912	AD1-013 E	3.6
933931	AD1-016 C	1.14
933932	AD1-016 E	1.85
934101	AD1-039 1	8.76
934111	AD1-039 2	8.85
934401	AD1-064 C O1	3.92
934402	AD1-064 E O1	18.37
934431	AD1-067 C	0.16
934432	AD1-067 E	0.68
934651	AD1-096 C	1.09
934652	AD1-096 E	1.78
934701	AD1-098 C O1	8.43
934702	AD1-098 E O1	6.15
934721	AD1-100 C	29.44
934722	AD1-100 E	137.37
934871	AD1-116 C	1.17
934872	AD1-116 E	1.91
934881	AD1-117 C	6.58
934882	AD1-117 E	4.39
934971	AD1-129 C	1.11
934972	AD1-129 E	0.74
935001	AD1-133 C O1	27.42
935002	AD1-133 E O1	18.28
936291	AD2-038 C O1	2.88
936292	AD2-038 E O1	19.29
936371	AD2-047 C O1	2.87
936372	AD2-047 E O1	30.87
936461	AD2-060	3.37
936511	AD2-066 C O1	10.36
936512	AD2-066 E O1	6.91
936781	AD2-101 C	5.83
936782	AD2-101 E	27.31
936791	AD2-102 C	14.71
936792	AD2-102 E	14.14
936961	AD2-130	0.69
937001	AD2-134 C	3.35
937002	AD2-134 E	13.82
937031	AD2-137 C O1	7.17
937032	AD2-137 E O1	33.59
937051	AD2-140 C O1	7.53
937052	AD2-140 E O1	35.28
937061	AD2-141 C O1	7.49
937062	AD2-141 E O1	35.32
937071	AD2-142 C O1	15.07
937072	AD2-142 E O1	70.55
937121	AD2-148 C O1	4.51

Bus #	Bus	MW Impact
937122	AD2-148 E O1	21.13
937131	AD2-149 C O1	4.51
937132	AD2-149 E O1	21.13
937141	AD2-150 C O1	4.51
937142	AD2-150 E O1	21.13
937181	AD2-155 C O1	4.51
937182	AD2-155 E O1	21.13
937311	AD2-172 C	3.01
937312	AD2-172 E	4.16
937321	AD2-175 C	21.03
937322	AD2-175 E	14.02
937331	AD2-176 C O1	8.97
937332	AD2-176 E O1	5.98
937401	AD2-194 1	9.56
937411	AD2-194 2	9.56
938012	AE1-002 E O1	14.4
938511	AE1-070 1	11.24
938521	AE1-070 2	10.28
938851	AE1-113 C O1	10.75
938852	AE1-113 E O1	33.78
938861	AE1-114 C O1	4.4
938862	AE1-114 E O1	16.84
939051	AE1-134 1	1.67
939061	AE1-134 2	1.67
939321	AE1-163 C O1	7.24
939322	AE1-163 E O1	44.49
939351	AE1-166 C O1	14.52
939352	AE1-166 E O1	13.41
939401	AE1-172 C O1	9.52
939402	AE1-172 E O1	44.57
939691	AE1-199	2.93
939701	AE1-201 C	2.45
939702	AE1-201 E	0.54
939732	AE1-204 E	0.36
939741	AE1-205 C O1	12.48
939742	AE1-205 E O1	17.23
939861	AE1-222 1	98.68
939871	AE1-222 2	99.73
939921	AE1-228 C O1	12.31
939922	AE1-228 E O1	8.21
939961	AE1-233 C O1	2.85
939962	AE1-233 E O1	11.77
940101	AE1-252 C O1	16.23
940102	AE1-252 E O1	10.82
AB2-013	AB2-013	19.85
AE1-033	AE1-033	22.1
BLUEG	BLUEG	7.86
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.09
CARR	CARR	0.96
CATAWBA	CATAWBA	0.38
CBM-S1	CBM-S1	1.85

Bus #	Bus	MW Impact
CBM-W1	CBM-W1	37.32
CBM-W2	CBM-W2	71.02
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.9
ELMERSMITH	ELMERSMITH	0.07
G-007	G-007	2.69
GIBSON	GIBSON	0.0
HAMLET	HAMLET	1.46
MEC	MEC	46.58
O-066	O-066	9.06
RENSELAER	RENSELAER	0.76
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.94
WEC	WEC	9.75
Z1-043	Z1-043	35.51

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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
54930	270927	WILTON	CE	275233	WILTON	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	161.42	162.2	DC	45.48

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	15.13
274722	S-055 E	14.05
274772	LINCOLN ;3U	3.45
274773	LINCOLN ;4U	3.45
274774	LINCOLN ;5U	3.45
274775	LINCOLN ;6U	3.45
274776	LINCOLN ;7U	3.45
274777	LINCOLN ;8U	3.45
274832	U4-027	6.82
274859	EASYR;U1 E	13.75
274860	EASYR;U2 E	13.75
274888	PILOT HIL;1E	24.11
274890	CAYUG;1U E	20.66
274891	CAYUG;2U E	20.66
275149	KEMPTON ;1E	24.11
290021	O50 E	24.25
290051	GSG-6; E	13.07
290108	LEEDK;1U E	30.37
293061	N-015 E	19.85
293516	O-009 E1	11.37
293517	O-009 E2	5.78
293518	O-009 E3	6.36
293644	O22 E1	12.82
293645	O22 E2	24.89
293715	O-029 E	12.24
293716	O-029 E	6.71
293717	O-029 E	6.17
293771	O-035 E	8.08
294392	P-010 E	25.21
294763	P-046 E	11.72
295109	WESTBROOK E	7.0
295111	SUBLETTE E	3.24
296125	R-030 C3	5.08
296128	R-030 E3	20.34
296271	R-030 C2	5.02
296272	R-030 E2	20.09
296308	R-030 C1	5.02
296309	R-030 E1	20.09
910542	X3-005 E	0.91
914641	Y2-103	56.19
915011	Y3-013 1	4.68

Bus #	Bus	MW Impact
915021	Y3-013 2	4.68
915031	Y3-013 3	4.68
916211	Z1-072 E	6.11
916221	Z1-073 E	6.75
916502	Z1-106 E1	1.58
916504	Z1-106 E2	1.58
916512	Z1-107 E	3.23
916522	Z1-108 E	3.11
917502	Z2-087 E	26.28
918052	AA1-018 E	20.57
919221	AA1-146	22.0
919581	AA2-030	22.0
920272	AA2-123 E	3.06
924041	AB2-047 C O1	4.85
924042	AB2-047 E O1	32.43
924471	AB2-096	52.94
925161	AB2-173	3.92
925302	AB2-191 E	1.73
925881	AC1-067 O1	172.23
926311	AC1-109 1	2.39
926321	AC1-109 2	2.39
926331	AC1-110 1	2.37
926341	AC1-110 2	2.37
926351	AC1-111 1	0.96
926361	AC1-111 2	0.96
926371	AC1-111 3	0.96
926381	AC1-111 4	0.96
926391	AC1-111 5	0.96
926401	AC1-111 6	0.96
926431	AC1-114	2.97
926821	AC1-168 C O1	1.46
926822	AC1-168 E O1	9.79
927091	AC1-204 1	90.83
927101	AC1-204 2	90.83
927201	AC1-214 C O1	2.59
927202	AC1-214 E O1	8.24
927451	AC1-142A 1	5.23
927461	AC1-142A 2	5.23
927511	AC1-113 1	1.49
927521	AC1-113 2	1.49
927531	AC1-185 1	0.86
927541	AC1-185 2	0.86
927551	AC1-185 3	0.86
927561	AC1-185 4	0.86
927571	AC1-185 5	0.86
927581	AC1-185 6	0.86
927591	AC1-185 7	0.86
927601	AC1-185 8	0.86
930481	AB1-089	82.21
930501	AB1-091 O1	95.92
930741	AB1-122 1O1	91.25
930751	AB1-122 2O1	92.24

Bus #	Bus	MW Impact
932881	AC2-115 1	2.97
932891	AC2-115 2	2.97
932921	AC2-116	1.04
932931	AC2-117	6.67
933341	AC2-147 C	1.09
933342	AC2-147 E	1.78
933411	AC2-154 C	3.27
933412	AC2-154 E	5.34
933431	AC2-156 C O1	1.2
933432	AC2-156 E O1	1.95
933911	AD1-013 C	2.3
933912	AD1-013 E	3.68
933931	AD1-016 C	1.16
933932	AD1-016 E	1.89
934101	AD1-039 1	8.94
934111	AD1-039 2	9.04
934401	AD1-064 C O1	4.01
934402	AD1-064 E O1	18.76
934431	AD1-067 C	0.16
934432	AD1-067 E	0.69
934651	AD1-096 C	1.11
934652	AD1-096 E	1.82
934701	AD1-098 C O1	8.6
934702	AD1-098 E O1	6.28
934721	AD1-100 C	30.02
934722	AD1-100 E	140.09
934871	AD1-116 C	1.2
934872	AD1-116 E	1.95
934881	AD1-117 C	6.72
934882	AD1-117 E	4.48
934971	AD1-129 C	1.13
934972	AD1-129 E	0.75
935001	AD1-133 C O1	27.99
935002	AD1-133 E O1	18.66
936291	AD2-038 C O1	2.94
936292	AD2-038 E O1	19.7
936371	AD2-047 C O1	2.93
936372	AD2-047 E O1	31.51
936461	AD2-060	3.44
936511	AD2-066 C O1	10.58
936512	AD2-066 E O1	7.05
936781	AD2-101 C	5.95
936782	AD2-101 E	27.88
936791	AD2-102 C	15.03
936792	AD2-102 E	14.44
936961	AD2-130	0.7
937001	AD2-134 C	3.42
937002	AD2-134 E	14.12
937031	AD2-137 C O1	7.31
937032	AD2-137 E O1	34.21
937051	AD2-140 C O1	7.67
937052	AD2-140 E O1	35.93

Bus #	Bus	MW Impact
937061	AD2-141 C O1	7.63
937062	AD2-141 E O1	35.97
937071	AD2-142 C O1	15.35
937072	AD2-142 E O1	71.86
937121	AD2-148 C O1	4.61
937122	AD2-148 E O1	21.57
937131	AD2-149 C O1	4.61
937132	AD2-149 E O1	21.57
937141	AD2-150 C O1	4.61
937142	AD2-150 E O1	21.57
937181	AD2-155 C O1	4.61
937182	AD2-155 E O1	21.57
937311	AD2-172 C	3.08
937312	AD2-172 E	4.25
937321	AD2-175 C	21.46
937322	AD2-175 E	14.31
937331	AD2-176 C O1	9.17
937332	AD2-176 E O1	6.11
937401	AD2-194 1	9.77
937411	AD2-194 2	9.77
938012	AE1-002 E O1	14.67
938511	AE1-070 1	11.48
938521	AE1-070 2	10.5
938851	AE1-113 C O1	10.98
938852	AE1-113 E O1	34.5
938861	AE1-114 C O1	4.5
938862	AE1-114 E O1	17.19
939051	AE1-134 1	1.71
939061	AE1-134 2	1.71
939321	AE1-163 C O1	7.4
939322	AE1-163 E O1	45.45
939351	AE1-166 C O1	14.82
939352	AE1-166 E O1	13.68
939401	AE1-172 C O1	9.71
939402	AE1-172 E O1	45.45
939691	AE1-199	2.99
939701	AE1-201 C	2.51
939702	AE1-201 E	0.55
939732	AE1-204 E	0.37
939741	AE1-205 C O1	12.73
939742	AE1-205 E O1	17.58
939861	AE1-222 1	100.77
939871	AE1-222 2	101.86
939921	AE1-228 C O1	12.57
939922	AE1-228 E O1	8.38
939961	AE1-233 C O1	2.91
939962	AE1-233 E O1	12.02
940101	AE1-252 C O1	16.55
940102	AE1-252 E O1	11.03
AB2-013	AB2-013	20.27
AE1-033	AE1-033	22.58
BLUEG	BLUEG	8.03

Bus #	Bus	MW Impact
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.09
CARR	CARR	0.98
CATAWBA	CATAWBA	0.39
CBM-S1	CBM-S1	1.88
CBM-W1	CBM-W1	38.11
CBM-W2	CBM-W2	72.48
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.96
ELMERSMITH	ELMERSMITH	0.07
G-007	G-007	2.75
GIBSON	GIBSON	0.0
HAMLET	HAMLET	1.49
MEC	MEC	47.56
O-066	O-066	9.26
RENSSELAER	RENSSELAER	0.77
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.96
WEC	WEC	9.96
Z1-043	Z1-043	36.25

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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
54960	274750	CRETE EC;BP	CE	255112	17STJOHN	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1399.0	120.88	122.0	DC	38.51

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	12.57
274654	BRAIDWOOD;1U	26.97
274655	BRAIDWOOD;2U	25.8
274661	LASCO STA;2U	24.66
274687	WILL CNTY;4U	11.24
274704	KENDALL ;1C	3.96
274705	KENDALL ;1S	2.64
274706	KENDALL ;2C	3.96
274707	KENDALL ;2S	2.64
274722	S-055 E	11.77
274751	CRETE EC ;1U	5.74
274752	CRETE EC ;2U	5.74
274753	CRETE EC ;3U	5.74
274754	CRETE EC ;4U	5.74
274859	EASYR;U1 E	11.37
274860	EASYR;U2 E	11.37
274861	TOP CROP ;1U	0.47
274862	TOP CROP ;2U	0.91
274888	PILOT HIL;1E	16.88
274890	CAYUG;1U E	13.45
274891	CAYUG;2U E	13.45
275149	KEMPTON ;1E	16.88
290021	O50 E	20.54
290051	GSG-6; E	10.8
290108	LEEDK;1U E	25.11
293061	N-015 E	16.24
293516	O-009 E1	9.32
293517	O-009 E2	4.73
293518	O-009 E3	5.21
293644	O22 E1	12.21
293645	O22 E2	23.71
293715	O-029 E	10.07
293716	O-029 E	5.52
293717	O-029 E	5.08
294392	P-010 E	20.62
294763	P-046 E	9.71
295109	WESTBROOK E	5.78
295111	SUBLETTE E	2.68
914641	Y2-103	47.06
915011	Y3-013 1	3.92
915021	Y3-013 2	3.92

Bus #	Bus	MW Impact
915031	Y3-013 3	3.92
916221	Z1-073 E	5.57
916502	Z1-106 E1	1.31
916504	Z1-106 E2	1.31
916512	Z1-107 E	2.52
916522	Z1-108 E	2.59
918052	AA1-018 E	15.99
919221	AA1-146	18.16
919581	AA2-030	18.16
920272	AA2-123 E	2.54
924471	AB2-096	43.99
925161	AB2-173	3.24
925302	AB2-191 E	1.43
926311	AC1-109 1	1.97
926321	AC1-109 2	1.97
926331	AC1-110 1	1.98
926341	AC1-110 2	1.98
926351	AC1-111 1	0.79
926361	AC1-111 2	0.79
926371	AC1-111 3	0.79
926381	AC1-111 4	0.79
926391	AC1-111 5	0.79
926401	AC1-111 6	0.79
926431	AC1-114	2.47
926821	AC1-168 C O1	1.18
926822	AC1-168 E O1	7.92
927091	AC1-204 1	77.42
927101	AC1-204 2	77.29
927451	AC1-142A 1	4.48
927461	AC1-142A 2	4.48
927511	AC1-113 1	1.23
927521	AC1-113 2	1.23
927531	AC1-185 1	0.71
927541	AC1-185 2	0.71
927551	AC1-185 3	0.71
927561	AC1-185 4	0.71
927571	AC1-185 5	0.71
927581	AC1-185 6	0.71
927591	AC1-185 7	0.71
927601	AC1-185 8	0.71
930481	AB1-089	68.22
930501	AB1-091 O1	66.51
930741	AB1-122 1O1	73.76
930751	AB1-122 2O1	78.95
932881	AC2-115 1	2.47
932891	AC2-115 2	2.47
932921	AC2-116	0.86
933341	AC2-147 C	0.9
933342	AC2-147 E	1.47
933411	AC2-154 C	2.29
933412	AC2-154 E	3.74
933431	AC2-156 C O1	0.99

Bus #	Bus	MW Impact
933432	AC2-156 E O1	1.61
933911	AD1-013 C	1.9
933912	AD1-013 E	3.04
933931	AD1-016 C	0.97
933932	AD1-016 E	1.58
934101	AD1-039 1	7.23
934111	AD1-039 2	7.74
934401	AD1-064 C O1	3.33
934402	AD1-064 E O1	15.58
934431	AD1-067 C	0.14
934432	AD1-067 E	0.57
934651	AD1-096 C	0.92
934652	AD1-096 E	1.51
934701	AD1-098 C O1	7.11
934702	AD1-098 E O1	5.19
934721	AD1-100 C	19.71
934722	AD1-100 E	91.99
934871	AD1-116 C	0.93
934872	AD1-116 E	1.52
934881	AD1-117 C	5.55
934882	AD1-117 E	3.7
934971	AD1-129 C	0.94
934972	AD1-129 E	0.63
935001	AD1-133 C O1	21.05
935002	AD1-133 E O1	14.03
936291	AD2-038 C O1	2.37
936292	AD2-038 E O1	15.89
936371	AD2-047 C O1	2.05
936372	AD2-047 E O1	22.06
936461	AD2-060	2.41
936511	AD2-066 C O1	8.6
936512	AD2-066 E O1	5.74
936781	AD2-101 C	3.03
936782	AD2-101 E	14.16
936791	AD2-102 C	12.47
936792	AD2-102 E	11.98
936961	AD2-130	0.59
937001	AD2-134 C	2.82
937002	AD2-134 E	11.67
937031	AD2-137 C O1	3.3
937032	AD2-137 E O1	15.44
937051	AD2-140 C O1	3.28
937052	AD2-140 E O1	15.37
937061	AD2-141 C O1	3.27
937062	AD2-141 E O1	15.39
937071	AD2-142 C O1	6.57
937072	AD2-142 E O1	30.75
937121	AD2-148 C O1	3.19
937122	AD2-148 E O1	14.95
937131	AD2-149 C O1	3.19
937132	AD2-149 E O1	14.95
937141	AD2-150 C O1	3.19

Bus #	Bus	MW Impact
937142	AD2-150 E O1	14.95
937181	AD2-155 C O1	3.19
937182	AD2-155 E O1	14.95
937311	AD2-172 C	2.55
937312	AD2-172 E	3.52
937321	AD2-175 C	14.88
937322	AD2-175 E	9.92
937331	AD2-176 C O1	7.62
937332	AD2-176 E O1	5.08
937401	AD2-194 1	8.33
937411	AD2-194 2	8.31
937531	AD2-214 C	4.54
937532	AD2-214 E	2.14
938012	AE1-002 E O1	6.62
938511	AE1-070 1	9.78
938521	AE1-070 2	8.93
938851	AE1-113 C O1	9.29
938852	AE1-113 E O1	29.21
938861	AE1-114 C O1	3.72
938862	AE1-114 E O1	14.22
939051	AE1-134 1	1.41
939061	AE1-134 2	1.41
939321	AE1-163 C O1	5.97
939322	AE1-163 E O1	36.64
939351	AE1-166 C O1	10.54
939352	AE1-166 E O1	9.73
939401	AE1-172 C O1	6.17
939402	AE1-172 E O1	28.89
939641	AE1-194 C	32.38
939642	AE1-194 E	216.73
939651	AE1-195 C	32.38
939652	AE1-195 E	216.73
939691	AE1-199	2.47
939701	AE1-201 C	2.08
939702	AE1-201 E	0.46
939732	AE1-204 E	0.31
939861	AE1-222 1	81.46
939871	AE1-222 2	87.19
939921	AE1-228 C O1	10.39
939922	AE1-228 E O1	6.93
939961	AE1-233 C O1	2.41
939962	AE1-233 E O1	9.95
940101	AE1-252 C O1	10.52
940102	AE1-252 E O1	7.01
AB2-013	AB2-013	16.6
AE1-033	AE1-033	18.74
BLUEG	BLUEG	6.66
CALDERWOOD	CALDERWOOD	0.12
CANNELTON	CANNELTON	0.14
CARR	CARR	0.8
CATAWBA	CATAWBA	0.32
CBM-S1	CBM-S1	1.14

Bus #	Bus	MW Impact
CBM-W1	CBM-W1	25.55
CBM-W2	CBM-W2	51.99
CHEOAH	CHEOAH	0.12
CHILHOWEE	CHILHOWEE	0.04
DEARBORN	DEARBORN	3.16
ELMERSMITH	ELMERSMITH	0.17
G-007	G-007	2.23
GIBSON	GIBSON	0.08
HAMLET	HAMLET	1.22
MEC	MEC	38.45
O-066	O-066	7.49
RENSSELAER	RENSSELAER	0.63
SANTEETLA	SANTEETLA	0.04
TRIMBLE	TRIMBLE	0.78
WEC	WEC	8.32
Z1-043	Z1-043	29.26

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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
652683	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	131.68	132.68	DC	29.29

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	9.79
274722	S-055 E	9.15
274808	UNIV PK N;4U	1.62
274809	UNIV PK N;5U	1.62
274811	UNIV PK N;7U	1.62
274812	UNIV PK N;8U	1.62
274814	UNIV PK N;0U	1.62
274815	UNIV PK N;XU	1.62
274832	U4-027	8.61
274859	EASYR;U1 E	8.84
274860	EASYR;U2 E	8.84
274888	PILOT HIL;1E	14.86
274890	CAYUG;1U E	10.7
274891	CAYUG;2U E	10.7
275149	KEMPTON ;1E	14.86
290021	O50 E	15.62
290051	GSG-6; E	8.43
290108	LEEDK;1U E	19.61
293061	N-015 E	12.6
293516	O-009 E1	7.26
293517	O-009 E2	3.69
293518	O-009 E3	4.06
293644	O22 E1	7.88
293645	O22 E2	15.3
293715	O-029 E	7.84
293716	O-029 E	4.3
293717	O-029 E	3.95
293771	O-035 E	5.09
294392	P-010 E	16.0
294401	BSHIL;1U E	6.8
294410	BSHIL;2U E	6.8
294763	P-046 E	7.56
295109	WESTBROOK E	4.51
295111	SUBLETTE E	2.08
910542	X3-005 E	0.51
914641	Y2-103	36.59
915011	Y3-013 1	3.05
915021	Y3-013 2	3.05
915031	Y3-013 3	3.05
916211	Z1-072 E	3.85

Bus #	Bus	MW Impact
916221	Z1-073 E	4.35
916502	Z1-106 E1	1.02
916504	Z1-106 E2	1.02
916512	Z1-107 E	2.17
916522	Z1-108 E	2.02
918052	AA1-018 E	14.29
919221	AA1-146	14.12
919581	AA2-030	14.12
919621	AA2-039 C	1.66
919622	AA2-039 E	11.1
920272	AA2-123 E	1.98
924471	AB2-096	34.27
925161	AB2-173	2.52
925302	AB2-191 E	1.12
925581	AC1-033 C	1.11
925582	AC1-033 E	7.46
925881	AC1-067 O1	97.44
926311	AC1-109 1	1.55
926321	AC1-109 2	1.55
926331	AC1-110 1	1.54
926341	AC1-110 2	1.54
926351	AC1-111 1	0.62
926361	AC1-111 2	0.62
926371	AC1-111 3	0.62
926381	AC1-111 4	0.62
926391	AC1-111 5	0.62
926401	AC1-111 6	0.62
926431	AC1-114	1.92
926821	AC1-168 C O1	0.92
926822	AC1-168 E O1	6.18
927091	AC1-204 1	59.17
927101	AC1-204 2	59.21
927201	AC1-214 C O1	1.63
927202	AC1-214 E O1	5.19
927451	AC1-142A 1	3.45
927461	AC1-142A 2	3.45
927511	AC1-113 1	0.96
927521	AC1-113 2	0.96
927531	AC1-185 1	0.55
927541	AC1-185 2	0.55
927551	AC1-185 3	0.55
927561	AC1-185 4	0.55
927571	AC1-185 5	0.55
927581	AC1-185 6	0.55
927591	AC1-185 7	0.55
927601	AC1-185 8	0.55
930481	AB1-089	53.11
930501	AB1-091 O1	57.12
930741	AB1-122 1O1	58.21
930751	AB1-122 2O1	59.68
932881	AC2-115 1	1.92
932891	AC2-115 2	1.92

Bus #	Bus	MW Impact
932921	AC2-116	0.67
932931	AC2-117	10.39
933341	AC2-147 C	0.7
933342	AC2-147 E	1.15
933411	AC2-154 C	2.02
933412	AC2-154 E	3.29
933431	AC2-156 C O1	0.77
933432	AC2-156 E O1	1.26
933911	AD1-013 C	1.48
933912	AD1-013 E	2.37
933931	AD1-016 C	0.75
933932	AD1-016 E	1.23
934051	AD1-031 C O1	2.26
934052	AD1-031 E O1	3.69
934101	AD1-039 1	5.7
934111	AD1-039 2	5.85
934401	AD1-064 C O1	2.59
934402	AD1-064 E O1	12.13
934431	AD1-067 C	0.11
934432	AD1-067 E	0.44
934651	AD1-096 C	0.72
934652	AD1-096 E	1.17
934701	AD1-098 C O1	5.55
934702	AD1-098 E O1	4.05
934721	AD1-100 C	15.58
934722	AD1-100 E	72.69
934871	AD1-116 C	0.83
934872	AD1-116 E	1.36
934881	AD1-117 C	4.32
934882	AD1-117 E	2.88
934971	AD1-129 C	0.73
934972	AD1-129 E	0.49
935001	AD1-133 C O1	16.67
935002	AD1-133 E O1	11.11
936291	AD2-038 C O1	1.97
936292	AD2-038 E O1	13.19
936371	AD2-047 C O1	1.8
936372	AD2-047 E O1	19.42
936461	AD2-060	2.12
936511	AD2-066 C O1	6.83
936512	AD2-066 E O1	4.55
936781	AD2-101 C	3.51
936782	AD2-101 E	16.41
936791	AD2-102 C	9.71
936792	AD2-102 E	9.33
936961	AD2-130	0.46
937001	AD2-134 C	2.2
937002	AD2-134 E	9.1
937031	AD2-137 C O1	2.69
937032	AD2-137 E O1	12.6
937051	AD2-140 C O1	2.69
937052	AD2-140 E O1	12.61

Bus #	Bus	MW Impact
937061	AD2-141 C O1	2.68
937062	AD2-141 E O1	12.63
937071	AD2-142 C O1	5.39
937072	AD2-142 E O1	25.22
937121	AD2-148 C O1	2.74
937122	AD2-148 E O1	12.83
937131	AD2-149 C O1	2.74
937132	AD2-149 E O1	12.83
937141	AD2-150 C O1	2.74
937142	AD2-150 E O1	12.83
937181	AD2-155 C O1	2.74
937182	AD2-155 E O1	12.83
937311	AD2-172 C	1.98
937312	AD2-172 E	2.74
937321	AD2-175 C	12.77
937322	AD2-175 E	8.51
937331	AD2-176 C O1	5.94
937332	AD2-176 E O1	3.96
937401	AD2-194 1	6.36
937411	AD2-194 2	6.37
937531	AD2-214 C	3.53
937532	AD2-214 E	1.66
938012	AE1-002 E O1	5.4
938511	AE1-070 1	7.48
938521	AE1-070 2	6.84
938851	AE1-113 C O1	7.07
938852	AE1-113 E O1	22.22
938861	AE1-114 C O1	2.9
938862	AE1-114 E O1	11.07
939051	AE1-134 1	1.1
939061	AE1-134 2	1.1
939321	AE1-163 C O1	4.95
939322	AE1-163 E O1	30.42
939351	AE1-166 C O1	8.28
939352	AE1-166 E O1	7.64
939401	AE1-172 C O1	4.91
939402	AE1-172 E O1	22.97
939631	AE1-193 C O1	5.53
939632	AE1-193 E O1	37.0
939681	AE1-198 C O1	16.41
939682	AE1-198 E O1	13.95
939691	AE1-199	1.93
939701	AE1-201 C	1.62
939702	AE1-201 E	0.36
939732	AE1-204 E	0.24
939861	AE1-222 1	64.28
939871	AE1-222 2	65.91
939921	AE1-228 C O1	8.11
939922	AE1-228 E O1	5.4
939961	AE1-233 C O1	1.88
939962	AE1-233 E O1	7.77
940101	AE1-252 C O1	8.36

Bus #	Bus	MW Impact
940102	AE1-252 E O1	5.58
990901	L-005 E	5.05
AB2-013	AB2-013	12.84
AE1-033	AE1-033	14.59
BLUEG	BLUEG	4.41
CALDERWOOD	CALDERWOOD	0.05
CANNELTON	CANNELTON	0.06
CARR	CARR	0.61
CATAWBA	CATAWBA	0.23
CBM-S1	CBM-S1	1.22
CBM-W1	CBM-W1	21.89
CBM-W2	CBM-W2	43.2
CHEOAH	CHEOAH	0.05
CHILHOWEE	CHILHOWEE	0.01
DEARBORN	DEARBORN	2.62
ELMERSMITH	ELMERSMITH	0.06
G-007	G-007	1.71
GIBSON	GIBSON	0.02
HAMLET	HAMLET	0.88
MEC	MEC	30.08
O-066	O-066	5.77
RENSSELAER	RENSSELAER	0.49
SANTEETLA	SANTEETLA	0.02
TRIMBLE	TRIMBLE	0.52
WEC	WEC	6.46
Z1-043	Z1-043	22.86

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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
54927	275232	WILTON ;3M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	164.37	164.9	DC	44.53

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	14.81
274722	S-055 E	13.75
274772	LINCOLN ;3U	3.36
274773	LINCOLN ;4U	3.36
274774	LINCOLN ;5U	3.36
274775	LINCOLN ;6U	3.36
274776	LINCOLN ;7U	3.36
274777	LINCOLN ;8U	3.36
274859	EASYR;U1 E	13.46
274860	EASYR;U2 E	13.46
274888	PILOT HIL;1E	23.62
274890	CAYUG;1U E	20.25
274891	CAYUG;2U E	20.25
275149	KEMPTON ;1E	23.62
290021	O50 E	23.75
290051	GSG-6; E	12.8
290108	LEEDK;1U E	29.74
293061	N-015 E	19.44
293516	O-009 E1	1.0
293517	O-009 E2	0.51
293518	O-009 E3	0.56
293644	O22 E1	12.55
293645	O22 E2	24.37
293715	O-029 E	11.98
293716	O-029 E	6.57
293717	O-029 E	6.04
294392	P-010 E	24.69
294763	P-046 E	11.48
295109	WESTBROOK E	6.85
295111	SUBLETTE E	3.18
296125	R-030 C3	4.98
296128	R-030 E3	19.93
296271	R-030 C2	4.92
296272	R-030 E2	19.7
296308	R-030 C1	4.92
296309	R-030 E1	19.7
910542	X3-005 E	0.9
914641	Y2-103	55.02
915011	Y3-013 1	4.58
915021	Y3-013 2	4.58
915031	Y3-013 3	4.58

Bus #	Bus	MW Impact
916221	Z1-073 E	6.61
916502	Z1-106 E1	1.55
916504	Z1-106 E2	1.55
916512	Z1-107 E	3.17
916522	Z1-108 E	3.04
917502	Z2-087 E	25.76
918052	AA1-018 E	20.13
919221	AA1-146	21.54
919581	AA2-030	21.54
920272	AA2-123 E	2.99
924041	AB2-047 C O1	4.75
924042	AB2-047 E O1	31.79
924471	AB2-096	51.84
925161	AB2-173	3.84
925302	AB2-191 E	1.7
925881	AC1-067 O1	168.51
926311	AC1-109 1	2.34
926321	AC1-109 2	2.34
926331	AC1-110 1	2.33
926341	AC1-110 2	2.33
926351	AC1-111 1	0.94
926361	AC1-111 2	0.94
926371	AC1-111 3	0.94
926381	AC1-111 4	0.94
926391	AC1-111 5	0.94
926401	AC1-111 6	0.94
926431	AC1-114	2.91
926821	AC1-168 C O1	1.43
926822	AC1-168 E O1	9.59
927091	AC1-204 1	88.93
927101	AC1-204 2	88.93
927451	AC1-142A 1	5.12
927461	AC1-142A 2	5.12
927511	AC1-113 1	1.46
927521	AC1-113 2	1.46
927531	AC1-185 1	0.84
927541	AC1-185 2	0.84
927551	AC1-185 3	0.84
927561	AC1-185 4	0.84
927571	AC1-185 5	0.84
927581	AC1-185 6	0.84
927591	AC1-185 7	0.84
927601	AC1-185 8	0.84
930481	AB1-089	80.5
930501	AB1-091 O1	93.97
930741	AB1-122 1O1	89.35
930751	AB1-122 2O1	90.31
932881	AC2-115 1	2.91
932891	AC2-115 2	2.91
932921	AC2-116	1.02
932931	AC2-117	6.52
933341	AC2-147 C	1.07

Bus #	Bus	MW Impact
933342	AC2-147 E	1.74
933411	AC2-154 C	3.21
933412	AC2-154 E	5.23
933431	AC2-156 C O1	1.17
933432	AC2-156 E O1	1.91
933911	AD1-013 C	2.25
933912	AD1-013 E	3.6
933931	AD1-016 C	1.14
933932	AD1-016 E	1.85
934101	AD1-039 1	8.76
934111	AD1-039 2	8.85
934401	AD1-064 C O1	3.92
934402	AD1-064 E O1	18.37
934431	AD1-067 C	0.16
934432	AD1-067 E	0.68
934651	AD1-096 C	1.09
934652	AD1-096 E	1.78
934701	AD1-098 C O1	8.43
934702	AD1-098 E O1	6.15
934721	AD1-100 C	29.44
934722	AD1-100 E	137.37
934871	AD1-116 C	1.17
934872	AD1-116 E	1.91
934881	AD1-117 C	6.58
934882	AD1-117 E	4.39
934971	AD1-129 C	1.11
934972	AD1-129 E	0.74
935001	AD1-133 C O1	27.42
935002	AD1-133 E O1	18.28
936291	AD2-038 C O1	2.88
936292	AD2-038 E O1	19.29
936371	AD2-047 C O1	2.87
936372	AD2-047 E O1	30.87
936461	AD2-060	3.37
936511	AD2-066 C O1	10.36
936512	AD2-066 E O1	6.91
936781	AD2-101 C	5.83
936782	AD2-101 E	27.31
936791	AD2-102 C	14.71
936792	AD2-102 E	14.14
936961	AD2-130	0.69
937001	AD2-134 C	3.35
937002	AD2-134 E	13.82
937031	AD2-137 C O1	7.17
937032	AD2-137 E O1	33.59
937051	AD2-140 C O1	7.53
937052	AD2-140 E O1	35.28
937061	AD2-141 C O1	7.49
937062	AD2-141 E O1	35.32
937071	AD2-142 C O1	15.07
937072	AD2-142 E O1	70.55
937121	AD2-148 C O1	4.51

Bus #	Bus	MW Impact
937122	AD2-148 E O1	21.13
937131	AD2-149 C O1	4.51
937132	AD2-149 E O1	21.13
937141	AD2-150 C O1	4.51
937142	AD2-150 E O1	21.13
937181	AD2-155 C O1	4.51
937182	AD2-155 E O1	21.13
937311	AD2-172 C	3.01
937312	AD2-172 E	4.16
937321	AD2-175 C	21.03
937322	AD2-175 E	14.02
937331	AD2-176 C O1	8.97
937332	AD2-176 E O1	5.98
937401	AD2-194 1	9.56
937411	AD2-194 2	9.56
938012	AE1-002 E O1	14.4
938511	AE1-070 1	11.24
938521	AE1-070 2	10.28
938851	AE1-113 C O1	10.75
938852	AE1-113 E O1	33.78
938861	AE1-114 C O1	4.4
938862	AE1-114 E O1	16.84
939051	AE1-134 1	1.67
939061	AE1-134 2	1.67
939321	AE1-163 C O1	7.24
939322	AE1-163 E O1	44.49
939351	AE1-166 C O1	14.52
939352	AE1-166 E O1	13.41
939401	AE1-172 C O1	9.52
939402	AE1-172 E O1	44.57
939691	AE1-199	2.93
939701	AE1-201 C	2.45
939702	AE1-201 E	0.54
939732	AE1-204 E	0.36
939741	AE1-205 C O1	12.48
939742	AE1-205 E O1	17.23
939861	AE1-222 1	98.68
939871	AE1-222 2	99.73
939921	AE1-228 C O1	12.31
939922	AE1-228 E O1	8.21
939961	AE1-233 C O1	2.85
939962	AE1-233 E O1	11.77
940101	AE1-252 C O1	16.23
940102	AE1-252 E O1	10.82
AB2-013	AB2-013	19.85
AE1-033	AE1-033	22.1
BLUEG	BLUEG	7.86
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.09
CARR	CARR	0.96
CATAWBA	CATAWBA	0.38
CBM-S1	CBM-S1	1.85

Bus #	Bus	MW Impact
CBM-W1	CBM-W1	37.32
CBM-W2	CBM-W2	71.02
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.9
ELMERSMITH	ELMERSMITH	0.07
G-007	G-007	2.69
GIBSON	GIBSON	0.0
HAMLET	HAMLET	1.46
MEC	MEC	46.58
O-066	O-066	9.06
RENSELAER	RENSELAER	0.76
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.94
WEC	WEC	9.75
Z1-043	Z1-043	35.51

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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
54932	275233	WILTON ;4M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	161.42	162.2	DC	45.48

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	15.13
274722	S-055 E	14.05
274772	LINCOLN ;3U	3.45
274773	LINCOLN ;4U	3.45
274774	LINCOLN ;5U	3.45
274775	LINCOLN ;6U	3.45
274776	LINCOLN ;7U	3.45
274777	LINCOLN ;8U	3.45
274832	U4-027	6.82
274859	EASYSR;U1 E	13.75
274860	EASYSR;U2 E	13.75
274888	PILOT HIL;1E	24.11
274890	CAYUG;1U E	20.66
274891	CAYUG;2U E	20.66
275149	KEMPTON ;1E	24.11
290021	O50 E	24.25
290051	GSG-6; E	13.07
290108	LEEDK;1U E	30.37
293061	N-015 E	19.85
293516	O-009 E1	11.37
293517	O-009 E2	5.78
293518	O-009 E3	6.36
293644	O22 E1	12.82
293645	O22 E2	24.89
293715	O-029 E	12.24
293716	O-029 E	6.71
293717	O-029 E	6.17
293771	O-035 E	8.08
294392	P-010 E	25.21
294763	P-046 E	11.72
295109	WESTBROOK E	7.0
295111	SUBLETTE E	3.24
296125	R-030 C3	5.08
296128	R-030 E3	20.34
296271	R-030 C2	5.02
296272	R-030 E2	20.09
296308	R-030 C1	5.02
296309	R-030 E1	20.09
910542	X3-005 E	0.91
914641	Y2-103	56.19
915011	Y3-013 1	4.68

Bus #	Bus	MW Impact
915021	Y3-013 2	4.68
915031	Y3-013 3	4.68
916211	Z1-072 E	6.11
916221	Z1-073 E	6.75
916502	Z1-106 E1	1.58
916504	Z1-106 E2	1.58
916512	Z1-107 E	3.23
916522	Z1-108 E	3.11
917502	Z2-087 E	26.28
918052	AA1-018 E	20.57
919221	AA1-146	22.0
919581	AA2-030	22.0
920272	AA2-123 E	3.06
924041	AB2-047 C O1	4.85
924042	AB2-047 E O1	32.43
924471	AB2-096	52.94
925161	AB2-173	3.92
925302	AB2-191 E	1.73
925881	AC1-067 O1	172.23
926311	AC1-109 1	2.39
926321	AC1-109 2	2.39
926331	AC1-110 1	2.37
926341	AC1-110 2	2.37
926351	AC1-111 1	0.96
926361	AC1-111 2	0.96
926371	AC1-111 3	0.96
926381	AC1-111 4	0.96
926391	AC1-111 5	0.96
926401	AC1-111 6	0.96
926431	AC1-114	2.97
926821	AC1-168 C O1	1.46
926822	AC1-168 E O1	9.79
927091	AC1-204 1	90.83
927101	AC1-204 2	90.83
927201	AC1-214 C O1	2.59
927202	AC1-214 E O1	8.24
927451	AC1-142A 1	5.23
927461	AC1-142A 2	5.23
927511	AC1-113 1	1.49
927521	AC1-113 2	1.49
927531	AC1-185 1	0.86
927541	AC1-185 2	0.86
927551	AC1-185 3	0.86
927561	AC1-185 4	0.86
927571	AC1-185 5	0.86
927581	AC1-185 6	0.86
927591	AC1-185 7	0.86
927601	AC1-185 8	0.86
930481	AB1-089	82.21
930501	AB1-091 O1	95.92
930741	AB1-122 1O1	91.25
930751	AB1-122 2O1	92.24

Bus #	Bus	MW Impact
932881	AC2-115 1	2.97
932891	AC2-115 2	2.97
932921	AC2-116	1.04
932931	AC2-117	6.67
933341	AC2-147 C	1.09
933342	AC2-147 E	1.78
933411	AC2-154 C	3.27
933412	AC2-154 E	5.34
933431	AC2-156 C O1	1.2
933432	AC2-156 E O1	1.95
933911	AD1-013 C	2.3
933912	AD1-013 E	3.68
933931	AD1-016 C	1.16
933932	AD1-016 E	1.89
934101	AD1-039 1	8.94
934111	AD1-039 2	9.04
934401	AD1-064 C O1	4.01
934402	AD1-064 E O1	18.76
934431	AD1-067 C	0.16
934432	AD1-067 E	0.69
934651	AD1-096 C	1.11
934652	AD1-096 E	1.82
934701	AD1-098 C O1	8.6
934702	AD1-098 E O1	6.28
934721	AD1-100 C	30.02
934722	AD1-100 E	140.09
934871	AD1-116 C	1.2
934872	AD1-116 E	1.95
934881	AD1-117 C	6.72
934882	AD1-117 E	4.48
934971	AD1-129 C	1.13
934972	AD1-129 E	0.75
935001	AD1-133 C O1	27.99
935002	AD1-133 E O1	18.66
936291	AD2-038 C O1	2.94
936292	AD2-038 E O1	19.7
936371	AD2-047 C O1	2.93
936372	AD2-047 E O1	31.51
936461	AD2-060	3.44
936511	AD2-066 C O1	10.58
936512	AD2-066 E O1	7.05
936781	AD2-101 C	5.95
936782	AD2-101 E	27.88
936791	AD2-102 C	15.03
936792	AD2-102 E	14.44
936961	AD2-130	0.7
937001	AD2-134 C	3.42
937002	AD2-134 E	14.12
937031	AD2-137 C O1	7.31
937032	AD2-137 E O1	34.21
937051	AD2-140 C O1	7.67
937052	AD2-140 E O1	35.93

Bus #	Bus	MW Impact
937061	AD2-141 C O1	7.63
937062	AD2-141 E O1	35.97
937071	AD2-142 C O1	15.35
937072	AD2-142 E O1	71.86
937121	AD2-148 C O1	4.61
937122	AD2-148 E O1	21.57
937131	AD2-149 C O1	4.61
937132	AD2-149 E O1	21.57
937141	AD2-150 C O1	4.61
937142	AD2-150 E O1	21.57
937181	AD2-155 C O1	4.61
937182	AD2-155 E O1	21.57
937311	AD2-172 C	3.08
937312	AD2-172 E	4.25
937321	AD2-175 C	21.46
937322	AD2-175 E	14.31
937331	AD2-176 C O1	9.17
937332	AD2-176 E O1	6.11
937401	AD2-194 1	9.77
937411	AD2-194 2	9.77
938012	AE1-002 E O1	14.67
938511	AE1-070 1	11.48
938521	AE1-070 2	10.5
938851	AE1-113 C O1	10.98
938852	AE1-113 E O1	34.5
938861	AE1-114 C O1	4.5
938862	AE1-114 E O1	17.19
939051	AE1-134 1	1.71
939061	AE1-134 2	1.71
939321	AE1-163 C O1	7.4
939322	AE1-163 E O1	45.45
939351	AE1-166 C O1	14.82
939352	AE1-166 E O1	13.68
939401	AE1-172 C O1	9.71
939402	AE1-172 E O1	45.45
939691	AE1-199	2.99
939701	AE1-201 C	2.51
939702	AE1-201 E	0.55
939732	AE1-204 E	0.37
939741	AE1-205 C O1	12.73
939742	AE1-205 E O1	17.58
939861	AE1-222 1	100.77
939871	AE1-222 2	101.86
939921	AE1-228 C O1	12.57
939922	AE1-228 E O1	8.38
939961	AE1-233 C O1	2.91
939962	AE1-233 E O1	12.02
940101	AE1-252 C O1	16.55
940102	AE1-252 E O1	11.03
AB2-013	AB2-013	20.27
AE1-033	AE1-033	22.58
BLUEG	BLUEG	8.03

Bus #	Bus	MW Impact
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.09
CARR	CARR	0.98
CATAWBA	CATAWBA	0.39
CBM-S1	CBM-S1	1.88
CBM-W1	CBM-W1	38.11
CBM-W2	CBM-W2	72.48
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.96
ELMERSMITH	ELMERSMITH	0.07
G-007	G-007	2.75
GIBSON	GIBSON	0.0
HAMLET	HAMLET	1.49
MEC	MEC	47.56
O-066	O-066	9.26
RENSSELAER	RENSSELAER	0.77
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.96
WEC	WEC	9.96
Z1-043	Z1-043	36.25

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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
652650	346809	7CASEY	AMIL	247712	05SULLIVAN	AEP	1	AEP_P4_#3128_05EUGENE 345_A2	breaker	1466.0	141.83	142.47	DC	20.21

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	6.24
274650	KINCAID ;1U	14.71
274651	KINCAID ;2U	14.73
274832	U4-027	8.54
274853	TWINGROVE;U1	0.74
274854	TWINGROVE;U2	0.74
274859	EASYR;U1 E	6.8
274860	EASYR;U2 E	6.8
274890	CAYUG;1U E	10.14
274891	CAYUG;2U E	10.14
276150	W2-048 E	2.05
290021	O50 E	10.78
290051	GSG-6; E	5.68
290108	LEEDK;1U E	12.4
290261	S-027 E	19.36
290265	S-028 E	19.36
293516	O-009 E1	6.47
293517	O-009 E2	3.29
293518	O-009 E3	3.62
293644	O22 E1	4.9
293645	O22 E2	9.51
293715	O-029 E	6.65
293716	O-029 E	3.65
293717	O-029 E	3.35
293771	O-035 E	5.18
294401	BSHIL;1U E	7.08
294410	BSHIL;2U E	7.08
294763	P-046 E	5.38
295109	WESTBROOK E	3.04
295111	SUBLETTE E	1.65
296125	R-030 C3	3.34
296128	R-030 E3	13.34
296271	R-030 C2	3.3
296272	R-030 E2	13.18
296308	R-030 C1	3.3
296309	R-030 E1	13.18
905081	W4-005 C	0.98
905082	W4-005 E	42.62
909052	X2-022 E	28.51
916211	Z1-072 E	3.92
916221	Z1-073 E	2.93

Bus #	Bus	MW Impact
917502	Z2-087 E	17.32
918052	AA1-018 E	7.91
919221	AA1-146	11.65
919581	AA2-030	11.65
919621	AA2-039 C	1.73
919622	AA2-039 E	11.55
920272	AA2-123 E	1.22
924041	AB2-047 C O1	3.3
924042	AB2-047 E O1	22.1
924261	AB2-070 C O1	3.84
924262	AB2-070 E O1	25.68
924471	AB2-096	21.83
925161	AB2-173	2.08
925302	AB2-191 E	0.75
925581	AC1-033 C	1.16
925582	AC1-033 E	7.76
925771	AC1-053 C	3.87
925772	AC1-053 E	25.93
926431	AC1-114	1.3
926821	AC1-168 C O1	0.83
926822	AC1-168 E O1	5.54
926841	AC1-171 C O1	1.14
926842	AC1-171 E O1	7.61
927201	AC1-214 C O1	1.66
927202	AC1-214 E O1	5.29
927511	AC1-113 1	0.65
927521	AC1-113 2	0.65
927531	AC1-185 1	0.43
927541	AC1-185 2	0.43
927551	AC1-185 3	0.43
927561	AC1-185 4	0.43
927571	AC1-185 5	0.43
927581	AC1-185 6	0.43
927591	AC1-185 7	0.43
927601	AC1-185 8	0.43
930481	AB1-089	35.32
930741	AB1-122 1O1	34.94
932881	AC2-115 1	1.3
932891	AC2-115 2	1.3
932921	AC2-116	0.45
933341	AC2-147 C	0.54
933342	AC2-147 E	0.88
933911	AD1-013 C	0.99
933912	AD1-013 E	1.59
933931	AD1-016 C	0.46
933932	AD1-016 E	0.76
934051	AD1-031 C O1	2.35
934052	AD1-031 E O1	3.84
934101	AD1-039 1	3.42
934401	AD1-064 C O1	1.64
934402	AD1-064 E O1	7.66
934431	AD1-067 C	0.07

Bus #	Bus	MW Impact
934432	AD1-067 E	0.3
934651	AD1-096 C	0.51
934652	AD1-096 E	0.83
934701	AD1-098 C O1	3.77
934702	AD1-098 E O1	2.75
934871	AD1-116 C	0.46
934872	AD1-116 E	0.75
934881	AD1-117 C	3.31
934882	AD1-117 E	2.21
934971	AD1-129 C	0.47
934972	AD1-129 E	0.31
935001	AD1-133 C O1	14.12
935002	AD1-133 E O1	9.41
935141	AD1-148	7.45
936291	AD2-038 C O1	1.34
936292	AD2-038 E O1	8.98
936511	AD2-066 C O1	4.76
936512	AD2-066 E O1	3.17
936771	AD2-100 C O1	21.12
936772	AD2-100 E O1	14.08
936791	AD2-102 C	6.72
936792	AD2-102 E	6.46
936972	AD2-131 E O1	8.38
937001	AD2-134 C	1.48
937002	AD2-134 E	6.13
937161	AD2-153 C O1	3.2
937162	AD2-153 E O1	15.0
937171	AD2-154 C O1	3.2
937172	AD2-154 E O1	15.0
937211	AD2-159 C	4.61
937212	AD2-159 E	21.56
937311	AD2-172 C	1.41
937312	AD2-172 E	1.95
937331	AD2-176 C O1	3.65
937332	AD2-176 E O1	2.44
937531	AD2-214 C	3.23
937532	AD2-214 E	1.52
938851	AE1-113 C O1	4.88
938852	AE1-113 E O1	15.33
938861	AE1-114 C O1	2.16
938862	AE1-114 E O1	8.27
939051	AE1-134 1	0.91
939061	AE1-134 2	0.91
939321	AE1-163 C O1	3.37
939322	AE1-163 E O1	20.72
939401	AE1-172 C O1	4.02
939402	AE1-172 E O1	18.81
939631	AE1-193 C O1	5.75
939632	AE1-193 E O1	38.49
939681	AE1-198 C O1	17.08
939682	AE1-198 E O1	14.51
939691	AE1-199	1.29

Bus #	Bus	MW Impact
939701	AE1-201 C	1.0
939702	AE1-201 E	0.22
939741	AE1-205 C O1	8.33
939742	AE1-205 E O1	11.5
939861	AE1-222 1	38.59
939921	AE1-228 C O1	5.41
939922	AE1-228 E O1	3.61
939961	AE1-233 C O1	1.15
939962	AE1-233 E O1	4.76
940101	AE1-252 C O1	6.85
940102	AE1-252 E O1	4.57
950291	J291	3.2
950701	J196 C	1.33
950702	J196 E	5.3
951001	J339	6.03
951741	J474 C	2.02
951742	J474 E	10.95
952251	J641	10.35
952271	J644	9.57
952321	J734	5.07
952651	J756 C	2.46
952652	J756 E	13.33
952871	J757 C	4.06
952872	J757 E	21.98
953241	J467 C	2.76
953242	J467 E	14.91
953371	J808	9.06
953401	J811	17.76
953431	J853	11.11
953641	J813	43.81
953651	J815	32.11
953671	J817	10.67
953741	J826 C	1.65
953742	J826 E	8.94
953801	J835 C	2.68
953802	J835 E	14.48
953851	J845 C	1.72
953852	J845 E	9.32
953881	J848 C	5.27
953882	J848 E	28.51
953951	J859	9.79
954081	J872 C	4.44
954082	J872 E	24.03
954181	J884	7.67
954411	J912	14.24
954681	J949	38.92
954721	J750 C	2.11
954722	J750 E	11.4
954761	J468 C	7.08
954762	J468 E	28.32
990901	L-005 E	11.18
AB2-013	AB2-013	13.3

Bus #	Bus	MW Impact
AE1-033	AE1-033	10.55
AE1-042	AE1-042	10.08
BLUEG	BLUEG	10.38
CARR	CARR	0.29
CBM-S1	CBM-S1	13.17
CBM-S2	CBM-S2	2.35
CBM-W1	CBM-W1	28.23
CBM-W2	CBM-W2	199.79
CIN	CIN	3.85
CPLE	CPLE	0.56
DEARBORN	DEARBORN	0.69
G-007	G-007	0.8
GIBSON	GIBSON	0.02
MEC	MEC	45.61
O-066	O-066	2.69
RENSSELAER	RENSSELAER	0.23
TRIMBLE	TRIMBLE	1.31
WEC	WEC	4.13
Z1-043	Z1-043	21.97

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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
653123	932800	AC2-104 TAP	AEP	242928	05MARYSV	AEP	1	AEP_P4_#7334_05JEFRSO 765_A2	breaker	4571.0	103.14	103.17	DC	74.67

Bus #	Bus	MW Impact
243440	05CKG1	42.14
243441	05CKG2	52.39
246397	05ELKHART HY	1.01
246416	05TWIN BRCH1	0.2
246422	05MAYFLWER	0.26
246431	05BUCHANAN	1.1
246536	05MOTTVILL	0.42
247643	Z2-116 C	0.05
247906	05MDL-1G E	39.75
247907	05MDL-2G E	19.72
247912	05MDL-3G E	20.61
247913	05MDL-4G E	19.91
247943	T-127 E	19.91
247969	Z2-116 E	0.35
274722	S-055 E	22.69
274774	LINCOLN ;5U	3.14
274775	LINCOLN ;6U	3.14
274776	LINCOLN ;7U	3.14
274777	LINCOLN ;8U	3.14
274888	PILOT HIL;1E	36.41
275149	KEMPTON ;1E	36.41
290108	LEEDK;1U E	49.86
293061	N-015 E	30.86
293644	O22 E1	20.61
293645	O22 E2	40.01
294392	P-010 E	39.19
909145	X2-052	28.34
910542	X3-005 E	1.47
914641	Y2-103	90.77
915011	Y3-013 1	7.56
915021	Y3-013 2	7.56
915031	Y3-013 3	7.56
916502	Z1-106 E1	2.55
916504	Z1-106 E2	2.55
916512	Z1-107 E	5.16
916522	Z1-108 E	5.04
917702	Z2-113 E	0.6
917711	Z2-114 C	0.1
917712	Z2-114 E	0.68
918052	AA1-018 E	32.95

Bus #	Bus	MW Impact
920211	AA2-116	268.49
920272	AA2-123 E	4.99
925881	AC1-067 O1	286.39
926311	AC1-109 1	3.84
926321	AC1-109 2	3.84
926331	AC1-110 1	3.82
926341	AC1-110 2	3.82
926351	AC1-111 1	1.54
926361	AC1-111 2	1.54
926371	AC1-111 3	1.54
926381	AC1-111 4	1.54
926391	AC1-111 5	1.54
926401	AC1-111 6	1.54
926581	AC1-141	24.58
927091	AC1-204 1	143.52
927101	AC1-204 2	143.52
927451	AC1-142A 1	8.26
927461	AC1-142A 2	8.26
930042	AB1-006 E	43.31
930391	AB1-080	1.68
930501	AB1-091 O1	143.18
930741	AB1-122 1O1	146.79
930751	AB1-122 2O1	147.02
932601	AC2-080 C O1	6.66
932602	AC2-080 E O1	44.56
932801	AC2-104 C	35.99
932802	AC2-104 E	240.86
932931	AC2-117	12.03
933281	AC2-140 C	11.31
933282	AC2-140 E	0.6
933411	AC2-154 C	4.94
933412	AC2-154 E	8.06
933431	AC2-156 C O1	1.94
933432	AC2-156 E O1	3.16
933931	AD1-016 C	1.9
933932	AD1-016 E	3.09
934101	AD1-039 1	14.39
934111	AD1-039 2	14.41
934721	AD1-100 C	38.86
934722	AD1-100 E	181.34
934771	AD1-104 C	29.01
934772	AD1-104 E	194.13
934871	AD1-116 C	1.92
934872	AD1-116 E	3.13
935001	AD1-133 C O1	44.87
935002	AD1-133 E O1	29.91
936141	AD2-020 C O1	16.34
936142	AD2-020 E O1	10.06
936371	AD2-047 C O1	4.42
936372	AD2-047 E O1	47.59
936461	AD2-060	5.2
936511	AD2-066 C O1	17.37

Bus #	Bus	MW Impact
936512	AD2-066 E O1	11.58
936631	AD2-079 C O1	3.23
936632	AD2-079 E O1	2.15
936781	AD2-101 C	9.18
936782	AD2-101 E	43.0
936961	AD2-130	1.11
936981	AD2-132 C	9.01
936982	AD2-132 E	42.2
937031	AD2-137 C O1	7.0
937032	AD2-137 E O1	32.75
937041	AD2-138 C	9.01
937042	AD2-138 E	42.2
937051	AD2-140 C O1	7.03
937052	AD2-140 E O1	32.91
937061	AD2-141 C O1	6.99
937062	AD2-141 E O1	32.95
937071	AD2-142 C O1	14.06
937072	AD2-142 E O1	65.83
937121	AD2-148 C O1	6.87
937122	AD2-148 E O1	32.18
937131	AD2-149 C O1	6.87
937132	AD2-149 E O1	32.18
937141	AD2-150 C O1	6.87
937142	AD2-150 E O1	32.18
937181	AD2-155 C O1	6.87
937182	AD2-155 E O1	32.18
937321	AD2-175 C	32.02
937322	AD2-175 E	21.35
937331	AD2-176 C O1	14.97
937332	AD2-176 E O1	9.98
937401	AD2-194 1	15.43
937411	AD2-194 2	15.43
938012	AE1-002 E O1	14.04
938261	AE1-039	0.21
938511	AE1-070 1	18.13
938521	AE1-070 2	16.59
938671	AE1-089 C	36.65
938672	AE1-089 E	50.31
938851	AE1-113 C O1	5.1
938852	AE1-113 E O1	16.03
939351	AE1-166 C O1	20.24
939352	AE1-166 E O1	18.68
939391	AE1-170 C O1	16.87
939392	AE1-170 E O1	23.3
939401	AE1-172 C O1	13.26
939402	AE1-172 E O1	62.09
939641	AE1-194 C	17.06
939642	AE1-194 E	114.19
939651	AE1-195 C	17.06
939652	AE1-195 E	114.19
939701	AE1-201 C	4.09
939702	AE1-201 E	0.9

Bus #	Bus	MW Impact
939732	AE1-204 E	0.59
939861	AE1-222 1	162.11
939871	AE1-222 2	162.36
939961	AE1-233 C O1	4.76
939962	AE1-233 E O1	19.65
940101	AE1-252 C O1	22.6
940102	AE1-252 E O1	15.07
AB2-013	AB2-013	35.55
AE1-033	AE1-033	37.8
AE1-042	AE1-042	10.86
CARR	CARR	2.36
CATAWBA	CATAWBA	0.63
CBM-S1	CBM-S1	20.07
CBM-W1	CBM-W1	112.29
CBM-W2	CBM-W2	293.15
CIN	CIN	39.78
G-007	G-007	6.85
HAMLET	HAMLET	2.77
IPL	IPL	24.98
LGEE	LGEE	4.88
MEC	MEC	92.49
MECS	MECS	52.19
O-066	O-066	23.05
RENSSELAER	RENSSELAER	1.87
WEC	WEC	16.38
Z1-043	Z1-043	62.52

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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
652800	938670	AE1-089 TAP	AEP	243219	05DUMONT	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1409.0	123.89	124.58	DC	21.48

Bus #	Bus	MW Impact
247900	05FR-11G E	6.85
247901	05FR-12G E	6.74
247902	05FR-21G E	7.2
247903	05FR-22G E	6.89
247904	05FR-3G E	13.96
247905	05FR-4G E	10.5
247906	05MDL-1G E	15.63
247907	05MDL-2G E	7.75
247912	05MDL-3G E	8.11
247913	05MDL-4G E	7.83
247943	T-127 E	7.83
270859	PWR VTR EC;R	7.11
274722	S-055 E	6.55
274809	UNIV PK N;5U	0.8
274811	UNIV PK N;7U	0.8
274812	UNIV PK N;8U	0.8
274814	UNIV PK N;0U	0.8
274815	UNIV PK N;XU	0.8
274888	PILOT HIL;1E	10.32
275149	KEMPTON ;1E	10.32
290021	O50 E	11.46
290051	GSG-6; E	6.16
290108	LEEDK;1U E	14.23
293061	N-015 E	8.96
293644	O22 E1	5.93
293645	O22 E2	11.51
294392	P-010 E	11.37
295109	WESTBROOK E	3.3
909145	X2-052	36.23
914641	Y2-103	26.18
915011	Y3-013 1	2.18
915021	Y3-013 2	2.18
915031	Y3-013 3	2.18
916221	Z1-073 E	3.18
916502	Z1-106 E1	0.73
916504	Z1-106 E2	0.73
916512	Z1-107 E	1.5
916522	Z1-108 E	1.45
917711	Z2-114 C	0.06
917712	Z2-114 E	0.4

Bus #	Bus	MW Impact
918052	AA1-018 E	9.8
920272	AA2-123 E	1.43
924471	AB2-096	24.87
925302	AB2-191 E	0.82
926311	AC1-109 1	1.1
926321	AC1-109 2	1.1
926331	AC1-110 1	1.1
926341	AC1-110 2	1.1
926351	AC1-111 1	0.44
926361	AC1-111 2	0.44
926371	AC1-111 3	0.44
926381	AC1-111 4	0.44
926391	AC1-111 5	0.44
926401	AC1-111 6	0.44
926431	AC1-114	1.4
927091	AC1-204 1	41.9
927101	AC1-204 2	41.91
927451	AC1-142A 1	2.42
927461	AC1-142A 2	2.42
927511	AC1-113 1	0.7
927521	AC1-113 2	0.7
930042	AB1-006 E	17.03
930391	AB1-080	2.15
930481	AB1-089	38.75
930501	AB1-091 O1	40.14
930741	AB1-122 1O1	41.99
930751	AB1-122 2O1	42.66
932601	AC2-080 C O1	3.72
932602	AC2-080 E O1	24.91
932881	AC2-115 1	1.4
932891	AC2-115 2	1.4
932921	AC2-116	0.49
932931	AC2-117	5.17
933411	AC2-154 C	1.4
933412	AC2-154 E	2.28
933431	AC2-156 C O1	0.55
933432	AC2-156 E O1	0.9
933911	AD1-013 C	1.08
933912	AD1-013 E	1.73
933931	AD1-016 C	0.54
933932	AD1-016 E	0.89
934101	AD1-039 1	4.12
934111	AD1-039 2	4.18
934401	AD1-064 C O1	1.88
934402	AD1-064 E O1	8.8
934431	AD1-067 C	0.08
934432	AD1-067 E	0.33
934701	AD1-098 C O1	4.06
934702	AD1-098 E O1	2.96
934721	AD1-100 C	11.12
934722	AD1-100 E	51.9
934871	AD1-116 C	0.57

Bus #	Bus	MW Impact
934872	AD1-116 E	0.93
934971	AD1-129 C	0.53
934972	AD1-129 E	0.35
935001	AD1-133 C O1	12.63
935002	AD1-133 E O1	8.42
935271	AD1-137 C	5.69
935272	AD1-137 E	38.05
936291	AD2-038 C O1	1.41
936292	AD2-038 E O1	9.44
936371	AD2-047 C O1	1.25
936372	AD2-047 E O1	13.49
936461	AD2-060	1.47
936511	AD2-066 C O1	4.99
936512	AD2-066 E O1	3.33
936781	AD2-101 C	2.48
936782	AD2-101 E	11.59
936961	AD2-130	0.32
936981	AD2-132 C	5.04
936982	AD2-132 E	23.6
937001	AD2-134 C	1.61
937002	AD2-134 E	6.66
937031	AD2-137 C O1	1.92
937032	AD2-137 E O1	9.0
937041	AD2-138 C	5.04
937042	AD2-138 E	23.6
937051	AD2-140 C O1	1.92
937052	AD2-140 E O1	8.99
937061	AD2-141 C O1	1.91
937062	AD2-141 E O1	9.0
937071	AD2-142 C O1	3.84
937072	AD2-142 E O1	17.98
937121	AD2-148 C O1	1.93
937122	AD2-148 E O1	9.02
937131	AD2-149 C O1	1.93
937132	AD2-149 E O1	9.02
937141	AD2-150 C O1	1.93
937142	AD2-150 E O1	9.02
937181	AD2-155 C O1	1.93
937182	AD2-155 E O1	9.02
937321	AD2-175 C	8.98
937322	AD2-175 E	5.98
937331	AD2-176 C O1	4.29
937332	AD2-176 E O1	2.86
937401	AD2-194 1	4.51
937411	AD2-194 2	4.51
938012	AE1-002 E O1	3.86
938511	AE1-070 1	5.29
938521	AE1-070 2	4.84
938671	AE1-089 C	74.55
938672	AE1-089 E	102.34
938851	AE1-113 C O1	5.18
938852	AE1-113 E O1	16.3

Bus #	Bus	MW Impact
939321	AE1-163 C O1	3.54
939322	AE1-163 E O1	21.77
939351	AE1-166 C O1	5.85
939352	AE1-166 E O1	5.4
939401	AE1-172 C O1	3.71
939402	AE1-172 E O1	17.38
939641	AE1-194 C	5.61
939642	AE1-194 E	37.52
939651	AE1-195 C	5.61
939652	AE1-195 E	37.52
939691	AE1-199	1.41
939701	AE1-201 C	1.17
939702	AE1-201 E	0.26
939732	AE1-204 E	0.17
939861	AE1-222 1	46.37
939871	AE1-222 2	47.11
939921	AE1-228 C O1	5.92
939922	AE1-228 E O1	3.95
939961	AE1-233 C O1	1.36
939962	AE1-233 E O1	5.62
940101	AE1-252 C O1	6.33
940102	AE1-252 E O1	4.22
AB2-013	AB2-013	10.01
AE1-033	AE1-033	10.77
CARR	CARR	0.59
CATAWBA	CATAWBA	0.05
CBM-S1	CBM-S1	4.6
CBM-W1	CBM-W1	19.73
CBM-W2	CBM-W2	68.15
CIN	CIN	7.05
DEARBORN	DEARBORN	1.82
G-007	G-007	1.64
HAMLET	HAMLET	0.34
IPL	IPL	3.28
LGEE	LGEE	0.73
MEC	MEC	25.32
O-066	O-066	5.54
RENSSELAER	RENSSELAER	0.47
WEC	WEC	4.7
Z1-043	Z1-043	17.65

Affected Systems

MISO

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

Contingency Name	Contingency Definition
COMED_P4_111-45-L16704T	CONTINGENCY 'COMED_P4_111-45-L16704T' 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 TRIP BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / ELEC JUNC; B 345 WAYNE ; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270928 CKT 1 / ELEC JUNC; B 345 WOLFS ; B 345 TRIP BRANCH FROM BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1 / WOLFS ; B 345 WOLFS ; B 138 WOLFS ;1C 34.5 DISCONNECT BUS 275239 / ELEC JUNC;2M 138 END
COMED_P7_345-L1223_TR-S+_345-L14321TB-N	CONTINGENCY 'COMED_P7_345-L1223_TR-S+_345-L14321TB-N' TRIP BRANCH FROM BUS 270717 TO BUS 270731 CKT 1 / DRES; R 345 ELECT;4R 345 TRIP BRANCH FROM BUS 275180 TO BUS 270717 CKT 1 / DRES;3M 138 DRES; R 345 TRIP BRANCH FROM BUS 275180 TO BUS 271336 CKT 1 / DRES;3M 138 DRES; B 138 TRIP BRANCH FROM BUS 275180 TO BUS 275280 CKT 1 / DRES;3M 138 DRES;3C 34.5 TRIP BRANCH FROM BUS 270928 TO BUS 270730 CKT 1 / WOLFS; B 345 ELECT; B 345 TRIP BRANCH FROM BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1 / WOLFS; B 345 WOLFS; B 138 WOLFS;1C 34.5 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 345 TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R 345 END
COMED_P1-2_345-L11620_B-S	CONTINGENCY 'COMED_P1-2_345-L11620_B-S' TRIP BRANCH FROM BUS 270736 TO BUS 270770 CKT 1 / ELWOO; B 345 GOODI;3B 345 END
AEP_P1-2_#8907	CONTINGENCY 'AEP_P1-2_#8907' OPEN BRANCH FROM BUS 247712 TO BUS 346809 CKT 1 / 247712 05SULLIVAN 345 346809 7CASEY 345 1 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_P1-2_345-L1220__B-S	CONTINGENCY 'COMED_P1-2_345-L1220__B-S' TRIP BRANCH FROM BUS 270716 TO BUS 270736 CKT 1 / DRES; 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_765-L11216__S	CONTINGENCY 'COMED_P1-2_765-L11216__S' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 / WILTO; 765 COLLI; 765 END

Contingency Name	Contingency Definition
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_116-45-TR82__	CONTINGENCY 'COMED_P4_116-45-TR82__' TRIP BRANCH FROM BUS 270769 TO BUS 271565 TO BUS 275324 CKT 1 / GOODINGS ;2R 345 GOODINGS ; R 138 GOODINGS ;2C 34.5 DISCONNECT BUS 270769 / GOODINGS ;2R 345 END
COMED_P4_112-45-BT4-5__	CONTINGENCY 'COMED_P4_112-45-BT4-5__' 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 TRIP BRANCH FROM BUS 270852 TO BUS 270704 CKT 1 / PONTI; B 345 LORET; B 345 END
COMED_P7_345-L0301__B-S+_345-L9801__R-S_FSA	CONTINGENCY 'COMED_P7_345-L0301__B-S+_345-L9801__R-S_FSA' TRIP BRANCH FROM BUS 270854 TO BUS 270790 CKT 1 / POWER; B 345 KATYDID TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R 345 END
AEP_P1-2_#697A	CONTINGENCY 'AEP_P1-2_#697A' OPEN BRANCH FROM BUS 243229 TO BUS 274804 CKT 1 / 243229 05OLIVE 345 274804 UNIV PK N;RP 345 1 END
COMED_P4_116-45-L11617__	CONTINGENCY 'COMED_P4_116-45-L11617__' TRIP BRANCH FROM BUS 270770 TO BUS 270810 CKT 1 / GOODI;4B 345 LOCKP; B 345 DISCONNECT BUS 270770 / GOODI;4B 345 END
COMED_P7_345-L11620_B-S+_345-L11622_R-S	CONTINGENCY 'COMED_P7_345-L11620_B-S+_345-L11622_R-S' TRIP BRANCH FROM BUS 270736 TO BUS 270770 CKT 1 / ELWOO; B 345 GOODI;3B 345 TRIP BRANCH FROM BUS 270737 TO BUS 270769 CKT 1 / ELWOO; R 345 GOODI;1R 345 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
COMED_P2-2_116_GG-345R__2_NO_FSA	CONTINGENCY 'COMED_P2-2_116_GG-345R__2_NO_FSA' DISCONNECT BUS 270769 / GOODI;2R 345 END

Contingency Name	Contingency Definition
AEP_P4_#7334_05JEFRSO 765_A2	CONTINGENCY 'AEP_P4_#7334_05JEFRSO 765_A2' OPEN BRANCH FROM BUS 242924 TO BUS 243208 CKT 1 / 242924 05HANG R 765 243208 05JEFRSO 765 1 OPEN BRANCH FROM BUS 243208 TO BUS 242865 CKT 2 / 243208 05JEFRSO 765 242865 05JEFRSO 345 2 OPEN BRANCH FROM BUS 242865 TO BUS 248000 CKT Z1 / 242865 05JEFRSO 345 248000 06CLIFTY 345 Z1 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_116-45-TR84__	CONTINGENCY 'COMED_P4_116-45-TR84__' TRIP BRANCH FROM BUS 270770 TO BUS 271564 TO BUS 275368 CKT 1 / GOODINGS ;4B 345 GOODINGS ; B 138 GOODINGS ;4C 34.5 DISCONNECT BUS 270770 / GOODINGS ;4B 345 END
COMED_P7_345-L6607__B-S+_345-L97008_R-S	CONTINGENCY 'COMED_P7_345-L6607__B-S+_345-L97008_R-S' TRIP BRANCH FROM BUS 270728 TO BUS 274750 CKT 1 / E FRANKFO; B 345 CRETE EC ;BP 345 TRIP BRANCH FROM BUS 274804 TO BUS 243229 CKT 1 / UNIV PK N;RP 345 05OLIVE 345 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
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-L1221__B-S	CONTINGENCY 'COMED_P1-2_345-L1221__B-S' TRIP BRANCH FROM BUS 270716 TO BUS 270928 CKT 1 / DRESDD; B 345 WOLFS; B 345 END
COMED_P4_116-45-L9801_FSA	CONTINGENCY 'COMED_P4_116-45-L9801_FSA' TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R 345 DISCONNECT BUS 270769 / GOODI;2R 345 END

Contingency Name	Contingency Definition
COMED_P2-2_116_GG-345B__4	CONTINGENCY 'COMED_P2-2_116_GG-345B__4' DISCONNECT BUS 270770 / GOODI;4B 345 END
COMED_P4_116-45-L11614_	CONTINGENCY 'COMED_P4_116-45-L11614_' TRIP BRANCH FROM BUS 270667 TO BUS 270665 CKT 1 / B ISL;RT 345 B ISL; R 345 TRIP BRANCH FROM BUS 270667 TO BUS 270927 CKT 1 / B ISL;RT 345 WILTO; R 345 TRIP BRANCH FROM BUS 270769 TO BUS 270667 CKT 1 / GOODI;2R 345 B ISL;RT 345 DISCONNECT BUS 270769 / GOODI;2R 345 END
COMED_P7_345-L1221__B-S+_345-L1223_TR-S	CONTINGENCY 'COMED_P7_345-L1221__B-S+_345-L1223_TR-S' TRIP BRANCH FROM BUS 270716 TO BUS 270928 CKT 1 / DRES; B 345 WOLFS; B 345 TRIP BRANCH FROM BUS 270717 TO BUS 270731 CKT 1 / DRES; R 345 ELECT;4R 345 TRIP BRANCH FROM BUS 275180 TO BUS 270717 CKT 1 / DRES;3M 138 DRES; R 345 TRIP BRANCH FROM BUS 275180 TO BUS 271336 CKT 1 / DRES;3M 138 DRES; B 138 TRIP BRANCH FROM BUS 275180 TO BUS 275280 CKT 1 / DRES;3M 138 DRES;3C 34.5 END
COMED_P2-2_116_GG-345R__2_FSA	CONTINGENCY 'COMED_P2-2_116_GG-345R__2_FSA' DISCONNECT BUS 270769 / GOODI;2R 345 DISCONNECT BUS 918050 / AA1-018 TAP /ADDED FOR NO FSA CASE 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 / DRES; R 345 ELECT;4R 345 TRIP BRANCH FROM BUS 275180 TO BUS 270717 CKT 1 / DRES;3M 138 DRES; R 345 TRIP BRANCH FROM BUS 275180 TO BUS 271336 CKT 1 / DRES;3M 138 DRES; B 138 TRIP BRANCH FROM BUS 275180 TO BUS 275280 CKT 1 / DRES;3M 138 DRES;3C 34.5 END
Base Case	
AEP_P1-2_#695A	CONTINGENCY 'AEP_P1-2_#695A' OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P4_116-45-L11613_	CONTINGENCY 'COMED_P4_116-45-L11613_' 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 DISCONNECT BUS 270770 / GOODI;4B 345 END
COMED_P7_345-L94507_B-S+_345-L97008_R-S	CONTINGENCY 'COMED_P7_345-L94507_B-S+_345-L97008_R-S' TRIP BRANCH FROM BUS 274750 TO BUS 255112 CKT 1 / CRETE;BP 345 17STJOHN 345 TRIP BRANCH FROM BUS 274804 TO BUS 243229 CKT 1 / UPNOR;RP 345 05OLIVE 345 END

Contingency Name	Contingency Definition
COMED_P4_111-45-L11126_	CONTINGENCY 'COMED_P4_111-45-L11126_' TRIP BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / ELEC JUNC; B 345 WAYNE ; B 345 TRIP BRANCH FROM BUS 270916 TO BUS 270917 CKT 1 / WAYNE ; B 345 WAYNE ; R 345 TRIP BRANCH FROM BUS 270730 TO BUS 270846 CKT 1 / ELEC JUNC; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270928 CKT 1 / ELEC JUNC; B 345 WOLFS ; B 345 TRIP BRANCH FROM BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1 / WOLFS ; B 345 WOLFS ; B 138 WOLFS ;1C 34.5 DISCONNECT BUS 275239 / ELEC JUNC;2M 138 END
COMED_P1-2_345-L10805_B-S	CONTINGENCY 'COMED_P1-2_345-L10805_B-S' TRIP BRANCH FROM BUS 270810 TO BUS 274702 CKT 1 / LOCKP; B 345 KEND
COMED_P4_111-45-L1223T_	CONTINGENCY 'COMED_P4_111-45-L1223T_' TRIP BRANCH FROM BUS 270717 TO BUS 270731 CKT 1 / DRESDEN ; R 345 ELEC JUNC;4R 345 TRIP BRANCH FROM BUS 275180 TO BUS 270717 CKT 1 / DRESDEN ;3M 138 DRESDEN ; R 345 TRIP BRANCH FROM BUS 275180 TO BUS 271336 CKT 1 / DRESDEN ;3M 138 DRESDEN ; B 138 TRIP BRANCH FROM BUS 275180 TO BUS 275280 CKT 1 / DRESDEN ;3M 138 DRESDEN ;3C 34.5 DISCONNECT BUS 270731 / ELEC JUNC;4R 345 DISCONNECT BUS 275184 / ELEC JUNC;4M 138 END
COMED_P7_345-L1202__B-S+_345-L1227__R-S-A	CONTINGENCY 'COMED_P7_345-L1202__B-S+_345-L1227__R-S-A' TRIP BRANCH FROM BUS 270716 TO BUS 930750 CKT 1 / DRESDEN ; B 345 AB1-122 TAP 345 TRIP BRANCH FROM BUS 930740 TO BUS 270717 CKT 1 / AB1-122 TAP 345 DRESDEN ; R 345 END
COMED_P1-2_345-L19601_B-S	CONTINGENCY 'COMED_P1-2_345-L19601_B-S' TRIP BRANCH FROM BUS 270790 TO BUS 270770 CKT 1 / KATYD; B 345 GOODI;4B 345 END
AEP_P4_#8805_05OLIVE 345_D	CONTINGENCY 'AEP_P4_#8805_05OLIVE 345_D' OPEN BRANCH FROM BUS 243229 TO BUS 932600 CKT 1 / 243229 05OLIVE 345 932600 AC2-080 TAP 345 1 /* CONTINGENCY LINE ADDED FOR AE1 BUILD OPEN BRANCH FROM BUS 243229 TO BUS 274804 CKT 1 / 243229 05OLIVE 345 274804 UNIV PK N;RP 345 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_P1-2_345-L1202__B-S-B	CONTINGENCY 'COMED_P1-2_345-L1202__B-S-B' TRIP BRANCH FROM BUS 930750 TO BUS 270822 CKT 1 / AB1-122 TAP 345 MOLECREEK; B 345 END

Contingency Name	Contingency Definition
COMED_P1-2_345-L14321TB-N	CONTINGENCY 'COMED_P1-2_345-L14321TB-N' TRIP BRANCH FROM BUS 270928 TO BUS 270730 CKT 1 / WOLFS; B 345 ELECT; B 345 TRIP BRANCH FROM BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1 / WOLFS; B 345 WOLFS; B 138 WOLFS;1C 34.5 END
COMED_P2-2_111_EJ-345B__2	CONTINGENCY 'COMED_P2-2_111_EJ-345B__2' TRIP BRANCH FROM BUS 270730 TO BUS 270846 CKT 1 / ELECT; B 345 PLANO; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / ELECT; B 345 WAYNE; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270928 CKT 1 / ELECT; B 345 WOLFS; B 345 TRIP BRANCH FROM BUS 270928 TO BUS 272794 TO BUS 275334 CKT 1 / WOLFS; B 345 WOLFS; B 138 WOLFS;1C 34.5 DISCONNECT BUS 275239 / ELECT;2M 138 END
COMED_P1-2_345-L11622_R-S	CONTINGENCY 'COMED_P1-2_345-L11622_R-S' TRIP BRANCH FROM BUS 270737 TO BUS 270769 CKT 1 / ELWOO; R 345 GOODI;1R 345 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
AEP_P4_#2978_05DUMONT 765_B	CONTINGENCY 'AEP_P4_#2978_05DUMONT 765_B' OPEN BRANCH FROM BUS 243206 TO BUS 243207 CKT 1 / 243206 05DUMONT 765 243207 05GRNTWN 765 1 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P4_012-45-BT5-6__	CONTINGENCY 'COMED_P4_012-45-BT5-6__' TRIP BRANCH FROM BUS 270716 TO BUS 270736 CKT 1 / DRES; B 345 ELWOO; B 345 TRIP BRANCH FROM BUS 270736 TO BUS 270737 CKT 1 / ELWOO; B 345 ELWOO; R 345 TRIP BRANCH FROM BUS 274702 TO BUS 270716 CKT 1 / KEND

Short Circuit

Short Circuit

No issues identified

Secondary Point of Interconnection Network Impacts

The Queue Project AE1-113 was evaluated as a 300 MW (Capacity 85 MW) injection tapping the Powerton; R to Goodings; 2R 345 kV line in the ComEd area. Project AE1-113 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AE1-113 was studied with a commercial probability of 53%. Potential network impacts were as follows:

Summer Peak Load Flow

Generation Deliverability

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

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
668929	270855	POWERTON ; R	CE	349662	7TAZEWELL	AMIL	1	COMED_P1-2_345-L1202_B-S-A	single	1479.0	75.35	77.6	DC	33.31
668802	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P1-2_345-L9801_R-S_FSA	single	1195.0	92.74	93.82	DC	12.86
668894	930750	AB1-122 TAP	CE	270716	DRESDEN ; B	CE	1	COMED_P1-2_345-L9801_R-S_FSA	single	1479.0	78.12	79.13	DC	14.92

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	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
342323	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	AEP_P4_#8805_05OLIVE_345_D	breaker	4105.0	95.22	95.82	DC	82.93
668507	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	AEP_P4_#8805_05OLIVE_345_D	breaker	4105.0	95.22	95.82	DC	82.93
668440	270716	DRESDEN ; B	CE	270928	WOLFS ; B	CE	1	COMED_P4_012-45-BT5-6	breaker	1479.0	89.77	90.47	DC	22.9
668426	270717	DRESDEN ; R	CE	270697	COLLINS ; R	CE	1	COMED_P4_111-45-L1223T	breaker	1528.0	98.81	99.32	DC	17.38
669611	918050	AA1-018 TAP	CE	270769	GOODINGS ; 2R	CE	1	COMED_P7_345-L1202_B-S_+ 345-L1227_R-S-A	tower	1494.0	79.53	88.0	DC	126.4
669488	930750	AB1-122 TAP	CE	270716	DRESDEN ; B	CE	1	COMED_P7_345-L19601_B-S_+ 345-L9801_R-S_FSA	tower	1768.0	88.73	93.14	DC	78.07
669489	930750	AB1-122	CE	270716	DRESDEN ;	CE	1	COMED_P7_345-	tower	1768.0	84.26	88.68	DC	78.09

		TAP			B			L0301__B-S+_345-L9801__R-S_FSA-B						
669670	936290	AD2-038 TAP	CE	918050	AA1-018 TAP	CE	1	COMED_P7_345-L1202__B-S+_345-L1227__R-S-A	tower	1494.0	73.17	81.65	DC	126.43

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	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
342020	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1409.0	115.21	115.9	DC	21.69
342021	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	COMED_P4_112-65-BT4-5	breaker	1409.0	106.69	107.25	DC	23.33
342022	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	COMED_P4_112-65-BT3-4	breaker	1409.0	106.69	107.25	DC	23.33
342023	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	COMED_P4_023-65-BT2-3	breaker	1409.0	106.69	107.25	DC	23.33
668399	255104	17GREEN_ACRE	NIPS	270771	GREENACRE; T	CE	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1091.0	101.09	101.75	DC	23.71
668233	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1091.0	106.02	106.92	DC	26.15
668234	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_023-65-BT2-3	breaker	1091.0	108.55	109.38	DC	26.33
668235	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_112-65-BT4-5	breaker	1091.0	106.27	107.16	DC	26.33
668236	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_112-65-BT3-4	breaker	1091.0	106.27	107.15	DC	26.33
341695	255113	17STILLWELL	NIPS	243219	05DUMONT	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1409.0	171.32	172.06	DC	41.44
343548	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L94507__B-S+_345-L97008_R-S	tower	4105.0	102.11	102.62	DC	90.12
343549	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L6607__B-S+_345-L97008_R-S	tower	4105.0	101.15	101.72	DC	90.24
669600	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L94507__B-S+_345-L97008_R-S	tower	4105.0	102.11	102.62	DC	90.12
669601	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L6607__B-S+_345-L97008_R-S	tower	4105.0	101.15	101.72	DC	90.24
668404	270677	BURNHAM ;OR	CE	255109	17MUNSTER	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1441.0	110.86	111.53	DC	35.82
668383	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1399.0	107.86	108.84	DC	37.0
668384	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	COMED_P4_023-65-BT2-3	breaker	1399.0	107.57	108.54	DC	37.16

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 IMPAC T
66835	27078	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	COMED_P4_112-65-BT4-5	breaker	1399.0	107.49	108.46	DC	37.18
66836	27078	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	COMED_P4_112-65-BT3-4	breaker	1399.0	107.48	108.45	DC	37.17
66773	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P2-2_116_GG-345R_2_NO_FSA	bus	1802.0	113.49	114.64	DC	45.85
66774	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P2-2_116_GG-345R_2_FSA	bus	1802.0	112.99	114.14	DC	45.86
66825	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-L11614	breaker	1802.0	117.95	119.11	DC	45.8
66826	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-L9801_FSA	breaker	1802.0	113.49	114.64	DC	45.85
66827	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-TR82	breaker	1802.0	113.46	114.61	DC	45.85
66828	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_112-45-BT4-5	breaker	1802.0	106.17	107.02	DC	33.71
341959	270771	GREENACRE; T	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	113.56	114.3	DC	23.71
668275	270771	GREENACRE; T	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	113.56	114.3	DC	23.71
668238	270886	ST JOHN ; T	CE	255104	17GREEN_ACR E	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1091.0	106.02	106.92	DC	26.15
668239	270886	ST JOHN ; T	CE	255104	17GREEN_ACR E	NIPS	1	COMED_P4_023-65-BT2-3	breaker	1091.0	108.55	109.38	DC	26.33
668240	270886	ST JOHN ; T	CE	255104	17GREEN_ACR E	NIPS	1	COMED_P4_112-65-BT4-5	breaker	1091.0	106.27	107.16	DC	26.33
668241	270886	ST JOHN ; T	CE	255104	17GREEN_ACR E	NIPS	1	COMED_P4_112-65-BT3-4	breaker	1091.0	106.27	107.15	DC	26.33
668099	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6	breaker	1379.0	164.37	164.9	DC	44.34
668101	270927	WILTON ; R	CE	275233	WILTON ;4M	CE	1	COMED_P4_112-65-BT2-3	breaker	1379.0	161.41	162.19	DC	45.3
668131	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1399.0	120.88	121.94	DC	36.52
668132	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_023-65-BT2-3	breaker	1399.0	120.29	121.35	DC	36.68
668133	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_112-65-BT4-5	breaker	1399.0	120.22	121.28	DC	36.7
668134	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_112-65-BT3-4	breaker	1399.0	120.21	121.28	DC	36.7
341828	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	131.67	132.71	DC	30.32
341829	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_023-65-BT2-3	breaker	971.0	129.33	130.46	DC	30.53
341830	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT4-5	breaker	971.0	130.41	131.46	DC	30.53
341831	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT3-4	breaker	971.0	130.41	131.46	DC	30.53
341832	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_023-65-BT4-5	breaker	971.0	130.41	131.46	DC	30.53
668193	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	131.67	132.71	DC	30.32
668194	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_023-65-BT2-3	breaker	971.0	129.33	130.46	DC	30.53
668195	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT4-5	breaker	971.0	130.41	131.46	DC	30.53
668196	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_112-65-BT3-4	breaker	971.0	130.41	131.46	DC	30.53
668197	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	COMED_P4_023-65-BT4-5	breaker	971.0	130.41	131.46	DC	30.53
668098	275232	WILTON ;3M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT5-6	breaker	1379.0	164.37	164.9	DC	44.34
668103	275233	WILTON ;4M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT2-3	breaker	1379.0	161.41	162.19	DC	45.3
341795	346809	7CASEY	AMIL	247712	05SULLIVAN	AEP	1	AEP_P4_#3128_05EUGEN E 345_A2	breaker	1466.0	141.83	142.48	DC	20.65

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
669307	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P7_345-L19601_B-S+_345-L9801_R-S_FSA	tower	1195.0	122.56	128.16	DC	66.92
669308	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P7_345-L0301_B-S+_345-L9801_R-S_FSA-B	tower	1195.0	117.9	123.5	DC	66.95
341957	938670	AE1-089 TAP	AEP	243219	05DUMONT	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1409.0	123.89	124.59	DC	21.69

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	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
342984	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	AEP_P1-2_#695A	operation	1409.0	106.69	107.25	DC	23.33
669114	255104	17GREEN_ACRE	NIPS	270771	GREENACRE; T	CE	1	AEP_P1-2_#695A	operation	1091.0	99.78	100.44	DC	23.97
668941	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	AEP_P1-2_#695A	operation	1091.0	106.26	107.14	DC	26.33
342519	255113	17STILLWELL	NIPS	243219	05DUMONT	AEP	1	AEP_P1-2_#695A	operation	1409.0	167.72	168.49	DC	42.46
342525	255113	17STILLWELL	NIPS	243219	05DUMONT	AEP	1	Base Case	operation	1409.0	109.7	110.17	DC	24.73
343048	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	Base Case	operation	3555.0	104.25	104.73	DC	75.95
343049	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	AEP_P1-2_#697A	operation	4105.0	95.18	95.78	DC	82.97
669187	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	Base Case	operation	3555.0	104.25	104.73	DC	75.95
669188	270644	WILTON ;	CE	243206	05DUMONT	AEP	1	AEP_P1-2_#697A	operation	4105.0	95.18	95.78	DC	82.97
669113	270677	BURNHAM ;OR	CE	255109	17MUNSTER	NIPS	1	AEP_P1-2_#695A	operation	1441.0	110.01	110.69	DC	36.04
669138	270717	DRESDEN ; R	CE	270697	COLLINS ; R	CE	1	COMED_P1-2_345-L1223_TR-S	operation	1528.0	98.67	99.18	DC	17.35
669091	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	AEP_P1-2_#695A	operation	1399.0	107.44	108.41	DC	37.16
669163	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P1-2_345-L11613AB-S	operation	1802.0	99.87	100.72	DC	33.87
669167	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	Base Case	operation	1560.0	94.36	95.05	DC	23.52
342764	270771	GREENACRE; T	CE	243229	05OLIVE	AEP	1	AEP_P1-2_#695A	operation	971.0	112.09	112.84	DC	23.97
668990	270771	GREENACRE; T	CE	243229	05OLIVE	AEP	1	AEP_P1-2_#695A	operation	971.0	112.09	112.84	DC	23.97
668928	270855	POWERTON ; R	CE	349662	7TAZEWELL	AMIL	1	COMED_P1-2_345-L1202_B-S-A	operation	1479.0	93.73	103.04	DC	138.04
668937	270886	ST JOHN ; T	CE	255104	17GREEN_ACRE	NIPS	1	AEP_P1-2_#695A	operation	1091.0	106.26	107.14	DC	26.33
669217	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P1-2_765-L11216_-S	operation	1379.0	103.18	103.51	DC	27.81
669186	270927	WILTON ; R	CE	275233	WILTON ;4M	CE	1	COMED_P1-2_765-L11216_-S	operation	1379.0	104.1	104.61	DC	29.24
668859	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	AEP_P1-2_#695A	operation	1399.0	120.18	121.24	DC	36.68
668860	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	Base Case	operation	1091.0	77.84	78.84	DC	24.1

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
342689	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P1-2_#695A	operation	971.0	130.4	131.44	DC	30.53
668919	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P1-2_#695A	operation	971.0	130.4	131.44	DC	30.53
342683	346809	7CASEY	AMIL	247712	05SULLIVAN	AEP	1	AEP_P1-2_#286	operation	1466.0	136.12	136.78	DC	21.17
342684	346809	7CASEY	AMIL	247712	05SULLIVAN	AEP	1	Base Case	operation	1334.0	120.5	121.09	DC	17.29
343158	348885	7BUNSONVILLE	AMIL	243221	05EUGENE	AEP	1	AEP_P1-2_#8907	operation	1793.0	100.09	100.45	DC	19.26
668794	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P1-2_345-L1202_B-S-A	operation	1195.0	108.11	111.37	DC	38.92
668804	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	Base Case	operation	1195.0	85.38	87.99	DC	31.21
668886	930750	AB1-122 TAP	CE	270716	DRESDEN ; B	CE	1	Base Case	operation	1201.0	94.8	97.83	DC	36.39
668887	930750	AB1-122 TAP	CE	270716	DRESDEN ; B	CE	1	COMED_P1-2_345-L19601_B-S	operation	1479.0	90.43	93.42	DC	44.18
342855	938670	AE1-089 TAP	AEP	243219	05DUMONT	AEP	1	AEP_P1-2_#695A	operation	1409.0	114.21	114.97	DC	23.33

Flow Gate Details

The following appendices contain additional information about each flowgate presented in the body of the report. For each appendix, a description of the flowgate and its contingency was included for convenience. However, the intent of the appendix section is to provide more information on which projects/generators have contributions to the flowgate in question. Although this information is not used "as is" for cost allocation purposes, it can be used to gage other generators impact. It should be noted the generator contributions presented in the appendices sections are full contributions, whereas in the body of the report, those contributions take into consideration the commercial probability of each project.

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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
668929	270855	POWERTON ;R	CE	349662	7TAZEWELL	AMIL	1	COMED_P1-2_345-L1202__B-S-A	single	1479.0	75.35	77.6	DC	33.31

Bus #	Bus	MW Impact
274677	POWERTON ;5U	73.29
274678	POWERTON ;6U	73.44
274861	TOP CROP ;1U	0.9
274862	TOP CROP ;2U	1.75
274879	MINONK ;1U	3.81
918051	AA1-018 C	0.89
930751	AB1-122 2O1	357.35
934111	AD1-039 2	35.02
934871	AD1-116 C	2.26
936291	AD2-038 C O1	8.97
938851	AE1-113 C O1	33.31
939321	AE1-163 C O1	23.08
939871	AE1-222 2	394.63
AC1-056	AC1-056	6.51
AE1-080A	AE1-080A	18.52
BAYOU	BAYOU	3.24
BIG_CAJUN1	BIG_CAJUN1	4.77
BIG_CAJUN2	BIG_CAJUN2	9.61
BLUEG	BLUEG	5.05
CALDERWOOD	CALDERWOOD	0.97
CANNELTON	CANNELTON	0.47
CARR	CARR	0.23
CATAWBA	CATAWBA	0.47
CHEOAH	CHEOAH	0.88
CHILHOWEE	CHILHOWEE	0.32
CHOCTAW	CHOCTAW	2.89
COFFEEN	COFFEEN	2.36
COTTONWOOD	COTTONWOOD	13.17
DUCKCREEK	DUCKCREEK	24.17
EDWARDS	EDWARDS	12.15
ELMERSMITH	ELMERSMITH	0.86
FARMERCITY	FARMERCITY	1.94
GIBSON	GIBSON	0.32
HAMLET	HAMLET	1.47
MECS	MECS	0.98
NEWTON	NEWTON	4.2
PRAIRIE	PRAIRIE	11.16
RENSELAER	RENSELAER	0.18
SANTEETLA	SANTEETLA	0.26
SMITHLAND	SMITHLAND	0.6

Bus #	Bus	MW Impact
TATANKA	TATANKA	3.01
TILTON	TILTON	1.46
TRIMBLE	TRIMBLE	0.53
TVA	TVA	4.17
UNIONPOWER	UNIONPOWER	2.25

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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
669307	930740	AB1-122 TAP	CE	270717	DRESDEN ; R	CE	1	COMED_P7_345-L19601_B-S+_345-L9801__R-S_FSA	tower	1195.0	122.56	128.16	DC	66.92

Bus #	Bus	MW Impact
274677	POWERTON ;5U	26.24
274678	POWERTON ;6U	26.31
274861	TOP CROP ;1U	0.7
274862	TOP CROP ;2U	1.35
274879	MINONK ;1U	0.74
290021	O50 E	19.44
293644	O22 E1	18.15
293645	O22 E2	35.22
294401	BSHIL;1U E	6.21
294410	BSHIL;2U E	6.21
918051	AA1-018 C	0.67
918052	AA1-018 E	29.1
919621	AA2-039 C	1.51
919622	AA2-039 E	10.13
925581	AC1-033 C	1.02
925582	AC1-033 E	6.81
926841	AC1-171 C O1	0.85
926842	AC1-171 E O1	5.66
930741	AB1-122 1O1	524.81
934051	AD1-031 C O1	2.06
934052	AD1-031 E O1	3.37
934101	AD1-039 1	51.43
934871	AD1-116 C	1.69
934872	AD1-116 E	2.77
936291	AD2-038 C O1	4.35
936292	AD2-038 E O1	29.11
938851	AE1-113 C O1	16.15
938852	AE1-113 E O1	50.77
939321	AE1-163 C O1	10.9
939322	AE1-163 E O1	66.96
939631	AE1-193 C O1	5.04
939632	AE1-193 E O1	33.74
939681	AE1-198 C O1	14.97
939682	AE1-198 E O1	12.72
939861	AE1-222 1	579.57
954702	J844 E	27.32
990901	L-005 E	9.43
AB2-013	AB2-013	28.99
CARR	CARR	0.04
CBM-S1	CBM-S1	3.25

Bus #	Bus	MW Impact
CBM-S2	CBM-S2	0.73
CBM-W1	CBM-W1	6.57
CBM-W2	CBM-W2	48.55
CIN	CIN	1.0
CPL	CPL	0.21
DEARBORN	DEARBORN	0.55
G-007	G-007	0.1
IPL	IPL	0.49
LGEE	LGEE	0.12
MEC	MEC	20.19
O-066	O-066	0.35
RENSELAER	RENSELAER	0.03
Z1-043	Z1-043	18.2

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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
669488	930750	AB1-122 TAP	CE	270716	DRESDEN ; B	CE	1	COMED_P7_345-L19601_B-S+_345-L9801__R-S_FSA	tower	1768.0	88.73	93.14	DC	78.07

Bus #	Bus	MW Impact
274677	POWERTON ;5U	30.9
274678	POWERTON ;6U	30.69
274861	TOP CROP ;1U	0.82
274862	TOP CROP ;2U	1.59
274879	MINONK ;1U	3.37
290021	O50 E	87.99
293644	O22 E1	21.38
293645	O22 E2	41.5
918051	AA1-018 C	0.78
918052	AA1-018 E	33.95
930751	AB1-122 2O1	521.0
934111	AD1-039 2	51.06
934871	AD1-116 C	1.98
934872	AD1-116 E	3.23
936291	AD2-038 C O1	5.07
936292	AD2-038 E O1	33.96
938851	AE1-113 C O1	18.84
938852	AE1-113 E O1	59.23
939321	AE1-163 C O1	12.84
939322	AE1-163 E O1	78.87
939871	AE1-222 2	575.36
AB2-013	AB2-013	23.94
CARR	CARR	0.03
CBM-S1	CBM-S1	2.85
CBM-S2	CBM-S2	0.66
CBM-W1	CBM-W1	3.44
CBM-W2	CBM-W2	42.04
CIN	CIN	1.13
CPL	CPL	0.2
DEARBORN	DEARBORN	0.47
G-007	G-007	0.06
IPL	IPL	0.57
LGEE	LGEE	0.14
MEC	MEC	15.32
O-066	O-066	0.21
RENSSELAER	RENSSELAER	0.02
Z1-043	Z1-043	13.56

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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
669600	270644	WILTON	CE	243206	05DUMONT	AEP	1	COMED_P7_345-L94507_B-S+_345-L97008_R-S	tower	4105.0	102.11	102.62	DC	90.12

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	32.17
274722	S-055 E	29.55
274772	LINCOLN ;3U	4.7
274773	LINCOLN ;4U	4.7
274774	LINCOLN ;5U	4.7
274775	LINCOLN ;6U	4.7
274776	LINCOLN ;7U	4.7
274777	LINCOLN ;8U	4.7
274832	U4-027	28.06
274859	EASYR;U1 E	29.13
274860	EASYR;U2 E	29.13
274888	PILOT HIL;1E	44.3
274890	CAYUG;1U E	36.07
274891	CAYUG;2U E	36.07
275149	KEMPTON ;1E	44.3
290021	O50 E	49.24
290051	GSG-6; E	28.08
290108	LEEDK;1U E	65.57
293061	N-015 E	41.22
293516	O-009 E1	23.79
293517	O-009 E2	12.09
293518	O-009 E3	13.31
293644	O22 E1	25.31
293645	O22 E2	49.12
293715	O-029 E	25.78
293716	O-029 E	14.13
293717	O-029 E	12.99
293771	O-035 E	16.49
294392	P-010 E	52.34
294763	P-046 E	24.88
295109	WESTBROOK E	15.03
295111	SUBLETTE E	6.87
296125	R-030 C3	9.31
296128	R-030 E3	37.24
296271	R-030 C2	9.2
296272	R-030 E2	36.8
296308	R-030 C1	9.2
296309	R-030 E1	36.8
910542	X3-005 E	1.57
914641	Y2-103	118.19

Bus #	Bus	MW Impact
915011	Y3-013 1	9.85
915021	Y3-013 2	9.85
915031	Y3-013 3	9.85
916211	Z1-072 E	12.48
916221	Z1-073 E	14.49
916502	Z1-106 E1	3.41
916504	Z1-106 E2	3.41
916512	Z1-107 E	6.53
916522	Z1-108 E	6.62
917502	Z2-087 E	48.13
918052	AA1-018 E	40.41
919221	AA1-146	46.5
919581	AA2-030	46.5
919621	AA2-039 C	3.78
919622	AA2-039 E	25.31
920272	AA2-123 E	6.51
924471	AB2-096	112.6
925161	AB2-173	8.29
925302	AB2-191 E	3.72
925581	AC1-033 C	3.62
925582	AC1-033 E	24.22
926311	AC1-109 1	5.21
926321	AC1-109 2	5.21
926331	AC1-110 1	5.12
926341	AC1-110 2	5.12
926351	AC1-111 1	2.07
926361	AC1-111 2	2.07
926371	AC1-111 3	2.07
926381	AC1-111 4	2.07
926391	AC1-111 5	2.07
926401	AC1-111 6	2.07
926431	AC1-114	6.32
926821	AC1-168 C O1	2.98
926822	AC1-168 E O1	20.01
927091	AC1-204 1	184.27
927101	AC1-204 2	184.31
927201	AC1-214 C O1	5.29
927202	AC1-214 E O1	16.83
927451	AC1-142A 1	10.61
927461	AC1-142A 2	10.61
927511	AC1-113 1	3.16
927521	AC1-113 2	3.16
927531	AC1-185 1	1.82
927541	AC1-185 2	1.82
927551	AC1-185 3	1.82
927561	AC1-185 4	1.82
927571	AC1-185 5	1.82
927581	AC1-185 6	1.82
927591	AC1-185 7	1.82
927601	AC1-185 8	1.82
930481	AB1-089	175.15
930501	AB1-091 O1	173.97

Bus #	Bus	MW Impact
930741	AB1-122 1O1	194.95
930751	AB1-122 2O1	188.67
932881	AC2-115 1	6.32
932891	AC2-115 2	6.32
932921	AC2-116	2.21
932931	AC2-117	14.95
933341	AC2-147 C	2.31
933342	AC2-147 E	3.77
933411	AC2-154 C	6.01
933412	AC2-154 E	9.81
933431	AC2-156 C O1	2.64
933432	AC2-156 E O1	4.3
933911	AD1-013 C	4.95
933912	AD1-013 E	7.9
933931	AD1-016 C	2.47
933932	AD1-016 E	4.03
934051	AD1-031 C O1	7.35
934052	AD1-031 E O1	11.99
934101	AD1-039 1	19.1
934111	AD1-039 2	18.49
934401	AD1-064 C O1	8.56
934402	AD1-064 E O1	40.08
934431	AD1-067 C	0.35
934432	AD1-067 E	1.48
934651	AD1-096 C	2.37
934652	AD1-096 E	3.86
934701	AD1-098 C O1	18.47
934702	AD1-098 E O1	13.48
934721	AD1-100 C	51.04
934722	AD1-100 E	238.17
934871	AD1-116 C	2.35
934872	AD1-116 E	3.84
934881	AD1-117 C	14.23
934882	AD1-117 E	9.49
934971	AD1-129 C	2.4
934972	AD1-129 E	1.6
935001	AD1-133 C O1	55.95
935002	AD1-133 E O1	37.3
936291	AD2-038 C O1	5.86
936292	AD2-038 E O1	39.2
936371	AD2-047 C O1	5.38
936372	AD2-047 E O1	57.91
936461	AD2-060	6.33
936511	AD2-066 C O1	21.47
936512	AD2-066 E O1	14.31
936781	AD2-101 C	10.68
936782	AD2-101 E	49.98
936791	AD2-102 C	31.89
936792	AD2-102 E	30.64
936961	AD2-130	1.4
937001	AD2-134 C	7.34
937002	AD2-134 E	30.33

Bus #	Bus	MW Impact
937031	AD2-137 C O1	10.26
937032	AD2-137 E O1	48.01
937051	AD2-140 C O1	10.5
937052	AD2-140 E O1	49.17
937061	AD2-141 C O1	10.44
937062	AD2-141 E O1	49.23
937071	AD2-142 C O1	21.0
937072	AD2-142 E O1	98.34
937121	AD2-148 C O1	8.35
937122	AD2-148 E O1	39.1
937131	AD2-149 C O1	8.35
937132	AD2-149 E O1	39.1
937141	AD2-150 C O1	8.35
937142	AD2-150 E O1	39.1
937181	AD2-155 C O1	8.35
937182	AD2-155 E O1	39.1
937311	AD2-172 C	6.53
937312	AD2-172 E	9.02
937321	AD2-175 C	38.91
937322	AD2-175 E	25.94
937331	AD2-176 C O1	19.52
937332	AD2-176 E O1	13.01
937401	AD2-194 1	19.82
937411	AD2-194 2	19.82
937531	AD2-214 C	11.6
937532	AD2-214 E	5.46
938012	AE1-002 E O1	20.59
938511	AE1-070 1	23.28
938521	AE1-070 2	21.31
938851	AE1-113 C O1	21.75
938852	AE1-113 E O1	68.37
938861	AE1-114 C O1	9.46
938862	AE1-114 E O1	36.16
939051	AE1-134 1	3.61
939061	AE1-134 2	3.61
939321	AE1-163 C O1	14.69
939322	AE1-163 E O1	90.24
939351	AE1-166 C O1	26.27
939352	AE1-166 E O1	24.25
939401	AE1-172 C O1	16.57
939402	AE1-172 E O1	77.57
939631	AE1-193 C O1	17.95
939632	AE1-193 E O1	120.14
939641	AE1-194 C	21.1
939642	AE1-194 E	141.24
939651	AE1-195 C	21.1
939652	AE1-195 E	141.24
939681	AE1-198 C O1	53.3
939682	AE1-198 E O1	45.3
939691	AE1-199	6.42
939701	AE1-201 C	5.34
939702	AE1-201 E	1.17

Bus #	Bus	MW Impact
939732	AE1-204 E	0.77
939741	AE1-205 C O1	23.29
939742	AE1-205 E O1	32.16
939861	AE1-222 1	215.29
939871	AE1-222 2	208.36
939921	AE1-228 C O1	27.02
939922	AE1-228 E O1	18.01
939961	AE1-233 C O1	6.29
939962	AE1-233 E O1	25.97
940101	AE1-252 C O1	27.05
940102	AE1-252 E O1	18.03
AB2-013	AB2-013	41.07
AE1-033	AE1-033	47.69
BLUEG	BLUEG	16.82
CALDERWOOD	CALDERWOOD	0.23
CANNELTON	CANNELTON	0.26
CARR	CARR	1.97
CATAWBA	CATAWBA	0.8
CBM-S1	CBM-S1	3.44
CBM-W1	CBM-W1	76.96
CBM-W2	CBM-W2	140.68
CHEOAH	CHEOAH	0.24
CHILHOWEE	CHILHOWEE	0.07
DEARBORN	DEARBORN	6.43
ELMERSMITH	ELMERSMITH	0.27
G-007	G-007	5.53
GIBSON	GIBSON	0.08
HAMLET	HAMLET	3.02
MEC	MEC	98.2
O-066	O-066	18.61
RENSSELAER	RENSSELAER	1.56
SANTEETLA	SANTEETLA	0.08
TRIMBLE	TRIMBLE	1.99
WEC	WEC	20.94
Z1-043	Z1-043	73.86

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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
668440	270716	DRESDEN ;B	CE	270928	WOLFS ;B	CE	1	COMED_P4_012-45-BT5-6__	breaker	1479.0	89.77	90.47	DC	22.9

Bus #	Bus	MW Impact
274658	DRESDEN ;2U	78.0
274677	POWERTON ;5U	12.82
274678	POWERTON ;6U	12.7
274836	EQUISTAR ;R	4.45
274879	MINONK ;1U	1.89
290021	O50 E	49.28
904211	W3-135	0.36
916502	Z1-106 E1	0.62
916504	Z1-106 E2	0.61
930751	AB1-122 2O1	318.92
934111	AD1-039 2	31.25
936291	AD2-038 C O1	1.49
936292	AD2-038 E O1	9.96
936511	AD2-066 C O1	15.81
936512	AD2-066 E O1	10.54
938851	AE1-113 C O1	5.53
938852	AE1-113 E O1	17.37
939321	AE1-163 C O1	3.84
939322	AE1-163 E O1	23.56
939871	AE1-222 2	352.2
953201	J715 C	1.34
953202	J715 E	7.25
AB2-013	AB2-013	10.17
BLUEG	BLUEG	0.42
CALDERWOOD	CALDERWOOD	0.01
CARR	CARR	0.07
CATAWBA	CATAWBA	0.03
CBM-S1	CBM-S1	0.09
CBM-W2	CBM-W2	7.73
CHEOAH	CHEOAH	0.01
CHILHOWEE	CHILHOWEE	0.0
CIN	CIN	0.16
DEARBORN	DEARBORN	0.27
FARMERCITY	FARMERCITY	0.1
G-007	G-007	0.2
HAMLET	HAMLET	0.12
IPL	IPL	0.03
O-066	O-066	0.67
RENSSELAER	RENSSELAER	0.06
SANTEETLA	SANTEETLA	0.0
TATANKA	TATANKA	0.72

Bus #	Bus	MW Impact
TRIMBLE	TRIMBLE	0.05
Z1-043	Z1-043	16.14

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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
668426	270717	DRESDEN	CE	270697	COLLINS	CE	1	COMED_P4_111-45-L1223T_	breaker	1528.0	98.81	99.32	DC	17.38

Bus #	Bus	MW Impact
274659	DRESDEN ;3U	42.28
274729	ELWOOD EC;1P	2.69
274731	ELWOOD EC;2P	2.69
274733	ELWOOD EC;3P	2.69
274735	ELWOOD EC;4P	2.69
274736	ELWOOD EC;9P	2.66
274890	CAYUG;1U E	9.67
274891	CAYUG;2U E	9.67
276150	W2-048 E	0.97
290021	O50 E	11.1
290261	S-027 E	15.15
290265	S-028 E	15.15
296125	R-030 C3	3.8
296128	R-030 E3	15.19
296271	R-030 C2	3.75
296272	R-030 E2	15.01
296308	R-030 C1	3.75
296309	R-030 E1	15.01
905082	W4-005 E	25.39
909052	X2-022 E	13.53
917502	Z2-087 E	19.63
924041	AB2-047 C O1	3.61
924042	AB2-047 E O1	24.18
924261	AB2-070 C O1	1.95
924262	AB2-070 E O1	13.08
925771	AC1-053 C	1.93
925772	AC1-053 E	12.91
926841	AC1-171 C O1	0.6
926842	AC1-171 E O1	4.0
927091	AC1-204 1	64.57
927101	AC1-204 2	65.35
930741	AB1-122 1O1	173.78
930751	AB1-122 2O1	33.89
934101	AD1-039 1	17.03
934111	AD1-039 2	3.32
935001	AD1-133 C O1	39.0
935002	AD1-133 E O1	26.0
935141	AD1-148	3.54
936291	AD2-038 C O1	1.13
936292	AD2-038 E O1	7.56
936771	AD2-100 C O1	7.92

Bus #	Bus	MW Impact
936772	AD2-100 E O1	5.28
936972	AD2-131 E O1	1.67
937161	AD2-153 C O1	2.52
937162	AD2-153 E O1	11.79
937171	AD2-154 C O1	2.52
937172	AD2-154 E O1	11.79
937211	AD2-159 C	2.74
937212	AD2-159 E	12.84
937401	AD2-194 1	6.94
937411	AD2-194 2	7.03
938511	AE1-070 1	8.16
938521	AE1-070 2	7.55
938851	AE1-113 C O1	4.19
938852	AE1-113 E O1	13.18
939321	AE1-163 C O1	3.11
939322	AE1-163 E O1	19.12
939401	AE1-172 C O1	3.31
939402	AE1-172 E O1	15.48
939741	AE1-205 C O1	9.44
939742	AE1-205 E O1	13.03
939861	AE1-222 1	191.92
939871	AE1-222 2	37.43
940101	AE1-252 C O1	7.26
940102	AE1-252 E O1	4.84
951741	J474 C	1.23
951742	J474 E	6.63
952651	J756 C	1.67
952652	J756 E	9.05
954181	J884	6.11
AB2-013	AB2-013	11.51
CARR	CARR	0.16
CBM-S1	CBM-S1	2.68
CBM-S2	CBM-S2	0.28
CBM-W1	CBM-W1	3.41
CBM-W2	CBM-W2	44.28
CIN	CIN	2.13
CPL	CPL	0.02
DEARBORN	DEARBORN	0.86
G-007	G-007	0.45
IPL	IPL	0.97
LGEE	LGEE	0.09
MEC	MEC	12.36
O-066	O-066	1.51
RENSSELAER	RENSSELAER	0.13
Z1-043	Z1-043	11.82

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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
669611	918050	AA1-018 TAP	CE	270769	GOODINGS ;2R	CE	1	COMED_P7_345-L1202__B-S+_345-L1227__R-S-A	tower	1494.0	79.53	88.0	DC	126.4

Bus #	Bus	MW Impact
274677	POWERTON ;5U	24.82
274678	POWERTON ;6U	24.88
274879	MINONK ;1U	1.29
290021	O50 E	33.68
293644	O22 E1	6.5
293645	O22 E2	12.61
294401	BSHIL;1U E	4.59
294410	BSHIL;2U E	4.59
918051	AA1-018 C	1.89
918052	AA1-018 E	82.43
919621	AA2-039 C	1.12
919622	AA2-039 E	7.49
925581	AC1-033 C	0.75
925582	AC1-033 E	5.03
926841	AC1-171 C O1	0.64
926842	AC1-171 E O1	4.29
930741	AB1-122 1O1	102.48
930751	AB1-122 2O1	121.04
934051	AD1-031 C O1	1.53
934052	AD1-031 E O1	2.49
934101	AD1-039 1	10.04
934111	AD1-039 2	11.86
934871	AD1-116 C	4.8
934872	AD1-116 E	7.83
936291	AD2-038 C O1	8.22
936292	AD2-038 E O1	54.98
938851	AE1-113 C O1	30.5
938852	AE1-113 E O1	95.89
939321	AE1-163 C O1	7.42
939322	AE1-163 E O1	45.55
939631	AE1-193 C O1	3.73
939632	AE1-193 E O1	24.94
939681	AE1-198 C O1	11.07
939682	AE1-198 E O1	9.4
939861	AE1-222 1	113.17
939871	AE1-222 2	133.67
951631	J456 C	1.31
951632	J456 E	7.1
954702	J844 E	20.17
990901	L-005 E	7.01

Bus #	Bus	MW Impact
AB2-013	AB2-013	21.27
CARR	CARR	0.05
CBM-S1	CBM-S1	2.46
CBM-S2	CBM-S2	0.52
CBM-W1	CBM-W1	4.37
CBM-W2	CBM-W2	37.42
CIN	CIN	0.84
CPLE	CPLE	0.14
DEARBORN	DEARBORN	0.49
G-007	G-007	0.12
IPL	IPL	0.4
LGEE	LGEE	0.09
MEC	MEC	14.95
O-066	O-066	0.42
RENSSELAER	RENSSELAER	0.04
Z1-043	Z1-043	13.46

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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
669670	936290	AD2-038 TAP	CE	918050	AA1-018 TAP	CE	1	COMED_P7_345-L1202__B-S+_345-L1227__R-S-A	tower	1494.0	73.17	81.65	DC	126.43

Bus #	Bus	MW Impact
274677	POWERTON ;5U	24.83
274678	POWERTON ;6U	24.89
274879	MINONK ;1U	1.29
290021	O50 E	33.7
293644	O22 E1	6.5
293645	O22 E2	12.63
293771	O-035 E	3.1
294401	BSHIL;1U E	4.6
294410	BSHIL;2U E	4.6
916211	Z1-072 E	2.34
919621	AA2-039 C	1.12
919622	AA2-039 E	7.5
925581	AC1-033 C	0.75
925582	AC1-033 E	5.04
926841	AC1-171 C O1	0.64
926842	AC1-171 E O1	4.29
927201	AC1-214 C O1	0.99
927202	AC1-214 E O1	3.16
930741	AB1-122 1O1	102.53
930751	AB1-122 2O1	121.11
934051	AD1-031 C O1	1.53
934052	AD1-031 E O1	2.49
934101	AD1-039 1	10.05
934111	AD1-039 2	11.87
936291	AD2-038 C O1	8.22
936292	AD2-038 E O1	55.0
938851	AE1-113 C O1	30.51
938852	AE1-113 E O1	95.92
939321	AE1-163 C O1	7.42
939322	AE1-163 E O1	45.58
939631	AE1-193 C O1	3.73
939632	AE1-193 E O1	24.99
939681	AE1-198 C O1	11.09
939682	AE1-198 E O1	9.42
939861	AE1-222 1	113.23
939871	AE1-222 2	133.74
951631	J456 C	1.31
951632	J456 E	7.1
953951	J859	8.13
954702	J844 E	20.17

Bus #	Bus	MW Impact
990901	L-005 E	7.02
AB2-013	AB2-013	21.29
CARR	CARR	0.04
CBM-S1	CBM-S1	2.49
CBM-S2	CBM-S2	0.53
CBM-W1	CBM-W1	4.43
CBM-W2	CBM-W2	37.66
CIN	CIN	0.86
CPLE	CPLE	0.15
DEARBORN	DEARBORN	0.48
G-007	G-007	0.11
IPL	IPL	0.42
LGEE	LGEE	0.09
MEC	MEC	15.0
O-066	O-066	0.38
RENSSELAER	RENSSELAER	0.04
Z1-043	Z1-043	13.48

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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
342020	243918	05ELDERBRYSS	AEP	938670	AE1-089 TAP	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1409.0	115.21	115.9	DC	21.69

Bus #	Bus	MW Impact
247900	05FR-11G E	6.85
247901	05FR-12G E	6.74
247902	05FR-21G E	7.2
247903	05FR-22G E	6.89
247904	05FR-3G E	13.96
247905	05FR-4G E	10.5
247906	05MDL-1G E	15.63
247907	05MDL-2G E	7.75
247912	05MDL-3G E	8.11
247913	05MDL-4G E	7.83
247943	T-127 E	7.83
270859	PWR VTR EC;R	7.11
274722	S-055 E	6.55
274809	UNIV PK N;5U	0.8
274811	UNIV PK N;7U	0.8
274812	UNIV PK N;8U	0.8
274814	UNIV PK N;0U	0.8
274815	UNIV PK N;XU	0.8
274859	EASYR;U1 E	5.56
274860	EASYR;U2 E	5.56
274888	PILOT HIL;1E	10.32
274890	CAYUG;1U E	8.28
274891	CAYUG;2U E	8.28
275149	KEMPTON ;1E	10.32
290021	O50 E	11.46
290051	GSG-6; E	6.16
290108	LEEDK;1U E	14.23
293061	N-015 E	8.96
293644	O22 E1	5.93
293645	O22 E2	11.51
294392	P-010 E	11.37
294763	P-046 E	5.56
295109	WESTBROOK E	3.3
909145	X2-052	36.23
914641	Y2-103	26.18
915011	Y3-013 1	2.18
915021	Y3-013 2	2.18
915031	Y3-013 3	2.18
916221	Z1-073 E	3.18
916502	Z1-106 E1	0.73

Bus #	Bus	MW Impact
916504	Z1-106 E2	0.73
916512	Z1-107 E	1.5
916522	Z1-108 E	1.45
917711	Z2-114 C	0.06
917712	Z2-114 E	0.4
918052	AA1-018 E	9.8
920272	AA2-123 E	1.43
924471	AB2-096	24.87
925302	AB2-191 E	0.82
926311	AC1-109 1	1.1
926321	AC1-109 2	1.1
926331	AC1-110 1	1.1
926341	AC1-110 2	1.1
926351	AC1-111 1	0.44
926361	AC1-111 2	0.44
926371	AC1-111 3	0.44
926381	AC1-111 4	0.44
926391	AC1-111 5	0.44
926401	AC1-111 6	0.44
926431	AC1-114	1.4
926821	AC1-168 C O1	0.7
926822	AC1-168 E O1	4.71
927091	AC1-204 1	41.9
927101	AC1-204 2	41.91
927451	AC1-142A 1	2.42
927461	AC1-142A 2	2.42
927511	AC1-113 1	0.7
927521	AC1-113 2	0.7
927531	AC1-185 1	0.41
927541	AC1-185 2	0.41
927551	AC1-185 3	0.41
927561	AC1-185 4	0.41
927571	AC1-185 5	0.41
927581	AC1-185 6	0.41
927591	AC1-185 7	0.41
927601	AC1-185 8	0.41
930042	AB1-006 E	17.03
930391	AB1-080	2.15
930481	AB1-089	38.75
930501	AB1-091 O1	40.14
930741	AB1-122 1O1	41.99
930751	AB1-122 2O1	42.66
932601	AC2-080 C O1	3.72
932602	AC2-080 E O1	24.91
932881	AC2-115 1	1.4
932891	AC2-115 2	1.4
932921	AC2-116	0.49
932931	AC2-117	5.17
933341	AC2-147 C	0.52
933342	AC2-147 E	0.85
933411	AC2-154 C	1.4
933412	AC2-154 E	2.28

Bus #	Bus	MW Impact
933431	AC2-156 C O1	0.55
933432	AC2-156 E O1	0.9
933911	AD1-013 C	1.08
933912	AD1-013 E	1.73
933931	AD1-016 C	0.54
933932	AD1-016 E	0.89
934101	AD1-039 1	4.12
934111	AD1-039 2	4.18
934401	AD1-064 C O1	1.88
934402	AD1-064 E O1	8.8
934431	AD1-067 C	0.08
934432	AD1-067 E	0.33
934651	AD1-096 C	0.53
934652	AD1-096 E	0.86
934701	AD1-098 C O1	4.06
934702	AD1-098 E O1	2.96
934721	AD1-100 C	11.12
934722	AD1-100 E	51.9
934871	AD1-116 C	0.57
934872	AD1-116 E	0.93
934881	AD1-117 C	3.21
934882	AD1-117 E	2.14
934971	AD1-129 C	0.53
934972	AD1-129 E	0.35
935001	AD1-133 C O1	12.63
935002	AD1-133 E O1	8.42
935271	AD1-137 C	5.69
935272	AD1-137 E	38.05
936291	AD2-038 C O1	1.41
936292	AD2-038 E O1	9.44
936371	AD2-047 C O1	1.25
936372	AD2-047 E O1	13.49
936461	AD2-060	1.47
936511	AD2-066 C O1	4.99
936512	AD2-066 E O1	3.33
936781	AD2-101 C	2.48
936782	AD2-101 E	11.59
936791	AD2-102 C	7.12
936792	AD2-102 E	6.84
936961	AD2-130	0.32
936981	AD2-132 C	5.04
936982	AD2-132 E	23.6
937001	AD2-134 C	1.61
937002	AD2-134 E	6.66
937031	AD2-137 C O1	1.92
937032	AD2-137 E O1	9.0
937041	AD2-138 C	5.04
937042	AD2-138 E	23.6
937051	AD2-140 C O1	1.92
937052	AD2-140 E O1	8.99
937061	AD2-141 C O1	1.91
937062	AD2-141 E O1	9.0

Bus #	Bus	MW Impact
937071	AD2-142 C O1	3.84
937072	AD2-142 E O1	17.98
937121	AD2-148 C O1	1.93
937122	AD2-148 E O1	9.02
937131	AD2-149 C O1	1.93
937132	AD2-149 E O1	9.02
937141	AD2-150 C O1	1.93
937142	AD2-150 E O1	9.02
937181	AD2-155 C O1	1.93
937182	AD2-155 E O1	9.02
937311	AD2-172 C	1.46
937312	AD2-172 E	2.02
937321	AD2-175 C	8.98
937322	AD2-175 E	5.98
937331	AD2-176 C O1	4.29
937332	AD2-176 E O1	2.86
937401	AD2-194 1	4.51
937411	AD2-194 2	4.51
938012	AE1-002 E O1	3.86
938511	AE1-070 1	5.29
938521	AE1-070 2	4.84
938851	AE1-113 C O1	5.24
938852	AE1-113 E O1	16.46
938861	AE1-114 C O1	2.13
938862	AE1-114 E O1	8.16
939321	AE1-163 C O1	3.48
939322	AE1-163 E O1	21.35
939351	AE1-166 C O1	5.85
939352	AE1-166 E O1	5.4
939401	AE1-172 C O1	3.71
939402	AE1-172 E O1	17.38
939641	AE1-194 C	5.61
939642	AE1-194 E	37.52
939651	AE1-195 C	5.61
939652	AE1-195 E	37.52
939691	AE1-199	1.41
939701	AE1-201 C	1.17
939702	AE1-201 E	0.26
939732	AE1-204 E	0.17
939861	AE1-222 1	46.37
939871	AE1-222 2	47.11
939921	AE1-228 C O1	5.92
939922	AE1-228 E O1	3.95
939961	AE1-233 C O1	1.36
939962	AE1-233 E O1	5.62
940101	AE1-252 C O1	6.21
940102	AE1-252 E O1	4.14
AB2-013	AB2-013	10.01
AE1-033	AE1-033	10.77
CARR	CARR	0.59
CATAWBA	CATAWBA	0.05
CBM-S1	CBM-S1	4.6

Bus #	Bus	MW Impact
CBM-W1	CBM-W1	19.73
CBM-W2	CBM-W2	68.15
CIN	CIN	7.05
DEARBORN	DEARBORN	1.82
G-007	G-007	1.64
HAMLET	HAMLET	0.34
IPL	IPL	3.28
LGEE	LGEE	0.73
MEC	MEC	25.32
O-066	O-066	5.54
RENSSELAER	RENSSELAER	0.47
WEC	WEC	4.7
Z1-043	Z1-043	17.65

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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
668399	255104	17GREEN_ACR E	NIPS	270771	GREENACR E; T	CE	1	AEP_P4_#2978_05DUMO NT 765_B	breaker	1091.0	101.09	101.75	DC	23.71

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	8.06
274722	S-055 E	7.52
274751	CRETE EC ;1U	1.93
274752	CRETE EC ;2U	1.93
274753	CRETE EC ;3U	1.93
274754	CRETE EC ;4U	1.93
274832	U4-027	7.11
274859	EASYR;U1 E	7.3
274860	EASYR;U2 E	7.3
274888	PILOT HIL;1E	12.4
274890	CAYUG;1U E	8.92
274891	CAYUG;2U E	8.92
275149	KEMPTON ;1E	12.4
290021	O50 E	12.98
290051	GSG-6; E	6.94
290108	LEEDK;1U E	16.14
293061	N-015 E	10.24
293516	O-009 E1	5.99
293517	O-009 E2	3.04
293518	O-009 E3	3.35
293644	O22 E1	7.24
293645	O22 E2	14.06
293715	O-029 E	6.47
293716	O-029 E	3.55
293717	O-029 E	3.26
294392	P-010 E	13.0
294763	P-046 E	6.23
295109	WESTBROOK E	3.72
295111	SUBLETTE E	1.72
910542	X3-005 E	0.52
914641	Y2-103	30.09
915011	Y3-013 1	2.51
915021	Y3-013 2	2.51
915031	Y3-013 3	2.51
916221	Z1-073 E	3.58
916502	Z1-106 E1	0.84
916504	Z1-106 E2	0.84
916512	Z1-107 E	1.71
916522	Z1-108 E	1.66
918052	AA1-018 E	10.62
919221	AA1-146	11.67

Bus #	Bus	MW Impact
919581	AA2-030	11.67
920272	AA2-123 E	1.63
924471	AB2-096	28.21
925161	AB2-173	2.08
925302	AB2-191 E	0.92
925881	AC1-067 O1	102.57
926311	AC1-109 1	1.27
926321	AC1-109 2	1.27
926331	AC1-110 1	1.27
926341	AC1-110 2	1.27
926351	AC1-111 1	0.51
926361	AC1-111 2	0.51
926371	AC1-111 3	0.51
926381	AC1-111 4	0.51
926391	AC1-111 5	0.51
926401	AC1-111 6	0.51
926431	AC1-114	1.58
926821	AC1-168 C O1	0.76
926822	AC1-168 E O1	5.08
927091	AC1-204 1	48.76
927101	AC1-204 2	48.73
927201	AC1-214 C O1	0.74
927202	AC1-214 E O1	2.34
927451	AC1-142A 1	2.83
927461	AC1-142A 2	2.83
927511	AC1-113 1	0.79
927521	AC1-113 2	0.79
927531	AC1-185 1	0.46
927541	AC1-185 2	0.46
927551	AC1-185 3	0.46
927561	AC1-185 4	0.46
927571	AC1-185 5	0.46
927581	AC1-185 6	0.46
927591	AC1-185 7	0.46
927601	AC1-185 8	0.46
930481	AB1-089	43.76
930501	AB1-091 O1	49.15
930741	AB1-122 1O1	47.58
930751	AB1-122 2O1	49.75
932881	AC2-115 1	1.58
932891	AC2-115 2	1.58
932921	AC2-116	0.55
933341	AC2-147 C	0.58
933342	AC2-147 E	0.94
933411	AC2-154 C	1.68
933412	AC2-154 E	2.75
933431	AC2-156 C O1	0.64
933432	AC2-156 E O1	1.04
933911	AD1-013 C	1.22
933912	AD1-013 E	1.95
933931	AD1-016 C	0.62
933932	AD1-016 E	1.01

Bus #	Bus	MW Impact
934101	AD1-039 1	4.66
934111	AD1-039 2	4.88
934401	AD1-064 C O1	2.13
934402	AD1-064 E O1	9.99
934431	AD1-067 C	0.09
934432	AD1-067 E	0.37
934651	AD1-096 C	0.59
934652	AD1-096 E	0.97
934701	AD1-098 C O1	4.57
934702	AD1-098 E O1	3.34
934721	AD1-100 C	12.94
934722	AD1-100 E	60.39
934871	AD1-116 C	0.62
934872	AD1-116 E	1.01
934881	AD1-117 C	3.57
934882	AD1-117 E	2.38
934971	AD1-129 C	0.6
934972	AD1-129 E	0.4
935001	AD1-133 C O1	13.73
935002	AD1-133 E O1	9.15
936291	AD2-038 C O1	1.54
936292	AD2-038 E O1	10.32
936371	AD2-047 C O1	1.51
936372	AD2-047 E O1	16.21
936461	AD2-060	1.77
936511	AD2-066 C O1	5.56
936512	AD2-066 E O1	3.71
936781	AD2-101 C	3.17
936782	AD2-101 E	14.84
936791	AD2-102 C	8.0
936792	AD2-102 E	7.69
936961	AD2-130	0.38
937001	AD2-134 C	1.82
937002	AD2-134 E	7.5
937031	AD2-137 C O1	2.31
937032	AD2-137 E O1	10.8
937051	AD2-140 C O1	2.32
937052	AD2-140 E O1	10.87
937061	AD2-141 C O1	2.31
937062	AD2-141 E O1	10.88
937071	AD2-142 C O1	4.64
937072	AD2-142 E O1	21.73
937121	AD2-148 C O1	2.36
937122	AD2-148 E O1	11.04
937131	AD2-149 C O1	2.36
937132	AD2-149 E O1	11.04
937141	AD2-150 C O1	2.36
937142	AD2-150 E O1	11.04
937181	AD2-155 C O1	2.36
937182	AD2-155 E O1	11.04
937311	AD2-172 C	1.64
937312	AD2-172 E	2.26

Bus #	Bus	MW Impact
937321	AD2-175 C	10.99
937322	AD2-175 E	7.33
937331	AD2-176 C O1	4.89
937332	AD2-176 E O1	3.26
937401	AD2-194 1	5.24
937411	AD2-194 2	5.24
937531	AD2-214 C	2.92
937532	AD2-214 E	1.37
938012	AE1-002 E O1	4.63
938511	AE1-070 1	6.16
938521	AE1-070 2	5.63
938851	AE1-113 C O1	5.72
938852	AE1-113 E O1	17.99
938861	AE1-114 C O1	2.37
938862	AE1-114 E O1	9.06
939051	AE1-134 1	0.91
939061	AE1-134 2	0.91
939321	AE1-163 C O1	4.03
939322	AE1-163 E O1	24.74
939351	AE1-166 C O1	6.84
939352	AE1-166 E O1	6.31
939401	AE1-172 C O1	4.1
939402	AE1-172 E O1	19.18
939641	AE1-194 C	10.88
939642	AE1-194 E	72.84
939651	AE1-195 C	10.88
939652	AE1-195 E	72.84
939691	AE1-199	1.59
939701	AE1-201 C	1.34
939702	AE1-201 E	0.29
939732	AE1-204 E	0.2
939861	AE1-222 1	52.55
939871	AE1-222 2	54.95
939921	AE1-228 C O1	6.68
939922	AE1-228 E O1	4.45
939961	AE1-233 C O1	1.55
939962	AE1-233 E O1	6.39
940101	AE1-252 C O1	6.69
940102	AE1-252 E O1	4.46
951721	J643	15.51
952581	J740 C	3.4
952582	J740 E	18.42
953871	J847	8.38
AB2-013	AB2-013	10.64
AE1-033	AE1-033	12.03
BLUEG	BLUEG	2.86
CANNELTON	CANNELTON	0.0
CARR	CARR	0.5
CATAWBA	CATAWBA	0.16
CBM-S1	CBM-S1	1.36
CBM-W1	CBM-W1	19.98
CBM-W2	CBM-W2	38.44

Bus #	Bus	MW Impact
CIN	CIN	0.12
DEARBORN	DEARBORN	2.29
G-007	G-007	1.38
HAMLET	HAMLET	0.65
MEC	MEC	25.05
O-066	O-066	4.65
RENSELAER	RENSELAER	0.39
SANTEETLA	SANTEETLA	0.0
TRIMBLE	TRIMBLE	0.34
WEC	WEC	5.32
Z1-043	Z1-043	18.82

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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
668234	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	COMED_P4_023-65-BT2-3__	breaker	1091.0	108.55	109.38	DC	26.33

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	9.04
274654	BRAIDWOOD;1U	19.05
274655	BRAIDWOOD;2U	18.24
274661	LASCO STA;2U	17.6
274687	WILL CNTY;4U	8.03
274704	KENDALL ;1C	2.81
274705	KENDALL ;1S	1.88
274706	KENDALL ;2C	2.81
274707	KENDALL ;2S	1.88
274722	S-055 E	8.45
274751	CRETE EC ;1U	3.36
274752	CRETE EC ;2U	3.36
274753	CRETE EC ;3U	3.36
274754	CRETE EC ;4U	3.36
274859	EASYR;U1 E	8.17
274860	EASYR;U2 E	8.17
274861	TOP CROP ;1U	0.33
274862	TOP CROP ;2U	0.63
274888	PILOT HIL;1E	12.81
274890	CAYUG;1U E	9.74
274891	CAYUG;2U E	9.74
275149	KEMPTON ;1E	12.81
290021	O50 E	14.65
290051	GSG-6; E	7.78
290108	LEEDK;1U E	18.09
293061	N-015 E	11.61
293516	O-009 E1	6.69
293517	O-009 E2	3.4
293518	O-009 E3	3.74
293644	O22 E1	8.5
293645	O22 E2	16.51
293715	O-029 E	7.24
293716	O-029 E	3.97
293717	O-029 E	3.65
294392	P-010 E	14.75
294763	P-046 E	6.98
295109	WESTBROOK E	4.16
295111	SUBLETTE E	1.92
914641	Y2-103	33.8
915011	Y3-013 1	2.82

Bus #	Bus	MW Impact
915021	Y3-013 2	2.82
915031	Y3-013 3	2.82
916221	Z1-073 E	4.01
916502	Z1-106 E1	0.94
916504	Z1-106 E2	0.94
916512	Z1-107 E	1.85
916522	Z1-108 E	1.86
918052	AA1-018 E	11.64
919221	AA1-146	13.04
919581	AA2-030	13.04
920272	AA2-123 E	1.83
924471	AB2-096	31.63
925161	AB2-173	2.33
925302	AB2-191 E	1.03
926311	AC1-109 1	1.42
926321	AC1-109 2	1.42
926331	AC1-110 1	1.42
926341	AC1-110 2	1.42
926351	AC1-111 1	0.57
926361	AC1-111 2	0.57
926371	AC1-111 3	0.57
926381	AC1-111 4	0.57
926391	AC1-111 5	0.57
926401	AC1-111 6	0.57
926431	AC1-114	1.77
926821	AC1-168 C O1	0.85
926822	AC1-168 E O1	5.68
927091	AC1-204 1	55.19
927101	AC1-204 2	55.12
927451	AC1-142A 1	3.2
927461	AC1-142A 2	3.2
927511	AC1-113 1	0.89
927521	AC1-113 2	0.89
927531	AC1-185 1	0.51
927541	AC1-185 2	0.51
927551	AC1-185 3	0.51
927561	AC1-185 4	0.51
927571	AC1-185 5	0.51
927581	AC1-185 6	0.51
927591	AC1-185 7	0.51
927601	AC1-185 8	0.51
930481	AB1-089	49.05
930501	AB1-091 O1	50.61
930741	AB1-122 1O1	52.99
930751	AB1-122 2O1	56.33
932881	AC2-115 1	1.77
932891	AC2-115 2	1.77
932921	AC2-116	0.62
933341	AC2-147 C	0.65
933342	AC2-147 E	1.06
933411	AC2-154 C	1.74
933412	AC2-154 E	2.84

Bus #	Bus	MW Impact
933431	AC2-156 C O1	0.71
933432	AC2-156 E O1	1.16
933911	AD1-013 C	1.37
933912	AD1-013 E	2.19
933931	AD1-016 C	0.69
933932	AD1-016 E	1.13
934101	AD1-039 1	5.19
934111	AD1-039 2	5.52
934401	AD1-064 C O1	2.39
934402	AD1-064 E O1	11.2
934431	AD1-067 C	0.1
934432	AD1-067 E	0.41
934651	AD1-096 C	0.66
934652	AD1-096 E	1.08
934701	AD1-098 C O1	5.12
934702	AD1-098 E O1	3.74
934721	AD1-100 C	14.27
934722	AD1-100 E	66.6
934871	AD1-116 C	0.68
934872	AD1-116 E	1.11
934881	AD1-117 C	3.99
934882	AD1-117 E	2.66
934971	AD1-129 C	0.67
934972	AD1-129 E	0.45
935001	AD1-133 C O1	15.16
935002	AD1-133 E O1	10.11
936291	AD2-038 C O1	1.71
936292	AD2-038 E O1	11.45
936371	AD2-047 C O1	1.56
936372	AD2-047 E O1	16.75
936461	AD2-060	1.83
936511	AD2-066 C O1	6.19
936512	AD2-066 E O1	4.13
936781	AD2-101 C	3.09
936782	AD2-101 E	14.46
936791	AD2-102 C	8.96
936792	AD2-102 E	8.61
936961	AD2-130	0.42
937001	AD2-134 C	2.03
937002	AD2-134 E	8.4
937031	AD2-137 C O1	2.44
937032	AD2-137 E O1	11.43
937051	AD2-140 C O1	2.44
937052	AD2-140 E O1	11.42
937061	AD2-141 C O1	2.43
937062	AD2-141 E O1	11.44
937071	AD2-142 C O1	4.88
937072	AD2-142 E O1	22.85
937121	AD2-148 C O1	2.43
937122	AD2-148 E O1	11.37
937131	AD2-149 C O1	2.43
937132	AD2-149 E O1	11.37

Bus #	Bus	MW Impact
937141	AD2-150 C O1	2.43
937142	AD2-150 E O1	11.37
937181	AD2-155 C O1	2.43
937182	AD2-155 E O1	11.37
937311	AD2-172 C	1.83
937312	AD2-172 E	2.53
937321	AD2-175 C	11.32
937322	AD2-175 E	7.55
937331	AD2-176 C O1	5.48
937332	AD2-176 E O1	3.65
937401	AD2-194 1	5.94
937411	AD2-194 2	5.93
937531	AD2-214 C	0.8
937532	AD2-214 E	0.38
938012	AE1-002 E O1	4.9
938511	AE1-070 1	6.97
938521	AE1-070 2	6.37
938851	AE1-113 C O1	6.35
938852	AE1-113 E O1	19.97
938861	AE1-114 C O1	2.65
938862	AE1-114 E O1	10.14
939051	AE1-134 1	1.01
939061	AE1-134 2	1.01
939321	AE1-163 C O1	4.63
939322	AE1-163 E O1	28.43
939351	AE1-166 C O1	7.6
939352	AE1-166 E O1	7.02
939401	AE1-172 C O1	4.47
939402	AE1-172 E O1	20.95
939641	AE1-194 C	18.96
939642	AE1-194 E	126.86
939651	AE1-195 C	18.96
939652	AE1-195 E	126.86
939691	AE1-199	1.78
939701	AE1-201 C	1.5
939702	AE1-201 E	0.33
939732	AE1-204 E	0.22
939861	AE1-222 1	58.52
939871	AE1-222 2	62.2
939921	AE1-228 C O1	7.48
939922	AE1-228 E O1	4.99
939961	AE1-233 C O1	1.73
939962	AE1-233 E O1	7.16
940101	AE1-252 C O1	7.31
940102	AE1-252 E O1	4.87
AB2-013	AB2-013	11.87
AE1-033	AE1-033	13.47
BLUEG	BLUEG	5.05
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.11
CARR	CARR	0.56
CATAWBA	CATAWBA	0.23

Bus #	Bus	MW Impact
CBM-S1	CBM-S1	0.77
CBM-W1	CBM-W1	20.04
CBM-W2	CBM-W2	37.14
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.24
ELMERSMITH	ELMERSMITH	0.14
G-007	G-007	1.57
GIBSON	GIBSON	0.06
HAMLET	HAMLET	0.87
MEC	MEC	27.58
O-066	O-066	5.3
RENSELAER	RENSELAER	0.45
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.59
WEC	WEC	5.97
Z1-043	Z1-043	20.98

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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
341695	255113	17STILLWEL L	NIPS	243219	05DUMON T	AEP	1	AEP_P4_#2978_05DUMON T 765_B	breaker	1409.0	171.32	172.06	DC	41.44

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	13.92
274722	S-055 E	12.95
274724	RIVER EC ;11	4.75
274788	SE CHICAG;5U	1.14
274789	SE CHICAG;6U	1.14
274790	SE CHICAG;7U	1.14
274791	SE CHICAG;8U	1.14
274795	SE CHICAG;2U	1.12
274832	U4-027	12.45
274859	EASYR;U1 E	12.67
274860	EASYR;U2 E	12.67
274888	PILOT HIL;1E	22.3
274890	CAYUG;1U E	15.76
274891	CAYUG;2U E	15.76
275149	KEMPTON ;1E	22.3
290021	O50 E	22.31
290051	GSG-6; E	12.02
290108	LEEDK;1U E	27.92
293061	N-015 E	17.54
293516	O-009 E1	10.45
293517	O-009 E2	5.31
293518	O-009 E3	5.85
293644	O22 E1	11.95
293645	O22 E2	23.2
293715	O-029 E	11.27
293716	O-029 E	6.18
293717	O-029 E	5.68
293771	O-035 E	7.36
294392	P-010 E	22.27
294763	P-046 E	10.8
295109	WESTBROOK E	6.44
295111	SUBLETTE E	2.99
910542	X3-005 E	1.0
914641	Y2-103	51.8
915011	Y3-013 1	4.32
915021	Y3-013 2	4.32
915031	Y3-013 3	4.32
916211	Z1-072 E	5.57
916221	Z1-073 E	6.2
916502	Z1-106 E1	1.45
916504	Z1-106 E2	1.45

Bus #	Bus	MW Impact
916512	Z1-107 E	3.03
916522	Z1-108 E	2.86
918052	AA1-018 E	18.74
919221	AA1-146	20.28
919581	AA2-030	20.28
920272	AA2-123 E	2.81
924471	AB2-096	48.73
925161	AB2-173	3.62
925302	AB2-191 E	1.59
925581	AC1-033 C	1.61
925582	AC1-033 E	10.81
925881	AC1-067 O1	198.49
926311	AC1-109 1	2.19
926321	AC1-109 2	2.19
926331	AC1-110 1	2.18
926341	AC1-110 2	2.18
926351	AC1-111 1	0.88
926361	AC1-111 2	0.88
926371	AC1-111 3	0.88
926381	AC1-111 4	0.88
926391	AC1-111 5	0.88
926401	AC1-111 6	0.88
926431	AC1-114	2.74
926821	AC1-168 C O1	1.32
926822	AC1-168 E O1	8.85
927091	AC1-204 1	83.26
927101	AC1-204 2	83.23
927201	AC1-214 C O1	2.36
927202	AC1-214 E O1	7.51
927451	AC1-142A 1	4.83
927461	AC1-142A 2	4.84
927511	AC1-113 1	1.37
927521	AC1-113 2	1.37
927531	AC1-185 1	0.79
927541	AC1-185 2	0.79
927551	AC1-185 3	0.79
927561	AC1-185 4	0.79
927571	AC1-185 5	0.79
927581	AC1-185 6	0.79
927591	AC1-185 7	0.79
927601	AC1-185 8	0.79
930481	AB1-089	75.67
930501	AB1-091 O1	88.22
930741	AB1-122 1O1	82.42
930751	AB1-122 2O1	84.95
932881	AC2-115 1	2.74
932891	AC2-115 2	2.74
932921	AC2-116	0.96
932931	AC2-117	5.81
933341	AC2-147 C	1.0
933342	AC2-147 E	1.64
933411	AC2-154 C	3.03

Bus #	Bus	MW Impact
933412	AC2-154 E	4.94
933431	AC2-156 C O1	1.1
933432	AC2-156 E O1	1.79
933911	AD1-013 C	2.12
933912	AD1-013 E	3.38
933931	AD1-016 C	1.07
933932	AD1-016 E	1.74
934101	AD1-039 1	8.08
934111	AD1-039 2	8.33
934401	AD1-064 C O1	3.69
934402	AD1-064 E O1	17.25
934431	AD1-067 C	0.15
934432	AD1-067 E	0.63
934651	AD1-096 C	1.03
934652	AD1-096 E	1.67
934701	AD1-098 C O1	7.91
934702	AD1-098 E O1	5.78
934721	AD1-100 C	22.45
934722	AD1-100 E	104.76
934871	AD1-116 C	1.09
934872	AD1-116 E	1.78
934881	AD1-117 C	6.19
934882	AD1-117 E	4.13
934971	AD1-129 C	1.04
934972	AD1-129 E	0.69
935001	AD1-133 C O1	24.06
935002	AD1-133 E O1	16.04
936291	AD2-038 C O1	2.69
936292	AD2-038 E O1	18.02
936371	AD2-047 C O1	2.71
936372	AD2-047 E O1	29.15
936461	AD2-060	3.19
936511	AD2-066 C O1	9.67
936512	AD2-066 E O1	6.45
936781	AD2-101 C	5.9
936782	AD2-101 E	27.62
936791	AD2-102 C	13.85
936792	AD2-102 E	13.3
936961	AD2-130	0.66
937001	AD2-134 C	3.14
937002	AD2-134 E	12.98
937031	AD2-137 C O1	4.08
937032	AD2-137 E O1	19.09
937051	AD2-140 C O1	4.11
937052	AD2-140 E O1	19.25
937061	AD2-141 C O1	4.09
937062	AD2-141 E O1	19.27
937071	AD2-142 C O1	8.22
937072	AD2-142 E O1	38.5
937121	AD2-148 C O1	4.23
937122	AD2-148 E O1	19.82
937131	AD2-149 C O1	4.23

Bus #	Bus	MW Impact
937132	AD2-149 E O1	19.82
937141	AD2-150 C O1	4.23
937142	AD2-150 E O1	19.82
937181	AD2-155 C O1	4.23
937182	AD2-155 E O1	19.82
937311	AD2-172 C	2.83
937312	AD2-172 E	3.91
937321	AD2-175 C	19.73
937322	AD2-175 E	13.15
937331	AD2-176 C O1	8.43
937332	AD2-176 E O1	5.62
937401	AD2-194 1	8.95
937411	AD2-194 2	8.95
937531	AD2-214 C	5.1
937532	AD2-214 E	2.4
938012	AE1-002 E O1	8.18
938511	AE1-070 1	10.52
938521	AE1-070 2	9.62
938851	AE1-113 C O1	10.0
938852	AE1-113 E O1	31.44
938861	AE1-114 C O1	4.11
938862	AE1-114 E O1	15.72
939051	AE1-134 1	1.58
939061	AE1-134 2	1.58
939321	AE1-163 C O1	6.81
939322	AE1-163 E O1	41.82
939351	AE1-166 C O1	11.8
939352	AE1-166 E O1	10.89
939401	AE1-172 C O1	7.21
939402	AE1-172 E O1	33.74
939631	AE1-193 C O1	4.73
939632	AE1-193 E O1	31.63
939641	AE1-194 C	10.24
939642	AE1-194 E	68.55
939651	AE1-195 C	10.24
939652	AE1-195 E	68.55
939681	AE1-198 C O1	23.78
939682	AE1-198 E O1	20.2
939691	AE1-199	2.75
939701	AE1-201 C	2.31
939702	AE1-201 E	0.51
939732	AE1-204 E	0.34
939861	AE1-222 1	91.02
939871	AE1-222 2	93.81
939921	AE1-228 C O1	11.56
939922	AE1-228 E O1	7.71
939961	AE1-233 C O1	2.67
939962	AE1-233 E O1	11.05
940101	AE1-252 C O1	11.82
940102	AE1-252 E O1	7.88
951721	J643	25.73
952581	J740 C	4.3

Bus #	Bus	MW Impact
952582	J740 E	23.28
953871	J847	13.1
954751	J351	434.54
AB2-013	AB2-013	18.6
AE1-033	AE1-033	20.85
BLUEG	BLUEG	1.07
CARR	CARR	0.9
CATAWBA	CATAWBA	0.22
CBM-S1	CBM-S1	3.95
CBM-W1	CBM-W1	35.83
CBM-W2	CBM-W2	81.92
CIN	CIN	3.3
DEARBORN	DEARBORN	4.0
G-007	G-007	2.51
HAMLET	HAMLET	0.96
IPL	IPL	1.12
MEC	MEC	44.69
O-066	O-066	8.44
RENSSELAER	RENSSELAER	0.71
TRIMBLE	TRIMBLE	0.16
WEC	WEC	9.2
Z1-043	Z1-043	32.93

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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
66840 4	27067 7	BURNHAM ;OR	CE	25510 9	17MUNSTER	NIPS	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1441.0	110.86	111.53	DC	35.82

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	11.75
274722	S-055 E	10.96
274723	RIVER EC ;12	4.32
274792	SE CHICAG;9U	0.96
274793	SE CHICAG;0U	0.96
274794	SE CHICAG;1U	0.96
274795	SE CHICAG;2U	0.96
274832	U4-027	10.31
274859	EASYR;U1 E	10.61
274860	EASYR;U2 E	10.61
274888	PILOT HIL;1E	20.48
274890	CAYUG;1U E	13.4
274891	CAYUG;2U E	13.4
275149	KEMPTON ;1E	20.48
290021	O50 E	18.57
290051	GSG-6; E	10.13
290108	LEEDK;1U E	23.57
293061	N-015 E	14.82
293516	O-009 E1	8.7
293517	O-009 E2	4.42
293518	O-009 E3	4.87
293644	O22 E1	9.26
293645	O22 E2	17.98
293715	O-029 E	9.4
293716	O-029 E	5.15
293717	O-029 E	4.74
293771	O-035 E	6.09
294392	P-010 E	18.82
294763	P-046 E	9.07
295109	WESTBROOK E	5.42
295111	SUBLETTE E	2.5
296125	R-030 C3	3.43
296128	R-030 E3	13.71
296271	R-030 C2	3.39
296272	R-030 E2	13.54
296308	R-030 C1	3.39
296309	R-030 E1	13.54
910541	X3-005 C	0.08
910542	X3-005 E	0.91
914641	Y2-103	43.82
915011	Y3-013 1	3.65

Bus #	Bus	MW Impact
915021	Y3-013 2	3.65
915031	Y3-013 3	3.65
916211	Z1-072 E	4.61
916221	Z1-073 E	5.23
916502	Z1-106 E1	1.23
916504	Z1-106 E2	1.23
916512	Z1-107 E	2.58
916522	Z1-108 E	2.42
917502	Z2-087 E	8.96
918052	AA1-018 E	16.81
919221	AA1-146	16.93
919581	AA2-030	16.93
920272	AA2-123 E	2.37
924471	AB2-096	41.11
925161	AB2-173	3.02
925302	AB2-191 E	1.34
925881	AC1-067 O1	301.08
926311	AC1-109 1	1.86
926321	AC1-109 2	1.86
926331	AC1-110 1	1.85
926341	AC1-110 2	1.85
926351	AC1-111 1	0.75
926361	AC1-111 2	0.75
926371	AC1-111 3	0.75
926381	AC1-111 4	0.75
926391	AC1-111 5	0.75
926401	AC1-111 6	0.75
926431	AC1-114	2.31
926821	AC1-168 C O1	1.1
926822	AC1-168 E O1	7.36
927091	AC1-204 1	70.09
927101	AC1-204 2	70.14
927201	AC1-214 C O1	1.95
927202	AC1-214 E O1	6.21
927451	AC1-142A 1	4.09
927461	AC1-142A 2	4.09
927511	AC1-113 1	1.15
927521	AC1-113 2	1.15
927531	AC1-185 1	0.66
927541	AC1-185 2	0.66
927551	AC1-185 3	0.66
927561	AC1-185 4	0.66
927571	AC1-185 5	0.66
927581	AC1-185 6	0.66
927591	AC1-185 7	0.66
927601	AC1-185 8	0.66
930481	AB1-089	63.73
930501	AB1-091 O1	82.27
930741	AB1-122 1O1	70.02
930751	AB1-122 2O1	70.99
932881	AC2-115 1	2.31
932891	AC2-115 2	2.31

Bus #	Bus	MW Impact
932921	AC2-116	0.81
932931	AC2-117	5.3
933341	AC2-147 C	0.84
933342	AC2-147 E	1.37
933411	AC2-154 C	2.78
933412	AC2-154 E	4.53
933431	AC2-156 C O1	0.93
933432	AC2-156 E O1	1.52
933911	AD1-013 C	1.78
933912	AD1-013 E	2.85
933931	AD1-016 C	0.9
933932	AD1-016 E	1.47
934101	AD1-039 1	6.86
934111	AD1-039 2	6.96
934401	AD1-064 C O1	3.11
934402	AD1-064 E O1	14.56
934431	AD1-067 C	0.13
934432	AD1-067 E	0.53
934651	AD1-096 C	0.86
934652	AD1-096 E	1.41
934701	AD1-098 C O1	6.66
934702	AD1-098 E O1	4.86
934721	AD1-100 C	19.54
934722	AD1-100 E	91.19
934871	AD1-116 C	0.98
934872	AD1-116 E	1.6
934881	AD1-117 C	5.18
934882	AD1-117 E	3.46
934971	AD1-129 C	0.88
934972	AD1-129 E	0.58
935001	AD1-133 C O1	20.3
935002	AD1-133 E O1	13.53
936291	AD2-038 C O1	2.33
936292	AD2-038 E O1	15.58
936371	AD2-047 C O1	2.49
936372	AD2-047 E O1	26.77
936461	AD2-060	2.93
936511	AD2-066 C O1	8.14
936512	AD2-066 E O1	5.43
936781	AD2-101 C	4.75
936782	AD2-101 E	22.22
936791	AD2-102 C	11.64
936792	AD2-102 E	11.19
936961	AD2-130	0.56
937001	AD2-134 C	2.65
937002	AD2-134 E	10.94
937031	AD2-137 C O1	3.67
937032	AD2-137 E O1	17.17
937051	AD2-140 C O1	3.72
937052	AD2-140 E O1	17.42
937061	AD2-141 C O1	3.7
937062	AD2-141 E O1	17.44

Bus #	Bus	MW Impact
937071	AD2-142 C O1	7.44
937072	AD2-142 E O1	34.83
937121	AD2-148 C O1	3.94
937122	AD2-148 E O1	18.43
937131	AD2-149 C O1	3.94
937132	AD2-149 E O1	18.43
937141	AD2-150 C O1	3.94
937142	AD2-150 E O1	18.43
937181	AD2-155 C O1	3.94
937182	AD2-155 E O1	18.43
937311	AD2-172 C	2.38
937312	AD2-172 E	3.29
937321	AD2-175 C	18.34
937322	AD2-175 E	12.23
937331	AD2-176 C O1	7.12
937332	AD2-176 E O1	4.75
937401	AD2-194 1	7.54
937411	AD2-194 2	7.54
937531	AD2-214 C	4.24
937532	AD2-214 E	1.99
938012	AE1-002 E O1	7.36
938511	AE1-070 1	8.86
938521	AE1-070 2	8.11
938851	AE1-113 C O1	8.65
938852	AE1-113 E O1	27.18
938861	AE1-114 C O1	3.45
938862	AE1-114 E O1	13.17
939051	AE1-134 1	1.32
939061	AE1-134 2	1.32
939321	AE1-163 C O1	5.47
939322	AE1-163 E O1	33.6
939351	AE1-166 C O1	10.23
939352	AE1-166 E O1	9.45
939401	AE1-172 C O1	6.18
939402	AE1-172 E O1	28.94
939691	AE1-199	2.32
939701	AE1-201 C	1.95
939702	AE1-201 E	0.43
939732	AE1-204 E	0.28
939741	AE1-205 C O1	8.57
939742	AE1-205 E O1	11.84
939861	AE1-222 1	77.33
939871	AE1-222 2	78.4
939921	AE1-228 C O1	9.74
939922	AE1-228 E O1	6.49
939961	AE1-233 C O1	2.26
939962	AE1-233 E O1	9.34
940101	AE1-252 C O1	10.05
940102	AE1-252 E O1	6.7
AB2-013	AB2-013	15.32
AE1-033	AE1-033	17.49
BLUEG	BLUEG	5.47

Bus #	Bus	MW Impact
CALDERWOOD	CALDERWOOD	0.06
CANNELTON	CANNELTON	0.08
CARR	CARR	0.73
CATAWBA	CATAWBA	0.27
CBM-S1	CBM-S1	1.44
CBM-W1	CBM-W1	23.88
CBM-W2	CBM-W2	51.81
CHEOAH	CHEOAH	0.06
CHILHOWEE	CHILHOWEE	0.02
DEARBORN	DEARBORN	2.93
ELMERSMITH	ELMERSMITH	0.08
G-007	G-007	2.03
GIBSON	GIBSON	0.04
HAMLET	HAMLET	1.05
MEC	MEC	36.09
O-066	O-066	6.84
RENSSELAER	RENSSELAER	0.58
SANTEETLA	SANTEETLA	0.02
TRIMBLE	TRIMBLE	0.65
WEC	WEC	7.74
Z1-043	Z1-043	27.27

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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
668386	270728	E FRANKFO; B	CE	274750	CRETE EC ;BP	CE	1	COMED_P4_112- 65-BT3-4__	breaker	1399.0	107.48	108.45	DC	37.17

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	12.8
274654	BRAIDWOOD;1U	27.4
274655	BRAIDWOOD;2U	26.22
274660	LASCO STA;1U	25.04
274661	LASCO STA;2U	25.08
274675	JOLIET 29;7U	11.31
274676	JOLIET 29;8U	11.32
274687	WILL CNTY;4U	11.43
274704	KENDALL ;1C	4.02
274705	KENDALL ;1S	2.68
274706	KENDALL ;2C	4.02
274707	KENDALL ;2S	2.68
274722	S-055 E	11.98
274736	ELWOOD EC;9P	3.25
274832	U4-027	11.25
274859	EASYR;U1 E	11.58
274860	EASYR;U2 E	11.58
274861	TOP CROP ;1U	0.48
274862	TOP CROP ;2U	0.92
274888	PILOT HIL;1E	17.21
274890	CAYUG;1U E	13.68
274891	CAYUG;2U E	13.68
275149	KEMPTON ;1E	17.21
290021	O50 E	20.89
290051	GSG-6; E	11.0
290108	LEEDK;1U E	25.57
293061	N-015 E	16.52
293516	O-009 E1	9.49
293517	O-009 E2	4.82
293518	O-009 E3	5.31
293644	O22 E1	12.4
293645	O22 E2	24.06
293715	O-029 E	10.26
293716	O-029 E	5.62
293717	O-029 E	5.17
293771	O-035 E	6.63
294392	P-010 E	20.98
294763	P-046 E	9.89
295109	WESTBROOK E	5.89
295111	SUBLETTE E	2.72

Bus #	Bus	MW Impact
914641	Y2-103	47.9
915011	Y3-013 1	3.99
915021	Y3-013 2	3.99
915031	Y3-013 3	3.99
916211	Z1-072 E	5.02
916221	Z1-073 E	5.68
916502	Z1-106 E1	1.34
916504	Z1-106 E2	1.34
916512	Z1-107 E	2.57
916522	Z1-108 E	2.64
918052	AA1-018 E	16.28
919221	AA1-146	18.49
919581	AA2-030	18.49
920272	AA2-123 E	2.59
924471	AB2-096	44.79
925161	AB2-173	3.3
925302	AB2-191 E	1.46
925581	AC1-033 C	1.45
925582	AC1-033 E	9.74
926311	AC1-109 1	2.01
926321	AC1-109 2	2.01
926331	AC1-110 1	2.01
926341	AC1-110 2	2.01
926351	AC1-111 1	0.8
926361	AC1-111 2	0.8
926371	AC1-111 3	0.8
926381	AC1-111 4	0.8
926391	AC1-111 5	0.8
926401	AC1-111 6	0.8
926431	AC1-114	2.51
926821	AC1-168 C O1	1.2
926822	AC1-168 E O1	8.06
927091	AC1-204 1	78.74
927101	AC1-204 2	78.6
927201	AC1-214 C O1	2.13
927202	AC1-214 E O1	6.77
927451	AC1-142A 1	4.56
927461	AC1-142A 2	4.56
927511	AC1-113 1	1.26
927521	AC1-113 2	1.26
927531	AC1-185 1	0.72
927541	AC1-185 2	0.72
927551	AC1-185 3	0.72
927561	AC1-185 4	0.72
927571	AC1-185 5	0.72
927581	AC1-185 6	0.72
927591	AC1-185 7	0.72
927601	AC1-185 8	0.72
930481	AB1-089	69.46
930501	AB1-091 O1	67.8
930741	AB1-122 1O1	75.1
930751	AB1-122 2O1	80.29

Bus #	Bus	MW Impact
932881	AC2-115 1	2.51
932891	AC2-115 2	2.51
932921	AC2-116	0.88
933341	AC2-147 C	0.92
933342	AC2-147 E	1.5
933411	AC2-154 C	2.34
933412	AC2-154 E	3.81
933431	AC2-156 C O1	1.0
933432	AC2-156 E O1	1.64
933911	AD1-013 C	1.94
933912	AD1-013 E	3.09
933931	AD1-016 C	0.98
933932	AD1-016 E	1.6
934101	AD1-039 1	7.36
934111	AD1-039 2	7.87
934401	AD1-064 C O1	3.39
934402	AD1-064 E O1	15.86
934431	AD1-067 C	0.14
934432	AD1-067 E	0.58
934651	AD1-096 C	0.94
934652	AD1-096 E	1.53
934701	AD1-098 C O1	7.24
934702	AD1-098 E O1	5.29
934721	AD1-100 C	20.04
934722	AD1-100 E	93.51
934871	AD1-116 C	0.95
934872	AD1-116 E	1.55
934881	AD1-117 C	5.65
934882	AD1-117 E	3.77
934971	AD1-129 C	0.96
934972	AD1-129 E	0.64
935001	AD1-133 C O1	21.43
935002	AD1-133 E O1	14.28
936291	AD2-038 C O1	2.42
936292	AD2-038 E O1	16.17
936371	AD2-047 C O1	2.09
936372	AD2-047 E O1	22.5
936461	AD2-060	2.46
936511	AD2-066 C O1	8.76
936512	AD2-066 E O1	5.84
936781	AD2-101 C	3.99
936782	AD2-101 E	18.7
936791	AD2-102 C	12.7
936792	AD2-102 E	12.2
936961	AD2-130	0.6
937001	AD2-134 C	2.88
937002	AD2-134 E	11.88
937031	AD2-137 C O1	3.35
937032	AD2-137 E O1	15.69
937051	AD2-140 C O1	3.33
937052	AD2-140 E O1	15.61
937061	AD2-141 C O1	3.32

Bus #	Bus	MW Impact
937062	AD2-141 E O1	15.63
937071	AD2-142 C O1	6.67
937072	AD2-142 E O1	31.23
937121	AD2-148 C O1	3.26
937122	AD2-148 E O1	15.24
937131	AD2-149 C O1	3.26
937132	AD2-149 E O1	15.24
937141	AD2-150 C O1	3.26
937142	AD2-150 E O1	15.24
937181	AD2-155 C O1	3.26
937182	AD2-155 E O1	15.24
937311	AD2-172 C	2.6
937312	AD2-172 E	3.58
937321	AD2-175 C	15.17
937322	AD2-175 E	10.11
937331	AD2-176 C O1	7.76
937332	AD2-176 E O1	5.17
937401	AD2-194 1	8.47
937411	AD2-194 2	8.45
937531	AD2-214 C	4.62
937532	AD2-214 E	2.18
938012	AE1-002 E O1	6.73
938511	AE1-070 1	9.95
938521	AE1-070 2	9.09
938851	AE1-113 C O1	8.97
938852	AE1-113 E O1	28.2
938861	AE1-114 C O1	3.76
938862	AE1-114 E O1	14.36
939051	AE1-134 1	1.44
939061	AE1-134 2	1.44
939321	AE1-163 C O1	6.67
939322	AE1-163 E O1	41.0
939351	AE1-166 C O1	10.72
939352	AE1-166 E O1	9.89
939401	AE1-172 C O1	6.27
939402	AE1-172 E O1	29.37
939631	AE1-193 C O1	1.03
939632	AE1-193 E O1	6.92
939681	AE1-198 C O1	21.43
939682	AE1-198 E O1	18.21
939691	AE1-199	2.52
939701	AE1-201 C	2.12
939702	AE1-201 E	0.47
939732	AE1-204 E	0.31
939861	AE1-222 1	82.94
939871	AE1-222 2	88.67
939921	AE1-228 C O1	10.58
939922	AE1-228 E O1	7.05
939961	AE1-233 C O1	2.45
939962	AE1-233 E O1	10.13
940101	AE1-252 C O1	10.26
940102	AE1-252 E O1	6.84

Bus #	Bus	MW Impact
AB2-013	AB2-013	16.9
AE1-033	AE1-033	19.08
BLUEG	BLUEG	6.65
CALDERWOOD	CALDERWOOD	0.07
CANNELTON	CANNELTON	0.13
CARR	CARR	0.74
CATAWBA	CATAWBA	0.28
CBM-S1	CBM-S1	1.38
CBM-W1	CBM-W1	26.87
CBM-W2	CBM-W2	54.0
CHEOAH	CHEOAH	0.07
CHILHOWEE	CHILHOWEE	0.02
DEARBORN	DEARBORN	2.91
ELMERSMITH	ELMERSMITH	0.15
G-007	G-007	2.06
GIBSON	GIBSON	0.08
HAMLET	HAMLET	1.08
MEC	MEC	39.21
O-066	O-066	6.95
RENSSELAER	RENSSELAER	0.58
SANTEETLA	SANTEETLA	0.02
TRIMBLE	TRIMBLE	0.78
WEC	WEC	8.47
Z1-043	Z1-043	29.78

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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
668285	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-L11614_	breaker	1802.0	117.95	119.11	DC	45.8

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	7.96
274722	S-055 E	7.38
274728	ELWOOD EC;5P	4.75
274730	ELWOOD EC;6P	4.75
274732	ELWOOD EC;7P	4.75
274734	ELWOOD EC;8P	4.75
274735	ELWOOD EC;4P	4.72
274736	ELWOOD EC;9P	4.75
274832	U4-027	8.21
274859	EASYR;U1 E	7.73
274860	EASYR;U2 E	7.73
274861	TOP CROP ;1U	0.95
274862	TOP CROP ;2U	1.84
290021	O50 E	25.65
290051	GSG-6; E	6.67
293516	O-009 E1	6.67
293517	O-009 E2	3.39
293518	O-009 E3	3.73
293644	O22 E1	24.77
293645	O22 E2	48.08
293715	O-029 E	7.07
293716	O-029 E	3.88
293717	O-029 E	3.56
293771	O-035 E	4.74
294401	BSHIL;1U E	6.6
294410	BSHIL;2U E	6.6
294763	P-046 E	6.37
295109	WESTBROOK E	3.57
295111	SUBLETTE E	1.82
914641	Y2-103	29.53
915011	Y3-013 1	2.46
915021	Y3-013 2	2.46
915031	Y3-013 3	2.46
916211	Z1-072 E	3.58
916221	Z1-073 E	3.44
916502	Z1-106 E1	0.78
916504	Z1-106 E2	0.78
916522	Z1-108 E	1.6
918052	AA1-018 E	19.58
919221	AA1-146	12.7
919581	AA2-030	12.7

Bus #	Bus	MW Impact
919621	AA2-039 C	1.61
919622	AA2-039 E	10.77
920272	AA2-123 E	1.59
924471	AB2-096	27.85
925161	AB2-173	2.27
925302	AB2-191 E	0.88
925581	AC1-033 C	1.08
925582	AC1-033 E	7.24
926331	AC1-110 1	1.2
926341	AC1-110 2	1.2
926431	AC1-114	1.59
926841	AC1-171 C O1	0.79
926842	AC1-171 E O1	5.24
927091	AC1-204 1	115.11
927101	AC1-204 2	114.46
927201	AC1-214 C O1	1.52
927202	AC1-214 E O1	4.83
927451	AC1-142A 1	3.64
927461	AC1-142A 2	3.67
927511	AC1-113 1	0.79
927521	AC1-113 2	0.79
927531	AC1-185 1	0.48
927541	AC1-185 2	0.48
927551	AC1-185 3	0.48
927561	AC1-185 4	0.48
927571	AC1-185 5	0.48
927581	AC1-185 6	0.48
927591	AC1-185 7	0.48
927601	AC1-185 8	0.48
930481	AB1-089	43.91
930741	AB1-122 1O1	65.29
930751	AB1-122 2O1	95.35
932881	AC2-115 1	1.59
932891	AC2-115 2	1.59
932921	AC2-116	0.56
933341	AC2-147 C	0.61
933342	AC2-147 E	0.99
933911	AD1-013 C	1.17
933912	AD1-013 E	1.87
933931	AD1-016 C	0.61
933932	AD1-016 E	0.99
934051	AD1-031 C O1	2.2
934052	AD1-031 E O1	3.58
934101	AD1-039 1	6.4
934111	AD1-039 2	9.34
934401	AD1-064 C O1	2.11
934402	AD1-064 E O1	9.87
934431	AD1-067 C	0.08
934432	AD1-067 E	0.35
934651	AD1-096 C	0.6
934652	AD1-096 E	0.99
934701	AD1-098 C O1	4.41

Bus #	Bus	MW Impact
934702	AD1-098 E O1	3.22
934871	AD1-116 C	1.14
934872	AD1-116 E	1.86
934881	AD1-117 C	3.74
934882	AD1-117 E	2.49
934971	AD1-129 C	0.6
934972	AD1-129 E	0.4
935001	AD1-133 C O1	14.7
935002	AD1-133 E O1	9.8
936291	AD2-038 C O1	2.98
936292	AD2-038 E O1	19.92
936511	AD2-066 C O1	6.45
936512	AD2-066 E O1	4.3
936791	AD2-102 C	8.1
936792	AD2-102 E	7.78
937001	AD2-134 C	1.74
937002	AD2-134 E	7.2
937311	AD2-172 C	1.67
937312	AD2-172 E	2.31
937331	AD2-176 C O1	4.78
937332	AD2-176 E O1	3.18
937401	AD2-194 1	12.38
937411	AD2-194 2	12.31
937531	AD2-214 C	3.27
937532	AD2-214 E	1.54
938511	AE1-070 1	14.54
938521	AE1-070 2	13.23
938851	AE1-113 C O1	11.05
938852	AE1-113 E O1	34.75
938861	AE1-114 C O1	2.49
938862	AE1-114 E O1	9.5
939051	AE1-134 1	0.99
939061	AE1-134 2	0.99
939321	AE1-163 C O1	10.91
939322	AE1-163 E O1	67.01
939631	AE1-193 C O1	5.36
939632	AE1-193 E O1	35.9
939681	AE1-198 C O1	15.93
939682	AE1-198 E O1	13.53
939691	AE1-199	1.52
939701	AE1-201 C	1.31
939702	AE1-201 E	0.29
939732	AE1-204 E	0.19
939861	AE1-222 1	72.1
939871	AE1-222 2	105.3
939921	AE1-228 C O1	6.37
939922	AE1-228 E O1	4.25
990901	L-005 E	9.75
AB2-013	AB2-013	17.74
AE1-033	AE1-033	12.31
BLUEG	BLUEG	2.87
CANNELTON	CANNELTON	0.0

Bus #	Bus	MW Impact
CARR	CARR	0.36
CATAWBA	CATAWBA	0.06
CBM-S1	CBM-S1	2.13
CBM-W1	CBM-W1	18.07
CBM-W2	CBM-W2	45.91
DEARBORN	DEARBORN	1.82
G-007	G-007	0.99
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.28
MEC	MEC	29.52
O-066	O-066	3.34
RENSELAER	RENSELAER	0.28
TRIMBLE	TRIMBLE	0.35
WEC	WEC	5.37
Z1-043	Z1-043	19.7

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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
668275	270771	GREENACRE;	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	113.56	114.3	DC	23.71

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	8.06
274722	S-055 E	7.52
274751	CRETE EC ;1U	1.93
274752	CRETE EC ;2U	1.93
274753	CRETE EC ;3U	1.93
274754	CRETE EC ;4U	1.93
274832	U4-027	7.11
274859	EASYR;U1 E	7.3
274860	EASYR;U2 E	7.3
274888	PILOT HIL;1E	12.4
274890	CAYUG;1U E	8.92
274891	CAYUG;2U E	8.92
275149	KEMPTON ;1E	12.4
290021	O50 E	12.98
290051	GSG-6; E	6.94
290108	LEEDK;1U E	16.14
293061	N-015 E	10.24
293516	O-009 E1	5.99
293517	O-009 E2	3.04
293518	O-009 E3	3.35
293644	O22 E1	7.24
293645	O22 E2	14.06
293715	O-029 E	6.47
293716	O-029 E	3.55
293717	O-029 E	3.26
294392	P-010 E	13.0
294763	P-046 E	6.23
295109	WESTBROOK E	3.72
295111	SUBLETTE E	1.72
910542	X3-005 E	0.52
914641	Y2-103	30.09
915011	Y3-013 1	2.51
915021	Y3-013 2	2.51
915031	Y3-013 3	2.51
916221	Z1-073 E	3.58
916502	Z1-106 E1	0.84
916504	Z1-106 E2	0.84
916512	Z1-107 E	1.71
916522	Z1-108 E	1.66
918052	AA1-018 E	10.62
919221	AA1-146	11.67

Bus #	Bus	MW Impact
919581	AA2-030	11.67
920272	AA2-123 E	1.63
924471	AB2-096	28.21
925161	AB2-173	2.08
925302	AB2-191 E	0.92
925881	AC1-067 O1	102.57
926311	AC1-109 1	1.27
926321	AC1-109 2	1.27
926331	AC1-110 1	1.27
926341	AC1-110 2	1.27
926351	AC1-111 1	0.51
926361	AC1-111 2	0.51
926371	AC1-111 3	0.51
926381	AC1-111 4	0.51
926391	AC1-111 5	0.51
926401	AC1-111 6	0.51
926431	AC1-114	1.58
926821	AC1-168 C O1	0.76
926822	AC1-168 E O1	5.08
927091	AC1-204 1	48.76
927101	AC1-204 2	48.73
927201	AC1-214 C O1	0.74
927202	AC1-214 E O1	2.34
927451	AC1-142A 1	2.83
927461	AC1-142A 2	2.83
927511	AC1-113 1	0.79
927521	AC1-113 2	0.79
927531	AC1-185 1	0.46
927541	AC1-185 2	0.46
927551	AC1-185 3	0.46
927561	AC1-185 4	0.46
927571	AC1-185 5	0.46
927581	AC1-185 6	0.46
927591	AC1-185 7	0.46
927601	AC1-185 8	0.46
930481	AB1-089	43.76
930501	AB1-091 O1	49.15
930741	AB1-122 1O1	47.58
930751	AB1-122 2O1	49.75
932881	AC2-115 1	1.58
932891	AC2-115 2	1.58
932921	AC2-116	0.55
933341	AC2-147 C	0.58
933342	AC2-147 E	0.94
933411	AC2-154 C	1.68
933412	AC2-154 E	2.75
933431	AC2-156 C O1	0.64
933432	AC2-156 E O1	1.04
933911	AD1-013 C	1.22
933912	AD1-013 E	1.95
933931	AD1-016 C	0.62
933932	AD1-016 E	1.01

Bus #	Bus	MW Impact
934101	AD1-039 1	4.66
934111	AD1-039 2	4.88
934401	AD1-064 C O1	2.13
934402	AD1-064 E O1	9.99
934431	AD1-067 C	0.09
934432	AD1-067 E	0.37
934651	AD1-096 C	0.59
934652	AD1-096 E	0.97
934701	AD1-098 C O1	4.57
934702	AD1-098 E O1	3.34
934721	AD1-100 C	12.94
934722	AD1-100 E	60.39
934871	AD1-116 C	0.62
934872	AD1-116 E	1.01
934881	AD1-117 C	3.57
934882	AD1-117 E	2.38
934971	AD1-129 C	0.6
934972	AD1-129 E	0.4
935001	AD1-133 C O1	13.73
935002	AD1-133 E O1	9.15
936291	AD2-038 C O1	1.54
936292	AD2-038 E O1	10.32
936371	AD2-047 C O1	1.51
936372	AD2-047 E O1	16.21
936461	AD2-060	1.77
936511	AD2-066 C O1	5.56
936512	AD2-066 E O1	3.71
936781	AD2-101 C	3.17
936782	AD2-101 E	14.84
936791	AD2-102 C	8.0
936792	AD2-102 E	7.69
936961	AD2-130	0.38
937001	AD2-134 C	1.82
937002	AD2-134 E	7.5
937031	AD2-137 C O1	2.31
937032	AD2-137 E O1	10.8
937051	AD2-140 C O1	2.32
937052	AD2-140 E O1	10.87
937061	AD2-141 C O1	2.31
937062	AD2-141 E O1	10.88
937071	AD2-142 C O1	4.64
937072	AD2-142 E O1	21.73
937121	AD2-148 C O1	2.36
937122	AD2-148 E O1	11.04
937131	AD2-149 C O1	2.36
937132	AD2-149 E O1	11.04
937141	AD2-150 C O1	2.36
937142	AD2-150 E O1	11.04
937181	AD2-155 C O1	2.36
937182	AD2-155 E O1	11.04
937311	AD2-172 C	1.64
937312	AD2-172 E	2.26

Bus #	Bus	MW Impact
937321	AD2-175 C	10.99
937322	AD2-175 E	7.33
937331	AD2-176 C O1	4.89
937332	AD2-176 E O1	3.26
937401	AD2-194 1	5.24
937411	AD2-194 2	5.24
937531	AD2-214 C	2.92
937532	AD2-214 E	1.37
938012	AE1-002 E O1	4.63
938511	AE1-070 1	6.16
938521	AE1-070 2	5.63
938851	AE1-113 C O1	5.72
938852	AE1-113 E O1	17.99
938861	AE1-114 C O1	2.37
938862	AE1-114 E O1	9.06
939051	AE1-134 1	0.91
939061	AE1-134 2	0.91
939321	AE1-163 C O1	4.03
939322	AE1-163 E O1	24.74
939351	AE1-166 C O1	6.84
939352	AE1-166 E O1	6.31
939401	AE1-172 C O1	4.1
939402	AE1-172 E O1	19.18
939641	AE1-194 C	10.88
939642	AE1-194 E	72.84
939651	AE1-195 C	10.88
939652	AE1-195 E	72.84
939691	AE1-199	1.59
939701	AE1-201 C	1.34
939702	AE1-201 E	0.29
939732	AE1-204 E	0.2
939861	AE1-222 1	52.55
939871	AE1-222 2	54.95
939921	AE1-228 C O1	6.68
939922	AE1-228 E O1	4.45
939961	AE1-233 C O1	1.55
939962	AE1-233 E O1	6.39
940101	AE1-252 C O1	6.69
940102	AE1-252 E O1	4.46
951721	J643	15.51
952581	J740 C	3.4
952582	J740 E	18.42
953871	J847	8.38
AB2-013	AB2-013	10.64
AE1-033	AE1-033	12.03
BLUEG	BLUEG	2.86
CANNELTON	CANNELTON	0.0
CARR	CARR	0.5
CATAWBA	CATAWBA	0.16
CBM-S1	CBM-S1	1.36
CBM-W1	CBM-W1	19.98
CBM-W2	CBM-W2	38.44

Bus #	Bus	MW Impact
CIN	CIN	0.12
DEARBORN	DEARBORN	2.29
G-007	G-007	1.38
HAMLET	HAMLET	0.65
MEC	MEC	25.05
O-066	O-066	4.65
RENSELAER	RENSELAER	0.39
SANTEETLA	SANTEETLA	0.0
TRIMBLE	TRIMBLE	0.34
WEC	WEC	5.32
Z1-043	Z1-043	18.82

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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
668239	270886	ST JOHN ; T	CE	255104	17GREEN_ACRE	NIPS	1	COMED_P4_023-65-BT2-3__	breaker	1091.0	108.55	109.38	DC	26.33

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	9.04
274654	BRAIDWOOD;1U	19.05
274655	BRAIDWOOD;2U	18.24
274661	LASCO STA;2U	17.6
274687	WILL CNTY;4U	8.03
274704	KENDALL ;1C	2.81
274705	KENDALL ;1S	1.88
274706	KENDALL ;2C	2.81
274707	KENDALL ;2S	1.88
274722	S-055 E	8.45
274751	CRETE EC ;1U	3.36
274752	CRETE EC ;2U	3.36
274753	CRETE EC ;3U	3.36
274754	CRETE EC ;4U	3.36
274859	EASYR;U1 E	8.17
274860	EASYR;U2 E	8.17
274861	TOP CROP ;1U	0.33
274862	TOP CROP ;2U	0.63
274888	PILOT HIL;1E	12.81
274890	CAYUG;1U E	9.74
274891	CAYUG;2U E	9.74
275149	KEMPTON ;1E	12.81
290021	O50 E	14.65
290051	GSG-6; E	7.78
290108	LEEDK;1U E	18.09
293061	N-015 E	11.61
293516	O-009 E1	6.69
293517	O-009 E2	3.4
293518	O-009 E3	3.74
293644	O22 E1	8.5
293645	O22 E2	16.51
293715	O-029 E	7.24
293716	O-029 E	3.97
293717	O-029 E	3.65
294392	P-010 E	14.75
294763	P-046 E	6.98
295109	WESTBROOK E	4.16
295111	SUBLETTE E	1.92
914641	Y2-103	33.8
915011	Y3-013 1	2.82

Bus #	Bus	MW Impact
915021	Y3-013 2	2.82
915031	Y3-013 3	2.82
916221	Z1-073 E	4.01
916502	Z1-106 E1	0.94
916504	Z1-106 E2	0.94
916512	Z1-107 E	1.85
916522	Z1-108 E	1.86
918052	AA1-018 E	11.64
919221	AA1-146	13.04
919581	AA2-030	13.04
920272	AA2-123 E	1.83
924471	AB2-096	31.63
925161	AB2-173	2.33
925302	AB2-191 E	1.03
926311	AC1-109 1	1.42
926321	AC1-109 2	1.42
926331	AC1-110 1	1.42
926341	AC1-110 2	1.42
926351	AC1-111 1	0.57
926361	AC1-111 2	0.57
926371	AC1-111 3	0.57
926381	AC1-111 4	0.57
926391	AC1-111 5	0.57
926401	AC1-111 6	0.57
926431	AC1-114	1.77
926821	AC1-168 C O1	0.85
926822	AC1-168 E O1	5.68
927091	AC1-204 1	55.19
927101	AC1-204 2	55.12
927451	AC1-142A 1	3.2
927461	AC1-142A 2	3.2
927511	AC1-113 1	0.89
927521	AC1-113 2	0.89
927531	AC1-185 1	0.51
927541	AC1-185 2	0.51
927551	AC1-185 3	0.51
927561	AC1-185 4	0.51
927571	AC1-185 5	0.51
927581	AC1-185 6	0.51
927591	AC1-185 7	0.51
927601	AC1-185 8	0.51
930481	AB1-089	49.05
930501	AB1-091 O1	50.61
930741	AB1-122 1O1	52.99
930751	AB1-122 2O1	56.33
932881	AC2-115 1	1.77
932891	AC2-115 2	1.77
932921	AC2-116	0.62
933341	AC2-147 C	0.65
933342	AC2-147 E	1.06
933411	AC2-154 C	1.74
933412	AC2-154 E	2.84

Bus #	Bus	MW Impact
933431	AC2-156 C O1	0.71
933432	AC2-156 E O1	1.16
933911	AD1-013 C	1.37
933912	AD1-013 E	2.19
933931	AD1-016 C	0.69
933932	AD1-016 E	1.13
934101	AD1-039 1	5.19
934111	AD1-039 2	5.52
934401	AD1-064 C O1	2.39
934402	AD1-064 E O1	11.2
934431	AD1-067 C	0.1
934432	AD1-067 E	0.41
934651	AD1-096 C	0.66
934652	AD1-096 E	1.08
934701	AD1-098 C O1	5.12
934702	AD1-098 E O1	3.74
934721	AD1-100 C	14.27
934722	AD1-100 E	66.6
934871	AD1-116 C	0.68
934872	AD1-116 E	1.11
934881	AD1-117 C	3.99
934882	AD1-117 E	2.66
934971	AD1-129 C	0.67
934972	AD1-129 E	0.45
935001	AD1-133 C O1	15.16
935002	AD1-133 E O1	10.11
936291	AD2-038 C O1	1.71
936292	AD2-038 E O1	11.45
936371	AD2-047 C O1	1.56
936372	AD2-047 E O1	16.75
936461	AD2-060	1.83
936511	AD2-066 C O1	6.19
936512	AD2-066 E O1	4.13
936781	AD2-101 C	3.09
936782	AD2-101 E	14.46
936791	AD2-102 C	8.96
936792	AD2-102 E	8.61
936961	AD2-130	0.42
937001	AD2-134 C	2.03
937002	AD2-134 E	8.4
937031	AD2-137 C O1	2.44
937032	AD2-137 E O1	11.43
937051	AD2-140 C O1	2.44
937052	AD2-140 E O1	11.42
937061	AD2-141 C O1	2.43
937062	AD2-141 E O1	11.44
937071	AD2-142 C O1	4.88
937072	AD2-142 E O1	22.85
937121	AD2-148 C O1	2.43
937122	AD2-148 E O1	11.37
937131	AD2-149 C O1	2.43
937132	AD2-149 E O1	11.37

Bus #	Bus	MW Impact
937141	AD2-150 C O1	2.43
937142	AD2-150 E O1	11.37
937181	AD2-155 C O1	2.43
937182	AD2-155 E O1	11.37
937311	AD2-172 C	1.83
937312	AD2-172 E	2.53
937321	AD2-175 C	11.32
937322	AD2-175 E	7.55
937331	AD2-176 C O1	5.48
937332	AD2-176 E O1	3.65
937401	AD2-194 1	5.94
937411	AD2-194 2	5.93
937531	AD2-214 C	0.8
937532	AD2-214 E	0.38
938012	AE1-002 E O1	4.9
938511	AE1-070 1	6.97
938521	AE1-070 2	6.37
938851	AE1-113 C O1	6.35
938852	AE1-113 E O1	19.97
938861	AE1-114 C O1	2.65
938862	AE1-114 E O1	10.14
939051	AE1-134 1	1.01
939061	AE1-134 2	1.01
939321	AE1-163 C O1	4.63
939322	AE1-163 E O1	28.43
939351	AE1-166 C O1	7.6
939352	AE1-166 E O1	7.02
939401	AE1-172 C O1	4.47
939402	AE1-172 E O1	20.95
939641	AE1-194 C	18.96
939642	AE1-194 E	126.86
939651	AE1-195 C	18.96
939652	AE1-195 E	126.86
939691	AE1-199	1.78
939701	AE1-201 C	1.5
939702	AE1-201 E	0.33
939732	AE1-204 E	0.22
939861	AE1-222 1	58.52
939871	AE1-222 2	62.2
939921	AE1-228 C O1	7.48
939922	AE1-228 E O1	4.99
939961	AE1-233 C O1	1.73
939962	AE1-233 E O1	7.16
940101	AE1-252 C O1	7.31
940102	AE1-252 E O1	4.87
AB2-013	AB2-013	11.87
AE1-033	AE1-033	13.47
BLUEG	BLUEG	5.05
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.11
CARR	CARR	0.56
CATAWBA	CATAWBA	0.23

Bus #	Bus	MW Impact
CBM-S1	CBM-S1	0.77
CBM-W1	CBM-W1	20.04
CBM-W2	CBM-W2	37.14
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.24
ELMERSMITH	ELMERSMITH	0.14
G-007	G-007	1.57
GIBSON	GIBSON	0.06
HAMLET	HAMLET	0.87
MEC	MEC	27.58
O-066	O-066	5.3
RENSELAER	RENSELAER	0.45
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.59
WEC	WEC	5.97
Z1-043	Z1-043	20.98

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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
668099	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	164.37	164.9	DC	44.34

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	14.81
274722	S-055 E	13.75
274772	LINCOLN ;3U	3.36
274773	LINCOLN ;4U	3.36
274774	LINCOLN ;5U	3.36
274775	LINCOLN ;6U	3.36
274776	LINCOLN ;7U	3.36
274777	LINCOLN ;8U	3.36
274859	EASYR;U1 E	13.46
274860	EASYR;U2 E	13.46
274888	PILOT HIL;1E	23.62
274890	CAYUG;1U E	20.25
274891	CAYUG;2U E	20.25
275149	KEMPTON ;1E	23.62
290021	O50 E	23.75
290051	GSG-6; E	12.8
290108	LEEDK;1U E	29.74
293061	N-015 E	19.44
293516	O-009 E1	1.0
293517	O-009 E2	0.51
293518	O-009 E3	0.56
293644	O22 E1	12.55
293645	O22 E2	24.37
293715	O-029 E	11.98
293716	O-029 E	6.57
293717	O-029 E	6.04
294392	P-010 E	24.69
294763	P-046 E	11.48
295109	WESTBROOK E	6.85
295111	SUBLETTE E	3.18
296125	R-030 C3	4.98
296128	R-030 E3	19.93
296271	R-030 C2	4.92
296272	R-030 E2	19.7
296308	R-030 C1	4.92
296309	R-030 E1	19.7
910542	X3-005 E	0.9
914641	Y2-103	55.02
915011	Y3-013 1	4.58
915021	Y3-013 2	4.58
915031	Y3-013 3	4.58

Bus #	Bus	MW Impact
916221	Z1-073 E	6.61
916502	Z1-106 E1	1.55
916504	Z1-106 E2	1.55
916512	Z1-107 E	3.17
916522	Z1-108 E	3.04
917502	Z2-087 E	25.76
918052	AA1-018 E	20.13
919221	AA1-146	21.54
919581	AA2-030	21.54
920272	AA2-123 E	2.99
924041	AB2-047 C O1	4.75
924042	AB2-047 E O1	31.79
924471	AB2-096	51.84
925161	AB2-173	3.84
925302	AB2-191 E	1.7
925881	AC1-067 O1	168.51
926311	AC1-109 1	2.34
926321	AC1-109 2	2.34
926331	AC1-110 1	2.33
926341	AC1-110 2	2.33
926351	AC1-111 1	0.94
926361	AC1-111 2	0.94
926371	AC1-111 3	0.94
926381	AC1-111 4	0.94
926391	AC1-111 5	0.94
926401	AC1-111 6	0.94
926431	AC1-114	2.91
926821	AC1-168 C O1	1.43
926822	AC1-168 E O1	9.59
927091	AC1-204 1	88.93
927101	AC1-204 2	88.93
927451	AC1-142A 1	5.12
927461	AC1-142A 2	5.12
927511	AC1-113 1	1.46
927521	AC1-113 2	1.46
927531	AC1-185 1	0.84
927541	AC1-185 2	0.84
927551	AC1-185 3	0.84
927561	AC1-185 4	0.84
927571	AC1-185 5	0.84
927581	AC1-185 6	0.84
927591	AC1-185 7	0.84
927601	AC1-185 8	0.84
930481	AB1-089	80.5
930501	AB1-091 O1	93.97
930741	AB1-122 1O1	89.35
930751	AB1-122 2O1	90.31
932881	AC2-115 1	2.91
932891	AC2-115 2	2.91
932921	AC2-116	1.02
932931	AC2-117	6.52
933341	AC2-147 C	1.07

Bus #	Bus	MW Impact
933342	AC2-147 E	1.74
933411	AC2-154 C	3.21
933412	AC2-154 E	5.23
933431	AC2-156 C O1	1.17
933432	AC2-156 E O1	1.91
933911	AD1-013 C	2.25
933912	AD1-013 E	3.6
933931	AD1-016 C	1.14
933932	AD1-016 E	1.85
934101	AD1-039 1	8.76
934111	AD1-039 2	8.85
934401	AD1-064 C O1	3.92
934402	AD1-064 E O1	18.37
934431	AD1-067 C	0.16
934432	AD1-067 E	0.68
934651	AD1-096 C	1.09
934652	AD1-096 E	1.78
934701	AD1-098 C O1	8.43
934702	AD1-098 E O1	6.15
934721	AD1-100 C	29.44
934722	AD1-100 E	137.37
934871	AD1-116 C	1.17
934872	AD1-116 E	1.91
934881	AD1-117 C	6.58
934882	AD1-117 E	4.39
934971	AD1-129 C	1.11
934972	AD1-129 E	0.74
935001	AD1-133 C O1	27.42
935002	AD1-133 E O1	18.28
936291	AD2-038 C O1	2.88
936292	AD2-038 E O1	19.29
936371	AD2-047 C O1	2.87
936372	AD2-047 E O1	30.87
936461	AD2-060	3.37
936511	AD2-066 C O1	10.36
936512	AD2-066 E O1	6.91
936781	AD2-101 C	5.83
936782	AD2-101 E	27.31
936791	AD2-102 C	14.71
936792	AD2-102 E	14.14
936961	AD2-130	0.69
937001	AD2-134 C	3.35
937002	AD2-134 E	13.82
937031	AD2-137 C O1	7.17
937032	AD2-137 E O1	33.59
937051	AD2-140 C O1	7.53
937052	AD2-140 E O1	35.28
937061	AD2-141 C O1	7.49
937062	AD2-141 E O1	35.32
937071	AD2-142 C O1	15.07
937072	AD2-142 E O1	70.55
937121	AD2-148 C O1	4.51

Bus #	Bus	MW Impact
937122	AD2-148 E O1	21.13
937131	AD2-149 C O1	4.51
937132	AD2-149 E O1	21.13
937141	AD2-150 C O1	4.51
937142	AD2-150 E O1	21.13
937181	AD2-155 C O1	4.51
937182	AD2-155 E O1	21.13
937311	AD2-172 C	3.01
937312	AD2-172 E	4.16
937321	AD2-175 C	21.03
937322	AD2-175 E	14.02
937331	AD2-176 C O1	8.97
937332	AD2-176 E O1	5.98
937401	AD2-194 1	9.56
937411	AD2-194 2	9.56
938012	AE1-002 E O1	14.4
938511	AE1-070 1	11.24
938521	AE1-070 2	10.28
938851	AE1-113 C O1	10.7
938852	AE1-113 E O1	33.64
938861	AE1-114 C O1	4.37
938862	AE1-114 E O1	16.72
939051	AE1-134 1	1.67
939061	AE1-134 2	1.67
939321	AE1-163 C O1	7.21
939322	AE1-163 E O1	44.26
939351	AE1-166 C O1	14.52
939352	AE1-166 E O1	13.41
939401	AE1-172 C O1	9.52
939402	AE1-172 E O1	44.57
939691	AE1-199	2.93
939701	AE1-201 C	2.45
939702	AE1-201 E	0.54
939732	AE1-204 E	0.36
939741	AE1-205 C O1	12.48
939742	AE1-205 E O1	17.23
939861	AE1-222 1	98.68
939871	AE1-222 2	99.73
939921	AE1-228 C O1	12.31
939922	AE1-228 E O1	8.21
939961	AE1-233 C O1	2.85
939962	AE1-233 E O1	11.77
940101	AE1-252 C O1	15.19
940102	AE1-252 E O1	10.13
AB2-013	AB2-013	19.85
AE1-033	AE1-033	22.1
BLUEG	BLUEG	7.86
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.09
CARR	CARR	0.96
CATAWBA	CATAWBA	0.38
CBM-S1	CBM-S1	1.85

Bus #	Bus	MW Impact
CBM-W1	CBM-W1	37.32
CBM-W2	CBM-W2	71.02
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.9
ELMERSMITH	ELMERSMITH	0.07
G-007	G-007	2.69
GIBSON	GIBSON	0.0
HAMLET	HAMLET	1.46
MEC	MEC	46.58
O-066	O-066	9.06
RENSELAER	RENSELAER	0.76
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.94
WEC	WEC	9.75
Z1-043	Z1-043	35.51

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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
668101	270927	WILTON	CE	275233	WILTON	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	161.41	162.19	DC	45.3

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	15.13
274722	S-055 E	14.05
274772	LINCOLN ;3U	3.45
274773	LINCOLN ;4U	3.45
274774	LINCOLN ;5U	3.45
274775	LINCOLN ;6U	3.45
274776	LINCOLN ;7U	3.45
274777	LINCOLN ;8U	3.45
274832	U4-027	6.82
274859	EASYR;U1 E	13.75
274860	EASYR;U2 E	13.75
274888	PILOT HIL;1E	24.11
274890	CAYUG;1U E	20.66
274891	CAYUG;2U E	20.66
275149	KEMPTON ;1E	24.11
290021	O50 E	24.25
290051	GSG-6; E	13.07
290108	LEEDK;1U E	30.37
293061	N-015 E	19.85
293516	O-009 E1	11.37
293517	O-009 E2	5.78
293518	O-009 E3	6.36
293644	O22 E1	12.82
293645	O22 E2	24.89
293715	O-029 E	12.24
293716	O-029 E	6.71
293717	O-029 E	6.17
293771	O-035 E	8.08
294392	P-010 E	25.21
294763	P-046 E	11.72
295109	WESTBROOK E	7.0
295111	SUBLETTE E	3.24
296125	R-030 C3	5.08
296128	R-030 E3	20.34
296271	R-030 C2	5.02
296272	R-030 E2	20.09
296308	R-030 C1	5.02
296309	R-030 E1	20.09
910542	X3-005 E	0.91
914641	Y2-103	56.19
915011	Y3-013 1	4.68

Bus #	Bus	MW Impact
915021	Y3-013 2	4.68
915031	Y3-013 3	4.68
916211	Z1-072 E	6.11
916221	Z1-073 E	6.75
916502	Z1-106 E1	1.58
916504	Z1-106 E2	1.58
916512	Z1-107 E	3.23
916522	Z1-108 E	3.11
917502	Z2-087 E	26.28
918052	AA1-018 E	20.57
919221	AA1-146	22.0
919581	AA2-030	22.0
920272	AA2-123 E	3.06
924041	AB2-047 C O1	4.85
924042	AB2-047 E O1	32.43
924471	AB2-096	52.94
925161	AB2-173	3.92
925302	AB2-191 E	1.73
925881	AC1-067 O1	172.23
926311	AC1-109 1	2.39
926321	AC1-109 2	2.39
926331	AC1-110 1	2.37
926341	AC1-110 2	2.37
926351	AC1-111 1	0.96
926361	AC1-111 2	0.96
926371	AC1-111 3	0.96
926381	AC1-111 4	0.96
926391	AC1-111 5	0.96
926401	AC1-111 6	0.96
926431	AC1-114	2.97
926821	AC1-168 C O1	1.46
926822	AC1-168 E O1	9.79
927091	AC1-204 1	90.83
927101	AC1-204 2	90.83
927201	AC1-214 C O1	2.59
927202	AC1-214 E O1	8.24
927451	AC1-142A 1	5.23
927461	AC1-142A 2	5.23
927511	AC1-113 1	1.49
927521	AC1-113 2	1.49
927531	AC1-185 1	0.86
927541	AC1-185 2	0.86
927551	AC1-185 3	0.86
927561	AC1-185 4	0.86
927571	AC1-185 5	0.86
927581	AC1-185 6	0.86
927591	AC1-185 7	0.86
927601	AC1-185 8	0.86
930481	AB1-089	82.21
930501	AB1-091 O1	95.92
930741	AB1-122 1O1	91.25
930751	AB1-122 2O1	92.24

Bus #	Bus	MW Impact
932881	AC2-115 1	2.97
932891	AC2-115 2	2.97
932921	AC2-116	1.04
932931	AC2-117	6.67
933341	AC2-147 C	1.09
933342	AC2-147 E	1.78
933411	AC2-154 C	3.27
933412	AC2-154 E	5.34
933431	AC2-156 C O1	1.2
933432	AC2-156 E O1	1.95
933911	AD1-013 C	2.3
933912	AD1-013 E	3.68
933931	AD1-016 C	1.16
933932	AD1-016 E	1.89
934101	AD1-039 1	8.94
934111	AD1-039 2	9.04
934401	AD1-064 C O1	4.01
934402	AD1-064 E O1	18.76
934431	AD1-067 C	0.16
934432	AD1-067 E	0.69
934651	AD1-096 C	1.11
934652	AD1-096 E	1.82
934701	AD1-098 C O1	8.6
934702	AD1-098 E O1	6.28
934721	AD1-100 C	30.02
934722	AD1-100 E	140.09
934871	AD1-116 C	1.2
934872	AD1-116 E	1.95
934881	AD1-117 C	6.72
934882	AD1-117 E	4.48
934971	AD1-129 C	1.13
934972	AD1-129 E	0.75
935001	AD1-133 C O1	27.99
935002	AD1-133 E O1	18.66
936291	AD2-038 C O1	2.94
936292	AD2-038 E O1	19.7
936371	AD2-047 C O1	2.93
936372	AD2-047 E O1	31.51
936461	AD2-060	3.44
936511	AD2-066 C O1	10.58
936512	AD2-066 E O1	7.05
936781	AD2-101 C	5.95
936782	AD2-101 E	27.88
936791	AD2-102 C	15.03
936792	AD2-102 E	14.44
936961	AD2-130	0.7
937001	AD2-134 C	3.42
937002	AD2-134 E	14.12
937031	AD2-137 C O1	7.31
937032	AD2-137 E O1	34.21
937051	AD2-140 C O1	7.67
937052	AD2-140 E O1	35.93

Bus #	Bus	MW Impact
937061	AD2-141 C O1	7.63
937062	AD2-141 E O1	35.97
937071	AD2-142 C O1	15.35
937072	AD2-142 E O1	71.86
937121	AD2-148 C O1	4.61
937122	AD2-148 E O1	21.57
937131	AD2-149 C O1	4.61
937132	AD2-149 E O1	21.57
937141	AD2-150 C O1	4.61
937142	AD2-150 E O1	21.57
937181	AD2-155 C O1	4.61
937182	AD2-155 E O1	21.57
937311	AD2-172 C	3.08
937312	AD2-172 E	4.25
937321	AD2-175 C	21.46
937322	AD2-175 E	14.31
937331	AD2-176 C O1	9.17
937332	AD2-176 E O1	6.11
937401	AD2-194 1	9.77
937411	AD2-194 2	9.77
938012	AE1-002 E O1	14.67
938511	AE1-070 1	11.48
938521	AE1-070 2	10.5
938851	AE1-113 C O1	10.93
938852	AE1-113 E O1	34.37
938861	AE1-114 C O1	4.47
938862	AE1-114 E O1	17.07
939051	AE1-134 1	1.71
939061	AE1-134 2	1.71
939321	AE1-163 C O1	7.36
939322	AE1-163 E O1	45.2
939351	AE1-166 C O1	14.82
939352	AE1-166 E O1	13.68
939401	AE1-172 C O1	9.71
939402	AE1-172 E O1	45.45
939691	AE1-199	2.99
939701	AE1-201 C	2.51
939702	AE1-201 E	0.55
939732	AE1-204 E	0.37
939741	AE1-205 C O1	12.73
939742	AE1-205 E O1	17.58
939861	AE1-222 1	100.77
939871	AE1-222 2	101.86
939921	AE1-228 C O1	12.57
939922	AE1-228 E O1	8.38
939961	AE1-233 C O1	2.91
939962	AE1-233 E O1	12.02
940101	AE1-252 C O1	15.49
940102	AE1-252 E O1	10.33
AB2-013	AB2-013	20.27
AE1-033	AE1-033	22.58
BLUEG	BLUEG	8.03

Bus #	Bus	MW Impact
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.09
CARR	CARR	0.98
CATAWBA	CATAWBA	0.39
CBM-S1	CBM-S1	1.88
CBM-W1	CBM-W1	38.11
CBM-W2	CBM-W2	72.48
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.96
ELMERSMITH	ELMERSMITH	0.07
G-007	G-007	2.75
GIBSON	GIBSON	0.0
HAMLET	HAMLET	1.49
MEC	MEC	47.56
O-066	O-066	9.26
RENSSELAER	RENSSELAER	0.77
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.96
WEC	WEC	9.96
Z1-043	Z1-043	36.25

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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
668134	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	COMED_P4_112-65-BT3-4__	breaker	1399.0	120.21	121.28	DC	36.7

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	12.64
274654	BRAIDWOOD;1U	27.1
274655	BRAIDWOOD;2U	25.93
274661	LASCO STA;2U	24.8
274687	WILL CNTY;4U	11.3
274704	KENDALL ;1C	3.98
274705	KENDALL ;1S	2.65
274706	KENDALL ;2C	3.98
274707	KENDALL ;2S	2.65
274722	S-055 E	11.83
274751	CRETE EC ;1U	5.76
274752	CRETE EC ;2U	5.76
274753	CRETE EC ;3U	5.76
274754	CRETE EC ;4U	5.76
274859	EASYR;U1 E	11.42
274860	EASYR;U2 E	11.42
274861	TOP CROP ;1U	0.47
274862	TOP CROP ;2U	0.91
274888	PILOT HIL;1E	16.99
274890	CAYUG;1U E	13.49
274891	CAYUG;2U E	13.49
275149	KEMPTON ;1E	16.99
290021	O50 E	20.63
290051	GSG-6; E	10.86
290108	LEEDK;1U E	25.25
293061	N-015 E	16.33
293516	O-009 E1	9.36
293517	O-009 E2	4.75
293518	O-009 E3	5.24
293644	O22 E1	12.27
293645	O22 E2	23.81
293715	O-029 E	10.12
293716	O-029 E	5.55
293717	O-029 E	5.1
294392	P-010 E	20.74
294763	P-046 E	9.76
295109	WESTBROOK E	5.81
295111	SUBLETTE E	2.69
914641	Y2-103	47.33
915011	Y3-013 1	3.94
915021	Y3-013 2	3.94

Bus #	Bus	MW Impact
915031	Y3-013 3	3.94
916221	Z1-073 E	5.6
916502	Z1-106 E1	1.32
916504	Z1-106 E2	1.32
916512	Z1-107 E	2.53
916522	Z1-108 E	2.6
918052	AA1-018 E	16.07
919221	AA1-146	18.24
919581	AA2-030	18.24
920272	AA2-123 E	2.55
924471	AB2-096	44.23
925161	AB2-173	3.25
925302	AB2-191 E	1.44
926311	AC1-109 1	1.99
926321	AC1-109 2	1.99
926331	AC1-110 1	1.99
926341	AC1-110 2	1.99
926351	AC1-111 1	0.79
926361	AC1-111 2	0.79
926371	AC1-111 3	0.79
926381	AC1-111 4	0.79
926391	AC1-111 5	0.79
926401	AC1-111 6	0.79
926431	AC1-114	2.48
926821	AC1-168 C O1	1.18
926822	AC1-168 E O1	7.95
927091	AC1-204 1	77.85
927101	AC1-204 2	77.71
927451	AC1-142A 1	4.51
927461	AC1-142A 2	4.51
927511	AC1-113 1	1.24
927521	AC1-113 2	1.24
927531	AC1-185 1	0.71
927541	AC1-185 2	0.71
927551	AC1-185 3	0.71
927561	AC1-185 4	0.71
927571	AC1-185 5	0.71
927581	AC1-185 6	0.71
927591	AC1-185 7	0.71
927601	AC1-185 8	0.71
930481	AB1-089	68.58
930501	AB1-091 O1	66.92
930741	AB1-122 1O1	74.18
930751	AB1-122 2O1	79.37
932881	AC2-115 1	2.48
932891	AC2-115 2	2.48
932921	AC2-116	0.87
933341	AC2-147 C	0.91
933342	AC2-147 E	1.48
933411	AC2-154 C	2.31
933412	AC2-154 E	3.76
933431	AC2-156 C O1	0.99

Bus #	Bus	MW Impact
933432	AC2-156 E O1	1.62
933911	AD1-013 C	1.91
933912	AD1-013 E	3.05
933931	AD1-016 C	0.97
933932	AD1-016 E	1.58
934101	AD1-039 1	7.27
934111	AD1-039 2	7.78
934401	AD1-064 C O1	3.35
934402	AD1-064 E O1	15.66
934431	AD1-067 C	0.14
934432	AD1-067 E	0.57
934651	AD1-096 C	0.93
934652	AD1-096 E	1.51
934701	AD1-098 C O1	7.15
934702	AD1-098 E O1	5.22
934721	AD1-100 C	19.8
934722	AD1-100 E	92.39
934871	AD1-116 C	0.94
934872	AD1-116 E	1.53
934881	AD1-117 C	5.58
934882	AD1-117 E	3.72
934971	AD1-129 C	0.94
934972	AD1-129 E	0.63
935001	AD1-133 C O1	21.14
935002	AD1-133 E O1	14.09
936291	AD2-038 C O1	2.39
936292	AD2-038 E O1	15.96
936371	AD2-047 C O1	2.06
936372	AD2-047 E O1	22.2
936461	AD2-060	2.43
936511	AD2-066 C O1	8.65
936512	AD2-066 E O1	5.76
936781	AD2-101 C	3.94
936782	AD2-101 E	18.44
936791	AD2-102 C	12.53
936792	AD2-102 E	12.04
936961	AD2-130	0.59
937001	AD2-134 C	2.84
937002	AD2-134 E	11.73
937031	AD2-137 C O1	3.31
937032	AD2-137 E O1	15.49
937051	AD2-140 C O1	3.29
937052	AD2-140 E O1	15.42
937061	AD2-141 C O1	3.27
937062	AD2-141 E O1	15.43
937071	AD2-142 C O1	6.59
937072	AD2-142 E O1	30.83
937121	AD2-148 C O1	3.21
937122	AD2-148 E O1	15.04
937131	AD2-149 C O1	3.21
937132	AD2-149 E O1	15.04
937141	AD2-150 C O1	3.21

Bus #	Bus	MW Impact
937142	AD2-150 E O1	15.04
937181	AD2-155 C O1	3.21
937182	AD2-155 E O1	15.04
937311	AD2-172 C	2.56
937312	AD2-172 E	3.54
937321	AD2-175 C	14.97
937322	AD2-175 E	9.98
937331	AD2-176 C O1	7.66
937332	AD2-176 E O1	5.11
937401	AD2-194 1	8.37
937411	AD2-194 2	8.36
937531	AD2-214 C	1.12
937532	AD2-214 E	0.53
938012	AE1-002 E O1	6.64
938511	AE1-070 1	9.84
938521	AE1-070 2	8.98
938851	AE1-113 C O1	8.86
938852	AE1-113 E O1	27.84
938861	AE1-114 C O1	3.71
938862	AE1-114 E O1	14.17
939051	AE1-134 1	1.42
939061	AE1-134 2	1.42
939321	AE1-163 C O1	6.6
939322	AE1-163 E O1	40.51
939351	AE1-166 C O1	10.59
939352	AE1-166 E O1	9.78
939401	AE1-172 C O1	6.19
939402	AE1-172 E O1	28.98
939641	AE1-194 C	32.45
939642	AE1-194 E	217.15
939651	AE1-195 C	32.45
939652	AE1-195 E	217.15
939691	AE1-199	2.48
939701	AE1-201 C	2.1
939702	AE1-201 E	0.46
939732	AE1-204 E	0.31
939861	AE1-222 1	81.92
939871	AE1-222 2	87.66
939921	AE1-228 C O1	10.44
939922	AE1-228 E O1	6.96
939961	AE1-233 C O1	2.42
939962	AE1-233 E O1	10.0
940101	AE1-252 C O1	10.12
940102	AE1-252 E O1	6.74
AB2-013	AB2-013	16.66
AE1-033	AE1-033	18.83
BLUEG	BLUEG	7.46
CALDERWOOD	CALDERWOOD	0.15
CANNELTON	CANNELTON	0.18
CARR	CARR	0.8
CATAWBA	CATAWBA	0.34
CBM-S1	CBM-S1	0.87

Bus #	Bus	MW Impact
CBM-W1	CBM-W1	25.94
CBM-W2	CBM-W2	50.2
CHEOAH	CHEOAH	0.15
CHILHOWEE	CHILHOWEE	0.05
DEARBORN	DEARBORN	3.06
ELMERSMITH	ELMERSMITH	0.24
G-007	G-007	2.23
GIBSON	GIBSON	0.11
HAMLET	HAMLET	1.27
MEC	MEC	38.47
O-066	O-066	7.52
RENSELAER	RENSELAER	0.63
SANTEETLA	SANTEETLA	0.05
TRIMBLE	TRIMBLE	0.87
WEC	WEC	8.36
Z1-043	Z1-043	29.36

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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
668193	274804	UNIV PK N;RP	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	971.0	131.67	132.71	DC	30.32

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	9.79
274722	S-055 E	9.15
274808	UNIV PK N;4U	1.62
274809	UNIV PK N;5U	1.62
274811	UNIV PK N;7U	1.62
274812	UNIV PK N;8U	1.62
274814	UNIV PK N;0U	1.62
274815	UNIV PK N;XU	1.62
274832	U4-027	8.61
274859	EASYR;U1 E	8.84
274860	EASYR;U2 E	8.84
274888	PILOT HIL;1E	14.86
274890	CAYUG;1U E	10.7
274891	CAYUG;2U E	10.7
275149	KEMPTON ;1E	14.86
290021	O50 E	15.62
290051	GSG-6; E	8.43
290108	LEEDK;1U E	19.61
293061	N-015 E	12.6
293516	O-009 E1	7.26
293517	O-009 E2	3.69
293518	O-009 E3	4.06
293644	O22 E1	7.88
293645	O22 E2	15.3
293715	O-029 E	7.84
293716	O-029 E	4.3
293717	O-029 E	3.95
293771	O-035 E	5.09
294392	P-010 E	16.0
294401	BSHIL;1U E	6.8
294410	BSHIL;2U E	6.8
294763	P-046 E	7.56
295109	WESTBROOK E	4.51
295111	SUBLETTE E	2.08
910542	X3-005 E	0.51
914641	Y2-103	36.59
915011	Y3-013 1	3.05
915021	Y3-013 2	3.05
915031	Y3-013 3	3.05
916211	Z1-072 E	3.85

Bus #	Bus	MW Impact
916221	Z1-073 E	4.35
916502	Z1-106 E1	1.02
916504	Z1-106 E2	1.02
916512	Z1-107 E	2.17
916522	Z1-108 E	2.02
918052	AA1-018 E	14.29
919221	AA1-146	14.12
919581	AA2-030	14.12
919621	AA2-039 C	1.66
919622	AA2-039 E	11.1
920272	AA2-123 E	1.98
924471	AB2-096	34.27
925161	AB2-173	2.52
925302	AB2-191 E	1.12
925581	AC1-033 C	1.11
925582	AC1-033 E	7.46
925881	AC1-067 O1	97.44
926311	AC1-109 1	1.55
926321	AC1-109 2	1.55
926331	AC1-110 1	1.54
926341	AC1-110 2	1.54
926351	AC1-111 1	0.62
926361	AC1-111 2	0.62
926371	AC1-111 3	0.62
926381	AC1-111 4	0.62
926391	AC1-111 5	0.62
926401	AC1-111 6	0.62
926431	AC1-114	1.92
926821	AC1-168 C O1	0.92
926822	AC1-168 E O1	6.18
927091	AC1-204 1	59.17
927101	AC1-204 2	59.21
927201	AC1-214 C O1	1.63
927202	AC1-214 E O1	5.19
927451	AC1-142A 1	3.45
927461	AC1-142A 2	3.45
927511	AC1-113 1	0.96
927521	AC1-113 2	0.96
927531	AC1-185 1	0.55
927541	AC1-185 2	0.55
927551	AC1-185 3	0.55
927561	AC1-185 4	0.55
927571	AC1-185 5	0.55
927581	AC1-185 6	0.55
927591	AC1-185 7	0.55
927601	AC1-185 8	0.55
930481	AB1-089	53.11
930501	AB1-091 O1	57.12
930741	AB1-122 1O1	58.21
930751	AB1-122 2O1	59.68
932881	AC2-115 1	1.92
932891	AC2-115 2	1.92

Bus #	Bus	MW Impact
932921	AC2-116	0.67
932931	AC2-117	10.39
933341	AC2-147 C	0.7
933342	AC2-147 E	1.15
933411	AC2-154 C	2.02
933412	AC2-154 E	3.29
933431	AC2-156 C O1	0.77
933432	AC2-156 E O1	1.26
933911	AD1-013 C	1.48
933912	AD1-013 E	2.37
933931	AD1-016 C	0.75
933932	AD1-016 E	1.23
934051	AD1-031 C O1	2.26
934052	AD1-031 E O1	3.69
934101	AD1-039 1	5.7
934111	AD1-039 2	5.85
934401	AD1-064 C O1	2.59
934402	AD1-064 E O1	12.13
934431	AD1-067 C	0.11
934432	AD1-067 E	0.44
934651	AD1-096 C	0.72
934652	AD1-096 E	1.17
934701	AD1-098 C O1	5.55
934702	AD1-098 E O1	4.05
934721	AD1-100 C	15.58
934722	AD1-100 E	72.69
934871	AD1-116 C	0.83
934872	AD1-116 E	1.36
934881	AD1-117 C	4.32
934882	AD1-117 E	2.88
934971	AD1-129 C	0.73
934972	AD1-129 E	0.49
935001	AD1-133 C O1	16.67
935002	AD1-133 E O1	11.11
936291	AD2-038 C O1	1.97
936292	AD2-038 E O1	13.19
936371	AD2-047 C O1	1.8
936372	AD2-047 E O1	19.42
936461	AD2-060	2.12
936511	AD2-066 C O1	6.83
936512	AD2-066 E O1	4.55
936781	AD2-101 C	3.51
936782	AD2-101 E	16.41
936791	AD2-102 C	9.71
936792	AD2-102 E	9.33
936961	AD2-130	0.46
937001	AD2-134 C	2.2
937002	AD2-134 E	9.1
937031	AD2-137 C O1	2.69
937032	AD2-137 E O1	12.6
937051	AD2-140 C O1	2.69
937052	AD2-140 E O1	12.61

Bus #	Bus	MW Impact
937061	AD2-141 C O1	2.68
937062	AD2-141 E O1	12.63
937071	AD2-142 C O1	5.39
937072	AD2-142 E O1	25.22
937121	AD2-148 C O1	2.74
937122	AD2-148 E O1	12.83
937131	AD2-149 C O1	2.74
937132	AD2-149 E O1	12.83
937141	AD2-150 C O1	2.74
937142	AD2-150 E O1	12.83
937181	AD2-155 C O1	2.74
937182	AD2-155 E O1	12.83
937311	AD2-172 C	1.98
937312	AD2-172 E	2.74
937321	AD2-175 C	12.77
937322	AD2-175 E	8.51
937331	AD2-176 C O1	5.94
937332	AD2-176 E O1	3.96
937401	AD2-194 1	6.36
937411	AD2-194 2	6.37
937531	AD2-214 C	3.53
937532	AD2-214 E	1.66
938012	AE1-002 E O1	5.4
938511	AE1-070 1	7.48
938521	AE1-070 2	6.84
938851	AE1-113 C O1	7.32
938852	AE1-113 E O1	23.0
938861	AE1-114 C O1	2.87
938862	AE1-114 E O1	10.98
939051	AE1-134 1	1.1
939061	AE1-134 2	1.1
939321	AE1-163 C O1	4.63
939322	AE1-163 E O1	28.42
939351	AE1-166 C O1	8.28
939352	AE1-166 E O1	7.64
939401	AE1-172 C O1	4.91
939402	AE1-172 E O1	22.97
939631	AE1-193 C O1	5.53
939632	AE1-193 E O1	37.0
939681	AE1-198 C O1	16.41
939682	AE1-198 E O1	13.95
939691	AE1-199	1.93
939701	AE1-201 C	1.62
939702	AE1-201 E	0.36
939732	AE1-204 E	0.24
939861	AE1-222 1	64.28
939871	AE1-222 2	65.91
939921	AE1-228 C O1	8.11
939922	AE1-228 E O1	5.4
939961	AE1-233 C O1	1.88
939962	AE1-233 E O1	7.77
940101	AE1-252 C O1	8.02

Bus #	Bus	MW Impact
940102	AE1-252 E O1	5.35
990901	L-005 E	5.05
AB2-013	AB2-013	12.84
AE1-033	AE1-033	14.59
BLUEG	BLUEG	4.41
CALDERWOOD	CALDERWOOD	0.05
CANNELTON	CANNELTON	0.06
CARR	CARR	0.61
CATAWBA	CATAWBA	0.23
CBM-S1	CBM-S1	1.22
CBM-W1	CBM-W1	21.89
CBM-W2	CBM-W2	43.2
CHEOAH	CHEOAH	0.05
CHILHOWEE	CHILHOWEE	0.01
DEARBORN	DEARBORN	2.62
ELMERSMITH	ELMERSMITH	0.06
G-007	G-007	1.71
GIBSON	GIBSON	0.02
HAMLET	HAMLET	0.88
MEC	MEC	30.08
O-066	O-066	5.77
RENSSELAER	RENSSELAER	0.49
SANTEETLA	SANTEETLA	0.02
TRIMBLE	TRIMBLE	0.52
WEC	WEC	6.46
Z1-043	Z1-043	22.86

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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
668098	275232	WILTON ;3M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	164.37	164.9	DC	44.34

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	14.81
274722	S-055 E	13.75
274772	LINCOLN ;3U	3.36
274773	LINCOLN ;4U	3.36
274774	LINCOLN ;5U	3.36
274775	LINCOLN ;6U	3.36
274776	LINCOLN ;7U	3.36
274777	LINCOLN ;8U	3.36
274859	EASYR;U1 E	13.46
274860	EASYR;U2 E	13.46
274888	PILOT HIL;1E	23.62
274890	CAYUG;1U E	20.25
274891	CAYUG;2U E	20.25
275149	KEMPTON ;1E	23.62
290021	O50 E	23.75
290051	GSG-6; E	12.8
290108	LEEDK;1U E	29.74
293061	N-015 E	19.44
293516	O-009 E1	1.0
293517	O-009 E2	0.51
293518	O-009 E3	0.56
293644	O22 E1	12.55
293645	O22 E2	24.37
293715	O-029 E	11.98
293716	O-029 E	6.57
293717	O-029 E	6.04
294392	P-010 E	24.69
294763	P-046 E	11.48
295109	WESTBROOK E	6.85
295111	SUBLETTE E	3.18
296125	R-030 C3	4.98
296128	R-030 E3	19.93
296271	R-030 C2	4.92
296272	R-030 E2	19.7
296308	R-030 C1	4.92
296309	R-030 E1	19.7
910542	X3-005 E	0.9
914641	Y2-103	55.02
915011	Y3-013 1	4.58
915021	Y3-013 2	4.58
915031	Y3-013 3	4.58

Bus #	Bus	MW Impact
916221	Z1-073 E	6.61
916502	Z1-106 E1	1.55
916504	Z1-106 E2	1.55
916512	Z1-107 E	3.17
916522	Z1-108 E	3.04
917502	Z2-087 E	25.76
918052	AA1-018 E	20.13
919221	AA1-146	21.54
919581	AA2-030	21.54
920272	AA2-123 E	2.99
924041	AB2-047 C O1	4.75
924042	AB2-047 E O1	31.79
924471	AB2-096	51.84
925161	AB2-173	3.84
925302	AB2-191 E	1.7
925881	AC1-067 O1	168.51
926311	AC1-109 1	2.34
926321	AC1-109 2	2.34
926331	AC1-110 1	2.33
926341	AC1-110 2	2.33
926351	AC1-111 1	0.94
926361	AC1-111 2	0.94
926371	AC1-111 3	0.94
926381	AC1-111 4	0.94
926391	AC1-111 5	0.94
926401	AC1-111 6	0.94
926431	AC1-114	2.91
926821	AC1-168 C O1	1.43
926822	AC1-168 E O1	9.59
927091	AC1-204 1	88.93
927101	AC1-204 2	88.93
927451	AC1-142A 1	5.12
927461	AC1-142A 2	5.12
927511	AC1-113 1	1.46
927521	AC1-113 2	1.46
927531	AC1-185 1	0.84
927541	AC1-185 2	0.84
927551	AC1-185 3	0.84
927561	AC1-185 4	0.84
927571	AC1-185 5	0.84
927581	AC1-185 6	0.84
927591	AC1-185 7	0.84
927601	AC1-185 8	0.84
930481	AB1-089	80.5
930501	AB1-091 O1	93.97
930741	AB1-122 1O1	89.35
930751	AB1-122 2O1	90.31
932881	AC2-115 1	2.91
932891	AC2-115 2	2.91
932921	AC2-116	1.02
932931	AC2-117	6.52
933341	AC2-147 C	1.07

Bus #	Bus	MW Impact
933342	AC2-147 E	1.74
933411	AC2-154 C	3.21
933412	AC2-154 E	5.23
933431	AC2-156 C O1	1.17
933432	AC2-156 E O1	1.91
933911	AD1-013 C	2.25
933912	AD1-013 E	3.6
933931	AD1-016 C	1.14
933932	AD1-016 E	1.85
934101	AD1-039 1	8.76
934111	AD1-039 2	8.85
934401	AD1-064 C O1	3.92
934402	AD1-064 E O1	18.37
934431	AD1-067 C	0.16
934432	AD1-067 E	0.68
934651	AD1-096 C	1.09
934652	AD1-096 E	1.78
934701	AD1-098 C O1	8.43
934702	AD1-098 E O1	6.15
934721	AD1-100 C	29.44
934722	AD1-100 E	137.37
934871	AD1-116 C	1.17
934872	AD1-116 E	1.91
934881	AD1-117 C	6.58
934882	AD1-117 E	4.39
934971	AD1-129 C	1.11
934972	AD1-129 E	0.74
935001	AD1-133 C O1	27.42
935002	AD1-133 E O1	18.28
936291	AD2-038 C O1	2.88
936292	AD2-038 E O1	19.29
936371	AD2-047 C O1	2.87
936372	AD2-047 E O1	30.87
936461	AD2-060	3.37
936511	AD2-066 C O1	10.36
936512	AD2-066 E O1	6.91
936781	AD2-101 C	5.83
936782	AD2-101 E	27.31
936791	AD2-102 C	14.71
936792	AD2-102 E	14.14
936961	AD2-130	0.69
937001	AD2-134 C	3.35
937002	AD2-134 E	13.82
937031	AD2-137 C O1	7.17
937032	AD2-137 E O1	33.59
937051	AD2-140 C O1	7.53
937052	AD2-140 E O1	35.28
937061	AD2-141 C O1	7.49
937062	AD2-141 E O1	35.32
937071	AD2-142 C O1	15.07
937072	AD2-142 E O1	70.55
937121	AD2-148 C O1	4.51

Bus #	Bus	MW Impact
937122	AD2-148 E O1	21.13
937131	AD2-149 C O1	4.51
937132	AD2-149 E O1	21.13
937141	AD2-150 C O1	4.51
937142	AD2-150 E O1	21.13
937181	AD2-155 C O1	4.51
937182	AD2-155 E O1	21.13
937311	AD2-172 C	3.01
937312	AD2-172 E	4.16
937321	AD2-175 C	21.03
937322	AD2-175 E	14.02
937331	AD2-176 C O1	8.97
937332	AD2-176 E O1	5.98
937401	AD2-194 1	9.56
937411	AD2-194 2	9.56
938012	AE1-002 E O1	14.4
938511	AE1-070 1	11.24
938521	AE1-070 2	10.28
938851	AE1-113 C O1	10.7
938852	AE1-113 E O1	33.64
938861	AE1-114 C O1	4.37
938862	AE1-114 E O1	16.72
939051	AE1-134 1	1.67
939061	AE1-134 2	1.67
939321	AE1-163 C O1	7.21
939322	AE1-163 E O1	44.26
939351	AE1-166 C O1	14.52
939352	AE1-166 E O1	13.41
939401	AE1-172 C O1	9.52
939402	AE1-172 E O1	44.57
939691	AE1-199	2.93
939701	AE1-201 C	2.45
939702	AE1-201 E	0.54
939732	AE1-204 E	0.36
939741	AE1-205 C O1	12.48
939742	AE1-205 E O1	17.23
939861	AE1-222 1	98.68
939871	AE1-222 2	99.73
939921	AE1-228 C O1	12.31
939922	AE1-228 E O1	8.21
939961	AE1-233 C O1	2.85
939962	AE1-233 E O1	11.77
940101	AE1-252 C O1	15.19
940102	AE1-252 E O1	10.13
AB2-013	AB2-013	19.85
AE1-033	AE1-033	22.1
BLUEG	BLUEG	7.86
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.09
CARR	CARR	0.96
CATAWBA	CATAWBA	0.38
CBM-S1	CBM-S1	1.85

Bus #	Bus	MW Impact
CBM-W1	CBM-W1	37.32
CBM-W2	CBM-W2	71.02
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.9
ELMERSMITH	ELMERSMITH	0.07
G-007	G-007	2.69
GIBSON	GIBSON	0.0
HAMLET	HAMLET	1.46
MEC	MEC	46.58
O-066	O-066	9.06
RENSELAER	RENSELAER	0.76
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.94
WEC	WEC	9.75
Z1-043	Z1-043	35.51

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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
668103	275233	WILTON ;4M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	161.41	162.19	DC	45.3

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	15.13
274722	S-055 E	14.05
274772	LINCOLN ;3U	3.45
274773	LINCOLN ;4U	3.45
274774	LINCOLN ;5U	3.45
274775	LINCOLN ;6U	3.45
274776	LINCOLN ;7U	3.45
274777	LINCOLN ;8U	3.45
274832	U4-027	6.82
274859	EASYR;U1 E	13.75
274860	EASYR;U2 E	13.75
274888	PILOT HIL;1E	24.11
274890	CAYUG;1U E	20.66
274891	CAYUG;2U E	20.66
275149	KEMPTON ;1E	24.11
290021	O50 E	24.25
290051	GSG-6; E	13.07
290108	LEEDK;1U E	30.37
293061	N-015 E	19.85
293516	O-009 E1	11.37
293517	O-009 E2	5.78
293518	O-009 E3	6.36
293644	O22 E1	12.82
293645	O22 E2	24.89
293715	O-029 E	12.24
293716	O-029 E	6.71
293717	O-029 E	6.17
293771	O-035 E	8.08
294392	P-010 E	25.21
294763	P-046 E	11.72
295109	WESTBROOK E	7.0
295111	SUBLETTE E	3.24
296125	R-030 C3	5.08
296128	R-030 E3	20.34
296271	R-030 C2	5.02
296272	R-030 E2	20.09
296308	R-030 C1	5.02
296309	R-030 E1	20.09
910542	X3-005 E	0.91
914641	Y2-103	56.19
915011	Y3-013 1	4.68

Bus #	Bus	MW Impact
915021	Y3-013 2	4.68
915031	Y3-013 3	4.68
916211	Z1-072 E	6.11
916221	Z1-073 E	6.75
916502	Z1-106 E1	1.58
916504	Z1-106 E2	1.58
916512	Z1-107 E	3.23
916522	Z1-108 E	3.11
917502	Z2-087 E	26.28
918052	AA1-018 E	20.57
919221	AA1-146	22.0
919581	AA2-030	22.0
920272	AA2-123 E	3.06
924041	AB2-047 C O1	4.85
924042	AB2-047 E O1	32.43
924471	AB2-096	52.94
925161	AB2-173	3.92
925302	AB2-191 E	1.73
925881	AC1-067 O1	172.23
926311	AC1-109 1	2.39
926321	AC1-109 2	2.39
926331	AC1-110 1	2.37
926341	AC1-110 2	2.37
926351	AC1-111 1	0.96
926361	AC1-111 2	0.96
926371	AC1-111 3	0.96
926381	AC1-111 4	0.96
926391	AC1-111 5	0.96
926401	AC1-111 6	0.96
926431	AC1-114	2.97
926821	AC1-168 C O1	1.46
926822	AC1-168 E O1	9.79
927091	AC1-204 1	90.83
927101	AC1-204 2	90.83
927201	AC1-214 C O1	2.59
927202	AC1-214 E O1	8.24
927451	AC1-142A 1	5.23
927461	AC1-142A 2	5.23
927511	AC1-113 1	1.49
927521	AC1-113 2	1.49
927531	AC1-185 1	0.86
927541	AC1-185 2	0.86
927551	AC1-185 3	0.86
927561	AC1-185 4	0.86
927571	AC1-185 5	0.86
927581	AC1-185 6	0.86
927591	AC1-185 7	0.86
927601	AC1-185 8	0.86
930481	AB1-089	82.21
930501	AB1-091 O1	95.92
930741	AB1-122 1O1	91.25
930751	AB1-122 2O1	92.24

Bus #	Bus	MW Impact
932881	AC2-115 1	2.97
932891	AC2-115 2	2.97
932921	AC2-116	1.04
932931	AC2-117	6.67
933341	AC2-147 C	1.09
933342	AC2-147 E	1.78
933411	AC2-154 C	3.27
933412	AC2-154 E	5.34
933431	AC2-156 C O1	1.2
933432	AC2-156 E O1	1.95
933911	AD1-013 C	2.3
933912	AD1-013 E	3.68
933931	AD1-016 C	1.16
933932	AD1-016 E	1.89
934101	AD1-039 1	8.94
934111	AD1-039 2	9.04
934401	AD1-064 C O1	4.01
934402	AD1-064 E O1	18.76
934431	AD1-067 C	0.16
934432	AD1-067 E	0.69
934651	AD1-096 C	1.11
934652	AD1-096 E	1.82
934701	AD1-098 C O1	8.6
934702	AD1-098 E O1	6.28
934721	AD1-100 C	30.02
934722	AD1-100 E	140.09
934871	AD1-116 C	1.2
934872	AD1-116 E	1.95
934881	AD1-117 C	6.72
934882	AD1-117 E	4.48
934971	AD1-129 C	1.13
934972	AD1-129 E	0.75
935001	AD1-133 C O1	27.99
935002	AD1-133 E O1	18.66
936291	AD2-038 C O1	2.94
936292	AD2-038 E O1	19.7
936371	AD2-047 C O1	2.93
936372	AD2-047 E O1	31.51
936461	AD2-060	3.44
936511	AD2-066 C O1	10.58
936512	AD2-066 E O1	7.05
936781	AD2-101 C	5.95
936782	AD2-101 E	27.88
936791	AD2-102 C	15.03
936792	AD2-102 E	14.44
936961	AD2-130	0.7
937001	AD2-134 C	3.42
937002	AD2-134 E	14.12
937031	AD2-137 C O1	7.31
937032	AD2-137 E O1	34.21
937051	AD2-140 C O1	7.67
937052	AD2-140 E O1	35.93

Bus #	Bus	MW Impact
937061	AD2-141 C O1	7.63
937062	AD2-141 E O1	35.97
937071	AD2-142 C O1	15.35
937072	AD2-142 E O1	71.86
937121	AD2-148 C O1	4.61
937122	AD2-148 E O1	21.57
937131	AD2-149 C O1	4.61
937132	AD2-149 E O1	21.57
937141	AD2-150 C O1	4.61
937142	AD2-150 E O1	21.57
937181	AD2-155 C O1	4.61
937182	AD2-155 E O1	21.57
937311	AD2-172 C	3.08
937312	AD2-172 E	4.25
937321	AD2-175 C	21.46
937322	AD2-175 E	14.31
937331	AD2-176 C O1	9.17
937332	AD2-176 E O1	6.11
937401	AD2-194 1	9.77
937411	AD2-194 2	9.77
938012	AE1-002 E O1	14.67
938511	AE1-070 1	11.48
938521	AE1-070 2	10.5
938851	AE1-113 C O1	10.93
938852	AE1-113 E O1	34.37
938861	AE1-114 C O1	4.47
938862	AE1-114 E O1	17.07
939051	AE1-134 1	1.71
939061	AE1-134 2	1.71
939321	AE1-163 C O1	7.36
939322	AE1-163 E O1	45.2
939351	AE1-166 C O1	14.82
939352	AE1-166 E O1	13.68
939401	AE1-172 C O1	9.71
939402	AE1-172 E O1	45.45
939691	AE1-199	2.99
939701	AE1-201 C	2.51
939702	AE1-201 E	0.55
939732	AE1-204 E	0.37
939741	AE1-205 C O1	12.73
939742	AE1-205 E O1	17.58
939861	AE1-222 1	100.77
939871	AE1-222 2	101.86
939921	AE1-228 C O1	12.57
939922	AE1-228 E O1	8.38
939961	AE1-233 C O1	2.91
939962	AE1-233 E O1	12.02
940101	AE1-252 C O1	15.49
940102	AE1-252 E O1	10.33
AB2-013	AB2-013	20.27
AE1-033	AE1-033	22.58
BLUEG	BLUEG	8.03

Bus #	Bus	MW Impact
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.09
CARR	CARR	0.98
CATAWBA	CATAWBA	0.39
CBM-S1	CBM-S1	1.88
CBM-W1	CBM-W1	38.11
CBM-W2	CBM-W2	72.48
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
DEARBORN	DEARBORN	2.96
ELMERSMITH	ELMERSMITH	0.07
G-007	G-007	2.75
GIBSON	GIBSON	0.0
HAMLET	HAMLET	1.49
MEC	MEC	47.56
O-066	O-066	9.26
RENSSELAER	RENSSELAER	0.77
SANTEETLA	SANTEETLA	0.03
TRIMBLE	TRIMBLE	0.96
WEC	WEC	9.96
Z1-043	Z1-043	36.25

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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
341795	346809	7CASEY	AMIL	247712	05SULLIVAN	AEP	1	AEP_P4_#3128_05EUGENE 345_A2	breaker	1466.0	141.83	142.48	DC	20.65

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	6.24
274650	KINCAID ;1U	14.71
274651	KINCAID ;2U	14.73
274832	U4-027	8.54
274853	TWINGROVE;U1	0.74
274854	TWINGROVE;U2	0.74
274859	EASYR;U1 E	6.8
274860	EASYR;U2 E	6.8
274890	CAYUG;1U E	10.14
274891	CAYUG;2U E	10.14
276150	W2-048 E	2.05
290021	O50 E	10.78
290051	GSG-6; E	5.68
290108	LEEDK;1U E	12.4
290261	S-027 E	19.36
290265	S-028 E	19.36
293516	O-009 E1	6.47
293517	O-009 E2	3.29
293518	O-009 E3	3.62
293644	O22 E1	4.9
293645	O22 E2	9.51
293715	O-029 E	6.65
293716	O-029 E	3.65
293717	O-029 E	3.35
293771	O-035 E	5.18
294401	BSHIL;1U E	7.08
294410	BSHIL;2U E	7.08
294763	P-046 E	5.38
295109	WESTBROOK E	3.04
295111	SUBLETTE E	1.65
296125	R-030 C3	3.34
296128	R-030 E3	13.34
296271	R-030 C2	3.3
296272	R-030 E2	13.18
296308	R-030 C1	3.3
296309	R-030 E1	13.18
905081	W4-005 C	0.98
905082	W4-005 E	42.62
909052	X2-022 E	28.51
916211	Z1-072 E	3.92
916221	Z1-073 E	2.93

Bus #	Bus	MW Impact
917502	Z2-087 E	17.32
918052	AA1-018 E	7.91
919221	AA1-146	11.65
919581	AA2-030	11.65
919621	AA2-039 C	1.73
919622	AA2-039 E	11.55
920272	AA2-123 E	1.22
924041	AB2-047 C O1	3.3
924042	AB2-047 E O1	22.1
924261	AB2-070 C O1	3.84
924262	AB2-070 E O1	25.68
924471	AB2-096	21.83
925161	AB2-173	2.08
925302	AB2-191 E	0.75
925581	AC1-033 C	1.16
925582	AC1-033 E	7.76
925771	AC1-053 C	3.87
925772	AC1-053 E	25.93
926431	AC1-114	1.3
926821	AC1-168 C O1	0.83
926822	AC1-168 E O1	5.54
926841	AC1-171 C O1	1.14
926842	AC1-171 E O1	7.61
927201	AC1-214 C O1	1.66
927202	AC1-214 E O1	5.29
927511	AC1-113 1	0.65
927521	AC1-113 2	0.65
927531	AC1-185 1	0.43
927541	AC1-185 2	0.43
927551	AC1-185 3	0.43
927561	AC1-185 4	0.43
927571	AC1-185 5	0.43
927581	AC1-185 6	0.43
927591	AC1-185 7	0.43
927601	AC1-185 8	0.43
930481	AB1-089	35.32
930741	AB1-122 1O1	34.94
932881	AC2-115 1	1.3
932891	AC2-115 2	1.3
932921	AC2-116	0.45
933341	AC2-147 C	0.54
933342	AC2-147 E	0.88
933911	AD1-013 C	0.99
933912	AD1-013 E	1.59
933931	AD1-016 C	0.46
933932	AD1-016 E	0.76
934051	AD1-031 C O1	2.35
934052	AD1-031 E O1	3.84
934101	AD1-039 1	3.42
934401	AD1-064 C O1	1.64
934402	AD1-064 E O1	7.66
934431	AD1-067 C	0.07

Bus #	Bus	MW Impact
934432	AD1-067 E	0.3
934651	AD1-096 C	0.51
934652	AD1-096 E	0.83
934701	AD1-098 C O1	3.77
934702	AD1-098 E O1	2.75
934871	AD1-116 C	0.46
934872	AD1-116 E	0.75
934881	AD1-117 C	3.31
934882	AD1-117 E	2.21
934971	AD1-129 C	0.47
934972	AD1-129 E	0.31
935001	AD1-133 C O1	14.12
935002	AD1-133 E O1	9.41
935141	AD1-148	7.45
936291	AD2-038 C O1	1.34
936292	AD2-038 E O1	8.98
936511	AD2-066 C O1	4.76
936512	AD2-066 E O1	3.17
936771	AD2-100 C O1	21.12
936772	AD2-100 E O1	14.08
936791	AD2-102 C	6.72
936792	AD2-102 E	6.46
936972	AD2-131 E O1	8.38
937001	AD2-134 C	1.48
937002	AD2-134 E	6.13
937161	AD2-153 C O1	3.2
937162	AD2-153 E O1	15.0
937171	AD2-154 C O1	3.2
937172	AD2-154 E O1	15.0
937211	AD2-159 C	4.61
937212	AD2-159 E	21.56
937311	AD2-172 C	1.41
937312	AD2-172 E	1.95
937331	AD2-176 C O1	3.65
937332	AD2-176 E O1	2.44
937531	AD2-214 C	3.23
937532	AD2-214 E	1.52
938851	AE1-113 C O1	4.98
938852	AE1-113 E O1	15.67
938861	AE1-114 C O1	2.2
938862	AE1-114 E O1	8.42
939051	AE1-134 1	0.91
939061	AE1-134 2	0.91
939321	AE1-163 C O1	3.4
939322	AE1-163 E O1	20.86
939401	AE1-172 C O1	4.02
939402	AE1-172 E O1	18.81
939631	AE1-193 C O1	5.75
939632	AE1-193 E O1	38.49
939681	AE1-198 C O1	17.08
939682	AE1-198 E O1	14.51
939691	AE1-199	1.29

Bus #	Bus	MW Impact
939701	AE1-201 C	1.0
939702	AE1-201 E	0.22
939741	AE1-205 C O1	8.33
939742	AE1-205 E O1	11.5
939861	AE1-222 1	38.59
939921	AE1-228 C O1	5.41
939922	AE1-228 E O1	3.61
939961	AE1-233 C O1	1.15
939962	AE1-233 E O1	4.76
940101	AE1-252 C O1	7.6
940102	AE1-252 E O1	5.07
950291	J291	3.2
950701	J196 C	1.33
950702	J196 E	5.3
951001	J339	6.03
951741	J474 C	2.02
951742	J474 E	10.95
952251	J641	10.35
952271	J644	9.57
952321	J734	5.07
952651	J756 C	2.46
952652	J756 E	13.33
952871	J757 C	4.06
952872	J757 E	21.98
953241	J467 C	2.76
953242	J467 E	14.91
953371	J808	9.06
953401	J811	17.76
953431	J853	11.11
953641	J813	43.81
953651	J815	32.11
953671	J817	10.67
953741	J826 C	1.65
953742	J826 E	8.94
953801	J835 C	2.68
953802	J835 E	14.48
953851	J845 C	1.72
953852	J845 E	9.32
953881	J848 C	5.27
953882	J848 E	28.51
953951	J859	9.79
954081	J872 C	4.44
954082	J872 E	24.03
954181	J884	7.67
954411	J912	14.24
954681	J949	38.92
954721	J750 C	2.11
954722	J750 E	11.4
954761	J468 C	7.08
954762	J468 E	28.32
990901	L-005 E	11.18
AB2-013	AB2-013	13.3

Bus #	Bus	MW Impact
AE1-033	AE1-033	10.55
AE1-042	AE1-042	10.08
BLUEG	BLUEG	10.38
CARR	CARR	0.29
CBM-S1	CBM-S1	13.17
CBM-S2	CBM-S2	2.35
CBM-W1	CBM-W1	28.23
CBM-W2	CBM-W2	199.79
CIN	CIN	3.85
CPLE	CPLE	0.56
DEARBORN	DEARBORN	0.69
G-007	G-007	0.8
GIBSON	GIBSON	0.02
MEC	MEC	45.61
O-066	O-066	2.69
RENSSELAER	RENSSELAER	0.23
TRIMBLE	TRIMBLE	1.31
WEC	WEC	4.13
Z1-043	Z1-043	21.97

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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
341957	938670	AE1-089 TAP	AEP	243219	05DUMONT	AEP	1	AEP_P4_#2978_05DUMONT 765_B	breaker	1409.0	123.89	124.59	DC	21.69

Bus #	Bus	MW Impact
247900	05FR-11G E	6.85
247901	05FR-12G E	6.74
247902	05FR-21G E	7.2
247903	05FR-22G E	6.89
247904	05FR-3G E	13.96
247905	05FR-4G E	10.5
247906	05MDL-1G E	15.63
247907	05MDL-2G E	7.75
247912	05MDL-3G E	8.11
247913	05MDL-4G E	7.83
247943	T-127 E	7.83
270859	PWR VTR EC;R	7.11
274722	S-055 E	6.55
274809	UNIV PK N;5U	0.8
274811	UNIV PK N;7U	0.8
274812	UNIV PK N;8U	0.8
274814	UNIV PK N;0U	0.8
274815	UNIV PK N;XU	0.8
274888	PILOT HIL;1E	10.32
275149	KEMPTON ;1E	10.32
290021	O50 E	11.46
290051	GSG-6; E	6.16
290108	LEEDK;1U E	14.23
293061	N-015 E	8.96
293644	O22 E1	5.93
293645	O22 E2	11.51
294392	P-010 E	11.37
295109	WESTBROOK E	3.3
909145	X2-052	36.23
914641	Y2-103	26.18
915011	Y3-013 1	2.18
915021	Y3-013 2	2.18
915031	Y3-013 3	2.18
916221	Z1-073 E	3.18
916502	Z1-106 E1	0.73
916504	Z1-106 E2	0.73
916512	Z1-107 E	1.5
916522	Z1-108 E	1.45
917711	Z2-114 C	0.06
917712	Z2-114 E	0.4

Bus #	Bus	MW Impact
918052	AA1-018 E	9.8
920272	AA2-123 E	1.43
924471	AB2-096	24.87
925302	AB2-191 E	0.82
926311	AC1-109 1	1.1
926321	AC1-109 2	1.1
926331	AC1-110 1	1.1
926341	AC1-110 2	1.1
926351	AC1-111 1	0.44
926361	AC1-111 2	0.44
926371	AC1-111 3	0.44
926381	AC1-111 4	0.44
926391	AC1-111 5	0.44
926401	AC1-111 6	0.44
926431	AC1-114	1.4
927091	AC1-204 1	41.9
927101	AC1-204 2	41.91
927451	AC1-142A 1	2.42
927461	AC1-142A 2	2.42
927511	AC1-113 1	0.7
927521	AC1-113 2	0.7
930042	AB1-006 E	17.03
930391	AB1-080	2.15
930481	AB1-089	38.75
930501	AB1-091 O1	40.14
930741	AB1-122 1O1	41.99
930751	AB1-122 2O1	42.66
932601	AC2-080 C O1	3.72
932602	AC2-080 E O1	24.91
932881	AC2-115 1	1.4
932891	AC2-115 2	1.4
932921	AC2-116	0.49
932931	AC2-117	5.17
933411	AC2-154 C	1.4
933412	AC2-154 E	2.28
933431	AC2-156 C O1	0.55
933432	AC2-156 E O1	0.9
933911	AD1-013 C	1.08
933912	AD1-013 E	1.73
933931	AD1-016 C	0.54
933932	AD1-016 E	0.89
934101	AD1-039 1	4.12
934111	AD1-039 2	4.18
934401	AD1-064 C O1	1.88
934402	AD1-064 E O1	8.8
934431	AD1-067 C	0.08
934432	AD1-067 E	0.33
934701	AD1-098 C O1	4.06
934702	AD1-098 E O1	2.96
934721	AD1-100 C	11.12
934722	AD1-100 E	51.9
934871	AD1-116 C	0.57

Bus #	Bus	MW Impact
934872	AD1-116 E	0.93
934971	AD1-129 C	0.53
934972	AD1-129 E	0.35
935001	AD1-133 C O1	12.63
935002	AD1-133 E O1	8.42
935271	AD1-137 C	5.69
935272	AD1-137 E	38.05
936291	AD2-038 C O1	1.41
936292	AD2-038 E O1	9.44
936371	AD2-047 C O1	1.25
936372	AD2-047 E O1	13.49
936461	AD2-060	1.47
936511	AD2-066 C O1	4.99
936512	AD2-066 E O1	3.33
936781	AD2-101 C	2.48
936782	AD2-101 E	11.59
936961	AD2-130	0.32
936981	AD2-132 C	5.04
936982	AD2-132 E	23.6
937001	AD2-134 C	1.61
937002	AD2-134 E	6.66
937031	AD2-137 C O1	1.92
937032	AD2-137 E O1	9.0
937041	AD2-138 C	5.04
937042	AD2-138 E	23.6
937051	AD2-140 C O1	1.92
937052	AD2-140 E O1	8.99
937061	AD2-141 C O1	1.91
937062	AD2-141 E O1	9.0
937071	AD2-142 C O1	3.84
937072	AD2-142 E O1	17.98
937121	AD2-148 C O1	1.93
937122	AD2-148 E O1	9.02
937131	AD2-149 C O1	1.93
937132	AD2-149 E O1	9.02
937141	AD2-150 C O1	1.93
937142	AD2-150 E O1	9.02
937181	AD2-155 C O1	1.93
937182	AD2-155 E O1	9.02
937321	AD2-175 C	8.98
937322	AD2-175 E	5.98
937331	AD2-176 C O1	4.29
937332	AD2-176 E O1	2.86
937401	AD2-194 1	4.51
937411	AD2-194 2	4.51
938012	AE1-002 E O1	3.86
938511	AE1-070 1	5.29
938521	AE1-070 2	4.84
938671	AE1-089 C	74.55
938672	AE1-089 E	102.34
938851	AE1-113 C O1	5.24
938852	AE1-113 E O1	16.46

Bus #	Bus	MW Impact
939321	AE1-163 C O1	3.48
939322	AE1-163 E O1	21.35
939351	AE1-166 C O1	5.85
939352	AE1-166 E O1	5.4
939401	AE1-172 C O1	3.71
939402	AE1-172 E O1	17.38
939641	AE1-194 C	5.61
939642	AE1-194 E	37.52
939651	AE1-195 C	5.61
939652	AE1-195 E	37.52
939691	AE1-199	1.41
939701	AE1-201 C	1.17
939702	AE1-201 E	0.26
939732	AE1-204 E	0.17
939861	AE1-222 1	46.37
939871	AE1-222 2	47.11
939921	AE1-228 C O1	5.92
939922	AE1-228 E O1	3.95
939961	AE1-233 C O1	1.36
939962	AE1-233 E O1	5.62
AB2-013	AB2-013	10.01
AE1-033	AE1-033	10.77
CARR	CARR	0.59
CATAWBA	CATAWBA	0.05
CBM-S1	CBM-S1	4.6
CBM-W1	CBM-W1	19.73
CBM-W2	CBM-W2	68.15
CIN	CIN	7.05
DEARBORN	DEARBORN	1.82
G-007	G-007	1.64
HAMLET	HAMLET	0.34
IPL	IPL	3.28
LGEE	LGEE	0.73
MEC	MEC	25.32
O-066	O-066	5.54
RENSSELAER	RENSSELAER	0.47
WEC	WEC	4.7
Z1-043	Z1-043	17.65

Affected Systems

LG&E

LG&E Impacts to be determined during later study phases (as applicable).

MISO

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

TVA

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

Duke Energy Progress

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

NYISO

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

Contingency Name	Contingency Definition
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 345 TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R 345 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 939320 TO BUS 270790 CKT 1 / AE1-163 TAP 345 KATYDID TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R 345 END
AEP_P1-2_#8907	CONTINGENCY 'AEP_P1-2_#8907' OPEN BRANCH FROM BUS 247712 TO BUS 346809 CKT 1 / 247712 05SULLIVAN 345 346809 7CASEY 345 1 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_012-45-BT5-6__	CONTINGENCY 'COMED_P4_012-45-BT5-6__' TRIP BRANCH FROM BUS 270716 TO BUS 270736 CKT 1 / DRES; B 345 ELWOO; B 345 TRIP BRANCH FROM BUS 270736 TO BUS 270737 CKT 1 / ELWOO; B 345 ELWOO; R 345 TRIP BRANCH FROM BUS 274702 TO BUS 270716 CKT 1 / KEND
COMED_P1-2_765-L11216__S	CONTINGENCY 'COMED_P1-2_765-L11216__S' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 / WILTO; 765 COLLI; 765 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_116-45-TR82__	CONTINGENCY 'COMED_P4_116-45-TR82__' TRIP BRANCH FROM BUS 270769 TO BUS 271565 TO BUS 275324 CKT 1 / GOODINGS ;2R 345 GOODINGS ; R 138 GOODINGS ;2C 34.5 DISCONNECT BUS 270769 / GOODINGS ;2R 345 END
COMED_P4_112-45-BT4-5__	CONTINGENCY 'COMED_P4_112-45-BT4-5__' 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 TRIP BRANCH FROM BUS 270852 TO BUS 270704 CKT 1 / PONTI; B 345 LORET; B 345 END

Contingency Name	Contingency Definition
COMED_P1-2_345-L9801__R-S_FSA	CONTINGENCY 'COMED_P1-2_345-L9801__R-S_FSA' TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R 345 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
COMED_P2-2_116_GG-345R__2_NO_FSA	CONTINGENCY 'COMED_P2-2_116_GG-345R__2_NO_FSA' DISCONNECT BUS 270769 / GOODI;2R 345 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 / DRES; R 345 ELECT;4R 345 TRIP BRANCH FROM BUS 275180 TO BUS 270717 CKT 1 / DRES;3M 138 DRES; R 345 TRIP BRANCH FROM BUS 275180 TO BUS 271336 CKT 1 / DRES;3M 138 DRES; B 138 TRIP BRANCH FROM BUS 275180 TO BUS 275280 CKT 1 / DRES;3M 138 DRES;3C 34.5 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 / DRES; 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
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_P7_345-L6607__B-S_+_345-L97008_R-S	CONTINGENCY 'COMED_P7_345-L6607__B-S_+_345-L97008_R-S' TRIP BRANCH FROM BUS 270728 TO BUS 274750 CKT 1 / E FRANKFO; B 345 CRETE EC ;BP 345 TRIP BRANCH FROM BUS 274804 TO BUS 243229 CKT 1 / UNIV PK N;RP 345 05OLIVE 345 END

Contingency Name	Contingency Definition
COMED_P4_116-45-L9801_FSA	CONTINGENCY 'COMED_P4_116-45-L9801_FSA' TRIP BRANCH FROM BUS 918050 TO BUS 270769 CKT 1 / AA1-018 GOODINGS ;2R 345 DISCONNECT BUS 270769 / GOODI;2R 345 END
COMED_P4_116-45-L11614_	CONTINGENCY 'COMED_P4_116-45-L11614_' TRIP BRANCH FROM BUS 270667 TO BUS 270665 CKT 1 / B ISL;RT 345 B ISL; R 345 TRIP BRANCH FROM BUS 270667 TO BUS 270927 CKT 1 / B ISL;RT 345 WILTO; R 345 TRIP BRANCH FROM BUS 270769 TO BUS 270667 CKT 1 / GOODI;2R 345 B ISL;RT 345 DISCONNECT BUS 270769 / GOODI;2R 345 END
COMED_P2-2_116_GG-345R__2_FSA	CONTINGENCY 'COMED_P2-2_116_GG-345R__2_FSA' DISCONNECT BUS 270769 / GOODI;2R 345 DISCONNECT BUS 918050 / AA1-018 TAP /ADDED FOR NO FSA CASE END
Base Case	
AEP_P1-2_#695A	CONTINGENCY 'AEP_P1-2_#695A' OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P7_345-L94507_B-S+_345-L97008_R-S	CONTINGENCY 'COMED_P7_345-L94507_B-S+_345-L97008_R-S' TRIP BRANCH FROM BUS 274750 TO BUS 255112 CKT 1 / CRETE;BP 345 17STJOHN 345 TRIP BRANCH FROM BUS 274804 TO BUS 243229 CKT 1 / UPNOR;RP 345 05OLIVE 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_P4_111-45-L1223T_	CONTINGENCY 'COMED_P4_111-45-L1223T_' TRIP BRANCH FROM BUS 270717 TO BUS 270731 CKT 1 / DRESDEN ; R 345 ELEC JUNC;4R 345 TRIP BRANCH FROM BUS 275180 TO BUS 270717 CKT 1 / DRESDEN ;3M 138 DRESDEN ; R 345 TRIP BRANCH FROM BUS 275180 TO BUS 271336 CKT 1 / DRESDEN ;3M 138 DRESDEN ; B 138 TRIP BRANCH FROM BUS 275180 TO BUS 275280 CKT 1 / DRESDEN ;3M 138 DRESDEN ;3C 34.5 DISCONNECT BUS 270731 / ELEC JUNC;4R 345 DISCONNECT BUS 275184 / ELEC JUNC;4M 138 END
COMED_P7_345-L1202__B-S+_345-L1227__R-S-A	CONTINGENCY 'COMED_P7_345-L1202__B-S+_345-L1227__R-S-A' TRIP BRANCH FROM BUS 270716 TO BUS 930750 CKT 1 / DRESDEN ; B 345 AB1-122 TAP 345 TRIP BRANCH FROM BUS 930740 TO BUS 270717 CKT 1 / AB1-122 TAP 345 DRESDEN ; R 345 END

Contingency Name	Contingency Definition
COMED_P1-2_345-L19601_B-S	CONTINGENCY 'COMED_P1-2_345-L19601_B-S' TRIP BRANCH FROM BUS 270790 TO BUS 270770 CKT 1 END / KATYD; B 345 GOODI;4B 345
AEP_P4_#8805_05OLIVE 345_D	CONTINGENCY 'AEP_P4_#8805_05OLIVE 345_D' OPEN BRANCH FROM BUS 243229 TO BUS 932600 CKT 1 TAP 345 1 /* CONTINGENCY LINE ADDED FOR AE1 BUILD OPEN BRANCH FROM BUS 243229 TO BUS 274804 CKT 1 N;RP 345 1 END / 243229 05OLIVE 345 932600 AC2-080 / 243229 05OLIVE 345 274804 UNIV PK
COMED_P4_112-65-BT2-3__	CONTINGENCY 'COMED_P4_112-65-BT2-3__' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 TRIP BRANCH FROM BUS 275232 TO BUS 270644 CKT 1 TRIP BRANCH FROM BUS 275232 TO BUS 270926 CKT 1 TRIP BRANCH FROM BUS 275232 TO BUS 275332 CKT 1 END / WILTO; 765 COLLI; 765 / WILTO;3M 345 WILTO; 765 / WILTO;3M 345 WILTO; B 345 / WILTO;3M 345 WILTO;3C 33
AEP_P1-2_#697A	CONTINGENCY 'AEP_P1-2_#697A' OPEN BRANCH FROM BUS 243229 TO BUS 274804 CKT 1 N;RP 345 1 END / 243229 05OLIVE 345 274804 UNIV PK
COMED_P4_112-65-BT5-6__	CONTINGENCY 'COMED_P4_112-65-BT5-6__' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 TRIP BRANCH FROM BUS 275233 TO BUS 270644 CKT 1 TRIP BRANCH FROM BUS 275233 TO BUS 270927 CKT 1 TRIP BRANCH FROM BUS 275233 TO BUS 275333 CKT 1 END / WILTO; 765 COLLI; 765 / WILTO;4M 345 WILTO; 765 / WILTO;4M 345 WILTO; R 345 / WILTO;4M 345 WILTO;4C 33
AEP_P4_#2978_05DUMONT 765_B	CONTINGENCY 'AEP_P4_#2978_05DUMONT 765_B' OPEN BRANCH FROM BUS 243206 TO BUS 243207 CKT 1 05GRNTWN 765 1 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 WILTON ; 765 1 END / 243206 05DUMONT 765 243207 / 243206 05DUMONT 765 270644

Short Circuit

No issues identified.