



**Merchant Transmission Interconnection
Feasibility Study Report
for
PJM Merchant Transmission Request AF1-200
Plano 345
2035 MW Capacity / 2035 MW Energy**

January, 2020

1 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.

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.

2 General

The Interconnection Customer (IC) has proposed a 350 mile, 525 kV underground high voltage direct current (HVDC) Merchant Transmission line from Killdeer 345 kV Substation in Iowa into ComEd's transmission system in Illinois. The installed facilities will have a capability of 2035 MWs. The IC requested 2035 MW of Firm (Capacity) injection rights (TIRs), 2035 MWs of Non-Firm (Energy) inject rights, and 2100 MWs of Non-Firm (Energy) withdrawal rights. The IC also requested that both a Primary and Secondary Point of Interconnection be studied for the AF1-200 project.

Queue Number	AF1-200
Project Name	Plano 345
State	Illinois
County	Kendall
Transmission Owner	ComEd
Basecase Study Year	2023

3 Primary Point of Interconnection

Queue Position AF1-200, a 2100 MW, 350-mile 525 kV HVDC transmission line from Iowa, proposes to interconnect with the ComEd transmission system by tying to 345kV bus at TSS 167 Plano.

4 Cost Summary

AF1-200 will be responsible for the following costs associated with the physical interconnection of the project:

Description	Total Cost
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Description	Total Cost
Attachment Facilities	\$200,000
Direct Connection Network Upgrade	\$6,000,000
Non Direct Connection Network Upgrades	\$0
Total Costs	\$6,200,000

In addition, the AF1-200 project may be responsible for a contribution to the following costs associated with network upgrades:

Description	Total Cost
System Upgrades	\$715,116,062

5 Transmission Owner Scope of Work

Attachment Facilities

The two generator leads for AF1-200 will interconnect to 345kV buses at TSS 167 Plano (see details in Direct Connection section below). The required Attachment Facilities are two 345kV line MODs, two dead-end structures and two sets of revenue-metering as shown in the one-line diagram.

Scope of Work	Cost Estimate
Installation of two 345kV line MOD, two dead-end structure and two set of revenue metering (see notes below on cost estimate)	\$ 2,000,000

Direct Connection Network Upgrades

In order to accommodate interconnection of AF1-200, TSS 167 Plano would need to be expanded to create two bus positions.

The scope of work includes installation of two 345kV circuit breakers at TSS 167 Plano to interconnect IC's generator leads, as shown in the one-line diagram below.

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

ComEd would design, engineer and construct expansion of TSS 167 Plano. The preliminary cost estimate for Direct Connection Network Upgrade is given in the following tables.

Scope of Work	Cost Estimate
Installation of two 345kV circuit breakers at TSS 167 Plano as described above	\$6,000,000

Total Cost Estimate (see notes below on cost estimate)	\$ 6,000,000
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Non-Direct Connection Network Upgrades

None

Notes on Cost Estimate:

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

6 Schedule

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

7 Interconnection Customer Requirements

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

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

ComEd distribution line drops to move customer cranes and heavy equipment is not part of PJM process. The customer should directly contact ComEd New Business Group to arrange for line drops, if needed.

8 Revenue Metering and SCADA Requirements

PJM Requirements

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

9 Network Impacts

Summer Peak Load Flow

10 Generation Deliverability

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
43521085	255113	17STILLWELL	345.0	NIPS	243219	05DUMONT	345.0	AEP	1	COMED_P1-2_695_B2	single	1409.0	90.32	101.96	DC	308.38
45686446	270847	PLANO ; R	345.0	CE	275208	PLANO ;4M	345.0	CE	1	COMED_P1-2_345-L16703_R-S	single	1379.0	30.46	111.78	DC	1121.41
45686450	275208	PLANO ;4M	345.0	CE	270630	PLANO ;	765.0	CE	1	COMED_P1-2_345-L16703_R-S	single	1379.0	30.46	111.78	DC	1121.41

11 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
44342185	255109	17MUNSTER	345.0	NIPS	270677	BURNHAM ;OR	345.0	CE	1	COMED_P4_023-65-BT4-5__	breaker	1441.0	98.89	116.88	DC	267.33
44341945	270630	PLANO ;	765.0	CE	275208	PLANO ;4M	345.0	CE	1	COMED_P4_167-45-BT1-2__	breaker	1379.0	0.41	152.69	DC	2100.0
45685800	270743	ESS W407K;9T	345.0	CE	270751	ESS W407M;9T	345.0	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	62.01	108.66	DC	171.69
45685803	270751	ESS W407M;9T	345.0	CE	270917	WAYNE ; R	345.0	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	62.0	108.64	DC	171.69
44342121	270802	LASCO STA; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P4_167-45-BT2-5__	breaker	1528.0	92.72	119.14	DC	404.63
45685742	270802	LASCO STA; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P4_167-45-BT5-6__	breaker	1528.0	83.54	117.82	DC	523.91
44341956	270803	LASCO STA; R	345.0	CE	270847	PLANO ; R	345.0	CE	1	COMED_P4_167-45-BT5-6__	breaker	1528.0	0.36	137.79	DC	2100.0
44342077	270846	PLANO ; B	345.0	CE	270847	PLANO ; R	345.0	CE	1	COMED_P4_167-45-BT2-5__	breaker	1726.0	32.77	124.16	DC	1577.42

4434210 1	27084 7	PLANO ; R	345. 0	CE	27073 3	ELECT JCT;3R	345. 0	CE	1	COMED_P4_16 7-45-BT8-12__	breake r	1528. 0	77.72	123.79	DC	704.03
4568536 1	27084 7	PLANO ; R	345. 0	CE	27084 6	PLANO ; B	345. 0	CE	1	COMED_P2- 2_111_EJ- 345R_3	bus	1726. 0	35.68	113.13	DC	1336.8 1
4568556 9	27084 7	PLANO ; R	345. 0	CE	27520 8	PLANO ; 4M	345. 0	CE	1	COMED_P4_16 7-45-BT1-2__	breake r	1379. 0	-0.4	147.17	DC	2035.0
4568557 0	27084 7	PLANO ; R	345. 0	CE	27520 8	PLANO ; 4M	345. 0	CE	1	COMED_P4_16 7-45-BT1-9__	breake r	1379. 0	56.1	140.12	DC	1158.4
4568564 4	27084 7	PLANO ; R	345. 0	CE	27080 3	LASCO STA; R	345. 0	CE	1	COMED_P4_16 7-45-BT5-6__	breake r	1528. 0	-0.36	132.82	DC	2035.0
4568581 9	27084 7	PLANO ; R	345. 0	CE	27084 6	PLANO ; B	345. 0	CE	1	COMED_P4_11 1-45-L11120__	breake r	1726. 0	35.7	113.15	DC	1336.8 1
4568578 2	27474 9	AURORA EC;RP	345. 0	CE	27074 3	ESS W407K;9 T	345. 0	CE	1	COMED_P4_11 1-45-L16704T	breake r	1479. 0	62.98	109.62	DC	171.69
4434194 4	27520 8	PLANO ; 4M	345. 0	CE	27084 7	PLANO ; R	345. 0	CE	1	COMED_P4_16 7-45-BT1-2__	breake r	1379. 0	0.4	152.68	DC	2100.0
4568557 4	27520 8	PLANO ; 4M	345. 0	CE	27063 0	PLANO ;	765. 0	CE	1	COMED_P4_16 7-45-BT1-2__	breake r	1379. 0	-0.41	147.16	DC	2035.0
4568557 5	27520 8	PLANO ; 4M	345. 0	CE	27063 0	PLANO ;	765. 0	CE	1	COMED_P4_16 7-45-BT1-9__	breake r	1379. 0	56.1	140.12	DC	1158.4

12 Contribution to Previously Identified Overloads

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rati ng MVA	PRE PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC DC	MW IMPA CT
435206 81	2432 15	05COOK	345 .0	AEP	2432 29	05OLIVE	345 .0	AEP	1	AEP_P4_#7443_05DUMONT 765_A	break er	1409 .0	148.68	153.5	DC	140.9 3
435207 15	2432 19	05DUMONT	345 .0	AEP	2551 13	17STILLWEL L	345 .0	NIP S	1	COMED_P4_023-65-BT4-5__	break er	1409 .0	121.88	149.57	DC	319.4 9
443420 39	2551 12	17STJOHN	345 .0	NIPS	2708 86	ST JOHN ; T	345 .0	CE	1	AEP_P4_#2978_05DUMONT_ NON_FSA	break er	1091 .0	124.79	125.42	DC	192.3 5
443420 40	2551 12	17STJOHN	345 .0	NIPS	2708 86	ST JOHN ; T	345 .0	CE	1	AEP_P4_#2978_05DUMONT_ FSA	break er	1091 .0	124.8	125.43	DC	192.3 5
443420 41	2551 12	17STJOHN	345 .0	NIPS	2708 86	ST JOHN ; T	345 .0	CE	1	COMED_P4_023-65-BT2-3__	break er	1091 .0	124.22	124.92	DC	195.5 6
443420 42	2551 12	17STJOHN	345 .0	NIPS	2708 86	ST JOHN ; T	345 .0	CE	1	COMED_P4_112-65-BT4-5__	break er	1091 .0	124.21	124.86	DC	194.0
443420 43	2551 12	17STJOHN	345 .0	NIPS	2708 86	ST JOHN ; T	345 .0	CE	1	COMED_P4_112-65-BT3-4__	break er	1091 .0	124.2	124.85	DC	193.9 6
435207 40	2551 13	17STILLW ELL	345 .0	NIPS	2432 19	05DUMONT	345 .0	AEP	1	AEP_P4_#2978_05DUMONT_ NON_FSA	break er	1409 .0	133.4	134.19	DC	299.7 6
435207 41	2551 13	17STILLW ELL	345 .0	NIPS	2432 19	05DUMONT	345 .0	AEP	1	AEP_P4_#2978_05DUMONT_ FSA	break er	1409 .0	133.39	134.19	DC	299.7 6
410240 55	2646 12	19MON1 2	345 .0	ITCT	2419 01	02LALLEND ORF	345 .0	ATS I	1	ATSI-P7-1-TE-138-025T-A	towe r	1244 .0	238.82	239.33	DC	126.7 4
412902 74	2646 12	19MON1 2	345 .0	ITCT	2419 01	02LALLEND ORF	345 .0	ATS I	1	ATSI-P1-2-TE-345-605T	single	1244 .0	168.14	173.22	DC	117.1 5
416123 29	2646 12	19MON1 2	345 .0	ITCT	2419 01	02LALLEND ORF	345 .0	ATS I	1	ATSI-P2-3-TE-345-023T	break er	1244 .0	213.13	215.04	DC	117.1 5
416123 30	2646 12	19MON1 2	345 .0	ITCT	2419 01	02LALLEND ORF	345 .0	ATS I	1	ATSI-P2-3-TE-345-022T	break er	1244 .0	213.39	214.96	DC	117.1 5
443420 04	2706 44	WILTON ;	765 .0	CE	2752 33	WILTON ;4M	345 .0	CE	1	COMED_P4_112-65-BT2-3__	break er	1379 .0	115.78	145.94	DC	340.0 3
443420 23	2706 44	WILTON ;	765 .0	CE	2752 32	WILTON ;3M	345 .0	CE	1	COMED_P4_112-65-BT5-6__	break er	1379 .0	112.27	141.8	DC	333.0
435208 85	2707 71	GREENAC RE; T	345 .0	CE	2432 29	05OLIVE	345 .0	AEP	1	AEP_P4_#2978_05DUMONT_ FSA	break er	971. 0	102.03	102.74	DC	173.6 1
435208 86	2707 71	GREENAC RE; T	345 .0	CE	2432 29	05OLIVE	345 .0	AEP	1	AEP_P4_#2978_05DUMONT_ NON_FSA	break er	971. 0	102.03	102.74	DC	173.6 1

443420 44	2708 86	ST JOHN ; T	345 .0	CE	2551 04	17GREEN_A CRE	345 .0	NIP S	1	AEP_P4_#2978_05DUMONT_ FSA	break er	1091 .0	124.79	125.42	DC	192.3 5
443420 45	2708 86	ST JOHN ; T	345 .0	CE	2551 04	17GREEN_A CRE	345 .0	NIP S	1	AEP_P4_#2978_05DUMONT_ NON_FSA	break er	1091 .0	124.79	125.42	DC	192.3 5
443420 46	2708 86	ST JOHN ; T	345 .0	CE	2551 04	17GREEN_A CRE	345 .0	NIP S	1	COMED_P4_023-65-BT2-3__	break er	1091 .0	124.22	124.92	DC	195.5 6
443420 47	2708 86	ST JOHN ; T	345 .0	CE	2551 04	17GREEN_A CRE	345 .0	NIP S	1	COMED_P4_112-65-BT4-5__	break er	1091 .0	124.2	124.85	DC	194.0
443420 48	2708 86	ST JOHN ; T	345 .0	CE	2551 04	17GREEN_A CRE	345 .0	NIP S	1	COMED_P4_112-65-BT3-4__	break er	1091 .0	124.2	124.84	DC	193.9 6
443421 09	2709 26	WILTON ; B	345 .0	CE	2752 32	WILTON ;3M	345 .0	CE	1	COMED_P4_112-65-BT5-6__	break er	1379 .0	117.72	118.83	DC	322.6 9
443420 84	2709 27	WILTON ; R	345 .0	CE	2752 33	WILTON ;4M	345 .0	CE	1	COMED_P4_112-65-BT2-3__	break er	1379 .0	120.19	121.32	DC	329.5 1
443419 08	2747 50	CRETE EC ;BP	345 .0	CE	2707 28	E FRANKFO; B	345 .0	CE	1	COMED_P4_112-65-BT4-5__	break er	1399 .0	112.38	193.36	DC	283.6 3
443419 39	2747 50	CRETE EC ;BP	345 .0	CE	2551 12	17STJOHN	345 .0	NIP S	1	AEP_P4_#2978_05DUMONT_ NON_FSA	break er	1399 .0	153.55	154.35	DC	269.5
443419 40	2747 50	CRETE EC ;BP	345 .0	CE	2551 12	17STJOHN	345 .0	NIP S	1	AEP_P4_#2978_05DUMONT_ FSA	break er	1399 .0	153.55	154.35	DC	269.5
443419 41	2747 50	CRETE EC ;BP	345 .0	CE	2551 12	17STJOHN	345 .0	NIP S	1	COMED_P4_112-65-BT4-5__	break er	1399 .0	153.12	153.94	DC	271.5 5
443420 22	2752 32	WILTON ;3M	345 .0	CE	2709 26	WILTON ; B	345 .0	CE	1	COMED_P4_112-65-BT5-6__	break er	1379 .0	112.27	141.8	DC	333.0
443421 08	2752 32	WILTON ;3M	345 .0	CE	2706 44	WILTON ; B	765 .0	CE	1	COMED_P4_112-65-BT5-6__	break er	1379 .0	117.72	118.83	DC	322.6 9
443420 03	2752 33	WILTON ;4M	345 .0	CE	2709 27	WILTON ; R	345 .0	CE	1	COMED_P4_112-65-BT2-3__	break er	1379 .0	115.78	145.94	DC	340.0 3
443420 85	2752 33	WILTON ;4M	345 .0	CE	2706 44	WILTON ; B	765 .0	CE	1	COMED_P4_112-65-BT2-3__	break er	1379 .0	120.19	121.32	DC	329.5 1

13 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC/D C	MW IMPA CT
500909 95	23883 3	02JACKSN	138. 0	ATSI	23894 2	02MAPLE	138. 0	ATSI	1	AP-P1-3-WP-138-050	operati on	316.0	97.37	100.04	DC	15.94
435210 48	24321 9	05DUMON T	345. 0	AEP	25511 3	17STILLWELL	345. 0	NIPS	1	COMED_P1-2_695_B2	operati on	1409. 0	121.87	149.47	DC	318.23
435211 81	24322 9	05OLIVE	345. 0	AEP	27480 4	UNIV PK N;RP	345. 0	CE	1	COMED_P1-2_695_B2	operati on	971.0	103.34	127.6	DC	221.99
443427 92	25510 9	17MUNSTE R	345. 0	NIPS	27067 7	BURNHAM ;OR	345. 0	CE	1	COMED_P1-2_695_B2	operati on	1441. 0	98.88	116.74	DC	265.48
443426 43	25511 2	17STJOHN	345. 0	NIPS	27088 6	ST JOHN ; T	345. 0	CE	1	COMED_P1-2_695_B2	operati on	1091. 0	124.2	124.84	DC	193.81
443428 51	25511 2	17STJOHN	345. 0	NIPS	27475 0	CRETE EC;BP	345. 0	CE	1	COMED_P1-2_695_B2	operati on	1399. 0	94.34	114.32	DC	279.51
435210 84	25511 3	17STILLWEL L	345. 0	NIPS	24321 9	05DUMONT	345. 0	AEP	1	COMED_P1-2_695_B2	operati on	1409. 0	131.44	132.31	DC	308.38

41290273	264612	19MON12	345.0	ITCT	241901	02LALLENDORF	345.0	ATSI	1	ATSI-P1-2-TE-345-605T	operati on	1244.0	213.38	214.95	DC	117.15
44342465	270668	BLUEMOUN D; B	345.0	CE	270852	PONTIAC ; B	345.0	CE	1	COMED_P1-2_345-L8001__-S	operati on	1528.0	171.73	176.8	DC	147.99
44342541	270670	BRAIDWOO D; B	345.0	CE	934730	AD1-100 TAP	345.0	CE	1	COMED_P1-2_345-L2004_AR-S-B	operati on	1341.0	124.44	139.72	DC	204.74
44342804	270730	ELECT JCT; B	345.0	CE	270812	LOMBARD ; B	345.0	CE	1	Base Case	operati on	1201.0	96.44	102.55	DC	138.01
43521241	270771	GREENACR E; T	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P1-2_695_B2	operati on	971.0	101.08	101.82	DC	175.72
44342752	270802	LASCO STA; B	345.0	CE	270846	PLANO ; B	345.0	CE	1	COMED_P1-2_345-L0102__R-S	operati on	1528.0	91.94	115.11	DC	354.29
44342736	270803	LASCO STA; R	345.0	CE	270847	PLANO ; R	345.0	CE	1	COMED_P1-2_345-L0101__B-S	operati on	1528.0	81.15	117.02	DC	548.08
44342778	270846	PLANO ; B	345.0	CE	275207	PLANO ;3M	345.0	CE	1	COMED_P1-3_TR94_PLANO_R-S	operati on	1379.0	76.06	106.56	DC	485.63
44342839	270846	PLANO ; B	345.0	CE	270847	PLANO ; R	345.0	CE	1	COMED_P1-2_345-L0102__R-S	operati on	1726.0	31.01	104.12	DC	1261.87
45686420	270847	PLANO ; R	345.0	CE	270733	ELECT JCT;3R	345.0	CE	1	COMED_P1-2_345-L16704TB-S	operati on	1528.0	76.85	116.9	DC	611.9
45686444	270847	PLANO ; R	345.0	CE	275208	PLANO ;4M	345.0	CE	1	COMED_P1-2_345-L16703_R-S	operati on	1379.0	31.17	112.5	DC	1121.41
44342648	270886	ST JOHN ; T	345.0	CE	255104	17GREEN_AC RE	345.0	NIPS	1	COMED_P1-2_695_B2	operati on	1091.0	124.2	124.84	DC	193.81
44342452	270912	CHESTNUT ;	345.0	CE	270668	BLUEMOUN D; B	345.0	CE	1	COMED_P1-2_345-L8001__-S	operati on	1334.0	179.37	185.15	DC	147.11
44342443	274750	CRETE EC ;BP	345.0	CE	270728	E FRANKFO; B	345.0	CE	1	COMED_P1-2_695_B2	operati on	1399.0	112.35	193.24	DC	282.91
44342512	274750	CRETE EC ;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	COMED_P1-2_695_B2	operati on	1399.0	153.07	153.89	DC	270.86
43521230	274804	UNIV PK N;RP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P1-2_695_B2	operati on	971.0	102.95	104.41	DC	215.12
44342780	275207	PLANO ;3M	345.0	CE	270630	PLANO ;	765.0	CE	1	COMED_P1-3_TR94_PLANO_R-S	operati on	1379.0	76.06	106.56	DC	485.63
45686448	275208	PLANO ;4M	345.0	CE	270630	PLANO ;	765.0	CE	1	COMED_P1-2_345-L16703_R-S	operati on	1379.0	31.17	112.5	DC	1121.41
44342519	348847	7BROKAW	345.0	AMIL	917500	Z2-087 TAP	345.0	CE	1	COMED_P1-2_345-L8002__-S	operati on	1793.0	145.42	150.44	DC	171.44
44342527	348847	7BROKAW	345.0	AMIL	917500	Z2-087 TAP	345.0	CE	1	Base Case	operati on	1679.0	100.29	104.11	DC	121.61
44342749	934730	AD1-100 TAP	345.0	CE	270670	BRAIDWOOD ; B	345.0	CE	1	COMED_P1-2_345-L11212_B-S-A	operati on	1341.0	111.82	117.84	DC	152.73
44342864	940630	AE2-050 TAP	345.0	CE	270728	E FRANKFO; B	345.0	CE	1	COMED_P1-2_345-L2003__R-S	operati on	1528.0	97.0	100.73	DC	102.28

14 System Reinforcements

ID	Index	Facility	Upgrade Description	Cost
44342108	29	WILTON ;3M 345.0 kV - WILTON ; 765.0 kV Ckt 1	CE n5145 (1627) : 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	\$11,000,000

			line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	
44342109	24	WILTON ; B 345.0 kV - WILTON ;3M 345.0 kV Ckt 1	<u>CE</u> n5145 (1627) : PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000
44342084	25	WILTON ; R 345.0 kV - WILTON ;4M 345.0 kV Ckt 1	<u>CE</u> n5145 (1627) : PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000
44342085	31	WILTON ;4M 345.0 kV - WILTON ; 765.0 kV Ckt 1	<u>CE</u> n5145 (1627) : PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000
43520681	16	05COOK 345.0 kV - 05OLIVE 345.0 kV Ckt 1	<u>AEP</u> AEPI0020a (463) : Rebuild / reconductor 23.6 miles of ACSR ~ 954 ~ 45/7 ~ RAIL - Conductor section 1 Project Type : FAC Cost : \$47,200,000 Time Estimate : 24- 36 Months AEPI0020b (464) : Replace 2 Cook circuit breakers (3000A) Project Type : FAC Cost : \$2,000,000 Time Estimate : 12-18 Months AEPI0020c (465) : Replace 2 Olive circuit breakers (3000A) Project Type : FAC Cost : \$2,000,001 Time Estimate : 12-18 Months AEPI0020d (466) : An engineering study will need to be conducted to determine if the Olive Compliance Trip limits 3313 Amps settings can be adjusted to mitigate the overload, Estimated Cost \$25,000. New relay packages will be required if the settings cannot be adjusted. Estimated Cost: \$600,000. Project Type : FAC Cost : \$25,000 Time Estimate : 12-18 Months AEPI0020e (467) : An engineering study will need to be conducted to determine if the cookCompliance Trip limits	\$55,550,002

			3313 Amps settings can be adjusted to mitigate the overload, Estimated Cost \$25,000. New relay packages will be required if the settings cannot be adjusted. Estimated Cost: \$600,000. Project Type : FAC Cost : \$25,001 Time Estimate : 12-18 Months AEPI0020f (468) : Replace 11 Olive risers, Sub cond 2-1700 kcm AAC 61 Str Project Type : FAC Cost : \$1,925,000 Time Estimate : 12-18 Months AEPI0020g (469) : Replace 9 Cook risers, Sub cond 2-1700 kcm AAC 61 Str Project Type : FAC Cost : \$1,575,000 Time Estimate : 12-18 Months AEPI0020h (470) : Replace 2 Cook wavetraps (3000A) Project Type : FAC Cost : \$400,000 Time Estimate : 12-18 Months AEPI0020i (471) : Replace 2 Olive wavetraps (3000A) Project Type : FAC Cost : \$400,000 Time Estimate : 12-18 Months	
44341940,44341941, 44341939	27	CRETE EC ;BP 345.0 kV - 17STJOHN 345.0 kV Ckt 1	<u>CE</u> N5253 (1629) : L94507 SSTE rating is 1483 MVA. The post contingency flow for this event exceeds the rating therefore an upgrade is required. The upgrade will be to reconductor the line, upgrade station conductor and upgrade a relay package. A preliminary cost estimate is \$14.9 M with an estimated construction timeline of 30 months. Upon completion of this upgrade the new ratings will be 1754/2246/2297/2488 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$14,900,000 Time Estimate : 30.0 Months NonPJMArea (1708) : Project Type : FAC Cost : \$0 Time Estimate : 0.0 Months	\$14,900,000
44342185	4	17MUNSTER 345.0 kV - BURNHAM ;OR 345.0 kV Ckt 1	<u>CE</u> CE_NUN_17703 (1681) : ComEd 345kV L17703 SSTE rating is 1568 MVA. The upgrade will be to replace the station conductor at TSS 177 Burnham along with line reconductoring. A preliminary estimate for this upgrade is \$7.8M with a estimated construction timeline of 24 mionths. Upon completion the rating will be 1313/1591/1591/1591 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$7,800,000 Time Estimate : 24.0 Months	\$7,800,000
45685644	13	PLANO ; R 345.0 kV - LASCO STA; R 345.0 kV Ckt 1	<u>CE</u> CE_NUN_L0102 (1924) : ComEd 345kV L0102 SSTE rating is	\$6,700,000

			1837 MVA. The upgrade will be to replace 2-345kV oil circuit breakers at Station 1 LaSalle along with station conductor work. A preliminary estimate for the upgrade is \$6.7M with a estimated construction timeline of 30 months. Upon completion of the upgrade the ratings will be 1699/2085/2087/2118 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$6,700,000 Time Estimate : 30.0 Months	
44342023	21	WILTON ; 765.0 kV - WILTON ;3M 345.0 kV Ckt 1	<u>CE</u> n5145 (1627) : PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000
44341956	9	LASCO STA; R 345.0 kV - PLANO ; R 345.0 kV Ckt 1	<u>CE</u> CE_NUN_L0102 (1666) : ComEd 345kV L0102 SSTE rating is 1837 MVA. The upgrade will be to replace 2-345kV circuit breakers at Station 1, station conductor upgrade and re-conductoring a portion of the line. A preliminary estimate for the upgrades is \$ 12.1M with a estimated construction timeline of 30 months subject to outage coordination with Station 1 LaSalle. Upon completion of the upgrades the ratings will be 1679/2058/2107/2280 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$12,100,000 Time Estimate : 30.0 Months	\$12,100,000
44342048,44342047, 44342046,44342045, 44342044	23	ST JOHN ; T 345.0 kV - 17GREEN_ACRE 345.0 kV Ckt 1	<u>CE</u> N5834 (1633) : L6617 SSTE is 1134 MVA. The post contingency flow for this event exceeds the rating therefore an upgrade is required. The upgrade is sag mitigation of the line. A preliminary estimate is \$3.1 M with a estimated construction timeline of 30 months. Upon completion of this upgrade the new ratings will be 1091/1399/1483/1674 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,100,000 Time Estimate : 30.0 Months <u>MISO</u> NonPJMArea (1708) : The external (i.e. Non-PJM) Transmission Owner, MISO, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : 0.0 Months	\$3,100,000
45685570,45685569, 45686446	2	PLANO ; R 345.0 kV - PLANO ;4M 345.0 kV Ckt 1	<u>CE</u> CE_NUN_TSS 167-345KV_BT 10-12 (1916) : ComEd Tr. 94 at TSS 167 Plano SSTE rating is 1469 MVA. The contingency name should be BT 10-12 rather than BT 9-12.The upgrade will be to install a new 345kV bus tie circuit breaker at TSS 167 Plano,BT CB 9-10. The purpose is to reduce the impact of the current contingency impact. There will not be a rating change. A preliminary estimate for the upgrade is \$4M with a	\$4,000,000

			estimated construction timeline of 30 months contingent upon line relocation issues. PJM to confirm this proposed solution. Project Type : CON Cost : \$4,000,000 Time Estimate : 30.0 Months	
44342022	28	WILTON ;3M 345.0 kV - WILTON ; B 345.0 kV Ckt 1	<u>CE</u> n5145 (1627) : PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000
45685819,45685361	12	PLANO ; R 345.0 kV - PLANO ; B 345.0 kV Ckt 1	<u>CE</u> CE_NUN_TSS 167 345KV BT (1915) : ComEd 345kV BT R-B at TSS 1'67 Plano SSE rating is 1837 MVA. The upgrade will be to replace the 345kV bt 1-9 circuit breaker at TSS 167 Plano along with station conductor replacement at the station. A preliminary estimate for the upgrade is \$3.6M with a estimated construction timeline of 24-30 months. Upon completion the ratings will be 2179/2688/3079/3336 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,600,000 Time Estimate : 24-30 Months	\$3,600,000
44342121,45685742	8	LASCO STA; B 345.0 kV - PLANO ; B 345.0 kV Ckt 1	<u>CE</u> CE_NUN_L0101 (1913) : ComEd 345kV L0101 SSE rating is 1702 MVA. The upgrade will be to upgrade the line relaying scheme at both line terminals. A preliminary estimate for this upgrade is \$2.1M with a estimated construction timeline of 30 months based on outage scheduling at LaSalle Station. Upon completion of the upgrade the rating limits will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$2,100,000 Time Estimate : 30.0 Months	\$2,100,000
43520715	17	05DUMONT 345.0 kV - 17STILLWELL 345.0 kV Ckt 1	<u>CE</u> n4790 (475) : PJM Network Upgrade n4790. Replace Dumont substation 2500A wavetrapp. Project Type : FAC Cost : \$200,000 Time Estimate : 12-18 Months n5769.1 (476) : PJM Network Upgrade n5769.1. Perform engineering study for CT limits , and relay compliance trip limits at Dumont substation. Project Type : FAC Cost : \$25,000 Time Estimate : 12-18 Months n5769.2 (477) : PJM Network Upgrade n5769.2. Replace two Dumont 3000A Non-Oil breakers. Project Type : FAC Cost : \$2,000,000 Time Estimate : 12-18 Months	\$2,530,000

			n5769.3 (478) : PJM Network Upgrade n5769.3. Replace 11 jumpers/risers at Dumont substation. Project Type : FAC Cost : \$275,000 Time Estimate : 12-18 Months n4058 (479) : Perform a sag study on the Stillwell - Dumont 345 kV line Project Type : FAC Cost : \$30,000 Time Estimate : Months	
44342043,44342042, 44342041,44342039, 44342040	18	17STJOHN 345.0 kV - ST JOHN ; T 345.0 kV Ckt 1	<u>CE</u> N5833 (1632) : L6617 SSTE is 1134 MVA. The post contingency flow for this event exceeds the rating therefore an upgrade is required. The upgrade is sag mitigation of the line. A preliminary estimate is \$3.1 M with a estimated construction timeline of 30 months. Upon completion of this upgrade the new ratings will be 1091/1399/1483/1674 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,100,000 Time Estimate : 30.0 Months <u>MISO</u> NonPJM Area (1708) : The external (i.e. Non-PJM) Transmission Owner, MISO, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : 0.0 Months	\$3,100,000
41024055,41612330, 41612329,41290274	19	19MON12 345.0 kV - 02LALLENDORF 345.0 kV Ckt 1	<u>ATSI</u> TE-014A (2338) : Reconductor the Lallendorf-Monroe 345 kV line and the line drop at Lallendorf with 1272 ACSS 45/7 bundled (2 conductor per phase) with OPGW. Replace the wave trap with a new 4500 Amp unit. ITC would need to replace their section of limiting conductor and provide estimates for their replacement. Project Type : FAC Cost : \$17,631,000 Time Estimate : 30.0 Months TE-014B (2339) : Reconductor the Lallendorf-Monroe 345 kV line and the line drop at Lallendorf with 1272 ACSS 45/7 bundled (2 conductor per phase) with OPGW. Replace the wave trap with a new 4500 Amp unit. Replace the substation conductor at Lallendorf with 1590 ACSS bundled (2 conductor per phase). Replace the bitronics meter with a 15 Amp SATEC PM174 unit. Change relay settings for the SEL 421 at Lallendorf to meet a Summer Normal rating of 3171 MVA and Summer emergency rating of 3171 MVA. ITC would need to replace their section of limiting conductor and provide estimates for their replacement. Project Type : FAC Cost : \$18,373,500 Time Estimate : 30.0 Months	\$18,373,500
44342004	20	WILTON ; 765.0 kV - WILTON ; 4M 345.0 kV Ckt 1	<u>CE</u> n5145 (1627) : PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216	\$11,000,000

			(currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	
43520886,43520885	22	GREENACRE; T 345.0 kV - 05OLIVE 345.0 kV Ckt 1	<u>AEP</u> AEP_AE1_REF_r0005 (245) : 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. Project Type : FAC Cost : \$162,560 Time Estimate : 6-12 Months <u>CE</u> ce-002 (1619) : AEP owns limit on L6615. CE and NIPSCO have a sag limit as well that would need to be addressed. CE SSTE rating is 1134 MVA. A preliminary estimate for sag mitigation is \$13.9M with an estimated construction timeline of 30 months. Upon completion of the sag mitigation the new ratings will become 1091/1399/1483/1674 MVA SN/SLTE/SSTE/SLD. Project Type : FAC Cost : \$13,900,000 Time Estimate : 30.0 Months	\$14,062,560
45685800	6	ESS W407K;9T 345.0 kV - ESS W407M;9T 345.0 kV Ckt 1	<u>CE</u> CE_NUN_L14419_4 (1918) : ComEd 345kV L14419_1 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate for the upgrade is \$3.3M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,300,000 Time Estimate : 30.0 Months	\$3,300,000
45685782	14	AURORA EC;RP 345.0 kV - ESS W407K;9T 345.0 kV Ckt 1	<u>CE</u> CE_NUN_L14419_1 (1917) : ComEd 345kV L14419_1 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate for the upgrade is \$1.1M with an estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$1,100,000 Time Estimate : 30.0 Months	\$1,100,000
44341944	15	PLANO ;4M 345.0 kV - PLANO ; R 345.0 kV Ckt 1	<u>CE</u> CE_NUN_TSS 167-345KV_BT1-2 (1664) : ComEd Tr. 94 at TSS 167 Plano SSTE rating is 1469 MVA. The upgrade will be to install a new 345kV bus tie circuit breaker at TSS 167 Plano	\$10,000,000

			(BT CB 2-3) and relocate if possible 345kV L0101. This line is currently part of the contingency file. The purpose is to reduce the impact of the current contingency impact. There will not be a rating change. A preliminary estimate for the upgrade is \$10M with a estimated construction timeline of 30 months contingent upon line relocation issues.PJM to confirm this proposed solution. Project Type : FAC Cost : \$10,000,000 Time Estimate : 30.0 Months	
44342077	10	PLANO ; B 345.0 kV - PLANO ; R 345.0 kV Ckt 1	<u>CE</u> CE_NUN_TSS 167 345KV BT (1707) : ComEd 345kV BT R-B at TSS 1`67 Plano SSTE rating is 1837 MVA. The upgrade will be to replace the 345kV bt 1-9 circuit breaker at TSS 167 Plano along with station conductor replacement at the station. A preliminary estimate for the upgrade is \$3.6M with a estimated construction timeline of 24-30 months. Upon completion the ratings will be 2179/2688/3079/3336 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,600,000 Time Estimate : 24-30 Months	\$3,600,000
45685803	7	ESS W407M;9T 345.0 kV - WAYNE ; R 345.0 kV Ckt 1	<u>CE</u> CE_NUN_L14419_2 (1919) : ComEd 345kV L14419_2 SSTE rating is 1568 MVA. The upgrade will be to reconductor the line. A preliminary estimate for the upgrade is \$3.3M with a estimated construction timeline of 30 months. Upon completion of the upgrade the rating limit will be 1334/1726/1837/2084 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : \$3,300,000 Time Estimate : 30.0 Months	\$3,300,000
44341945	5	PLANO ; 765.0 kV - PLANO ;4M 345.0 kV Ckt 1	<u>CE</u> CE_NUN_TSS 167-345KV_BT1-2 (1664) : ComEd Tr. 94 at TSS 167 Plano SSTE rating is 1469 MVA. The upgrade will be to install a new 345kV bus tie circuit breaker at TSS 167 Plano (BT CB 2-3) and relocate if possible 345kV L0101. This line is currently part of the contingency file. The purpose is to reduce the impact of the current contingency impact. There will not be a rating change. A preliminary estimate for the upgrade is \$10M with a estimated construction timeline of 30 months contingent upon line relocation issues.PJM to confirm this proposed solution. Project Type : FAC Cost : \$10,000,000 Time Estimate : 30.0 Months	\$10,000,000
44341908	26	CRETE EC ;BP 345.0 kV - E FRANKFO; B 345.0 kV Ckt 1	<u>CE</u> CE_NUN_TSS 112-765KV (1706) : ComEd 345kV L6607 SSTE rating is 1483 MVA. The post contingency flow will require a new 765kV line to be constructed from ComEd TSS 112 Wilton Center to the AEP Dumont substation. A preliminary estimate for this upgrade is \$500M with a estimated construction timeline in excess of 7 years. The upgrade will not address the rating of the line rather the impact of the contingency at TSS 112 Wilton Center. ComEd is questioning PJM regarding the post contingency flow for this event. Given the size of the upgrade provided, it is critical to validate the	\$500,000,000

			contingency. Project Type : FAC Cost : \$500,000,000 Time Estimate : 84.0 Months	
45685574,45685575, 45686450	3	PLANO ;4M 345.0 kV - PLANO ; 765.0 kV Ckt 1	<u>CE</u> CE_NUN_TSS 167-345KV_BT 8-9 (1921) : ComEd Tr. 94 at TSS 167 Plano SSTE rating is 1469 MVA. The upgrade will be to install a new 345kV bus tie circuit breaker at TSS 167 Plano,BT CB 8-14 and relocate 345kV L0101 to newly designated 345kV Bus 14 on the Blue Bus. The purpose is to reduce the impact of the current contingency impact. There will not be a rating change. A preliminary estimate for the upgrade is \$10M with an estimated construction timeline of 30 months contingent upon line relocation issues. PJM to confirm this proposed solution. Project Type : CON Cost : \$10,000,000 Time Estimate : 30.0 Months	\$30,000,000
44342003	30	WILTON ;4M 345.0 kV - WILTON ; R 345.0 kV Ckt 1	<u>CE</u> n5145 (1627) : PJM Network Upgrade (n5145): Reconfigure Wilton 765kV bus thereby allowing for 765kV L11216 (currently on Bus 6) to be relocated to Bus 8. Along with this line relocation, installation of 2-765kV BT CBs (6-8 & 8-2). Project Type : CON Cost : \$11,000,000 Time Estimate : 36-40 Months	\$11,000,000
43521085,43520740, 43520741	1	17STILLWELL 345.0 kV - 05DUMONT 345.0 kV Ckt 1	<u>AEP</u> n4790 (475) : PJM Network Upgrade n4790. Replace Dumont substation 2500A wavetrap. Project Type : FAC Cost : \$200,000 Time Estimate : 12-18 Months n5769.1 (476) : PJM Network Upgrade n5769.1. Perform engineering study for CT limits , and relay compliance trip limits at Dumont substation. Project Type : FAC Cost : \$25,000 Time Estimate : 12-18 Months n5769.2 (477) : PJM Network Upgrade n5769.2. Replace two Dumont 3000A Non-Oil breakers. Project Type : FAC Cost : \$2,000,000 Time Estimate : 12-18 Months n5769.3 (478) : PJM Network Upgrade n5769.3. Replace 11 jumpers/risers at Dumont substation. Project Type : FAC Cost : \$275,000 Time Estimate : 12-18 Months <u>MISO</u> NonPJMArea (484) : The external (i.e. Non-PJM) Transmission Owner, MISO, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : 0.0 Months	\$2,500,000

44342101	11	PLANO ; R 345.0 kV - ELECT JCT;3R 345.0 kV Ckt 1	<u>CE</u> CE_NUN_TSS 167-345KV_BT 8-12 (1689) : ComEd Tr. 94 at TSS 167 Plano SSTE rating is 1469 MVA. The upgrade will be to install a new 345kV bus tie circuit breaker at TSS 167 Plano (BT CB 8-14) . The purpose is to reduce the impact of the current contingency impact. There will not be a rating change. A preliminary estimate for the upgrade is \$6M with an estimated construction timeline of 30 months contingent upon line relocation issues. PJM to confirm this proposed solution. Project Type : FAC Cost : \$6,000,000 Time Estimate : 30.0 Months	\$6,000,000
			TOTAL COST	\$715,116,062

15 Contingency Table

Contingency Name	Contingency Definition
COMED_P4_167-45-BT5-6__	CONTINGENCY 'COMED_P4_167-45-BT5-6__' TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 TRIP BRANCH FROM BUS 270847 TO BUS 270733 CKT 1 / PLANO ; R 345 ELEC JUNC;3R 345 TRIP BRANCH FROM BUS 275208 TO BUS 270630 CKT 1 / PLANO ;4M 345 PLANO ; 765 TRIP BRANCH FROM BUS 275208 TO BUS 270847 CKT 1 / PLANO ;4M 345 PLANO ; R 345 TRIP BRANCH FROM BUS 275208 TO BUS 275308 CKT 1 / PLANO ;4M 345 PLANO ;4C 33 END
ATSI-P2-3-TE-345-023T	CONTINGENCY 'ATSI-P2-3-TE-345-023T' /* ALLEN JCT BK-34532 345 DISCONNECT BRANCH FROM BUS 238530 TO BUS 256583 CKT 1 /* 02ALLEN 345 18LENAWEE 345 DISCONNECT BRANCH FROM BUS 238530 TO BUS 239344 CKT 3 /* 02ALLEN 345 02ALLEN-2 138 END
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_P1-2_345-L0101__B-S	CONTINGENCY 'COMED_P1-2_345-L0101__B-S' TRIP BRANCH FROM BUS 270802 TO BUS 270846 CKT 1 / LASCO STA; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 END
COMED_P1-2_345-L2003__R-S	CONTINGENCY 'COMED_P1-2_345-L2003__R-S'

	TRIP BRANCH FROM BUS 270671 TO BUS 270729 CKT 1 END	/ BRAID; R 345 E FRA; R 345
COMED_P1-2_695_B2	CONTINGENCY 'COMED_P1-2_695_B2' OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 WILTO; 765 1 END	/ 243206 05DUMONT 765 270644
COMED_P4_112-65-BT3-4__	CONTINGENCY 'COMED_P4_112-65-BT3-4__' TRIP BRANCH FROM BUS 270644 TO BUS 243206 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 05DUMONT 765 / WILTO;3M 345 WILTO; 765 / WILTO;3M 345 WILTO; B 345 / WILTO;3M 345 WILTO;3C 33
COMED_P1-2_345-L8001___-S	CONTINGENCY 'COMED_P1-2_345-L8001___-S' TRIP BRANCH FROM BUS 270853 TO BUS 917500 CKT 1 END	/ PONTI; R 345 Z2-087 TAP 345
AEP_P4_#7443_05DUMONT 765_A	CONTINGENCY 'AEP_P4_#7443_05DUMONT 765_A' OPEN BRANCH FROM BUS 243205 TO BUS 243206 CKT 1 05DUMONT 765 1 OPEN BRANCH FROM BUS 243206 TO BUS 246999 CKT 1 05SORENS 765 1 END	/ 243205 05COOK 765 243206 / 243206 05DUMONT 765 246999
COMED_P4_023-65-BT2-3__	CONTINGENCY 'COMED_P4_023-65-BT2-3__' TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 TRIP BRANCH FROM BUS 270607 TO BUS 270630 CKT 1 END	/ WILTO; 765 05DUMONT 765 / COLLI; 765 PLANO; 765
COMED_P1-2_345-L2004_AR-S-B	CONTINGENCY 'COMED_P1-2_345-L2004_AR-S-B' TRIP BRANCH FROM BUS 941560 TO BUS 270711 CKT 1 END	/ AE2-153 TAP 345 DAVIS; R 345
ATSI-P1-2-TE-345-605T	CONTINGENCY 'ATSI-P1-2-TE-345-605T' DISCONNECT BRANCH FROM BUS 238530 TO BUS 256583 CKT 1 END	/*LINE OUTAGE: AJ TO ITC MOROCCO
COMED_P1-2_345-L8002___-S	CONTINGENCY 'COMED_P1-2_345-L8002___-S' TRIP BRANCH FROM BUS 270852 TO BUS 270668 CKT 1 END	/ PONTI; B 345 BLUEM; B 345
COMED_P4_023-65-BT4-5__	CONTINGENCY 'COMED_P4_023-65-BT4-5__' TRIP BRANCH FROM BUS 275168 TO BUS 270607 CKT 1 TRIP BRANCH FROM BUS 275168 TO BUS 270697 CKT 1 TRIP BRANCH FROM BUS 275168 TO BUS 275268 CKT 1 TRIP BRANCH FROM BUS 270644 TO BUS 243206 CKT 1 END	/ COLLI;2M 345 COLLI; 765 / COLLI;2M 345 COLLI; R 345 / COLLI;2M 345 COLLI;2C 33 / WILTO; 765 05DUMONT 765
AP-P1-3-WP-138-050	CONTINGENCY 'AP-P1-3-WP-138-050' DISCONNECT BRANCH FROM BUS 235152 TO BUS 235246 CKT 1 DISCONNECT BRANCH FROM BUS 235152 TO BUS 235197 CKT 1	/* BUTLER #62 138/12KV XFMR /* 01BUTLER 138 01SHANOR 138 /* 01BUTLER 138 01KARNSC 138

	DISCONNECT BRANCH FROM BUS 235152 TO BUS 235153 CKT E / * 01BUTLER 138 01CABOT 138 END
COMED_P4_167-45-BT1-9__	CONTINGENCY 'COMED_P4_167-45-BT1-9__' TRIP BRANCH FROM BUS 270802 TO BUS 270846 CKT 1 / LASCO STA; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 TRIP BRANCH FROM BUS 270847 TO BUS 270733 CKT 1 / PLANO ; R 345 ELEC JUNC;3R 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
COMED_P4_167-45-BT8-12__	CONTINGENCY 'COMED_P4_167-45-BT8-12__' TRIP BRANCH FROM BUS 275207 TO BUS 270630 CKT 1 / PLANO ;3M 345 PLANO ; 765 TRIP BRANCH FROM BUS 275207 TO BUS 270846 CKT 1 / PLANO ;3M 345 PLANO ; B 345 TRIP BRANCH FROM BUS 275207 TO BUS 275307 CKT 1 / PLANO ;3M 345 PLANO ;3C 33 TRIP BRANCH FROM BUS 270846 TO BUS 270730 CKT 1 / PLANO ; B 345 ELEC JUNC; B 345 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 1 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 2 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 270846 TO BUS 272278 TO BUS 275354 CKT 1 / PLANO ; B 345 PLANO;1I 138 PLANO;1C 34.5 END
COMED_P1-2_345-L11212_B-S-A	CONTINGENCY 'COMED_P1-2_345-L11212_B-S-A' TRIP BRANCH FROM BUS 270926 TO BUS 934720 CKT 1 / WILTO; B 345 AD1-100 TAP 345 END
ATSI-P2-3-TE-345-022T	CONTINGENCY 'ATSI-P2-3-TE-345-022T' / * ALLEN JCT BK-34531 345 DISCONNECT BRANCH FROM BUS 238530 TO BUS 256583 CKT 1 / * 02ALLEN 345 18LENAWEE 345 DISCONNECT BRANCH FROM BUS 238530 TO BUS 239018 CKT 1 / * 02ALLEN 345 02FULTON 345 END
COMED_P2-2_111_EJ-345R__3	CONTINGENCY 'COMED_P2-2_111_EJ-345R__3' DISCONNECT BUS 270733 / ELEC JUNC;3R 345 DISCONNECT BUS 275183 / ELEC JUNC;3M 138 END
AEP_P4_#2978_05DUMONT_FSA	CONTINGENCY 'AEP_P4_#2978_05DUMONT_FSA' OPEN BRANCH FROM BUS 243206 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 X1-020 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P1-2_345-L16703_R-S	CONTINGENCY 'COMED_P1-2_345-L16703_R-S' TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 TRIP BRANCH FROM BUS 270847 TO BUS 270733 CKT 1 / PLANO ; R 345 ELEC JUNC;3R 345 END
Base Case	

AEP_P4_#2978_05DUMONT_NON_FSA	CONTINGENCY 'AEP_P4_#2978_05DUMONT_NON_FSA' OPEN BRANCH FROM BUS 243206 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 X1-020 OPEN BRANCH FROM BUS 243207 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 270644 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 WILTON ; 765 1 END
COMED_P1-3_TR94_PLANO_R-S	CONTINGENCY 'COMED_P1-3_TR94_PLANO_R-S' TRIP BRANCH FROM BUS 275208 TO BUS 270630 CKT 1 / PLANO;4M 345 PLANO; 765 TRIP BRANCH FROM BUS 275208 TO BUS 270847 CKT 1 / PLANO;4M 345 PLANO; R 345 TRIP BRANCH FROM BUS 275208 TO BUS 275308 CKT 1 / PLANO;4M 345 PLANO;4C 33 END
COMED_P4_111-45-L11120_	CONTINGENCY 'COMED_P4_111-45-L11120_' TRIP BRANCH FROM BUS 270733 TO BUS 270747 CKT 1 / ELECT;3R 345 W407K;0T 345 TRIP BRANCH FROM BUS 270747 TO BUS 270753 CKT 1 / W407K;0T 345 W407M;0T 345 TRIP BRANCH FROM BUS 270753 TO BUS 270749 CKT 1 / W407M;0T 345 W407M; R 345 TRIP BRANCH FROM BUS 270753 TO BUS 270813 CKT 1 / W407M;0T 345 LOMBA; R 345 MOVE 100 PERCENT LOAD FROM BUS 270749 TO BUS 270751 / W407M; R 345 W407M;9T 345 TRIP BRANCH FROM BUS 270733 TO BUS 270847 CKT 1 / ELECT;3R 345 PLANO; R 345 DISCONNECT BUS 275183 / ELECT;3M 138 END
COMED_P1-2_345-L0102__R-S	CONTINGENCY 'COMED_P1-2_345-L0102__R-S' TRIP BRANCH FROM BUS 270803 TO BUS 270847 CKT 1 / LASCO; R 345 PLANO; R 345 END
COMED_P4_167-45-BT1-2__	CONTINGENCY 'COMED_P4_167-45-BT1-2__' TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 TRIP BRANCH FROM BUS 270847 TO BUS 270733 CKT 1 / PLANO ; R 345 ELEC JUNC;3R 345 TRIP BRANCH FROM BUS 270803 TO BUS 270847 CKT 1 / LASCO STA; R 345 PLANO ; R 345 END
COMED_P4_112-65-BT2-3__	CONTINGENCY 'COMED_P4_112-65-BT2-3__' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 / WILTO; 765 COLLI; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270644 CKT 1 / WILTO;3M 345 WILTO; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270926 CKT 1 / WILTO;3M 345 WILTO; B 345 TRIP BRANCH FROM BUS 275232 TO BUS 275332 CKT 1 / WILTO;3M 345 WILTO;3C 33 END
COMED_P4_167-45-BT2-5__	CONTINGENCY 'COMED_P4_167-45-BT2-5__' TRIP BRANCH FROM BUS 275208 TO BUS 270630 CKT 1 / PLANO;4M 345 PLANO; 765 TRIP BRANCH FROM BUS 275208 TO BUS 270847 CKT 1 / PLANO;4M 345 PLANO; R 345 TRIP BRANCH FROM BUS 275208 TO BUS 275308 CKT 1 / PLANO;4M 345 PLANO;4C 33 TRIP BRANCH FROM BUS 270803 TO BUS 270847 CKT 1 / LASCO; R 345 PLANO; R 345 END
ATSI-P7-1-TE-138-025T-A	CONTINGENCY 'ATSI-P7-1-TE-138-025T-A' /* ALLEN-MAJ-MONROE & LEMO-MAJESTIC 345KV DISCONNECT BRANCH FROM BUS 264594 TO BUS 256583 CKT 1 /* 19LULU 345 18LENAWEE 345 DISCONNECT BRANCH FROM BUS 264594 TO BUS 264839 CKT 1 /* 19LULU 345 19MILAN 345 DISCONNECT BRANCH FROM BUS 264594 TO BUS 955720 CKT 1 /* 19LULU 345 J1056 TAP 345 DISCONNECT BRANCH FROM BUS 238889 TO BUS 955620 CKT 1 /* 02LEMOYN 345 19MAJTC 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
COMED_P1-2_345-L16704TB-S	CONTINGENCY 'COMED_P1-2_345-L16704TB-S' 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 2 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 1 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 270846 TO BUS 272278 TO BUS 275354 CKT 1 / PLANO ; B 345 PLANO;1I 138 PLANO;1C 34.5 END

16 Flow Gate Details

The following indices contain additional information about each flowgate presented in the body of the report. For each index, 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 PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC DC	MW IMPACT
4352074 1	25511 3	17STILLWEL L	NIPS	24321 9	05DUMON T	AEP	1	AEP_P4_#2978_05DUMONT_F SA	breaker	1409. 0	133.39	134.19	DC	299.76

Bus #	Bus	MW Impact
274724	RIVER EC ;11	4.3131
274788	SE CHICAG;5U (Deativation : 06/01/20)	7.2749
274789	SE CHICAG;6U (Deativation : 06/01/20)	7.2941
274790	SE CHICAG;7U (Deativation : 06/01/20)	7.3901
274791	SE CHICAG;8U (Deativation : 06/01/20)	7.3901
274792	SE CHICAG;9U (Deativation : 06/01/20)	6.2047
274793	SE CHICAG;0U (Deativation : 06/01/20)	6.2047
274794	SE CHICAG;1U (Deativation : 06/01/20)	7.2996
274795	SE CHICAG;2U (Deativation : 06/01/20)	7.2996
274830	U3-021 1	5.9351
274831	U3-021 2	5.9351

274881	PILOT HIL;1E	18.8591
275149	KELLYCK ;1E	18.8591
276161	W4-086	0.2359
276167	Z1-106 E2	1.2273
276168	Z1-106 E1	1.2272
276169	Z1-107 E	2.5648
276170	Z1-108 E	2.4191
290021	O50 E	18.8333
290051	GSG-6; E	3.3074
290108	LEEDK;1U E	23.6810
293061	N-015 E	14.8492
293644	O22 E1	10.1030
293645	O22 E2	19.6117
294392	P-010 E	18.8584
910542	X3-005 E	0.8451
914321	Y2-103 (Withdrawn : 12/24/2019)	43.7243
915011	Y3-013 1	3.6437
915021	Y3-013 2	3.6437
915031	Y3-013 3	3.6437
918052	AA1-018 E OP	15.8157
920272	AA2-123 E	2.3780
924471	AB2-096	41.2156
926311	AC1-109 1	1.8513
926321	AC1-109 2	1.8513
926331	AC1-110 1	1.8457
926341	AC1-110 2	1.8457
926351	AC1-111 1	0.7409
926361	AC1-111 2	0.7409
926371	AC1-111 3	0.7409
926381	AC1-111 4	0.7409
926391	AC1-111 5	0.7409
926401	AC1-111 6	0.7409
927091	AC1-204 1	70.3798
927101	AC1-204 2	70.3561
927451	AC1-142A 1	4.0890
927461	AC1-142A 2	4.0892
930501	AB1-091 O1	74.6224
930741	AB1-122 1O1	69.6078
930751	AB1-122 2O1	71.8071
933411	AC2-154 C	2.5595
933412	AC2-154 E	4.1759
933431	AC2-156 C O1	0.9283
933432	AC2-156 E O1	1.5146
933911	AD1-013 C	1.8083
933912	AD1-013 E	2.8885
933931	AD1-016 C	0.9036
933932	AD1-016 E	1.4743
934101	AD1-039 1	6.8216
934111	AD1-039 2	7.0371
934431	AD1-067 C	0.1286
934432	AD1-067 E	0.5407
934721	AD1-100 C	18.9656
934722	AD1-100 E	88.5063

934871	AD1-116 C	0.9211
934872	AD1-116 E	1.5028
934971	AD1-129 C	0.8798
934972	AD1-129 E	0.5865
936371	AD2-047 C O1	4.5801
936372	AD2-047 E O1	22.3615
936461	AD2-060	1.4279
936511	AD2-066 C O1	8.1954
936512	AD2-066 E O1	5.4636
937001	AD2-134 C	2.6772
937002	AD2-134 E	11.0596
937321	AD2-175 C (Withdrawn : 12/10/2019)	16.6862
937322	AD2-175 E (Withdrawn : 12/10/2019)	11.1241
937401	AD2-194 1	7.5684
937411	AD2-194 2	7.5659
938511	AE1-070 1	8.8929
938521	AE1-070 2	8.1333
938851	AE1-113 C	7.7687
938852	AE1-113 E	27.5437
939351	AE1-166 C O1	5.2839
939352	AE1-166 E O1	4.8774
939631	AE1-193 C	8.6820
939632	AE1-193 E	58.1025
939641	AE1-194 C	8.6820
939642	AE1-194 E	58.1025
939651	AE1-195 C	8.6820
939652	AE1-195 E	58.1025
939681	AE1-198 C	25.7788
939682	AE1-198 E	21.9053
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5371
940621	AE2-049 C O1	4.8871
940622	AE2-049 E O1	3.2581
940631	AE2-050 C O1	6.1122
940632	AE2-050 E O1	4.0748
940752	AE2-062 E	0.0687
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0687
941131	AE2-107 C	3.7742
941132	AE2-107 E	2.5161
941551	AE2-152 C O1	6.0968
941552	AE2-152 E O1	4.0645
941561	AE2-153 C O1	4.5912
941562	AE2-153 E O1	21.4953
942421	AE2-255 C O1	2.9427
942422	AE2-255 E O1	8.8281
942881	AE2-307 C O1	11.2056
942882	AE2-307 E O1	4.0748
942911	AE2-310 C O1	4.7454
942912	AE2-310 E O1	1.2749
942991	AE2-321 C	7.9553
942992	AE2-321 E	3.9183
943121	AE2-341 C	12.3870
943122	AE2-341 E	6.0827
943591	AF1-030 C O1	4.3789

943592	AF1-030 E O1	2.1470
943801	AF1-048 C	1.9710
943802	AF1-048 E	1.3140
944041	AF1-072	1.1094
944911	AF1-156 C	6.2216
944912	AF1-156 E	4.1478
945351	AF1-200 FTIR	158.8704
946521	AF1-316 C O1	3.4628
946522	AF1-316 E O1	5.1942
946661	AF1-330 C	1.0335
946662	AF1-330 E	0.2269
946671	AF1-331	1.2446
951721	J643	25.9805
953871	J847	13.2318
954751	J351	435.5561
955741	J1058	36.5370
WEC	WEC	4.3038
CBM-W2	CBM-W2	29.4185
NY	NY	1.3477
CBM-W1	CBM-W1	73.8716
TVA	TVA	2.3114
O-066	O-066	15.9264
CBM-S1	CBM-S1	11.3231
G-007	G-007	2.4606
MADISON	MADISON	22.0167
MEC	MEC	15.3609
BLUEG	BLUEG	0.0972
TRIMBLE	TRIMBLE	0.0723
CATAWBA	CATAWBA	0.2034

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
45685569	270847	PLANO	CE	275208	PLANO	CE	1	COMED_P4_167-45-BT1-2__	breaker	1379.0	-0.4	147.17	DC	2035.0

Bus #	Bus	MW Impact
945351	AF1-200 FTIR	2035.0000

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
45685574	275208	PLANO	CE	270630	PLANO	CE	1	COMED_P4_167-	breaker	1379.0	-0.41	147.16	DC	2035.0

		;4M				;			45-BT1-2__					
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Bus #	Bus	MW Impact
945351	AF1-200 FTIR	2035.0000

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
44342185	255109	17MUNSTER	NIPS	270677	BURNHAM ;OR	CE	1	COMED_P4_023-65-BT4-5__	breaker	1441.0	98.89	116.88	DC	267.33

Bus #	Bus	MW Impact
276153	W2-048 E	-0.7843
276165	Z1-106 BAT2	1.2303
276166	Z1-106 BAT1	1.2303
276171	Z1-107 BAT	2.5788
276172	Z1-108 BAT	2.4174
909052	X2-022 E	-11.3426
918052	AA1-018 E OP	-14.2849
920273	AA2-123 BAT	2.3714
936973	AD2-131 BAT	2.9590
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.5366
941732	AE2-173 BAT	5.0050
942883	AE2-307 BAT	9.2490
942913	AE2-310 BAT	5.7652
943383	AF1-009 BAT	2.9030
943403	AF1-011 BAT	3.2013
943423	AF1-013 BAT	2.9030
943803	AF1-048 BAT	6.1800
943922	AF1-060 BAT	1.3590
945352	AF1-200 NFTW	267.3300
945882	AF1-253 BAT	5.6031
946163	AF1-281 BAT	2.1930
946533	AF1-317 BAT	5.5080
946683	AF1-332 BAT	5.5080
950311	G934 C	2.1546
950312	G934 E	8.6184
950351	J466	2.0835
950791	J201 C	0.2804
950792	J201 E	1.1216
950871	J246 C	0.1000
950872	J246 E	0.4002
950942	J325 E	0.2770
951531	J533 C	2.8584
951532	J533 E	11.4336
951571	J538 C	2.0976
951572	J538 E	8.3904

951721	J643	25.2542
951731	J446 C	1.7110
951732	J446 E	9.2570
951811	J513 C	0.9996
951812	J513 E	5.4083
951941	J602 C	2.1955
951942	J602 E	11.8785
952161	J571	0.4701
952201	J589 C	2.2218
952202	J589 E	12.0202
952312	J646 E	0.1099
952401	J752 C	1.0856
952402	J752 E	5.8734
952581	J740 C	2.0402
952582	J740 E	11.0378
952611	J717 C	2.2066
952612	J717 E	11.9384
952761	J728 C	2.0521
952762	J728 E	11.1174
952881	J758	14.4680
952971	J793	90.8214
953071	J794 C	0.1384
953072	J794 E	0.7487
953161	J837 C	2.0412
953162	J837 E	11.0434
953171	J838 C	1.0201
953172	J838 E	5.5189
953271	J701 C	0.5323
953272	J701 E	2.8796
953291	J796	16.8447
953321	J799	12.7764
953361	J806	10.6475
953421	J841	49.4629
953771	J832	7.1430
953781	J833	6.7540
953811	J839	6.8900
953871	J847	13.0599
953941	J857	8.9827
954111	J875	10.3110
954171	J883 C	0.9130
954172	J883 E	4.9398
954381	J906 C	1.1393
954382	J906 E	6.1637
954421	J913 C	10.4624
954591	J937	39.6381
954751	J351	75.6112
954941	J968 C	2.0402
954942	J968 E	11.0378
955021	J978 C	1.1260
955022	J978 E	6.0920
955071	J984 C	2.2408
955072	J984 E	12.1232
955121	J989	5.5824

955141	J992	13.7900
955181	J996	5.4184
955261	J1005	14.0940
955341	J1013	5.8176
955351	J1014 C	3.5005
955352	J1014 E	2.1003
955491	J1031 C	1.2219
955492	J1031 E	6.6111
955591	J1043 C	1.4490
955592	J1043 E	25.6763
955621	J1046	3.3200
955721	J1056 C	2.0941
955722	J1056 E	11.3299
955741	J1058	35.5650
955781	J1062	13.2800
955791	J1063	15.7710
955801	J1064 C	2.2695
955802	J1064 E	12.2785
955811	J1065 C	2.2364
955812	J1065 E	12.0996
955821	J1067	19.0824
955831	J1068 C	2.1150
955832	J1068 E	11.4430
955841	J1069 C	2.0402
955842	J1069 E	11.0378
955861	J1071	7.2860
955961	J1083	4.9546
956011	J1088	10.5735
956021	J1089	11.9731
956031	J1090	6.3216
956161	J1103	1.3926
956251	J1112	12.3330
956291	J1117	5.6488
956301	J1119	42.0720
956741	J1172	3.5000
956751	J1173	5.4792
956801	J1178	4.6007
DUCKCREEK	DUCKCREEK	10.6399
LGEE	LGEE	0.6150
NEWTON	NEWTON	2.1748
CPL	CPL	0.6787
FARMERCITY	FARMERCITY	0.3737
G-007A	G-007A	4.5888
VFT	VFT	12.3518
PRAIRIE	PRAIRIE	8.9243
COFFEEN	COFFEEN	2.1616
CBM-S2	CBM-S2	4.4217
EDWARDS	EDWARDS	3.5105
TILTON	TILTON	1.1069

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
44341945	270630	PLANO ;	CE	275208	PLANO ;4M	CE	1	COMED_P4_167- 45-BT1-2__	breaker	1379.0	0.41	152.69	DC	2100.0

Bus #	Bus	MW Impact
945352	AF1-200 NFTW	2100.0000

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
45685800	270743	ESS W407K;9T	CE	270751	ESS W407M;9T	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	62.01	108.66	DC	171.69

Bus #	Bus	MW Impact
274737	AURORA EC;1P	4.8077
274739	AURORA EC;2P	4.8077
276165	Z1-106 BAT2	1.7404
276166	Z1-106 BAT1	1.7498
276172	Z1-108 BAT	5.5184
920273	AA2-123 BAT	5.1594
926311	AC1-109 1	3.3990
926321	AC1-109 2	3.3990
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6720
943383	AF1-009 BAT	3.0020
943403	AF1-011 BAT	3.4980
943423	AF1-013 BAT	3.0020
943803	AF1-048 BAT	13.3507
943922	AF1-060 BAT	2.3827
945351	AF1-200 FTIR	90.9973
946163	AF1-281 BAT	3.3038
946533	AF1-317 BAT	6.4345
946683	AF1-332 BAT	6.4345
950311	G934 C	1.7661
950312	G934 E	7.0644
950351	J466	1.7412
950791	J201 C	0.2330
950792	J201 E	0.9322
950871	J246 C	0.0822
950872	J246 E	0.3289
950942	J325 E	0.2319
950981	J333	8.7635
950991	J334	9.1710
951531	J533 C	2.3496
951532	J533 E	9.3984
951571	J538 C	1.7421
951572	J538 E	6.9684
951721	J643	10.3215
951731	J446 C	1.7247
951732	J446 E	9.3313
951811	J513 C	0.8891
951812	J513 E	4.8103
951941	J602 C	1.8208
951942	J602 E	9.8512
952161	J571	0.3788
952201	J589 C	1.8296
952202	J589 E	9.8984

952312	J646 E	0.0924
952401	J752 C	0.9062
952402	J752 E	4.9028
952581	J740 C	1.7859
952582	J740 E	9.6621
952611	J717 C	1.8252
952612	J717 E	9.8747
952761	J728 C	1.6974
952762	J728 E	9.1956
952801	J754 C	2.4557
952802	J754 E	13.2860
952881	J758	11.7720
952971	J793	76.3984
953071	J794 C	0.1142
953072	J794 E	0.6178
953161	J837 C	1.7868
953162	J837 E	9.6669
953171	J838 C	0.8929
953172	J838 E	4.8311
953271	J701 C	0.4441
953272	J701 E	2.4028
953291	J796	13.9576
953321	J799	10.8505
953351	J805	10.4196
953361	J806	8.7314
953421	J841	40.9898
953741	J826 C	0.7820
953742	J826 E	4.2310
953771	J832	5.8720
953781	J833	5.7390
953811	J839	5.7860
953851	J845 C	0.9510
953852	J845 E	5.1450
953871	J847	5.3055
953941	J857	7.3383
954111	J875	8.6640
954171	J883 C	0.7145
954172	J883 E	3.8655
954181	J884	5.0520
954351	J903	5.2810
954381	J906 C	0.9245
954382	J906 E	5.0015
954421	J913 C	9.1584
954591	J937	31.8058
954751	J351	42.8288
954772	J515 E	20.6440
954941	J968 C	1.7859
954942	J968 E	9.6621
955021	J978 C	0.9201
955022	J978 E	4.9779
955071	J984 C	1.8367
955072	J984 E	9.9373
955121	J989	4.6520

955141	J992	11.5480
955151	J993	10.5340
955181	J996	4.5944
955261	J1005	11.6800
955341	J1013	4.7064
955351	J1014 C	2.9080
955352	J1014 E	1.7448
955401	J1022 C	1.1730
955402	J1022 E	6.3465
955491	J1031 C	1.2568
955492	J1031 E	6.7997
955591	J1043 C	1.1818
955592	J1043 E	20.9415
955621	J1046	2.8515
955721	J1056 C	1.7865
955722	J1056 E	9.6655
955741	J1058	17.6130
955781	J1062	11.4060
955791	J1063	16.4430
955801	J1064 C	1.8467
955802	J1064 E	9.9913
955811	J1065 C	1.8349
955812	J1065 E	9.9271
955821	J1067	13.8816
955831	J1068 C	1.7931
955832	J1068 E	9.7009
955841	J1069 C	1.7859
955842	J1069 E	9.6621
955861	J1071	5.9200
955961	J1083	4.0887
956011	J1088	8.7585
956021	J1089	9.9229
956031	J1090	5.2416
956161	J1103	1.1620
956251	J1112	8.8320
956291	J1117	4.6696
956301	J1119	34.9200
956561	J1152	10.5140
956741	J1172	2.9115
956751	J1173	4.6144
956801	J1178	3.7967
DUCKCREEK	DUCKCREEK	2.4734
LGEE	LGEE	0.3343
NEWTON	NEWTON	0.2761
CPLE	CPLE	0.2137
FARMERCITY	FARMERCITY	0.3642
G-007A	G-007A	1.9084
VFT	VFT	5.1342
PRAIRIE	PRAIRIE	4.2800
COFFEEN	COFFEEN	0.3583
CBM-S2	CBM-S2	1.0288
EDWARDS	EDWARDS	0.7165
CHEOAH	CHEOAH	0.0646

CALDERWOOD	CALDERWOOD	0.0691
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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
45685803	270751	ESS	CE	270917	WAYNE	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	62.0	108.64	DC	171.69

Bus #	Bus	MW Impact
274737	AURORA EC;1P	4.8077
274739	AURORA EC;2P	4.8077
276165	Z1-106 BAT2	1.7404
276166	Z1-106 BAT1	1.7498
276172	Z1-108 BAT	5.5184
920273	AA2-123 BAT	5.1594
926311	AC1-109 1	3.3990
926321	AC1-109 2	3.3990
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6720
943383	AF1-009 BAT	3.0020
943403	AF1-011 BAT	3.4980
943423	AF1-013 BAT	3.0020
943803	AF1-048 BAT	13.3507
943922	AF1-060 BAT	2.3827
945351	AF1-200 FTIR	90.9973
946163	AF1-281 BAT	3.3038
946533	AF1-317 BAT	6.4345
946683	AF1-332 BAT	6.4345
950311	G934 C	1.7661
950312	G934 E	7.0644
950351	J466	1.7412
950791	J201 C	0.2330
950792	J201 E	0.9322
950871	J246 C	0.0822
950872	J246 E	0.3289
950942	J325 E	0.2319
950981	J333	8.7635
950991	J334	9.1710
951531	J533 C	2.3496
951532	J533 E	9.3984
951571	J538 C	1.7421
951572	J538 E	6.9684
951721	J643	10.3215
951731	J446 C	1.7247
951732	J446 E	9.3313
951811	J513 C	0.8891
951812	J513 E	4.8103
951941	J602 C	1.8208
951942	J602 E	9.8512

952161	J571	0.3788
952201	J589 C	1.8296
952202	J589 E	9.8984
952312	J646 E	0.0924
952401	J752 C	0.9062
952402	J752 E	4.9028
952581	J740 C	1.7859
952582	J740 E	9.6621
952611	J717 C	1.8252
952612	J717 E	9.8747
952761	J728 C	1.6974
952762	J728 E	9.1956
952801	J754 C	2.4557
952802	J754 E	13.2860
952881	J758	11.7720
952971	J793	76.3984
953071	J794 C	0.1142
953072	J794 E	0.6178
953161	J837 C	1.7868
953162	J837 E	9.6669
953171	J838 C	0.8929
953172	J838 E	4.8311
953271	J701 C	0.4441
953272	J701 E	2.4028
953291	J796	13.9576
953321	J799	10.8505
953351	J805	10.4196
953361	J806	8.7314
953421	J841	40.9898
953741	J826 C	0.7820
953742	J826 E	4.2310
953771	J832	5.8720
953781	J833	5.7390
953811	J839	5.7860
953851	J845 C	0.9510
953852	J845 E	5.1450
953871	J847	5.3055
953941	J857	7.3383
954111	J875	8.6640
954171	J883 C	0.7145
954172	J883 E	3.8655
954181	J884	5.0520
954351	J903	5.2810
954381	J906 C	0.9245
954382	J906 E	5.0015
954421	J913 C	9.1584
954591	J937	31.8058
954751	J351	42.8288
954772	J515 E	20.6440
954941	J968 C	1.7859
954942	J968 E	9.6621
955021	J978 C	0.9201
955022	J978 E	4.9779

955071	J984 C	1.8367
955072	J984 E	9.9373
955121	J989	4.6520
955141	J992	11.5480
955151	J993	10.5340
955181	J996	4.5944
955261	J1005	11.6800
955341	J1013	4.7064
955351	J1014 C	2.9080
955352	J1014 E	1.7448
955401	J1022 C	1.1730
955402	J1022 E	6.3465
955491	J1031 C	1.2568
955492	J1031 E	6.7997
955591	J1043 C	1.1818
955592	J1043 E	20.9415
955621	J1046	2.8515
955721	J1056 C	1.7865
955722	J1056 E	9.6655
955741	J1058	17.6130
955781	J1062	11.4060
955791	J1063	16.4430
955801	J1064 C	1.8467
955802	J1064 E	9.9913
955811	J1065 C	1.8349
955812	J1065 E	9.9271
955821	J1067	13.8816
955831	J1068 C	1.7931
955832	J1068 E	9.7009
955841	J1069 C	1.7859
955842	J1069 E	9.6621
955861	J1071	5.9200
955961	J1083	4.0887
956011	J1088	8.7585
956021	J1089	9.9229
956031	J1090	5.2416
956161	J1103	1.1620
956251	J1112	8.8320
956291	J1117	4.6696
956301	J1119	34.9200
956561	J1152	10.5140
956741	J1172	2.9115
956751	J1173	4.6144
956801	J1178	3.7967
DUCKCREEK	DUCKCREEK	2.4734
LGEE	LGEE	0.3343
NEWTON	NEWTON	0.2761
CPL	CPL	0.2137
FARMERCITY	FARMERCITY	0.3642
G-007A	G-007A	1.9084
VFT	VFT	5.1342
PRAIRIE	PRAIRIE	4.2800
COFFEEN	COFFEEN	0.3583

CBM-S2	CBM-S2	1.0288
EDWARDS	EDWARDS	0.7165
CHEOAH	CHEOAH	0.0646
CALDERWOOD	CALDERWOOD	0.0691

Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44342121	270802	LASCO STA; B	CE	270846	PLANO ; B	CE	1	COMED_P4_167-45-BT2-5__	breaker	1528.0	92.72	119.14	DC	404.63

Bus #	Bus	MW Impact
274654	BRAIDWOOD;1U	20.6227
274655	BRAIDWOOD;2U	20.1622
274660	LASCO STA;1U	43.4445
274661	LASCO STA;2U	43.4200
274847	GR RIDGE ;BU	0.8821
274871	GR RIDGE ;2U	1.1202
274881	PILOT HIL;1E	7.6898
275149	KELLYCK ;1E	7.6898
276165	Z1-106 BAT2	0.7262
276166	Z1-106 BAT1	0.7262
276172	Z1-108 BAT	1.2046
276173	Z2-081	0.2461
293061	N-015 E	25.2768
294392	P-010 E	32.1015
920273	AA2-123 BAT	1.1802
926821	AC1-168 C O1	0.4450
926822	AC1-168 E O1	2.9865
930501	AB1-091 O1	34.8615
933411	AC2-154 C	1.0438
933412	AC2-154 E	1.7030
934721	AD1-100 C	9.8379
934722	AD1-100 E	45.9102
936371	AD2-047 C O1	1.8678
936372	AD2-047 E O1	9.1193
936461	AD2-060	0.5823
937321	AD2-175 C (Withdrawn : 12/10/2019)	7.7837
937322	AD2-175 E (Withdrawn : 12/10/2019)	5.1892
939351	AE1-166 C O1	3.2482
939352	AE1-166 E O1	2.9984
940621	AE2-049 C O1	1.7715
940622	AE2-049 E O1	1.1810
940631	AE2-050 C O1	10.4886
940632	AE2-050 E O1	6.9924
941551	AE2-152 C O1	3.7480
941552	AE2-152 E O1	2.4987
941561	AE2-153 C O1	3.8005

941562	AE2-153 E O1	17.7935
942881	AE2-307 C O1	19.2291
942882	AE2-307 E O1	6.9924
942911	AE2-310 C O1	1.7202
942912	AE2-310 E O1	0.4621
943383	AF1-009 BAT	1.6748
943423	AF1-013 BAT	1.6748
943803	AF1-048 BAT	3.0746
943922	AF1-060 BAT	0.6400
944911	AF1-156 C	9.7173
944912	AF1-156 E	6.4782
945352	AF1-200 NFW	404.6280
946521	AF1-316 C O1	11.1218
946522	AF1-316 E O1	16.6827
946533	AF1-317 BAT	2.6235
946683	AF1-332 BAT	2.6235
DUCKCREEK	DUCKCREEK	0.9937
NEWTON	NEWTON	0.1558
FARMERCITY	FARMERCITY	0.1161
NY	NY	0.1360
PRAIRIE	PRAIRIE	1.4904
O-066	O-066	1.6666
COFFEEN	COFFEEN	0.0476
EDWARDS	EDWARDS	0.1953
CHEOAH	CHEOAH	0.2017
G-007	G-007	0.2579
GIBSON	GIBSON	0.0764
CALDERWOOD	CALDERWOOD	0.2008
BLUEG	BLUEG	0.3489
TRIMBLE	TRIMBLE	0.1113
CATAWBA	CATAWBA	0.1232

Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44341956	270803	LASCO STA; R	CE	270847	PLANO ; R	CE	1	COMED_P4_167-45-BT5-6__	breaker	1528.0	0.36	137.79	DC	2100.0

Bus #	Bus	MW Impact
945352	AF1-200 NFW	2100.0000

Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING	POST PROJECT LOADING	AC DC	MW IMPACT
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											%	%		
44342077	270846	PLANO ; B	CE	270847	PLANO ; R	CE	1	COMED_P4_167- 45-BT2-5__	breaker	1726.0	32.77	124.16	DC	1577.42

Bus #	Bus	MW Impact
276165	Z1-106 BAT2	0.8601
276166	Z1-106 BAT1	0.8512
276172	Z1-108 BAT	1.5464
920273	AA2-123 BAT	1.3972
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.3032
943803	AF1-048 BAT	3.6075
943922	AF1-060 BAT	0.6284
945352	AF1-200 NFTW	1577.4150
DUCKCREEK	DUCKCREEK	2.6853
LGEE	LGEE	0.1164
NEWTON	NEWTON	0.5287
CPLE	CPLE	0.1058
FARMERCITY	FARMERCITY	0.1343
G-007A	G-007A	0.9494
VFT	VFT	2.5606
PRAIRIE	PRAIRIE	2.5133
COFFEEN	COFFEEN	0.4799
CBM-S2	CBM-S2	0.5144
EDWARDS	EDWARDS	0.8306
CHEOAH	CHEOAH	0.0360
TILTON	TILTON	0.1997
CALDERWOOD	CALDERWOOD	0.0383

Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44342101	270847	PLANO ; R	CE	270733	ELECT JCT;3R	CE	1	COMED_P4_167- 45-BT8-12_	breaker	1528.0	77.72	123.79	DC	704.03

Bus #	Bus	MW Impact
274660	LASCO STA;1U	25.9801
274661	LASCO STA;2U	26.0939
274847	GR RIDGE ;BU	0.4839
274871	GR RIDGE ;2U	0.6145
276165	Z1-106 BAT2	1.5396
276166	Z1-106 BAT1	1.5348
276172	Z1-108 BAT	2.6910
293061	N-015 E	13.8660
294392	P-010 E	17.6098
920273	AA2-123 BAT	2.5804
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.5165
943383	AF1-009 BAT	2.8417

943403	AF1-011 BAT	2.5344
943423	AF1-013 BAT	2.8417
943803	AF1-048 BAT	6.7072
943922	AF1-060 BAT	1.3560
945351	AF1-200 FTIR	704.0286
946163	AF1-281 BAT	2.0676
946521	AF1-316 C O1	6.1010
946522	AF1-316 E O1	9.1516
946533	AF1-317 BAT	5.0275
946683	AF1-332 BAT	5.0275
DUCKCREEK	DUCKCREEK	4.9595
LGEE	LGEE	0.1968
NEWTON	NEWTON	0.8994
CPLE	CPLE	0.1402
FARMERCITY	FARMERCITY	0.2840
G-007A	G-007A	1.5895
VFT	VFT	4.2764
PRAIRIE	PRAIRIE	4.9000
COFFEEN	COFFEEN	0.8075
CBM-S2	CBM-S2	0.4277
EDWARDS	EDWARDS	1.5274
CHEOAH	CHEOAH	0.1146
TILTON	TILTON	0.2199
CALDERWOOD	CALDERWOOD	0.1188

Index 12

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
45685819	270847	PLANO ; R	CE	270846	PLANO ; B	CE	1	COMED_P4_111-45-L11120_	breaker	1726.0	35.7	113.15	DC	1336.81

Bus #	Bus	MW Impact
276165	Z1-106 BAT2	1.0107
276166	Z1-106 BAT1	1.0125
276172	Z1-108 BAT	1.6818
920273	AA2-123 BAT	1.6898
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.3113
943383	AF1-009 BAT	2.7077
943403	AF1-011 BAT	2.0655
943423	AF1-013 BAT	2.7077
943803	AF1-048 BAT	4.4135
943922	AF1-060 BAT	0.9829
945351	AF1-200 FTIR	1336.8119
946163	AF1-281 BAT	1.5974
946533	AF1-317 BAT	4.3060
946683	AF1-332 BAT	4.3060
DUCKCREEK	DUCKCREEK	3.5282
LGEE	LGEE	0.1683

NEWTON	NEWTON	0.6092
CPLE	CPLE	0.1290
FARMERCITY	FARMERCITY	0.2066
G-007A	G-007A	1.2611
VFT	VFT	3.3992
PRAIRIE	PRAIRIE	3.5051
COFFEEN	COFFEEN	0.5634
CBM-S2	CBM-S2	0.5433
EDWARDS	EDWARDS	1.1098
CHEOAH	CHEOAH	0.0646
TILTON	TILTON	0.1260
CALDERWOOD	CALDERWOOD	0.0676

Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
45685644	270847	PLANO ; R	CE	270803	LASCO STA; R	CE	1	COMED_P4_167-45-BT5-6__	breaker	1528.0	-0.36	132.82	DC	2035.0

Bus #	Bus	MW Impact
945351	AF1-200 FTIR	2035.0000

Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
45685782	274749	AURORA EC;RP	CE	270743	ESS W407K;9T	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	62.98	109.62	DC	171.69

Bus #	Bus	MW Impact
274737	AURORA EC;1P	4.8077
274739	AURORA EC;2P	4.8077
276165	Z1-106 BAT2	1.7404
276166	Z1-106 BAT1	1.7498
276172	Z1-108 BAT	5.5184
920273	AA2-123 BAT	5.1594
926311	AC1-109 1	3.3990
926321	AC1-109 2	3.3990
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6720
943383	AF1-009 BAT	3.0020
943403	AF1-011 BAT	3.4980
943423	AF1-013 BAT	3.0020
943803	AF1-048 BAT	13.3507

943922	AF1-060 BAT	2.3827
945351	AF1-200 FTIR	90.9973
946163	AF1-281 BAT	3.3038
946533	AF1-317 BAT	6.4345
946683	AF1-332 BAT	6.4345
950311	G934 C	1.7661
950312	G934 E	7.0644
950351	J466	1.7412
950791	J201 C	0.2330
950792	J201 E	0.9322
950871	J246 C	0.0822
950872	J246 E	0.3289
950942	J325 E	0.2319
950981	J333	8.7635
950991	J334	9.1710
951531	J533 C	2.3496
951532	J533 E	9.3984
951571	J538 C	1.7421
951572	J538 E	6.9684
951721	J643	10.3215
951731	J446 C	1.7247
951732	J446 E	9.3313
951811	J513 C	0.8891
951812	J513 E	4.8103
951941	J602 C	1.8208
951942	J602 E	9.8512
952161	J571	0.3788
952201	J589 C	1.8296
952202	J589 E	9.8984
952312	J646 E	0.0924
952401	J752 C	0.9062
952402	J752 E	4.9028
952581	J740 C	1.7859
952582	J740 E	9.6621
952611	J717 C	1.8252
952612	J717 E	9.8747
952761	J728 C	1.6974
952762	J728 E	9.1956
952801	J754 C	2.4557
952802	J754 E	13.2860
952881	J758	11.7720
952971	J793	76.3984
953071	J794 C	0.1142
953072	J794 E	0.6178
953161	J837 C	1.7868
953162	J837 E	9.6669
953171	J838 C	0.8929
953172	J838 E	4.8311
953271	J701 C	0.4441
953272	J701 E	2.4028
953291	J796	13.9576
953321	J799	10.8505
953351	J805	10.4196

953361	J806	8.7314
953421	J841	40.9898
953741	J826 C	0.7820
953742	J826 E	4.2310
953771	J832	5.8720
953781	J833	5.7390
953811	J839	5.7860
953851	J845 C	0.9510
953852	J845 E	5.1450
953871	J847	5.3055
953941	J857	7.3383
954111	J875	8.6640
954171	J883 C	0.7145
954172	J883 E	3.8655
954181	J884	5.0520
954351	J903	5.2810
954381	J906 C	0.9245
954382	J906 E	5.0015
954421	J913 C	9.1584
954591	J937	31.8058
954751	J351	42.8288
954772	J515 E	20.6440
954941	J968 C	1.7859
954942	J968 E	9.6621
955021	J978 C	0.9201
955022	J978 E	4.9779
955071	J984 C	1.8367
955072	J984 E	9.9373
955121	J989	4.6520
955141	J992	11.5480
955151	J993	10.5340
955181	J996	4.5944
955261	J1005	11.6800
955341	J1013	4.7064
955351	J1014 C	2.9080
955352	J1014 E	1.7448
955401	J1022 C	1.1730
955402	J1022 E	6.3465
955491	J1031 C	1.2568
955492	J1031 E	6.7997
955591	J1043 C	1.1818
955592	J1043 E	20.9415
955621	J1046	2.8515
955721	J1056 C	1.7865
955722	J1056 E	9.6655
955741	J1058	17.6130
955781	J1062	11.4060
955791	J1063	16.4430
955801	J1064 C	1.8467
955802	J1064 E	9.9913
955811	J1065 C	1.8349
955812	J1065 E	9.9271
955821	J1067	13.8816

955831	J1068 C	1.7931
955832	J1068 E	9.7009
955841	J1069 C	1.7859
955842	J1069 E	9.6621
955861	J1071	5.9200
955961	J1083	4.0887
956011	J1088	8.7585
956021	J1089	9.9229
956031	J1090	5.2416
956161	J1103	1.1620
956251	J1112	8.8320
956291	J1117	4.6696
956301	J1119	34.9200
956561	J1152	10.5140
956741	J1172	2.9115
956751	J1173	4.6144
956801	J1178	3.7967
DUCKCREEK	DUCKCREEK	2.4734
LGEE	LGEE	0.3343
NEWTON	NEWTON	0.2761
CPL	CPL	0.2137
FARMERCITY	FARMERCITY	0.3642
G-007A	G-007A	1.9084
VFT	VFT	5.1342
PRAIRIE	PRAIRIE	4.2800
COFFEEN	COFFEEN	0.3583
CBM-S2	CBM-S2	1.0288
EDWARDS	EDWARDS	0.7165
CHEOAH	CHEOAH	0.0646
CALDERWOOD	CALDERWOOD	0.0691

Index 15

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44341944	275208	PLANO	CE	270847	PLANO	CE	1	COMED_P4_167-45-BT1-2_	breaker	1379.0	0.4	152.68	DC	2100.0

Bus #	Bus	MW Impact
945352	AF1-200 NFTW	2100.0000

15.1 Index 16

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
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43520681	243215	05COOK	AEP	243229	05OLIVE	AEP	1	AEP_P4_#7443_05DUMONT 765_A	breaker	1409.0	148.68	153.5	DC	140.93
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Bus #	Bus	MW Impact
243440	05CKG1	41.2175
243441	05CKG2	46.5229
244412	05WTRV SLR C	0.0440
247528	05COVRT1	6.1898
247529	05COVRT2	6.1898
247530	05COVRT3	6.1898
247531	05COVRT4	3.7150
247532	05COVRT5	3.7150
247533	05COVRT6	3.7150
247604	X1-042	0.0602
247651	AA2-116	173.4132
247966	05WTRV SLR E	0.3156
276165	Z1-106 BAT2	0.6773
276166	Z1-106 BAT1	0.6773
276171	Z1-107 BAT	1.4114
276172	Z1-108 BAT	1.3446
918052	AA1-018 E OP	-7.7481
920273	AA2-123 BAT	1.3286
925961	AC1-072	0.5742
926581	AC1-141	15.8759
933281	AC2-140 C	11.0325
933282	AC2-140 E	0.5807
936141	AD2-020 C O1	7.3215
936142	AD2-020 E O1	4.5065
936601	AD2-075	29.8236
938261	AE1-039	0.1150
939391	AE1-170 C O1	6.1288
939392	AE1-170 E O1	8.4636
939683	AE1-198 BAT	7.1600
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.2985
940262	AE2-008 BAT	9.8800
942681	AE2-284	3.8670
942883	AE2-307 BAT	5.3963
942913	AE2-310 BAT	2.8464
943021	AE2-325 C	3.7081
943022	AE2-325 E	1.1110
943383	AF1-009 BAT	1.6353
943423	AF1-013 BAT	1.6353
943803	AF1-048 BAT	3.4645
943922	AF1-060 BAT	0.7758
944161	AF1-084 C	6.7387
944162	AF1-084 E	3.8489
944961	AF1-161 C	2.9570
944962	AF1-161 E	2.9570
945101	AF1-175 C O1	16.0758
945102	AF1-175 E O1	10.7172
945111	AF1-176 C O1	6.8430
945112	AF1-176 E O1	6.3436
945352	AF1-200 NFTW	74.6934

946163	AF1-281 BAT	1.2694
946533	AF1-317 BAT	3.1810
946683	AF1-332 BAT	3.1810
950311	G934 C	4.3704
950312	G934 E	17.4816
950351	J466	3.5046
950791	J201 C	0.4967
950792	J201 E	1.9867
950871	J246 C	0.1977
950872	J246 E	0.7908
950942	J325 E	0.4578
951531	J533 C	5.6488
951532	J533 E	22.5952
951571	J538 C	3.2103
951572	J538 E	12.8412
951941	J602 C	3.9693
951942	J602 E	21.4747
952161	J571	0.8906
952201	J589 C	4.2813
952202	J589 E	23.1627
952312	J646 E	0.1726
952401	J752 C	1.8470
952402	J752 E	9.9930
952611	J717 C	4.0930
952612	J717 E	22.1441
952761	J728 C	3.8064
952762	J728 E	20.6212
952881	J758	26.2120
952971	J793	142.8818
953071	J794 C	0.2622
953072	J794 E	1.4183
953271	J701 C	0.9086
953272	J701 E	4.9160
953291	J796	30.8095
953321	J799	17.9758
953361	J806	18.5907
953421	J841	90.2912
953771	J832	13.9260
953781	J833	9.4350
953811	J839	11.0370
953941	J857	15.9561
954111	J875	15.4590
954381	J906 C	2.4565
954382	J906 E	13.2905
954591	J937	79.0730
955021	J978 C	2.3216
955022	J978 E	12.5604
955071	J984 C	4.5452
955072	J984 E	24.5908
955121	J989	9.5752
955181	J996	7.4992
955261	J1005	25.7840
955341	J1013	9.5264

955351	J1014 C	5.7235
955352	J1014 E	3.4341
955591	J1043 C	3.0974
955592	J1043 E	54.8859
955621	J1046	4.1955
955721	J1056 C	2.8195
955722	J1056 E	15.2545
955781	J1062	16.7820
955801	J1064 C	4.9184
955802	J1064 E	26.6096
955811	J1065 C	4.4516
955812	J1065 E	24.0844
955831	J1068 C	3.0180
955832	J1068 E	16.3280
955861	J1071	15.5350
955961	J1083	8.5113
956011	J1088	19.1100
956021	J1089	21.5866
956031	J1090	10.5219
956161	J1103	2.3774
956291	J1117	9.7248
956301	J1119	69.4260
956741	J1172	6.1420
956751	J1173	8.0720
956801	J1178	7.9034
DUCKCREEK	DUCKCREEK	6.7996
NEWTON	NEWTON	4.0713
FARMERCITY	FARMERCITY	0.2663
G-007A	G-007A	2.1721
VFT	VFT	5.8630
PRAIRIE	PRAIRIE	9.7844
COFFEEN	COFFEEN	2.2963
EDWARDS	EDWARDS	2.1612
CHEOAH	CHEOAH	0.6206
TILTON	TILTON	2.8060
GIBSON	GIBSON	1.3912
CALDERWOOD	CALDERWOOD	0.6267
BLUEG	BLUEG	2.9321
TRIMBLE	TRIMBLE	0.9232
CATAWBA	CATAWBA	0.2138

Index 17

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
43520715	243219	05DUMONT	AEP	255113	17STILLWELL	NIPS	1	COMED_P4_023-65-BT4-5	breaker	1409.0	121.88	149.57	DC	319.49

Bus #	Bus	MW Impact
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247651	AA2-116	48.5564
276153	W2-048 E	-0.9958
276165	Z1-106 BAT2	1.4843
276166	Z1-106 BAT1	1.4842
276171	Z1-107 BAT	3.1064
276172	Z1-108 BAT	2.9226
909052	X2-022 E	-14.4012
918052	AA1-018 E OP	-16.2450
920273	AA2-123 BAT	2.8698
926581	AC1-141	4.4453
933281	AC2-140 C	2.2875
933282	AC2-140 E	0.1204
936973	AD2-131 BAT	3.8370
938671	AE1-089 C	8.8909
938672	AE1-089 E	12.2049
939683	AE1-198 BAT	14.5426
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6491
940261	AE2-008	5.4441
941732	AE2-173 BAT	6.0785
942883	AE2-307 BAT	11.6767
942913	AE2-310 BAT	6.4880
943383	AF1-009 BAT	3.5140
943403	AF1-011 BAT	3.9048
943423	AF1-013 BAT	3.5140
943803	AF1-048 BAT	7.4792
943922	AF1-060 BAT	1.6493
945101	AF1-175 C O1	2.5144
945102	AF1-175 E O1	1.6763
945352	AF1-200 NFTW	319.4940
945882	AF1-253 BAT	7.3751
946163	AF1-281 BAT	2.6674
946533	AF1-317 BAT	6.6995
946683	AF1-332 BAT	6.6995
950311	G934 C	2.9529
950312	G934 E	11.8116
950351	J466	2.8554
950791	J201 C	0.3842
950792	J201 E	1.5366
950871	J246 C	0.1371
950872	J246 E	0.5484
950942	J325 E	0.3796
951531	J533 C	3.9172
951532	J533 E	15.6688
951571	J538 C	2.8110
951572	J538 E	11.2440
951731	J446 C	1.8848
951732	J446 E	10.1972
951941	J602 C	3.0074
951942	J602 E	16.2706
952161	J571	0.6273
952201	J589 C	3.0429
952202	J589 E	16.4631
952312	J646 E	0.1506

952401	J752 C	1.4876
952402	J752 E	8.0484
952581	J740 C	1.6851
952582	J740 E	9.1169
952611	J717 C	3.0229
952612	J717 E	16.3548
952761	J728 C	2.8113
952762	J728 E	15.2300
952811	J759	3.8157
952821	J762	10.8140
952861	J783 C	3.6228
952862	J783 E	0.1509
952881	J758	19.4800
952971	J793	124.4927
953071	J794 C	0.1896
953072	J794 E	1.0256
953161	J837 C	1.6860
953162	J837 E	9.1214
953171	J838 C	0.8426
953172	J838 E	4.5584
953271	J701 C	0.7293
953272	J701 E	3.9458
953291	J796	23.0778
953321	J799	17.5146
953351	J805	12.4275
953361	J806	14.3934
953421	J841	67.7641
953771	J832	9.7820
953781	J833	9.2570
953811	J839	9.4440
953831	J842 C	1.6034
953832	J842 E	8.6746
953841	J843 C	1.6299
953842	J843 E	8.8181
953931	J856	4.1888
953941	J857	12.1164
954111	J875	14.0595
954351	J903	6.4640
954381	J906 C	1.5591
954382	J906 E	8.4349
954421	J913 C	8.6416
954591	J937	53.8210
954941	J968 C	1.6851
954942	J968 E	9.1169
955021	J978 C	1.5419
955022	J978 E	8.3421
955071	J984 C	3.0710
955072	J984 E	16.6150
955121	J989	7.6440
955141	J992	11.8220
955151	J993	11.9880
955181	J996	7.3952
955261	J1005	19.3120

955341	J1013	7.5328
955351	J1014 C	4.7675
955352	J1014 E	2.8605
955371	J1016	2.6300
955451	J1027	7.7385
955461	J1028	7.8735
955491	J1031 C	1.6209
955492	J1031 E	8.7696
955591	J1043 C	1.9872
955592	J1043 E	35.2132
955621	J1046	4.5630
955721	J1056 C	2.8720
955722	J1056 E	15.5380
955781	J1062	18.2520
955791	J1063	17.3430
955801	J1064 C	3.1106
955802	J1064 E	16.8294
955811	J1065 C	3.0626
955812	J1065 E	16.5694
955831	J1068 C	2.8979
955832	J1068 E	15.6781
955841	J1069 C	1.6851
955842	J1069 E	9.1169
955861	J1071	9.9730
955891	J1074	10.5200
955961	J1083	6.7396
956011	J1088	14.4690
956021	J1089	16.3880
956031	J1090	8.6103
956161	J1103	1.9082
956291	J1117	7.6928
956301	J1119	57.3720
956561	J1152	12.6460
956741	J1172	4.7945
956751	J1173	7.4752
956801	J1178	6.2582
956911	J1189	0.2548
DUCKCREEK	DUCKCREEK	13.1824
LGEE	LGEE	0.5306
NEWTON	NEWTON	3.4986
CPL	CPL	0.7898
FARMERCITY	FARMERCITY	0.4675
G-007A	G-007A	5.7276
VFT	VFT	15.4220
PRAIRIE	PRAIRIE	12.1298
COFFEEN	COFFEEN	2.9459
CBM-S2	CBM-S2	4.8725
EDWARDS	EDWARDS	4.3267
TILTON	TILTON	2.1943
GIBSON	GIBSON	0.2179
CALDERWOOD	CALDERWOOD	0.0010
AC1-056	AC1-056	6.4410

Index 18

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
44342040	255112	17STJOHN	NIPS	270886	ST JOHN ; T	CE	1	AEP_P4_#2978_05DUMONT_FSA	breaker	1091.0	124.8	125.43	DC	192.35

Bus #	Bus	MW Impact
274654	BRAIDWOOD;1U	16.7851
274655	BRAIDWOOD;2U	16.3398
274687	WILL CNTY;4U	7.1707
274751	CRETE EC ;1U	3.0488
274752	CRETE EC ;2U	3.0488
274753	CRETE EC ;3U	3.0488
274754	CRETE EC ;4U	3.0488
274861	TOP CROP ;1U	0.2936
274862	TOP CROP ;2U	0.5700
274881	PILOT HIL;1E	10.6969
275149	KELLYCK ;1E	10.6969
276161	W4-086	0.1479
276167	Z1-106 E2	0.7885
276168	Z1-106 E1	0.7885
276169	Z1-107 E	1.5492
276170	Z1-108 E	1.5564
290021	O50 E	12.2373
290108	LEEDK;1U E	12.6717
293061	N-015 E	9.7155
293644	O22 E1	8.4146
293645	O22 E2	16.3342
294392	P-010 E	12.3387
914321	Y2-103 (Withdrawn : 12/24/2019)	28.1918
915011	Y3-013 1	2.3493
915021	Y3-013 2	2.3493
915031	Y3-013 3	2.3493
920272	AA2-123 E	1.5268
926311	AC1-109 1	1.1891
926321	AC1-109 2	1.1891
926331	AC1-110 1	1.1860
926341	AC1-110 2	1.1860
926351	AC1-111 1	0.4751
926361	AC1-111 2	0.4751
926371	AC1-111 3	0.4751
926381	AC1-111 4	0.4751
926391	AC1-111 5	0.4751
926401	AC1-111 6	0.4751
927091	AC1-204 1	46.1927
927101	AC1-204 2	46.1263
927451	AC1-142A 1	2.6781
927461	AC1-142A 2	2.6795

930501	AB1-091 O1	42.2667
930741	AB1-122 1O1	44.3834
930751	AB1-122 2O1	47.0471
933411	AC2-154 C	1.4517
933412	AC2-154 E	2.3686
933431	AC2-156 C O1	0.5937
933432	AC2-156 E O1	0.9686
933931	AD1-016 C	0.5802
933932	AD1-016 E	0.9466
934101	AD1-039 1	4.3496
934111	AD1-039 2	4.6106
934721	AD1-100 C	11.9416
934722	AD1-100 E	55.7277
936371	AD2-047 C O1	2.5978
936372	AD2-047 E O1	12.6835
936461	AD2-060	0.8099
937321	AD2-175 C (Withdrawn : 12/10/2019)	9.4534
937322	AD2-175 E (Withdrawn : 12/10/2019)	6.3023
937401	AD2-194 1	4.9674
937411	AD2-194 2	4.9603
938511	AE1-070 1	5.8367
938521	AE1-070 2	5.3323
938851	AE1-113 C	5.0479
938852	AE1-113 E	17.8970
939351	AE1-166 C O1	3.3709
939352	AE1-166 E O1	3.1116
939631	AE1-193 C	18.8793
939632	AE1-193 E	126.3458
939641	AE1-194 C	18.8793
939642	AE1-194 E	126.3458
939651	AE1-195 C	18.8793
939652	AE1-195 E	126.3458
939681	AE1-198 C	56.0569
939682	AE1-198 E	47.6338
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.3465
940621	AE2-049 C O1	2.8069
940622	AE2-049 E O1	1.8713
940631	AE2-050 C O1	9.7263
940632	AE2-050 E O1	6.4842
940752	AE2-062 E	0.0449
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0449
941131	AE2-107 C	2.4143
941132	AE2-107 E	1.6095
941551	AE2-152 C O1	3.8895
941552	AE2-152 E O1	2.5930
941561	AE2-153 C O1	2.9229
941562	AE2-153 E O1	13.6844
942421	AE2-255 C O1	1.9121
942422	AE2-255 E O1	5.7362
942881	AE2-307 C O1	17.8316
942882	AE2-307 E O1	6.4842
942911	AE2-310 C O1	2.7256
942912	AE2-310 E O1	0.7322

942991	AE2-321 C	5.1073
942992	AE2-321 E	2.5155
943121	AE2-341 C	7.9199
943122	AE2-341 E	3.8891
943591	AF1-030 C O1	2.7998
943592	AF1-030 E O1	1.3728
943801	AF1-048 C	1.2654
943802	AF1-048 E	0.8436
944041	AF1-072	0.7137
944911	AF1-156 C	3.9608
944912	AF1-156 E	2.6406
945351	AF1-200 FTIR	101.9445
946521	AF1-316 C O1	2.2657
946522	AF1-316 E O1	3.3985
946661	AF1-330 C	0.6635
946662	AF1-330 E	0.1457
955741	J1058	50.1750
WEC	WEC	2.7619
CBM-W2	CBM-W2	14.1523
NY	NY	0.8411
CBM-W1	CBM-W1	40.4824
TVA	TVA	0.9016
O-066	O-066	9.9456
CHEOAH	CHEOAH	0.0420
CBM-S1	CBM-S1	3.3654
G-007	G-007	1.5371
MADISON	MADISON	14.1684
MEC	MEC	9.4450
GIBSON	GIBSON	0.0568
CALDERWOOD	CALDERWOOD	0.0338
BLUEG	BLUEG	1.2603
TRIMBLE	TRIMBLE	0.4302
CATAWBA	CATAWBA	0.2013

Index 19

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
41024055	264612	19MON12	ITCT	241901	02LALLENDORF	ATSI	1	ATSI-P7-1-TE-138-025T-A	tower	1244.0	238.82	239.33	DC	126.74

Bus #	Bus	MW Impact
244357	05GRANGER EL	-0.1884
244412	05WTRV SLR C	0.0333
247528	05COVRT1	4.2120
247529	05COVRT2	4.2120
247530	05COVRT3	4.2120

247531	05COVRT4	2.5280
247532	05COVRT5	2.5280
247533	05COVRT6	2.5280
247604	X1-042	0.0446
247651	AA2-116	75.1876
247966	05WTRV SLR E	0.2383
247967	05OLIV SLR E	0.1700
247969	Z2-116 E	0.0911
274788	SE CHICAG;5U (Deactivation : 06/01/20)	2.1081
274789	SE CHICAG;6U (Deactivation : 06/01/20)	2.1137
274790	SE CHICAG;7U (Deactivation : 06/01/20)	2.1415
274791	SE CHICAG;8U (Deactivation : 06/01/20)	2.1415
274792	SE CHICAG;9U (Deactivation : 06/01/20)	2.1461
274793	SE CHICAG;0U (Deactivation : 06/01/20)	2.1461
274794	SE CHICAG;1U (Deactivation : 06/01/20)	2.1461
274795	SE CHICAG;2U (Deactivation : 06/01/20)	2.1461
274881	PILOT HIL;1E	7.5410
275149	KELLYCK ;1E	7.5410
276169	Z1-107 E	1.0639
294392	P-010 E	2.4582
910542	X3-005 E	0.3072
925961	AC1-072	0.3907
926581	AC1-141	6.8834
927091	AC1-204 1	29.5652
927101	AC1-204 2	29.5605
927451	AC1-142A 1	1.7038
927461	AC1-142A 2	1.7038
930501	AB1-091 O1	29.6442
931951	AB1-107 1	-33.9244
931961	AB1-107 2	-110.3845
932601	AC2-080 C O1	1.3835
932602	AC2-080 E O1	9.2585
932931	AC2-117	2.5446
933281	AC2-140 C	2.3734
933282	AC2-140 E	0.1249
933411	AC2-154 C	1.0234
933412	AC2-154 E	1.6698
934252	AD1-052 E1	-0.5409
934262	AD1-052 E2	-0.5409
934721	AD1-100 C	7.9535
934722	AD1-100 E	37.1161
936141	AD2-020 C O1	4.9995
936142	AD2-020 E O1	3.0772
936371	AD2-047 C O1	1.8314
936372	AD2-047 E O1	8.9415
936461	AD2-060	0.5710
936601	AD2-075	20.2942
936631	AD2-079 C O1	0.8397
936632	AD2-079 E O1	0.5598
937041	AD2-138 C	1.8730
937042	AD2-138 E	8.7690
937321	AD2-175 C (Withdrawn : 12/10/2019)	6.6295
937322	AD2-175 E (Withdrawn : 12/10/2019)	4.4197

937401	AD2-194 1	3.1793
937411	AD2-194 2	3.1788
938261	AE1-039	0.0852
938511	AE1-070 1	3.7357
938521	AE1-070 2	3.4172
938671	AE1-089 C	8.3201
938672	AE1-089 E	11.4214
939351	AE1-166 C O1	2.2032
939352	AE1-166 E O1	2.0337
939391	AE1-170 C O1	4.8447
939392	AE1-170 E O1	6.6903
939631	AE1-193 C	3.6564
939632	AE1-193 E	24.4701
939641	AE1-194 C	3.6564
939642	AE1-194 E	24.4701
939651	AE1-195 C	3.6564
939652	AE1-195 E	24.4701
939681	AE1-198 C	10.8568
939682	AE1-198 E	9.2255
940261	AE2-008	5.0946
940581	AE2-045 C O1	6.2788
940582	AE2-045 E O1	8.6200
940621	AE2-049 C O1	1.9652
940622	AE2-049 E O1	1.3101
940631	AE2-050 C O1	2.5604
940632	AE2-050 E O1	1.7069
940752	AE2-062 E	0.0283
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0283
941551	AE2-152 C O1	2.5422
941552	AE2-152 E O1	1.6948
941561	AE2-153 C O1	1.8900
941562	AE2-153 E O1	8.8489
942681	AE2-284	3.0568
942881	AE2-307 C O1	4.6941
942882	AE2-307 E O1	1.7069
942911	AE2-310 C O1	1.9082
942912	AE2-310 E O1	0.5127
943001	AE2-323 C	3.8881
943002	AE2-323 E	1.9064
943021	AE2-325 C	1.3420
943022	AE2-325 E	0.8925
943781	AF1-046 C	0.9619
943782	AF1-046 E	0.6412
944161	AF1-084 C	2.3965
944162	AF1-084 E	1.3688
944911	AF1-156 C	2.5612
944912	AF1-156 E	1.7075
944931	AF1-158 C O1	3.2647
944932	AF1-158 E O1	2.1765
944961	AF1-161 C	1.0702
944962	AF1-161 E	1.0702
945101	AF1-175 C O1	3.6698
945102	AF1-175 E O1	2.4465

945111	AF1-176 C O1	6.2118
945112	AF1-176 E O1	5.7585
945351	AF1-200 FTIR	67.1721
945501	AF1-215 C O1	5.5044
945502	AF1-215 E O1	3.6696
946521	AF1-316 C O1	1.4743
946522	AF1-316 E O1	2.2114
950311	G934 C	4.3998
950312	G934 E	17.5992
950351	J466	7.2879
950791	J201 C	0.8608
950792	J201 E	3.4430
950871	J246 C	0.2252
950872	J246 E	0.9007
950942	J325 E	1.0051
951531	J533 C	6.4336
951532	J533 E	25.7344
951941	J602 C	6.3289
951942	J602 E	34.2411
952161	J571	0.4900
952201	J589 C	5.3352
952202	J589 E	28.8648
952312	J646 E	0.4419
952401	J752 C	3.7023
952402	J752 E	20.0307
952611	J717 C	5.9975
952612	J717 E	32.4478
952761	J728 C	5.5775
952762	J728 E	30.2163
952881	J758	20.3460
952971	J793	363.3782
953071	J794 C	0.3523
953072	J794 E	1.9059
953271	J701 C	1.8013
953272	J701 E	9.7455
953291	J796	47.7904
953321	J799	53.4001
953361	J806	17.9590
953421	J841	141.4319
953771	J832	16.2900
953781	J833	27.4140
953811	J839	26.5970
953941	J857	13.1222
954111	J875	13.9350
954381	J906 C	1.5403
954382	J906 E	8.3337
954591	J937	34.0956
955021	J978 C	2.0531
955022	J978 E	11.1079
955071	J984 C	4.5758
955072	J984 E	24.7562
955121	J989	17.9504
955261	J1005	40.1780

955351	J1014 C	7.6465
955352	J1014 E	4.5879
955591	J1043 C	2.4246
955592	J1043 E	42.9639
955621	J1046	12.5920
955721	J1056 C	9.3597
955722	J1056 E	50.6383
955781	J1062	50.3680
955801	J1064 C	3.3790
955802	J1064 E	18.2810
955811	J1065 C	4.7365
955812	J1065 E	25.6255
955831	J1068 C	8.6050
955832	J1068 E	46.5550
955861	J1071	10.5550
955961	J1083	11.5626
956011	J1088	29.1885
956021	J1089	33.6532
956031	J1090	14.8194
956161	J1103	4.7130
956291	J1117	13.4128
956301	J1119	107.7900
956741	J1172	10.9190
956751	J1173	6.6416
956801	J1178	10.7367
LGEE	LGEE	1.4793
CPL	CPL	0.3036
WEC	WEC	1.8730
CBM-W2	CBM-W2	27.9443
NY	NY	1.0474
CBM-W1	CBM-W1	184.8102
TVA	TVA	3.2718
O-066	O-066	11.3098
CBM-S2	CBM-S2	4.7280
CBM-S1	CBM-S1	20.3117
G-007	G-007	1.7368
MADISON	MADISON	6.6024
MEC	MEC	7.8942

Index 20

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
44342004	270644	WILTON ;	CE	275233	WILTON ;4M	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	115.78	145.94	DC	340.03

Bus #	Bus	MW Impact
238965	02MNF DG1 (Deactivation : 02/05/19)	16.8813
238966	02MNF DG2 (Deactivation : 02/05/19)	16.8813

238967	02MNFDG3 (Deactivation : 06/01/21)	16.8813
276153	W2-048 E	-1.1545
276165	Z1-106 BAT2	1.5698
276166	Z1-106 BAT1	1.5697
276171	Z1-107 BAT	3.2132
276172	Z1-108 BAT	3.0888
909052	X2-022 E	-16.6959
918052	AA1-018 E OP	-17.3564
920273	AA2-123 BAT	3.0356
932801	AC2-104 C (Withdrawn : 11/07/2019)	2.8257
932802	AC2-104 E (Withdrawn : 11/07/2019)	18.9112
933281	AC2-140 C	2.3786
933282	AC2-140 E	0.1252
934771	AD1-104 C	2.2776
934772	AD1-104 E	15.2423
936973	AD2-131 BAT	4.3315
939683	AE1-198 BAT	10.5696
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6844
941732	AE2-173 BAT	7.4305
942883	AE2-307 BAT	13.0200
942913	AE2-310 BAT	6.7916
943383	AF1-009 BAT	3.7245
943403	AF1-011 BAT	4.1634
943423	AF1-013 BAT	3.7245
943803	AF1-048 BAT	7.9125
943922	AF1-060 BAT	1.7483
945352	AF1-200 NFTW	340.0320
945882	AF1-253 BAT	8.2505
946163	AF1-281 BAT	2.8318
946533	AF1-317 BAT	7.1115
946683	AF1-332 BAT	7.1115
950311	G934 C	2.7465
950312	G934 E	10.9860
950351	J466	2.7120
950791	J201 C	0.3628
950792	J201 E	1.4510
950871	J246 C	0.1279
950872	J246 E	0.5117
950942	J325 E	0.3612
950981	J333	8.9403
951531	J533 C	3.6548
951532	J533 E	14.6192
951571	J538 C	2.6964
951572	J538 E	10.7856
951731	J446 C	2.2885
951732	J446 E	12.3815
951811	J513 C	1.0141
951812	J513 E	5.4863
951941	J602 C	2.8333
951942	J602 E	15.3287
952161	J571	0.5830
952201	J589 C	2.8458
952202	J589 E	15.3962

952312	J646 E	0.1441
952401	J752 C	1.4113
952402	J752 E	7.6357
952581	J740 C	2.2405
952582	J740 E	12.1215
952611	J717 C	2.8397
952612	J717 E	15.3634
952761	J728 C	2.6409
952762	J728 E	14.3069
952801	J754 C	2.4107
952802	J754 E	13.0425
952811	J759	4.0705
952821	J762	11.4760
952861	J783 C	3.8640
952862	J783 E	0.1610
952881	J758	18.1800
952971	J793	119.0593
953071	J794 C	0.1776
953072	J794 E	0.9611
953161	J837 C	2.2416
953162	J837 E	12.1276
953171	J838 C	1.1202
953172	J838 E	6.0608
953271	J701 C	0.6916
953272	J701 E	3.7419
953291	J796	21.7203
953321	J799	16.9250
953351	J805	13.3051
953361	J806	13.5098
953421	J841	63.7907
953771	J832	9.1300
953781	J833	8.9520
953811	J839	9.0150
953831	J842 C	1.7191
953832	J842 E	9.3009
953841	J843 C	1.7503
953842	J843 E	9.4697
953931	J856	4.4808
953941	J857	11.3430
954111	J875	13.4775
954171	J883 C	0.7730
954172	J883 E	4.1822
954351	J903	6.9150
954381	J906 C	1.4355
954382	J906 E	7.7665
954421	J913 C	11.4896
954591	J937	49.0702
954751	J351	46.5582
954941	J968 C	2.2405
954942	J968 E	12.1215
955021	J978 C	1.4301
955022	J978 E	7.7369
955071	J984 C	2.8564

955072	J984 E	15.4536
955121	J989	7.2416
955141	J992	16.6220
955151	J993	12.9880
955181	J996	7.1584
955261	J1005	18.1760
955341	J1013	7.2072
955351	J1014 C	4.5155
955352	J1014 E	2.7093
955371	J1016	2.8195
955451	J1027	8.3205
955461	J1028	8.4510
955491	J1031 C	1.7222
955492	J1031 E	9.3178
955591	J1043 C	1.8382
955592	J1043 E	32.5729
955621	J1046	4.4555
955721	J1056 C	2.7883
955722	J1056 E	15.0857
955781	J1062	17.8220
955791	J1063	20.9910
955801	J1064 C	2.8710
955802	J1064 E	15.5330
955811	J1065 C	2.8526
955812	J1065 E	15.4334
955821	J1067	15.0096
955831	J1068 C	2.7958
955832	J1068 E	15.1262
955841	J1069 C	2.2405
955842	J1069 E	12.1215
955861	J1071	9.1940
955891	J1074	11.2780
955961	J1083	6.3413
956011	J1088	13.6230
956021	J1089	15.4377
956031	J1090	8.1369
956161	J1103	1.8096
956251	J1112	11.0925
956291	J1117	7.2472
956301	J1119	54.2280
956561	J1152	13.5240
956741	J1172	4.5320
956751	J1173	7.1816
956801	J1178	5.8884
956911	J1189	0.2735
DUCKCREEK	DUCKCREEK	14.2245
LGEE	LGEE	0.7262
NEWTON	NEWTON	3.5469
CPL	CPL	0.9149
FARMERCITY	FARMERCITY	0.4980
G-007A	G-007A	6.2215
VFT	VFT	16.7507
PRAIRIE	PRAIRIE	12.8763

COFFEEN	COFFEEN	3.2133
CBM-S2	CBM-S2	5.8725
EDWARDS	EDWARDS	4.6659
TILTON	TILTON	2.1275
GIBSON	GIBSON	0.0426
AC1-056	AC1-056	6.9570

Index 21

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
44342023	270644	WILTON ;	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	112.27	141.8	DC	333.0

Bus #	Bus	MW Impact
238965	02MNFDG1 (Deativation : 02/05/19)	16.5264
238966	02MNFDG2 (Deativation : 02/05/19)	16.5264
238967	02MNFDG3 (Deativation : 06/01/21)	16.5264
276153	W2-048 E	-1.1314
276165	Z1-106 BAT2	1.5370
276166	Z1-106 BAT1	1.5369
276171	Z1-107 BAT	3.1460
276172	Z1-108 BAT	3.0242
909052	X2-022 E	-16.3619
918052	AA1-018 E OP	-16.9848
920273	AA2-123 BAT	2.9722
932801	AC2-104 C (Withdrawn : 11/07/2019)	2.7671
932802	AC2-104 E (Withdrawn : 11/07/2019)	18.5190
933281	AC2-140 C	2.3292
933282	AC2-140 E	0.1226
934771	AD1-104 C	2.2304
934772	AD1-104 E	14.9262
936973	AD2-131 BAT	4.2440
939683	AE1-198 BAT	10.3507
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6701
941732	AE2-173 BAT	7.2830
942883	AE2-307 BAT	12.7575
942913	AE2-310 BAT	6.6524
943383	AF1-009 BAT	3.6470
943403	AF1-011 BAT	4.0770
943423	AF1-013 BAT	3.6470
943803	AF1-048 BAT	7.7470
943922	AF1-060 BAT	1.7118
945352	AF1-200 NTFW	332.9970
945882	AF1-253 BAT	8.0847
946163	AF1-281 BAT	2.7728
946533	AF1-317 BAT	6.9635
946683	AF1-332 BAT	6.9635
950311	G934 C	2.6895

950312	G934 E	10.7580
950351	J466	2.6559
950791	J201 C	0.3553
950792	J201 E	1.4211
950871	J246 C	0.1253
950872	J246 E	0.5011
950942	J325 E	0.3538
950981	J333	8.7516
951531	J533 C	3.5792
951532	J533 E	14.3168
951571	J538 C	2.6406
951572	J538 E	10.5624
951731	J446 C	2.2411
951732	J446 E	12.1249
951811	J513 C	0.9930
951812	J513 E	5.3726
951941	J602 C	2.7749
951942	J602 E	15.0131
952161	J571	0.5710
952201	J589 C	2.7868
952202	J589 E	15.0772
952312	J646 E	0.1411
952401	J752 C	1.3820
952402	J752 E	7.4770
952581	J740 C	2.1940
952582	J740 E	11.8700
952611	J717 C	2.7810
952612	J717 E	15.0459
952761	J728 C	2.5863
952762	J728 E	14.0112
952811	J759	3.9858
952821	J762	11.2360
952861	J783 C	3.7834
952862	J783 E	0.1576
952881	J758	17.8040
952971	J793	116.5872
953071	J794 C	0.1740
953072	J794 E	0.9413
953161	J837 C	2.1951
953162	J837 E	11.8760
953171	J838 C	1.0970
953172	J838 E	5.9350
953271	J701 C	0.6773
953272	J701 E	3.6646
953291	J796	21.2710
953321	J799	16.5734
953351	J805	13.0265
953361	J806	13.2312
953421	J841	62.4710
953771	J832	8.9410
953781	J833	8.7670
953811	J839	8.8280
953831	J842 C	1.6832

953832	J842 E	9.1068
953841	J843 C	1.7135
953842	J843 E	9.2705
953931	J856	4.3872
953941	J857	11.1081
954111	J875	13.1985
954171	J883 C	0.7570
954172	J883 E	4.0958
954351	J903	6.7700
954381	J906 C	1.4059
954382	J906 E	7.6061
954421	J913 C	11.2512
954591	J937	48.0591
954751	J351	45.6065
954941	J968 C	2.1940
954942	J968 E	11.8700
955021	J978 C	1.4004
955022	J978 E	7.5766
955071	J984 C	2.7971
955072	J984 E	15.1329
955121	J989	7.0912
955141	J992	16.2780
955151	J993	12.7160
955181	J996	7.0104
955261	J1005	17.8000
955341	J1013	7.0576
955351	J1014 C	4.4220
955352	J1014 E	2.6532
955371	J1016	2.7605
955451	J1027	8.1450
955461	J1028	8.2740
955491	J1031 C	1.6864
955492	J1031 E	9.1241
955591	J1043 C	1.8002
955592	J1043 E	31.8995
955621	J1046	4.3630
955721	J1056 C	2.7306
955722	J1056 E	14.7734
955781	J1062	17.4520
955791	J1063	20.5560
955801	J1064 C	2.8114
955802	J1064 E	15.2106
955811	J1065 C	2.7936
955812	J1065 E	15.1144
955821	J1067	14.7000
955831	J1068 C	2.7378
955832	J1068 E	14.8122
955841	J1069 C	2.1940
955842	J1069 E	11.8700
955861	J1071	9.0040
955891	J1074	11.0420
955961	J1083	6.2104
956011	J1088	13.3410

956021	J1089	15.1181
956031	J1090	7.9686
956161	J1103	1.7722
956251	J1112	10.8645
956291	J1117	7.0968
956301	J1119	53.1060
956561	J1152	13.2420
956741	J1172	4.4385
956751	J1173	7.0328
956801	J1178	5.7668
956911	J1189	0.2678
DUCKCREEK	DUCKCREEK	13.9297
LGEE	LGEE	0.7108
NEWTON	NEWTON	3.4760
CPLE	CPLE	0.8957
FARMERCITY	FARMERCITY	0.4876
G-007A	G-007A	6.0920
VFT	VFT	16.3959
PRAIRIE	PRAIRIE	12.6154
COFFEEN	COFFEEN	3.1483
CBM-S2	CBM-S2	5.7453
EDWARDS	EDWARDS	4.5692
TILTON	TILTON	2.0853
GIBSON	GIBSON	0.0426
AC1-056	AC1-056	6.8160

Index 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 PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC D C	MW IMPAC T
43520886	270771	GREENACRE; T	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	971.0	102.03	102.74	DC	173.61

Bus #	Bus	MW Impact
274751	CRETE EC ;1U	1.7551
274752	CRETE EC ;2U	1.7551
274753	CRETE EC ;3U	1.7551
274754	CRETE EC ;4U	1.7551
274788	SE CHICAG;5U (Deactivation : 06/01/20)	3.0011
274789	SE CHICAG;6U (Deactivation : 06/01/20)	3.0091
274790	SE CHICAG;7U (Deactivation : 06/01/20)	3.0487
274791	SE CHICAG;8U (Deactivation : 06/01/20)	3.0487
274792	SE CHICAG;9U (Deactivation : 06/01/20)	3.0948
274793	SE CHICAG;0U (Deactivation : 06/01/20)	3.0948
274794	SE CHICAG;1U (Deactivation : 06/01/20)	3.0948
274795	SE CHICAG;2U (Deactivation : 06/01/20)	3.0948
274830	U3-021 1	3.4285
274831	U3-021 2	3.4285

274881	PILOT HIL;1E	10.4613
275149	KELLYCK ;1E	10.4613
276161	W4-086	0.1351
276167	Z1-106 E2	0.7104
276168	Z1-106 E1	0.7104
276169	Z1-107 E	1.4472
276170	Z1-108 E	1.4005
290021	O50 E	10.9303
290108	LEEDK;1U E	13.6646
293061	N-015 E	8.6537
293644	O22 E1	6.1217
293645	O22 E2	11.8833
294392	P-010 E	10.9902
910542	X3-005 E	0.4382
914321	Y2-103 (Withdrawn : 12/24/2019)	25.3429
915011	Y3-013 1	2.1119
915021	Y3-013 2	2.1119
915031	Y3-013 3	2.1119
918052	AA1-018 E OP	8.9217
920272	AA2-123 E	1.3746
924471	AB2-096	23.8089
926311	AC1-109 1	1.0716
926321	AC1-109 2	1.0716
926331	AC1-110 1	1.0687
926341	AC1-110 2	1.0687
926351	AC1-111 1	0.4286
926361	AC1-111 2	0.4286
926371	AC1-111 3	0.4286
926381	AC1-111 4	0.4286
926391	AC1-111 5	0.4286
926401	AC1-111 6	0.4286
927091	AC1-204 1	41.1371
927101	AC1-204 2	41.0992
927451	AC1-142A 1	2.3892
927461	AC1-142A 2	2.3898
930501	AB1-091 O1	41.4766
930741	AB1-122 1O1	40.1068
930751	AB1-122 2O1	41.9445
933411	AC2-154 C	1.4197
933412	AC2-154 E	2.3164
933431	AC2-156 C O1	0.5363
933432	AC2-156 E O1	0.8750
933931	AD1-016 C	0.5224
933932	AD1-016 E	0.8523
934101	AD1-039 1	3.9305
934111	AD1-039 2	4.1106
934721	AD1-100 C	10.9102
934722	AD1-100 E	50.9142
934871	AD1-116 C	0.5196
934872	AD1-116 E	0.8477
934971	AD1-129 C	0.4611
934972	AD1-129 E	0.3074
936371	AD2-047 C O1	2.5406

936372	AD2-047 E O1	12.4041
936461	AD2-060	0.7921
937321	AD2-175 C (Withdrawn : 12/10/2019)	9.2736
937322	AD2-175 E (Withdrawn : 12/10/2019)	6.1824
937401	AD2-194 1	4.4237
937411	AD2-194 2	4.4197
938511	AE1-070 1	5.1979
938521	AE1-070 2	4.7511
938851	AE1-113 C	4.5088
938852	AE1-113 E	15.9856
939351	AE1-166 C O1	3.0564
939352	AE1-166 E O1	2.8213
939631	AE1-193 C	10.8686
939632	AE1-193 E	72.7363
939641	AE1-194 C	10.8686
939642	AE1-194 E	72.7363
939651	AE1-195 C	10.8686
939652	AE1-195 E	72.7363
939681	AE1-198 C	32.2715
939682	AE1-198 E	27.4224
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.3114
940621	AE2-049 C O1	2.7218
940622	AE2-049 E O1	1.8145
940631	AE2-050 C O1	3.7164
940632	AE2-050 E O1	2.4776
940752	AE2-062 E	0.0402
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0402
941131	AE2-107 C	2.1783
941132	AE2-107 E	1.4522
941551	AE2-152 C O1	3.5266
941552	AE2-152 E O1	2.3511
941561	AE2-153 C O1	2.6560
941562	AE2-153 E O1	12.4349
942421	AE2-255 C O1	1.7079
942422	AE2-255 E O1	5.1236
942881	AE2-307 C O1	6.8133
942882	AE2-307 E O1	2.4776
942911	AE2-310 C O1	2.6429
942912	AE2-310 E O1	0.7100
942991	AE2-321 C	4.5981
942992	AE2-321 E	2.2648
943121	AE2-341 C	7.1572
943122	AE2-341 E	3.5146
943591	AF1-030 C O1	2.5301
943592	AF1-030 E O1	1.2406
943801	AF1-048 C	1.1392
943802	AF1-048 E	0.7595
944041	AF1-072	0.6424
944911	AF1-156 C	3.5992
944912	AF1-156 E	2.3995
945351	AF1-200 FTIR	92.0111
946521	AF1-316 C O1	2.0180
946522	AF1-316 E O1	3.0271

946661	AF1-330 C	0.5974
946662	AF1-330 E	0.1311
951721	J643	15.6310
953871	J847	8.4483
955741	J1058	43.9140
WEC	WEC	2.4860
CBM-W2	CBM-W2	13.9230
NY	NY	0.7388
CBM-W1	CBM-W1	41.2830
TVA	TVA	0.9800
O-066	O-066	8.7226
CBM-S1	CBM-S1	4.1492
G-007	G-007	1.3478
MADISON	MADISON	12.6242
MEC	MEC	8.5981
BLUEG	BLUEG	0.8090
TRIMBLE	TRIMBLE	0.2827
CATAWBA	CATAWBA	0.1515

Index 23

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
44342045	270886	ST JOHN ;T	CE	255104	17GREEN_AC RE	NIPS	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	1091.0	124.79	125.42	DC	192.35

Bus #	Bus	MW Impact
274654	BRAIDWOOD;1U	16.7851
274655	BRAIDWOOD;2U	16.3398
274687	WILL CNTY;4U	7.1707
274751	CRETE EC ;1U	3.0488
274752	CRETE EC ;2U	3.0488
274753	CRETE EC ;3U	3.0488
274754	CRETE EC ;4U	3.0488
274861	TOP CROP ;1U	0.2936
274862	TOP CROP ;2U	0.5700
274881	PILOT HIL;1E	10.6969
275149	KELLYCK ;1E	10.6969
276161	W4-086	0.1479
276167	Z1-106 E2	0.7885
276168	Z1-106 E1	0.7885
276169	Z1-107 E	1.5492
276170	Z1-108 E	1.5564
290021	O50 E	12.2373
290108	LEEDK;1U E	12.6717
293061	N-015 E	9.7155
293644	O22 E1	8.4146

293645	O22 E2	16.3342
294392	P-010 E	12.3387
914321	Y2-103 (Withdrawn : 12/24/2019)	28.1918
915011	Y3-013 1	2.3493
915021	Y3-013 2	2.3493
915031	Y3-013 3	2.3493
920272	AA2-123 E	1.5268
926311	AC1-109 1	1.1891
926321	AC1-109 2	1.1891
926331	AC1-110 1	1.1860
926341	AC1-110 2	1.1860
926351	AC1-111 1	0.4751
926361	AC1-111 2	0.4751
926371	AC1-111 3	0.4751
926381	AC1-111 4	0.4751
926391	AC1-111 5	0.4751
926401	AC1-111 6	0.4751
927091	AC1-204 1	46.1927
927101	AC1-204 2	46.1263
927451	AC1-142A 1	2.6781
927461	AC1-142A 2	2.6795
930501	AB1-091 O1	42.2667
930741	AB1-122 1O1	44.3834
930751	AB1-122 2O1	47.0471
933411	AC2-154 C	1.4517
933412	AC2-154 E	2.3686
933431	AC2-156 C O1	0.5937
933432	AC2-156 E O1	0.9686
933931	AD1-016 C	0.5802
933932	AD1-016 E	0.9466
934101	AD1-039 1	4.3496
934111	AD1-039 2	4.6106
934721	AD1-100 C	11.9416
934722	AD1-100 E	55.7277
936371	AD2-047 C O1	2.5978
936372	AD2-047 E O1	12.6835
936461	AD2-060	0.8099
937321	AD2-175 C (Withdrawn : 12/10/2019)	9.4534
937322	AD2-175 E (Withdrawn : 12/10/2019)	6.3023
937401	AD2-194 1	4.9674
937411	AD2-194 2	4.9603
938511	AE1-070 1	5.8367
938521	AE1-070 2	5.3323
938851	AE1-113 C	5.0479
938852	AE1-113 E	17.8970
939351	AE1-166 C O1	3.3709
939352	AE1-166 E O1	3.1116
939631	AE1-193 C	18.8793
939632	AE1-193 E	126.3458
939641	AE1-194 C	18.8793
939642	AE1-194 E	126.3458
939651	AE1-195 C	18.8793
939652	AE1-195 E	126.3458

939681	AE1-198 C	56.0569
939682	AE1-198 E	47.6338
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.3465
940621	AE2-049 C O1	2.8069
940622	AE2-049 E O1	1.8713
940631	AE2-050 C O1	9.7263
940632	AE2-050 E O1	6.4842
940752	AE2-062 E	0.0449
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0449
941131	AE2-107 C	2.4143
941132	AE2-107 E	1.6095
941551	AE2-152 C O1	3.8895
941552	AE2-152 E O1	2.5930
941561	AE2-153 C O1	2.9229
941562	AE2-153 E O1	13.6844
942421	AE2-255 C O1	1.9121
942422	AE2-255 E O1	5.7362
942881	AE2-307 C O1	17.8316
942882	AE2-307 E O1	6.4842
942911	AE2-310 C O1	2.7256
942912	AE2-310 E O1	0.7322
942991	AE2-321 C	5.1073
942992	AE2-321 E	2.5155
943121	AE2-341 C	7.9199
943122	AE2-341 E	3.8891
943591	AF1-030 C O1	2.7998
943592	AF1-030 E O1	1.3728
943801	AF1-048 C	1.2654
943802	AF1-048 E	0.8436
944041	AF1-072	0.7137
944911	AF1-156 C	3.9608
944912	AF1-156 E	2.6406
945351	AF1-200 FTIR	101.9445
946521	AF1-316 C O1	2.2657
946522	AF1-316 E O1	3.3985
946661	AF1-330 C	0.6635
946662	AF1-330 E	0.1457
955741	J1058	50.1750
WEC	WEC	2.7619
CBM-W2	CBM-W2	14.1523
NY	NY	0.8411
CBM-W1	CBM-W1	40.4824
TVA	TVA	0.9016
O-066	O-066	9.9456
CHEOAH	CHEOAH	0.0420
CBM-S1	CBM-S1	3.3654
G-007	G-007	1.5371
MADISON	MADISON	14.1684
MEC	MEC	9.4450
GIBSON	GIBSON	0.0568
CALDERWOOD	CALDERWOOD	0.0338
BLUEG	BLUEG	1.2603
TRIMBLE	TRIMBLE	0.4302

CATAWBA	CATAWBA	0.2013
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Index 24

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44342109	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	117.72	118.83	DC	322.69

Bus #	Bus	MW Impact
274771	LINCOLN ;2U	3.0480
274772	LINCOLN ;3U	3.0480
274773	LINCOLN ;4U	3.0480
274774	LINCOLN ;5U	3.0480
274775	LINCOLN ;6U	3.0480
274776	LINCOLN ;7U	3.0480
274777	LINCOLN ;8U	3.0480
274830	U3-021 1	6.3043
274831	U3-021 2	6.3043
274881	PILOT HIL;1E	19.9420
274890	CAYUG;1U E	17.0075
274891	CAYUG;2U E	17.0075
275149	KELLYCK ;1E	19.9420
276161	W4-086	0.2521
276167	Z1-106 E2	1.3064
276168	Z1-106 E1	1.3064
276169	Z1-107 E	2.6741
276170	Z1-108 E	2.5706
290021	O50 E	20.0287
290051	GSG-6; E	10.8928
290108	LEEDK;1U E	25.1957
293061	N-015 E	16.4444
293644	O22 E1	10.5927
293645	O22 E2	20.5622
294392	P-010 E	20.8844
910542	X3-005 E	0.7563
914321	Y2-103 (Withdrawn : 12/24/2019)	46.3651
915011	Y3-013 1	3.8638
915021	Y3-013 2	3.8638
915031	Y3-013 3	3.8638
918052	AA1-018 E OP	16.9848
920272	AA2-123 E	2.5264
924041	AB2-047 C O1	0.5855
924042	AB2-047 E O1	3.9182
924471	AB2-096	43.7801
926311	AC1-109 1	1.9768
926321	AC1-109 2	1.9768
926331	AC1-110 1	1.9636
926341	AC1-110 2	1.9636

926351	AC1-111 1	0.7895
926361	AC1-111 2	0.7895
926371	AC1-111 3	0.7895
926381	AC1-111 4	0.7895
926391	AC1-111 5	0.7895
926401	AC1-111 6	0.7895
927091	AC1-204 1	75.0465
927101	AC1-204 2	75.0465
927451	AC1-142A 1	4.3262
927461	AC1-142A 2	4.3259
930501	AB1-091 O1	79.3488
930741	AB1-122 1O1	75.3115
930751	AB1-122 2O1	76.2401
933411	AC2-154 C	2.7064
933412	AC2-154 E	4.4157
933431	AC2-156 C O1	0.9894
933432	AC2-156 E O1	1.6143
933911	AD1-013 C	1.9234
933912	AD1-013 E	3.0725
933931	AD1-016 C	0.9600
933932	AD1-016 E	1.5663
934101	AD1-039 1	7.3805
934111	AD1-039 2	7.4715
934431	AD1-067 C	0.1368
934432	AD1-067 E	0.5751
934701	AD1-098 C O1	7.1671
934702	AD1-098 E O1	5.2327
934721	AD1-100 C	24.8549
934722	AD1-100 E	115.9893
934871	AD1-116 C	0.9892
934872	AD1-116 E	1.6139
934971	AD1-129 C	0.9346
934972	AD1-129 E	0.6230
935001	AD1-133 C O1	23.0265
935002	AD1-133 E O1	15.3510
936291	AD2-038 C O1	2.4304
936292	AD2-038 E O1	16.2649
936371	AD2-047 C O1	4.8431
936372	AD2-047 E O1	23.6455
936461	AD2-060	1.5099
936511	AD2-066 C O1	8.7651
936512	AD2-066 E O1	5.8434
937001	AD2-134 C	2.8475
937002	AD2-134 E	11.7632
937321	AD2-175 C (Withdrawn : 12/10/2019)	17.7568
937322	AD2-175 E (Withdrawn : 12/10/2019)	11.8378
937401	AD2-194 1	8.0702
937411	AD2-194 2	8.0702
938511	AE1-070 1	9.4825
938521	AE1-070 2	8.6755
938851	AE1-113 C	8.2618
938852	AE1-113 E	29.2920
939321	AE1-163 C O1	6.1071

939322	AE1-163 E O1	37.5153
939351	AE1-166 C O1	6.4997
939352	AE1-166 E O1	5.9997
939401	AE1-172 C O1	6.7954
939402	AE1-172 E O1	31.8837
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5696
939741	AE1-205 C O1	10.4001
939742	AE1-205 E O1	14.3621
940101	AE1-252 C O1	13.6514
940102	AE1-252 E O1	9.1010
940621	AE2-049 C O1	5.1697
940622	AE2-049 E O1	3.4464
940631	AE2-050 C O1	6.8967
940632	AE2-050 E O1	4.5978
940752	AE2-062 E	0.0716
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0716
941131	AE2-107 C	4.0158
941132	AE2-107 E	2.6772
941551	AE2-152 C O1	7.4996
941552	AE2-152 E O1	4.9997
941561	AE2-153 C O1	5.1253
941562	AE2-153 E O1	23.9957
941731	AE2-173 O1	6.1905
942111	AE2-223 C	2.4143
942112	AE2-223 E	16.1573
942421	AE2-255 C O1	3.1295
942422	AE2-255 E O1	9.3885
942651	AE2-281 C O1	0.8724
942652	AE2-281 E O1	5.3593
942881	AE2-307 C O1	12.6440
942882	AE2-307 E O1	4.5978
942911	AE2-310 C O1	5.0198
942912	AE2-310 E O1	1.3486
942991	AE2-321 C	8.4519
942992	AE2-321 E	4.1629
943121	AE2-341 C	13.2096
943122	AE2-341 E	6.4866
943381	AF1-009 C	0.3286
943382	AF1-009 E	1.3144
943422	AF1-013 E	1.6430
943591	AF1-030 C O1	4.6697
943592	AF1-030 E O1	2.2896
943801	AF1-048 C	2.0940
943802	AF1-048 E	1.3960
944041	AF1-072	1.1799
944911	AF1-156 C	6.9454
944912	AF1-156 E	4.6302
945351	AF1-200 FTIR	171.0257
946521	AF1-316 C O1	3.8348
946522	AF1-316 E O1	5.7523
946661	AF1-330 C	1.0980
946662	AF1-330 E	0.2410
946671	AF1-331	1.3239

WEC	WEC	4.5593
CBM-W2	CBM-W2	25.8886
NY	NY	1.4400
CBM-W1	CBM-W1	77.6746
TVA	TVA	1.6184
O-066	O-066	17.0957
CHEOAH	CHEOAH	0.0776
CBM-S1	CBM-S1	6.0492
G-007	G-007	2.6426
MADISON	MADISON	24.2726
MEC	MEC	16.0219
CALDERWOOD	CALDERWOOD	0.0636
BLUEG	BLUEG	2.3054
TRIMBLE	TRIMBLE	0.7964
CATAWBA	CATAWBA	0.3626

Index 25

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44342084	270927	WILTON ; R	CE	275233	WILTON ;4M	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	120.19	121.32	DC	329.51

Bus #	Bus	MW Impact
274771	LINCOLN ;2U	3.1304
274772	LINCOLN ;3U	3.1304
274773	LINCOLN ;4U	3.1304
274774	LINCOLN ;5U	3.1304
274775	LINCOLN ;6U	3.1304
274776	LINCOLN ;7U	3.1304
274777	LINCOLN ;8U	3.1304
274830	U3-021 1	6.4384
274831	U3-021 2	6.4384
274881	PILOT HIL;1E	20.3585
274890	CAYUG;1U E	17.3471
274891	CAYUG;2U E	17.3471
275149	KELLYCK ;1E	20.3585
276161	W4-086	0.2575
276167	Z1-106 E2	1.3343
276168	Z1-106 E1	1.3342
276169	Z1-107 E	2.7312
276170	Z1-108 E	2.6255
290021	O50 E	20.4558
290051	GSG-6; E	11.1243
290108	LEEDK;1U E	25.7329
293061	N-015 E	16.7882
293644	O22 E1	10.8167

293645	O22 E2	20.9971
294392	P-010 E	21.3210
910542	X3-005 E	0.7728
914321	Y2-103 (Withdrawn : 12/24/2019)	47.3566
915011	Y3-013 1	3.9464
915021	Y3-013 2	3.9464
915031	Y3-013 3	3.9464
918052	AA1-018 E OP	17.3564
920272	AA2-123 E	2.5803
924041	AB2-047 C O1	0.5973
924042	AB2-047 E O1	3.9976
924471	AB2-096	44.7113
926311	AC1-109 1	2.0188
926321	AC1-109 2	2.0188
926331	AC1-110 1	2.0054
926341	AC1-110 2	2.0054
926351	AC1-111 1	0.8064
926361	AC1-111 2	0.8064
926371	AC1-111 3	0.8064
926381	AC1-111 4	0.8064
926391	AC1-111 5	0.8064
926401	AC1-111 6	0.8064
927091	AC1-204 1	76.6590
927101	AC1-204 2	76.6542
927451	AC1-142A 1	4.4192
927461	AC1-142A 2	4.4192
930501	AB1-091 O1	80.9991
930741	AB1-122 1O1	76.9097
930751	AB1-122 2O1	77.8676
933411	AC2-154 C	2.7629
933412	AC2-154 E	4.5080
933431	AC2-156 C O1	1.0105
933432	AC2-156 E O1	1.6487
933911	AD1-013 C	1.9643
933912	AD1-013 E	3.1378
933931	AD1-016 C	0.9805
933932	AD1-016 E	1.5998
934101	AD1-039 1	7.5372
934111	AD1-039 2	7.6310
934431	AD1-067 C	0.1397
934432	AD1-067 E	0.5873
934701	AD1-098 C O1	7.3194
934702	AD1-098 E O1	5.3439
934721	AD1-100 C	25.3483
934722	AD1-100 E	118.2919
934871	AD1-116 C	1.0108
934872	AD1-116 E	1.6492
934971	AD1-129 C	0.9545
934972	AD1-129 E	0.6363
935001	AD1-133 C O1	23.5039
935002	AD1-133 E O1	15.6692
936291	AD2-038 C O1	2.4828
936292	AD2-038 E O1	16.6155

936371	AD2-047 C O1	4.9442
936372	AD2-047 E O1	24.1394
936461	AD2-060	1.5414
936511	AD2-066 C O1	8.9509
936512	AD2-066 E O1	5.9673
937001	AD2-134 C	2.9081
937002	AD2-134 E	12.0133
937321	AD2-175 C (Withdrawn : 12/10/2019)	18.1248
937322	AD2-175 E (Withdrawn : 12/10/2019)	12.0832
937401	AD2-194 1	8.2436
937411	AD2-194 2	8.2431
938511	AE1-070 1	9.6863
938521	AE1-070 2	8.8614
938851	AE1-113 C	8.4380
938852	AE1-113 E	29.9165
939321	AE1-163 C O1	6.2388
939322	AE1-163 E O1	38.3238
939351	AE1-166 C O1	6.6307
939352	AE1-166 E O1	6.1207
939401	AE1-172 C O1	6.9298
939402	AE1-172 E O1	32.5144
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5818
939741	AE1-205 C O1	10.6108
939742	AE1-205 E O1	14.6529
940101	AE1-252 C O1	13.9215
940102	AE1-252 E O1	9.2810
940621	AE2-049 C O1	5.2778
940622	AE2-049 E O1	3.5186
940631	AE2-050 C O1	7.0386
940632	AE2-050 E O1	4.6924
940752	AE2-062 E	0.0731
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0731
941131	AE2-107 C	4.1013
941132	AE2-107 E	2.7342
941551	AE2-152 C O1	7.6508
941552	AE2-152 E O1	5.1006
941561	AE2-153 C O1	5.2309
941562	AE2-153 E O1	24.4902
941731	AE2-173 O1	6.3159
942111	AE2-223 C	2.4632
942112	AE2-223 E	16.4846
942421	AE2-255 C O1	3.1962
942422	AE2-255 E O1	9.5886
942651	AE2-281 C O1	0.8913
942652	AE2-281 E O1	5.4748
942881	AE2-307 C O1	12.9041
942882	AE2-307 E O1	4.6924
942911	AE2-310 C O1	5.1249
942912	AE2-310 E O1	1.3768
942991	AE2-321 C	8.6325
942992	AE2-321 E	4.2518
943121	AE2-341 C	13.4901
943122	AE2-341 E	6.6243

943381	AF1-009 C	0.3356
943382	AF1-009 E	1.3423
943422	AF1-013 E	1.6779
943591	AF1-030 C O1	4.7689
943592	AF1-030 E O1	2.3382
943801	AF1-048 C	2.1387
943802	AF1-048 E	1.4258
944041	AF1-072	1.2051
944911	AF1-156 C	7.0885
944912	AF1-156 E	4.7257
945351	AF1-200 FTIR	174.6388
946521	AF1-316 C O1	3.9150
946522	AF1-316 E O1	5.8725
946661	AF1-330 C	1.1214
946662	AF1-330 E	0.2462
946671	AF1-331	1.3520
WEC	WEC	4.6566
CBM-W2	CBM-W2	26.4209
NY	NY	1.4710
CBM-W1	CBM-W1	79.3384
TVA	TVA	1.6506
O-066	O-066	17.4586
CHEOAH	CHEOAH	0.0796
CBM-S1	CBM-S1	6.1685
G-007	G-007	2.6988
MADISON	MADISON	24.7867
MEC	MEC	16.3603
CALDERWOOD	CALDERWOOD	0.0651
BLUEG	BLUEG	2.3558
TRIMBLE	TRIMBLE	0.8136
CATAWBA	CATAWBA	0.3707

Index 26

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44341908	274750	CRETE EC ;BP	CE	270728	E FRANKFO; B	CE	1	COMED_P4_112-65-BT4-5__	breaker	1399.0	112.38	193.36	DC	283.63

Bus #	Bus	MW Impact
274751	CRETE EC ;1U	5.2411
274752	CRETE EC ;2U	5.2411
274753	CRETE EC ;3U	5.2411
274754	CRETE EC ;4U	5.2411
276153	W2-048 E	-0.8221
276165	Z1-106 BAT2	1.3253
276166	Z1-106 BAT1	1.3253
276171	Z1-107 BAT	2.5482

276172	Z1-108 BAT	2.6176
909052	X2-022 E	-11.8891
918052	AA1-018 E OP	-13.6094
920273	AA2-123 BAT	2.5674
936973	AD2-131 BAT	3.1260
939631	AE1-193 C	32.4551
939632	AE1-193 E	217.1998
939641	AE1-194 C	32.4551
939642	AE1-194 E	217.1998
939651	AE1-195 C	32.4551
939652	AE1-195 E	217.1998
939681	AE1-198 C	96.3668
939682	AE1-198 E	81.8868
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.5832
941732	AE2-173 BAT	5.1745
942883	AE2-307 BAT	11.9535
942913	AE2-310 BAT	4.9232
943383	AF1-009 BAT	3.1290
943403	AF1-011 BAT	3.4746
943423	AF1-013 BAT	3.1290
943803	AF1-048 BAT	6.6910
943922	AF1-060 BAT	1.4723
945352	AF1-200 NFTW	283.6260
945882	AF1-253 BAT	5.9220
946163	AF1-281 BAT	2.3780
946533	AF1-317 BAT	5.9745
946683	AF1-332 BAT	5.9745
950311	G934 C	2.3187
950312	G934 E	9.2748
950351	J466	2.2365
950791	J201 C	0.3012
950792	J201 E	1.2046
950871	J246 C	0.1076
950872	J246 E	0.4305
950942	J325 E	0.2972
951531	J533 C	3.0752
951532	J533 E	12.3008
951571	J538 C	2.2497
951572	J538 E	8.9988
951721	J643	25.1597
951731	J446 C	1.8598
951732	J446 E	10.0622
951811	J513 C	1.1149
951812	J513 E	6.0317
951941	J602 C	2.3590
951942	J602 E	12.7630
952161	J571	0.5053
952201	J589 C	2.3890
952202	J589 E	12.9250
952312	J646 E	0.1179
952401	J752 C	1.1653
952402	J752 E	6.3047
952581	J740 C	2.3094

952582	J740 E	12.4946
952611	J717 C	2.3714
952612	J717 E	12.8301
952761	J728 C	2.2054
952762	J728 E	11.9478
952881	J758	15.5400
952971	J793	97.4050
953071	J794 C	0.1488
953072	J794 E	0.8049
953161	J837 C	2.3106
953162	J837 E	12.5008
953171	J838 C	1.1547
953172	J838 E	6.2473
953271	J701 C	0.5714
953272	J701 E	3.0914
953291	J796	18.0995
953321	J799	13.6874
953351	J805	10.1928
953361	J806	11.4313
953421	J841	53.1484
953771	J832	7.6820
953781	J833	7.2340
953811	J839	7.3910
953871	J847	13.4982
953941	J857	9.6461
954111	J875	11.0520
954171	J883 C	0.9932
954172	J883 E	5.3732
954351	J903	5.2860
954381	J906 C	1.2271
954382	J906 E	6.6389
954421	J913 C	11.8432
954591	J937	42.6021
954751	J351	59.1495
954941	J968 C	2.3094
954942	J968 E	12.4946
955021	J978 C	1.2120
955022	J978 E	6.5570
955071	J984 C	2.4114
955072	J984 E	13.0466
955121	J989	5.9928
955141	J992	14.9340
955151	J993	10.1480
955181	J996	5.8032
955261	J1005	15.1460
955341	J1013	6.2480
955351	J1014 C	3.7555
955352	J1014 E	2.2533
955491	J1031 C	1.3123
955492	J1031 E	7.0997
955591	J1043 C	1.5606
955592	J1043 E	27.6538
955621	J1046	3.5530

955721	J1056 C	2.2423
955722	J1056 E	12.1317
955741	J1058	75.7410
955781	J1062	14.2120
955791	J1063	17.1810
955801	J1064 C	2.4448
955802	J1064 E	13.2272
955811	J1065 C	2.4058
955812	J1065 E	13.0162
955821	J1067	21.4920
955831	J1068 C	2.2661
955832	J1068 E	12.2599
955841	J1069 C	2.3094
955842	J1069 E	12.4946
955861	J1071	7.8470
955961	J1083	5.3179
956011	J1088	11.3595
956021	J1089	12.8622
956031	J1090	6.7824
956161	J1103	1.4950
956251	J1112	13.2045
956291	J1117	6.0640
956301	J1119	45.1320
956561	J1152	10.3680
956741	J1172	3.7585
956751	J1173	5.8720
956801	J1178	4.9381
DUCKCREEK	DUCKCREEK	11.6681
LGEE	LGEE	0.6281
NEWTON	NEWTON	2.2941
CPL	CPL	0.6688
FARMERCITY	FARMERCITY	0.4057
G-007A	G-007A	4.6703
VFT	VFT	12.5775
PRAIRIE	PRAIRIE	9.6010
COFFEEN	COFFEEN	2.2921
CBM-S2	CBM-S2	4.2483
EDWARDS	EDWARDS	3.8553
TILTON	TILTON	1.1157
AC1-056	AC1-056	5.1830

Index 27

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
44341940	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	AEP_P4_#2978_05DUMONT_FS A	breaker	1399.0	153.55	154.35	DC	269.5

Bus #	Bus	MW Impact
274654	BRAIDWOOD;1U	23.9615
274655	BRAIDWOOD;2U	23.3097
274660	LASCO STA;1U	22.0266
274661	LASCO STA;2U	22.1098
274687	WILL CNTY;4U	10.1107
274704	KENDALL ;1C	3.5538
274705	KENDALL ;1S	2.3763
274706	KENDALL ;2C	3.5538
274707	KENDALL ;2S	2.3763
274751	CRETE EC ;1U	5.2285
274752	CRETE EC ;2U	5.2285
274753	CRETE EC ;3U	5.2285
274754	CRETE EC ;4U	5.2285
274830	U3-021 1	5.3426
274831	U3-021 2	5.3426
274861	TOP CROP ;1U	0.4249
274862	TOP CROP ;2U	0.8248
276161	W4-086	0.2058
276167	Z1-106 E2	1.1059
276168	Z1-106 E1	1.1059
276169	Z1-107 E	2.1252
276170	Z1-108 E	2.1847
290021	O50 E	17.2584
290051	GSG-6; E	6.7300
290108	LEEDK;1U E	21.2313
293061	N-015 E	13.7210
293644	O22 E1	12.1764
293645	O22 E2	23.6364
294392	P-010 E	17.4257
914321	Y2-103 (Withdrawn : 12/24/2019)	39.6056
915011	Y3-013 1	3.3005
915021	Y3-013 2	3.3005
915031	Y3-013 3	3.3005
920272	AA2-123 E	2.1427
924471	AB2-096	37.1012
926311	AC1-109 1	1.6676
926321	AC1-109 2	1.6676
926331	AC1-110 1	1.6635
926341	AC1-110 2	1.6635
926351	AC1-111 1	0.6658
926361	AC1-111 2	0.6658
926371	AC1-111 3	0.6658
926381	AC1-111 4	0.6658
926391	AC1-111 5	0.6658
926401	AC1-111 6	0.6658
927091	AC1-204 1	65.2484
927101	AC1-204 2	65.1345
927451	AC1-142A 1	3.7789
927461	AC1-142A 2	3.7813
930741	AB1-122 1O1	62.1446
930751	AB1-122 2O1	66.4260
933431	AC2-156 C O1	0.8314

933432	AC2-156 E O1	1.3565
933911	AD1-013 C	1.6205
933912	AD1-013 E	2.5887
933931	AD1-016 C	0.8142
933932	AD1-016 E	1.3285
934101	AD1-039 1	6.0902
934111	AD1-039 2	6.5097
934431	AD1-067 C	0.1152
934432	AD1-067 E	0.4844
934721	AD1-100 C	16.6043
934722	AD1-100 E	77.4868
934971	AD1-129 C	0.7915
934972	AD1-129 E	0.5277
937001	AD2-134 C	2.3985
937002	AD2-134 E	9.9081
937401	AD2-194 1	7.0166
937411	AD2-194 2	7.0043
938511	AE1-070 1	8.2445
938521	AE1-070 2	7.5297
938851	AE1-113 C	7.1191
938852	AE1-113 E	25.2404
939351	AE1-166 C O1	4.7090
939352	AE1-166 E O1	4.3467
939631	AE1-193 C	32.3771
939632	AE1-193 E	216.6778
939641	AE1-194 C	32.3771
939642	AE1-194 E	216.6778
939651	AE1-195 C	32.3771
939652	AE1-195 E	216.6778
939681	AE1-198 C	96.1352
939682	AE1-198 E	81.6900
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.4869
940631	AE2-050 C O1	14.1318
940632	AE2-050 E O1	9.4212
940752	AE2-062 E	0.1405
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.1405
941131	AE2-107 C	3.3842
941132	AE2-107 E	2.2561
941551	AE2-152 C O1	5.4334
941552	AE2-152 E O1	3.6223
941561	AE2-153 C O1	4.0766
941562	AE2-153 E O1	19.0859
942421	AE2-255 C O1	2.6966
942422	AE2-255 E O1	8.0899
942881	AE2-307 C O1	25.9083
942882	AE2-307 E O1	9.4212
942991	AE2-321 C	7.1672
942992	AE2-321 E	3.5301
943121	AE2-341 C	11.0889
943122	AE2-341 E	5.4453
943591	AF1-030 C O1	3.9200
943592	AF1-030 E O1	1.9220
943801	AF1-048 C	1.7757

943802	AF1-048 E	1.1838
944041	AF1-072	1.0018
944911	AF1-156 C	5.5243
944912	AF1-156 E	3.6828
945351	AF1-200 FTIR	142.8324
946521	AF1-316 C O1	3.1997
946522	AF1-316 E O1	4.7996
946661	AF1-330 C	0.9312
946662	AF1-330 E	0.2044
946671	AF1-331	1.1154
WEC	WEC	3.8773
CBM-W2	CBM-W2	18.8534
NY	NY	1.1972
CBM-W1	CBM-W1	52.7046
TVA	TVA	1.1214
O-066	O-066	14.1658
CHEOAH	CHEOAH	0.1041
CBM-S1	CBM-S1	3.7658
G-007	G-007	2.1892
MADISON	MADISON	19.9987
MEC	MEC	13.1776
GIBSON	GIBSON	0.1818
CALDERWOOD	CALDERWOOD	0.0929
BLUEG	BLUEG	2.0433
TRIMBLE	TRIMBLE	0.6917
CATAWBA	CATAWBA	0.3080

Index 28

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
44342022	275232	WILTON ;3M	CE	270926	WILTON ; B	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	112.27	141.8	DC	333.0

Bus #	Bus	MW Impact
238965	02MNFDG1 (Deactivation : 02/05/19)	16.5264
238966	02MNFDG2 (Deactivation : 02/05/19)	16.5264
238967	02MNFDG3 (Deactivation : 06/01/21)	16.5264
276153	W2-048 E	-1.1314
276165	Z1-106 BAT2	1.5370
276166	Z1-106 BAT1	1.5369
276171	Z1-107 BAT	3.1460
276172	Z1-108 BAT	3.0242
909052	X2-022 E	-16.3619
918052	AA1-018 E OP	-16.9848
920273	AA2-123 BAT	2.9722
932801	AC2-104 C (Withdrawn : 11/07/2019)	2.7671
932802	AC2-104 E (Withdrawn : 11/07/2019)	18.5190
933281	AC2-140 C	2.3292

933282	AC2-140 E	0.1226
934771	AD1-104 C	2.2304
934772	AD1-104 E	14.9262
936973	AD2-131 BAT	4.2440
939683	AE1-198 BAT	10.3507
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6701
941732	AE2-173 BAT	7.2830
942883	AE2-307 BAT	12.7575
942913	AE2-310 BAT	6.6524
943383	AF1-009 BAT	3.6470
943403	AF1-011 BAT	4.0770
943423	AF1-013 BAT	3.6470
943803	AF1-048 BAT	7.7470
943922	AF1-060 BAT	1.7118
945352	AF1-200 NFW	332.9970
945882	AF1-253 BAT	8.0847
946163	AF1-281 BAT	2.7728
946533	AF1-317 BAT	6.9635
946683	AF1-332 BAT	6.9635
950311	G934 C	2.6895
950312	G934 E	10.7580
950351	J466	2.6559
950791	J201 C	0.3553
950792	J201 E	1.4211
950871	J246 C	0.1253
950872	J246 E	0.5011
950942	J325 E	0.3538
950981	J333	8.7516
951531	J533 C	3.5792
951532	J533 E	14.3168
951571	J538 C	2.6406
951572	J538 E	10.5624
951731	J446 C	2.2411
951732	J446 E	12.1249
951811	J513 C	0.9930
951812	J513 E	5.3726
951941	J602 C	2.7749
951942	J602 E	15.0131
952161	J571	0.5710
952201	J589 C	2.7868
952202	J589 E	15.0772
952312	J646 E	0.1411
952401	J752 C	1.3820
952402	J752 E	7.4770
952581	J740 C	2.1940
952582	J740 E	11.8700
952611	J717 C	2.7810
952612	J717 E	15.0459
952761	J728 C	2.5863
952762	J728 E	14.0112
952811	J759	3.9858
952821	J762	11.2360
952861	J783 C	3.7834

952862	J783 E	0.1576
952881	J758	17.8040
952971	J793	116.5872
953071	J794 C	0.1740
953072	J794 E	0.9413
953161	J837 C	2.1951
953162	J837 E	11.8760
953171	J838 C	1.0970
953172	J838 E	5.9350
953271	J701 C	0.6773
953272	J701 E	3.6646
953291	J796	21.2710
953321	J799	16.5734
953351	J805	13.0265
953361	J806	13.2312
953421	J841	62.4710
953771	J832	8.9410
953781	J833	8.7670
953811	J839	8.8280
953831	J842 C	1.6832
953832	J842 E	9.1068
953841	J843 C	1.7135
953842	J843 E	9.2705
953931	J856	4.3872
953941	J857	11.1081
954111	J875	13.1985
954171	J883 C	0.7570
954172	J883 E	4.0958
954351	J903	6.7700
954381	J906 C	1.4059
954382	J906 E	7.6061
954421	J913 C	11.2512
954591	J937	48.0591
954751	J351	45.6065
954941	J968 C	2.1940
954942	J968 E	11.8700
955021	J978 C	1.4004
955022	J978 E	7.5766
955071	J984 C	2.7971
955072	J984 E	15.1329
955121	J989	7.0912
955141	J992	16.2780
955151	J993	12.7160
955181	J996	7.0104
955261	J1005	17.8000
955341	J1013	7.0576
955351	J1014 C	4.4220
955352	J1014 E	2.6532
955371	J1016	2.7605
955451	J1027	8.1450
955461	J1028	8.2740
955491	J1031 C	1.6864
955492	J1031 E	9.1241

955591	J1043 C	1.8002
955592	J1043 E	31.8995
955621	J1046	4.3630
955721	J1056 C	2.7306
955722	J1056 E	14.7734
955781	J1062	17.4520
955791	J1063	20.5560
955801	J1064 C	2.8114
955802	J1064 E	15.2106
955811	J1065 C	2.7936
955812	J1065 E	15.1144
955821	J1067	14.7000
955831	J1068 C	2.7378
955832	J1068 E	14.8122
955841	J1069 C	2.1940
955842	J1069 E	11.8700
955861	J1071	9.0040
955891	J1074	11.0420
955961	J1083	6.2104
956011	J1088	13.3410
956021	J1089	15.1181
956031	J1090	7.9686
956161	J1103	1.7722
956251	J1112	10.8645
956291	J1117	7.0968
956301	J1119	53.1060
956561	J1152	13.2420
956741	J1172	4.4385
956751	J1173	7.0328
956801	J1178	5.7668
956911	J1189	0.2678
DUCKCREEK	DUCKCREEK	13.9297
LGEE	LGEE	0.7108
NEWTON	NEWTON	3.4760
CPL	CPL	0.8957
FARMERCITY	FARMERCITY	0.4876
G-007A	G-007A	6.0920
VFT	VFT	16.3959
PRAIRIE	PRAIRIE	12.6154
COFFEEN	COFFEEN	3.1483
CBM-S2	CBM-S2	5.7453
EDWARDS	EDWARDS	4.5692
TILTON	TILTON	2.0853
GIBSON	GIBSON	0.0426
AC1-056	AC1-056	6.8160

Index 29

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
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44342108	275232	WILTON ;3M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	117.72	118.83	DC	322.69
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Bus #	Bus	MW Impact
274771	LINCOLN ;2U	3.0480
274772	LINCOLN ;3U	3.0480
274773	LINCOLN ;4U	3.0480
274774	LINCOLN ;5U	3.0480
274775	LINCOLN ;6U	3.0480
274776	LINCOLN ;7U	3.0480
274777	LINCOLN ;8U	3.0480
274830	U3-021 1	6.3043
274831	U3-021 2	6.3043
274881	PILOT HIL;1E	19.9420
274890	CAYUG;1U E	17.0075
274891	CAYUG;2U E	17.0075
275149	KELLYCK ;1E	19.9420
276161	W4-086	0.2521
276167	Z1-106 E2	1.3064
276168	Z1-106 E1	1.3064
276169	Z1-107 E	2.6741
276170	Z1-108 E	2.5706
290021	O50 E	20.0287
290051	GSG-6; E	10.8928
290108	LEEDK;1U E	25.1957
293061	N-015 E	16.4444
293644	O22 E1	10.5927
293645	O22 E2	20.5622
294392	P-010 E	20.8844
910542	X3-005 E	0.7563
914321	Y2-103 (Withdrawn : 12/24/2019)	46.3651
915011	Y3-013 1	3.8638
915021	Y3-013 2	3.8638
915031	Y3-013 3	3.8638
918052	AA1-018 E OP	16.9848
920272	AA2-123 E	2.5264
924041	AB2-047 C O1	0.5855
924042	AB2-047 E O1	3.9182
924471	AB2-096	43.7801
926311	AC1-109 1	1.9768
926321	AC1-109 2	1.9768
926331	AC1-110 1	1.9636
926341	AC1-110 2	1.9636
926351	AC1-111 1	0.7895
926361	AC1-111 2	0.7895
926371	AC1-111 3	0.7895
926381	AC1-111 4	0.7895
926391	AC1-111 5	0.7895
926401	AC1-111 6	0.7895
927091	AC1-204 1	75.0465
927101	AC1-204 2	75.0465
927451	AC1-142A 1	4.3262
927461	AC1-142A 2	4.3259

930501	AB1-091 O1	79.3488
930741	AB1-122 1O1	75.3115
930751	AB1-122 2O1	76.2401
933411	AC2-154 C	2.7064
933412	AC2-154 E	4.4157
933431	AC2-156 C O1	0.9894
933432	AC2-156 E O1	1.6143
933911	AD1-013 C	1.9234
933912	AD1-013 E	3.0725
933931	AD1-016 C	0.9600
933932	AD1-016 E	1.5663
934101	AD1-039 1	7.3805
934111	AD1-039 2	7.4715
934431	AD1-067 C	0.1368
934432	AD1-067 E	0.5751
934701	AD1-098 C O1	7.1671
934702	AD1-098 E O1	5.2327
934721	AD1-100 C	24.8549
934722	AD1-100 E	115.9893
934871	AD1-116 C	0.9892
934872	AD1-116 E	1.6139
934971	AD1-129 C	0.9346
934972	AD1-129 E	0.6230
935001	AD1-133 C O1	23.0265
935002	AD1-133 E O1	15.3510
936291	AD2-038 C O1	2.4304
936292	AD2-038 E O1	16.2649
936371	AD2-047 C O1	4.8431
936372	AD2-047 E O1	23.6455
936461	AD2-060	1.5099
936511	AD2-066 C O1	8.7651
936512	AD2-066 E O1	5.8434
937001	AD2-134 C	2.8475
937002	AD2-134 E	11.7632
937321	AD2-175 C (Withdrawn : 12/10/2019)	17.7568
937322	AD2-175 E (Withdrawn : 12/10/2019)	11.8378
937401	AD2-194 1	8.0702
937411	AD2-194 2	8.0702
938511	AE1-070 1	9.4825
938521	AE1-070 2	8.6755
938851	AE1-113 C	8.2618
938852	AE1-113 E	29.2920
939321	AE1-163 C O1	6.1071
939322	AE1-163 E O1	37.5153
939351	AE1-166 C O1	6.4997
939352	AE1-166 E O1	5.9997
939401	AE1-172 C O1	6.7954
939402	AE1-172 E O1	31.8837
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5696
939741	AE1-205 C O1	10.4001
939742	AE1-205 E O1	14.3621
940101	AE1-252 C O1	13.6514
940102	AE1-252 E O1	9.1010

940621	AE2-049 C O1	5.1697
940622	AE2-049 E O1	3.4464
940631	AE2-050 C O1	6.8967
940632	AE2-050 E O1	4.5978
940752	AE2-062 E	0.0716
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0716
941131	AE2-107 C	4.0158
941132	AE2-107 E	2.6772
941551	AE2-152 C O1	7.4996
941552	AE2-152 E O1	4.9997
941561	AE2-153 C O1	5.1253
941562	AE2-153 E O1	23.9957
941731	AE2-173 O1	6.1905
942111	AE2-223 C	2.4143
942112	AE2-223 E	16.1573
942421	AE2-255 C O1	3.1295
942422	AE2-255 E O1	9.3885
942651	AE2-281 C O1	0.8724
942652	AE2-281 E O1	5.3593
942881	AE2-307 C O1	12.6440
942882	AE2-307 E O1	4.5978
942911	AE2-310 C O1	5.0198
942912	AE2-310 E O1	1.3486
942991	AE2-321 C	8.4519
942992	AE2-321 E	4.1629
943121	AE2-341 C	13.2096
943122	AE2-341 E	6.4866
943381	AF1-009 C	0.3286
943382	AF1-009 E	1.3144
943422	AF1-013 E	1.6430
943591	AF1-030 C O1	4.6697
943592	AF1-030 E O1	2.2896
943801	AF1-048 C	2.0940
943802	AF1-048 E	1.3960
944041	AF1-072	1.1799
944911	AF1-156 C	6.9454
944912	AF1-156 E	4.6302
945351	AF1-200 FTIR	171.0257
946521	AF1-316 C O1	3.8348
946522	AF1-316 E O1	5.7523
946661	AF1-330 C	1.0980
946662	AF1-330 E	0.2410
946671	AF1-331	1.3239
WEC	WEC	4.5593
CBM-W2	CBM-W2	25.8886
NY	NY	1.4400
CBM-W1	CBM-W1	77.6746
TVA	TVA	1.6184
O-066	O-066	17.0957
CHEOAH	CHEOAH	0.0776
CBM-S1	CBM-S1	6.0492
G-007	G-007	2.6426
MADISON	MADISON	24.2726

MEC	MEC	16.0219
CALDERWOOD	CALDERWOOD	0.0636
BLUEG	BLUEG	2.3054
TRIMBLE	TRIMBLE	0.7964
CATAWBA	CATAWBA	0.3626

Index 30

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
44342003	275233	WILTON ;4M	CE	270927	WILTON ; R	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	115.78	145.94	DC	340.03

Bus #	Bus	MW Impact
238965	02MNFDG1 (Deativation : 02/05/19)	16.8813
238966	02MNFDG2 (Deativation : 02/05/19)	16.8813
238967	02MNFDG3 (Deativation : 06/01/21)	16.8813
276153	W2-048 E	-1.1545
276165	Z1-106 BAT2	1.5698
276166	Z1-106 BAT1	1.5697
276171	Z1-107 BAT	3.2132
276172	Z1-108 BAT	3.0888
909052	X2-022 E	-16.6959
918052	AA1-018 E OP	-17.3564
920273	AA2-123 BAT	3.0356
932801	AC2-104 C (Withdrawn : 11/07/2019)	2.8257
932802	AC2-104 E (Withdrawn : 11/07/2019)	18.9112
933281	AC2-140 C	2.3786
933282	AC2-140 E	0.1252
934771	AD1-104 C	2.2776
934772	AD1-104 E	15.2423
936973	AD2-131 BAT	4.3315
939683	AE1-198 BAT	10.5696
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6844
941732	AE2-173 BAT	7.4305
942883	AE2-307 BAT	13.0200
942913	AE2-310 BAT	6.7916
943383	AF1-009 BAT	3.7245
943403	AF1-011 BAT	4.1634
943423	AF1-013 BAT	3.7245
943803	AF1-048 BAT	7.9125
943922	AF1-060 BAT	1.7483
945352	AF1-200 NTFW	340.0320
945882	AF1-253 BAT	8.2505
946163	AF1-281 BAT	2.8318
946533	AF1-317 BAT	7.1115
946683	AF1-332 BAT	7.1115
950311	G934 C	2.7465
950312	G934 E	10.9860

950351	J466	2.7120
950791	J201 C	0.3628
950792	J201 E	1.4510
950871	J246 C	0.1279
950872	J246 E	0.5117
950942	J325 E	0.3612
950981	J333	8.9403
951531	J533 C	3.6548
951532	J533 E	14.6192
951571	J538 C	2.6964
951572	J538 E	10.7856
951731	J446 C	2.2885
951732	J446 E	12.3815
951811	J513 C	1.0141
951812	J513 E	5.4863
951941	J602 C	2.8333
951942	J602 E	15.3287
952161	J571	0.5830
952201	J589 C	2.8458
952202	J589 E	15.3962
952312	J646 E	0.1441
952401	J752 C	1.4113
952402	J752 E	7.6357
952581	J740 C	2.2405
952582	J740 E	12.1215
952611	J717 C	2.8397
952612	J717 E	15.3634
952761	J728 C	2.6409
952762	J728 E	14.3069
952801	J754 C	2.4107
952802	J754 E	13.0425
952811	J759	4.0705
952821	J762	11.4760
952861	J783 C	3.8640
952862	J783 E	0.1610
952881	J758	18.1800
952971	J793	119.0593
953071	J794 C	0.1776
953072	J794 E	0.9611
953161	J837 C	2.2416
953162	J837 E	12.1276
953171	J838 C	1.1202
953172	J838 E	6.0608
953271	J701 C	0.6916
953272	J701 E	3.7419
953291	J796	21.7203
953321	J799	16.9250
953351	J805	13.3051
953361	J806	13.5098
953421	J841	63.7907
953771	J832	9.1300
953781	J833	8.9520
953811	J839	9.0150

953831	J842 C	1.7191
953832	J842 E	9.3009
953841	J843 C	1.7503
953842	J843 E	9.4697
953931	J856	4.4808
953941	J857	11.3430
954111	J875	13.4775
954171	J883 C	0.7730
954172	J883 E	4.1822
954351	J903	6.9150
954381	J906 C	1.4355
954382	J906 E	7.7665
954421	J913 C	11.4896
954591	J937	49.0702
954751	J351	46.5582
954941	J968 C	2.2405
954942	J968 E	12.1215
955021	J978 C	1.4301
955022	J978 E	7.7369
955071	J984 C	2.8564
955072	J984 E	15.4536
955121	J989	7.2416
955141	J992	16.6220
955151	J993	12.9880
955181	J996	7.1584
955261	J1005	18.1760
955341	J1013	7.2072
955351	J1014 C	4.5155
955352	J1014 E	2.7093
955371	J1016	2.8195
955451	J1027	8.3205
955461	J1028	8.4510
955491	J1031 C	1.7222
955492	J1031 E	9.3178
955591	J1043 C	1.8382
955592	J1043 E	32.5729
955621	J1046	4.4555
955721	J1056 C	2.7883
955722	J1056 E	15.0857
955781	J1062	17.8220
955791	J1063	20.9910
955801	J1064 C	2.8710
955802	J1064 E	15.5330
955811	J1065 C	2.8526
955812	J1065 E	15.4334
955821	J1067	15.0096
955831	J1068 C	2.7958
955832	J1068 E	15.1262
955841	J1069 C	2.2405
955842	J1069 E	12.1215
955861	J1071	9.1940
955891	J1074	11.2780
955961	J1083	6.3413

956011	J1088	13.6230
956021	J1089	15.4377
956031	J1090	8.1369
956161	J1103	1.8096
956251	J1112	11.0925
956291	J1117	7.2472
956301	J1119	54.2280
956561	J1152	13.5240
956741	J1172	4.5320
956751	J1173	7.1816
956801	J1178	5.8884
956911	J1189	0.2735
DUCKCREEK	DUCKCREEK	14.2245
LGEE	LGEE	0.7262
NEWTON	NEWTON	3.5469
CPLE	CPLE	0.9149
FARMERCITY	FARMERCITY	0.4980
G-007A	G-007A	6.2215
VFT	VFT	16.7507
PRAIRIE	PRAIRIE	12.8763
COFFEEN	COFFEEN	3.2133
CBM-S2	CBM-S2	5.8725
EDWARDS	EDWARDS	4.6659
TILTON	TILTON	2.1275
GIBSON	GIBSON	0.0426
AC1-056	AC1-056	6.9570

Index 31

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
44342085	275233	WILTON ;4M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	120.19	121.32	DC	329.51

Bus #	Bus	MW Impact
274771	LINCOLN ;2U	3.1304
274772	LINCOLN ;3U	3.1304
274773	LINCOLN ;4U	3.1304
274774	LINCOLN ;5U	3.1304
274775	LINCOLN ;6U	3.1304
274776	LINCOLN ;7U	3.1304
274777	LINCOLN ;8U	3.1304
274830	U3-021 1	6.4384
274831	U3-021 2	6.4384
274881	PILOT HIL;1E	20.3585
274890	CAYUG;1U E	17.3471
274891	CAYUG;2U E	17.3471
275149	KELLYCK ;1E	20.3585
276161	W4-086	0.2575

276167	Z1-106 E2	1.3343
276168	Z1-106 E1	1.3342
276169	Z1-107 E	2.7312
276170	Z1-108 E	2.6255
290021	O50 E	20.4558
290051	GSG-6; E	11.1243
290108	LEEDK;1U E	25.7329
293061	N-015 E	16.7882
293644	O22 E1	10.8167
293645	O22 E2	20.9971
294392	P-010 E	21.3210
910542	X3-005 E	0.7728
914321	Y2-103 (Withdrawn : 12/24/2019)	47.3566
915011	Y3-013 1	3.9464
915021	Y3-013 2	3.9464
915031	Y3-013 3	3.9464
918052	AA1-018 E OP	17.3564
920272	AA2-123 E	2.5803
924041	AB2-047 C O1	0.5973
924042	AB2-047 E O1	3.9976
924471	AB2-096	44.7113
926311	AC1-109 1	2.0188
926321	AC1-109 2	2.0188
926331	AC1-110 1	2.0054
926341	AC1-110 2	2.0054
926351	AC1-111 1	0.8064
926361	AC1-111 2	0.8064
926371	AC1-111 3	0.8064
926381	AC1-111 4	0.8064
926391	AC1-111 5	0.8064
926401	AC1-111 6	0.8064
927091	AC1-204 1	76.6590
927101	AC1-204 2	76.6542
927451	AC1-142A 1	4.4192
927461	AC1-142A 2	4.4192
930501	AB1-091 O1	80.9991
930741	AB1-122 1O1	76.9097
930751	AB1-122 2O1	77.8676
933411	AC2-154 C	2.7629
933412	AC2-154 E	4.5080
933431	AC2-156 C O1	1.0105
933432	AC2-156 E O1	1.6487
933911	AD1-013 C	1.9643
933912	AD1-013 E	3.1378
933931	AD1-016 C	0.9805
933932	AD1-016 E	1.5998
934101	AD1-039 1	7.5372
934111	AD1-039 2	7.6310
934431	AD1-067 C	0.1397
934432	AD1-067 E	0.5873
934701	AD1-098 C O1	7.3194
934702	AD1-098 E O1	5.3439
934721	AD1-100 C	25.3483

934722	AD1-100 E	118.2919
934871	AD1-116 C	1.0108
934872	AD1-116 E	1.6492
934971	AD1-129 C	0.9545
934972	AD1-129 E	0.6363
935001	AD1-133 C O1	23.5039
935002	AD1-133 E O1	15.6692
936291	AD2-038 C O1	2.4828
936292	AD2-038 E O1	16.6155
936371	AD2-047 C O1	4.9442
936372	AD2-047 E O1	24.1394
936461	AD2-060	1.5414
936511	AD2-066 C O1	8.9509
936512	AD2-066 E O1	5.9673
937001	AD2-134 C	2.9081
937002	AD2-134 E	12.0133
937321	AD2-175 C (Withdrawn : 12/10/2019)	18.1248
937322	AD2-175 E (Withdrawn : 12/10/2019)	12.0832
937401	AD2-194 1	8.2436
937411	AD2-194 2	8.2431
938511	AE1-070 1	9.6863
938521	AE1-070 2	8.8614
938851	AE1-113 C	8.4380
938852	AE1-113 E	29.9165
939321	AE1-163 C O1	6.2388
939322	AE1-163 E O1	38.3238
939351	AE1-166 C O1	6.6307
939352	AE1-166 E O1	6.1207
939401	AE1-172 C O1	6.9298
939402	AE1-172 E O1	32.5144
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5818
939741	AE1-205 C O1	10.6108
939742	AE1-205 E O1	14.6529
940101	AE1-252 C O1	13.9215
940102	AE1-252 E O1	9.2810
940621	AE2-049 C O1	5.2778
940622	AE2-049 E O1	3.5186
940631	AE2-050 C O1	7.0386
940632	AE2-050 E O1	4.6924
940752	AE2-062 E	0.0731
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0731
941131	AE2-107 C	4.1013
941132	AE2-107 E	2.7342
941551	AE2-152 C O1	7.6508
941552	AE2-152 E O1	5.1006
941561	AE2-153 C O1	5.2309
941562	AE2-153 E O1	24.4902
941731	AE2-173 O1	6.3159
942111	AE2-223 C	2.4632
942112	AE2-223 E	16.4846
942421	AE2-255 C O1	3.1962
942422	AE2-255 E O1	9.5886
942651	AE2-281 C O1	0.8913

942652	AE2-281 E O1	5.4748
942881	AE2-307 C O1	12.9041
942882	AE2-307 E O1	4.6924
942911	AE2-310 C O1	5.1249
942912	AE2-310 E O1	1.3768
942991	AE2-321 C	8.6325
942992	AE2-321 E	4.2518
943121	AE2-341 C	13.4901
943122	AE2-341 E	6.6243
943381	AF1-009 C	0.3356
943382	AF1-009 E	1.3423
943422	AF1-013 E	1.6779
943591	AF1-030 C O1	4.7689
943592	AF1-030 E O1	2.3382
943801	AF1-048 C	2.1387
943802	AF1-048 E	1.4258
944041	AF1-072	1.2051
944911	AF1-156 C	7.0885
944912	AF1-156 E	4.7257
945351	AF1-200 FTIR	174.6388
946521	AF1-316 C O1	3.9150
946522	AF1-316 E O1	5.8725
946661	AF1-330 C	1.1214
946662	AF1-330 E	0.2462
946671	AF1-331	1.3520
WEC	WEC	4.6566
CBM-W2	CBM-W2	26.4209
NY	NY	1.4710
CBM-W1	CBM-W1	79.3384
TVA	TVA	1.6506
O-066	O-066	17.4586
CHEOAH	CHEOAH	0.0796
CBM-S1	CBM-S1	6.1685
G-007	G-007	2.6988
MADISON	MADISON	24.7867
MEC	MEC	16.3603
CALDERWOOD	CALDERWOOD	0.0651
BLUEG	BLUEG	2.3558
TRIMBLE	TRIMBLE	0.8136
CATAWBA	CATAWBA	0.3707

17 Affected Systems

17.1 LG&E

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

17.2 MISO

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

17.3 TVA

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

17.4 Duke Energy Progress

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

17.5 NYISO

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

18 Short Circuit

The following breakers are overdutied: None

19 Secondary Point of Interconnection

ComEd Byron 345 kV Substation

20 Network Impacts

Summer Peak Load Flow

21 Generation Deliverability

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
43521085	255113	17STILLWELL	345.0	NIPS	243219	05DUMONT	345.0	AEP	1	COMED_P1-2_695_B2	single	1409.0	90.32	100.99	DC	282.4
44342975	270678	BYRON ; B	345.0	CE	270694	CHERRY VA; B	345.0	CE	1	COMED_P1-2_345-L0622__R-R	single	1441.0	85.55	115.4	DC	443.81
60838939	270678	BYRON ; B	345.0	CE	930480	AB1-089 TAP	345.0	CE	1	COMED_P1-2_345-L97116__R_FSA	single	2058.0	73.54	103.76	DC	621.06
60838940	270678	BYRON ; B	345.0	CE	930480	AB1-089 TAP	345.0	CE	1	COMED_P1-2_345-L15616__R_FSA	single	2058.0	70.2	100.33	DC	621.06
60838941	270678	BYRON ; B	345.0	CE	930480	AB1-089 TAP	345.0	CE	1	COMED_P1-2_345-L15616__R_NON_FSA	single	2058.0	70.19	100.33	DC	621.06
44342962	270679	BYRON ; R	345.0	CE	270695	CHERRY VA; R	345.0	CE	1	COMED_P1-2_345-L0621__B-R	single	1479.0	87.27	117.68	DC	463.86
60838893	270679	BYRON ; R	345.0	CE	270695	CHERRY VA; R	345.0	CE	1	COMED_P1-2_345-	single	1479.0	79.16	107.64	DC	421.2

										L0624__R-R						
44342676	270694	CHERRY VA; B	345.0	CE	270759	GARDEN PR; R	345.0	CE	1	COMED_P1-2_345-L0626__B-R-A	single	1479.0	93.36	128.6	DC	525.42
44342677	270694	CHERRY VA; B	345.0	CE	270759	GARDEN PR; R	345.0	CE	1	Base Case	single	1201.0	90.54	120.89	DC	364.04
44342597	270759	GARDEN PR; R	345.0	CE	270883	SILVER LK; R	345.0	CE	1	Base Case	single	1201.0	99.24	115.34	DC	364.04
44342686	270770	GOODINGS ;4B	345.0	CE	270766	GOODINGS ;3B	345.0	CE	1	COMED_P1-2_345-L11613AB-S	single	1802.0	95.0	101.41	DC	211.84
44342698	270828	NELSON ; B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	COMED_P1-2_345-L0626__B-R-B	single	1656.0	84.78	101.85	DC	286.02
60838780	274768	LEE CO EC;BP	345.0	CE	270828	NELSON ; B	345.0	CE	1	COMED_P1-2_345-L0626__B-R-B	single	1479.0	70.69	122.55	DC	775.07
60838781	274768	LEE CO EC;BP	345.0	CE	270828	NELSON ; B	345.0	CE	1	COMED_P1-2_345-L0626__B-R-A	single	1479.0	56.56	108.99	DC	775.07
44342884	930480	AB1-089 TAP	345.0	CE	270916	WAYNE ; B	345.0	CE	1	COMED_P1-2_345-L97116__R FSA	single	2058.0	84.66	114.88	DC	621.06
60838794	930480	AB1-089 TAP	345.0	CE	270916	WAYNE ; B	345.0	CE	1	Base Case	single	1679.0	81.65	112.0	DC	509.03
44342607	943410	AF1-012 TAP	345.0	CE	270730	ELECT JCT; B	345.0	CE	1	Base Case	single	1334.0	94.39	100.59	DC	192.04

22 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC D C	MW IMPAC T
44342185	255109	17MUNSTER	345.0	NIPS	270677	BURNHAM ;OR	345.0	CE	1	COMED_P4_02 3-65-BT4-5__	breaker	1441.0	98.89	115.01	DC	240.3
60837960	270678	BYRON ; B	345.0	CE	270694	CHERRY VA; B	345.0	CE	1	COMED_P4_00 6-45-BT3-8__	breaker	1441.0	61.56	137.3	DC	1091.55
44343206	270679	BYRON ; R	345.0	CE	270918	WEMPLETO W; B	345.0	CE	1	COMED_P7_34 5-L0621__B-R +_345-L0622__R-R	tower	2084.0	87.08	116.9	DC	620.41
60839367	270679	BYRON ; R	345.0	CE	270695	CHERRY VA; R	345.0	CE	1	COMED_P7_34 5-L0621__B-R +_138-L15621__R-R	tower	1768.0	75.18	101.06	DC	456.63
45685486	270695	CHERRY VA; R	345.0	CE	275165	CHERRY VA;1M	138.0	CE	1	COMED_P2-2_156_CV-345R_10	bus	480.0	85.19	101.3	DC	145.83
60838334	270695	CHERRY VA; R	345.0	CE	275165	CHERRY VA;1M	138.0	CE	1	COMED_P4_15 6-45-BT10-13	breaker	480.0	84.87	102.98	DC	164.0
45685948	270731	ELECT JCT;4R	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P4_11 1-45-L16704T	breaker	1479.0	91.95	124.78	DC	485.46
60837749	270731	ELECT JCT;4R	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P2-2_111_EJ-345B__2	bus	1479.0	86.28	118.6	DC	478.09
60838144	270731	ELECT JCT;4R	345.0	CE	274749	AURORA EC;RP	345.0	CE	1	COMED_P4_11 1-45-L14321T	breaker	1479.0	86.28	118.6	DC	478.09
4568580	27074	ESS	345.0	CE	27075	ESS	345.0	CE	1	COMED_P4_11	breaker	1479.0	53.59	140.92	DC	488.9

0	3	W407K;9T	0		1	W407M;9T	0			1-45-L16704T	r	0				
45685802	270743	ESS W407K;9T	345.0	CE	270751	ESS W407M;9T	345.0	CE	1	COMED_P4_16 7-38-TR81	break r	1479.0	45.75	109.88	DC	404.06
45685803	270751	ESS W407M;9T	345.0	CE	270917	WAYNE ;R	345.0	CE	1	COMED_P4_11 1-45-L16704T	break r	1479.0	53.58	140.9	DC	488.9
45685805	270751	ESS W407M;9T	345.0	CE	270917	WAYNE ;R	345.0	CE	1	COMED_P4_16 7-38-TR81	break r	1479.0	45.74	109.87	DC	404.06
60837698	270770	GOODINGS ;4B	345.0	CE	270810	LOCKPORT ; B	345.0	CE	1	COMED_P2- 2_116_GG- 345R_1	bus	1479.0	70.39	130.46	DC	269.12
60838025	270770	GOODINGS ;4B	345.0	CE	270810	LOCKPORT ; B	345.0	CE	1	COMED_P4_10 8-45-BT5-6	break r	1479.0	84.67	152.31	DC	290.64
60838026	270770	GOODINGS ;4B	345.0	CE	270810	LOCKPORT ; B	345.0	CE	1	COMED_P4_11 6-45-L11602	break r	1479.0	70.39	130.46	DC	269.12
60839282	270770	GOODINGS ;4B	345.0	CE	270810	LOCKPORT ; B	345.0	CE	1	COMED_P7_34 5-L16703_R- S_+ 345- L16704TB-S	tower	1768.0	64.3	117.81	DC	286.69
44342264	270806	LIBERTYVI; B	345.0	CE	270856	P HTS 117; B	345.0	CE	1	COMED_P4_01 6-45-BT6-11	break r	1201.0	97.22	103.06	DC	130.95
44342135	270807	LIBERTYVI; R	345.0	CE	270857	P HTS 117; R	345.0	CE	1	COMED_P4_15 9-38-TR81	break r	1479.0	95.52	102.25	DC	185.27
44342136	270807	LIBERTYVI; R	345.0	CE	270857	P HTS 117; R	345.0	CE	1	COMED_P4_01 6-45-BT10-11	break r	1479.0	94.91	101.42	DC	180.61
44342137	270807	LIBERTYVI; R	345.0	CE	270857	P HTS 117; R	345.0	CE	1	COMED_P4_01 6-45-BT9-11	break r	1479.0	93.99	100.56	DC	181.5
60838182	270807	LIBERTYVI; R	345.0	CE	270857	P HTS 117; R	345.0	CE	1	COMED_P4_14 4-45-BT6-9	break r	1479.0	91.25	100.0	DC	242.9
60838107	270828	NELSON ; B	345.0	CE	274768	LEE CO EC;BP	345.0	CE	1	COMED_P4_93 7-45-BT3-4	break r	1479.0	80.17	126.93	DC	625.21
45685782	274749	AURORA EC;RP	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P4_11 1-45-L16704T	break r	1479.0	54.56	141.88	DC	488.9
45685784	274749	AURORA EC;RP	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P4_16 7-38-TR81	break r	1479.0	46.72	110.85	DC	404.06
45685487	275165	CHERRY VA;1M	138.0	CE	271193	CHERRY VA; R	138.0	CE	1	COMED_P2- 2_156_CV- 345R_10	bus	480.0	85.17	101.27	DC	145.83
60838336	275165	CHERRY VA;1M	138.0	CE	271193	CHERRY VA; R	138.0	CE	1	COMED_P4_15 6-45-BT10-13	break r	480.0	84.87	102.98	DC	164.0

23 Contribution to Previously Identified Overloads

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADING %	POST PROJE CT LOADING %	AC DC	MW IMPACT
59924697	243215	05COOK	345.0	AEP	945100	AF1-175 TAP	345.0	AEP	1	AEP_P4_#7443_05DUMONT 765_A	break er	1409.0	146.88	151.43	DC	136.56
43520715	243219	05DUMONT	345.0	AEP	255113	17STILLWELL	345.0	NIPS	1	COMED_P4_023-65-BT4-5__	break er	1409.0	121.55	147.25	DC	291.44
43520814	243229	05OLIVE	345.0	AEP	274804	UNIV PK N;RP	345.0	CE	1	COMED_P4_023-65-BT4-5__	break er	971.0	103.99	116.24	DC	202.76
44342004	270644	WILTON ;	765.0	CE	275233	WILTON ;4M	345.0	CE	1	COMED_P4_112-65-BT2-3__	break er	1379.0	115.82	143.65	DC	308.76
44342023	270644	WILTON ;	765.0	CE	275232	WILTON ;3M	345.0	CE	1	COMED_P4_112-65-BT5-6__	break er	1379.0	112.3	139.55	DC	302.34
44342126	270678	BYRON ;B	345.0	CE	270694	CHERRY VA; B	345.0	CE	1	COMED_P4_006-45-BT7-8__	break er	1441.0	115.25	185.61	DC	1012.9
44342673	270694	CHERRY VA; B	345.0	CE	270759	GARDEN PR; R	345.0	CE	1	COMED_P1-2_345-L0626__B-R-B	single	1479.0	102.58	138.15	DC	525.42
60838011	270728	E FRANKFO ;B	345.0	CE	270766	GOODING S;3B	345.0	CE	1	COMED_P4_112-65-BT4-5__	break er	1726.0	108.0	157.1	DC	217.96

608380 12	2707 28	E FRANKFO ; B	345. 0	CE	2707 66	GOODING S;3B	345. 0	CE	1	COMED_P4_112-65-BT3-4__	break er	1726 .0	108.0	157.1	DC	217.9 6
608380 13	2707 28	E FRANKFO ; B	345. 0	CE	2707 66	GOODING S;3B	345. 0	CE	1	COMED_P4_023-65-BT4-5__	break er	1726 .0	107.88	157.04	DC	217.5 4
443425 94	2707 59	GARDEN PR; R	345. 0	CE	2708 83	SILVER LK; R	345. 0	CE	1	COMED_P1-2_345-L0626__B- R-B	single	1479 .0	115.08	150.65	DC	525.4 2
443425 96	2707 59	GARDEN PR; R	345. 0	CE	2708 83	SILVER LK; R	345. 0	CE	1	COMED_P1-2_345-L0626__B- R-A	single	1479 .0	105.51	141.08	DC	525.4 2
443420 58	2707 70	GOODIN GS;4B	345. 0	CE	2707 66	GOODING S;3B	345. 0	CE	1	COMED_P4_116-45-L11614__	break er	1802 .0	119.87	124.78	DC	165.4 3
435208 85	2707 71	GREENAC RE; T	345. 0	CE	2432 29	05OLIVE	345. 0	AEP	1	AEP_P4_#2978_05DUMONT_ FSA	break er	971. 0	101.95	102.06	DC	159.0 8
435208 86	2707 71	GREENAC RE; T	345. 0	CE	2432 29	05OLIVE	345. 0	AEP	1	AEP_P4_#2978_05DUMONT_ NON_FSA	break er	971. 0	101.95	102.06	DC	159.0 8
443421 34	2708 07	LIBERTYVI ; R	345. 0	CE	2708 57	P HTS 117; R	345. 0	CE	1	COMED_P4_016-45-BT6-11__	break er	1479 .0	112.62	119.59	DC	192.4 7
443421 09	2709 26	WILTON ; B	345. 0	CE	2752 32	WILTON ;3M	345. 0	CE	1	COMED_P4_112-65-BT5-6__	break er	1379 .0	117.59	117.81	DC	292.9 8
443420 84	2709 27	WILTON ; R	345. 0	CE	2752 33	WILTON ;4M	345. 0	CE	1	COMED_P4_112-65-BT2-3__	break er	1379 .0	120.04	120.26	DC	299.2 1
443427 01	2709 40	ZION STA ; B	345. 0	CE	2709 14	WAUKEG AN; B	345. 0	CE	1	COMED_P1-2_345-L2218_GR- N	single	1479 .0	115.95	123.03	DC	104.8 4
443427 11	2709 42	ZION STA ;0B	345. 0	CE	2709 15	WAUKEG AN; R	345. 0	CE	1	COMED_P1-2_345-L2219__B- N	single	1479 .0	115.66	122.72	DC	104.4 6
443430 26	2709 42	ZION STA ;0B	345. 0	CE	2709 15	WAUKEG AN; R	345. 0	CE	1	COMED_P7_345-L2221__R- N + 345-L2222__B-N-B	tower	1768 .0	129.97	133.58	DC	118.0 9
443430 27	2709 42	ZION STA ;0B	345. 0	CE	2709 15	WAUKEG AN; R	345. 0	CE	1	COMED_P7_345-L2221__R- N + 345-L2222__B-N-A	tower	1768 .0	117.28	120.88	DC	118.0 9
443419 08	2747 50	CRETE EC ;BP	345. 0	CE	2707 28	E FRANKFO ; B	345. 0	CE	1	COMED_P4_112-65-BT4-5__	break er	1399 .0	112.68	191.41	DC	260.3 2
443419 11	2747 50	CRETE EC ;BP	345. 0	CE	2707 28	E FRANKFO ; B	345. 0	CE	1	AEP_P4_#1750_05DUMONT	break er	1399 .0	113.51	191.39	DC	258.9 3
443419 39	2747 50	CRETE EC ;BP	345. 0	CE	2551 12	17STJOH N	345. 0	NIP S	1	AEP_P4_#2978_05DUMONT_ NON_FSA	break er	1399 .0	153.46	153.59	DC	247.6 6
443419 40	2747 50	CRETE EC ;BP	345. 0	CE	2551 12	17STJOH N	345. 0	NIP S	1	AEP_P4_#2978_05DUMONT_ FSA	break er	1399 .0	153.46	153.6	DC	247.6 6
443425 59	2748 17	ZION EC ;RP	345. 0	CE	2709 41	ZION STA ; R	345. 0	CE	1	COMED_P1-2_345-L2221__R- N	single	1201 .0	128.12	132.92	DC	106.2 3
443425 61	2748 17	ZION EC ;RP	345. 0	CE	2709 41	ZION STA ; R	345. 0	CE	1	COMED_P2-1_154-CB_13__	single	1201 .0	102.06	107.34	DC	119.3 9
443429 97	2748 17	ZION EC ;RP	345. 0	CE	2709 41	ZION STA ; R	345. 0	CE	1	COMED_P7_345-L2221__R- N + 345-L2222__B-N-A	tower	1367 .0	151.69	156.35	DC	118.0 9
443429 98	2748 17	ZION EC ;RP	345. 0	CE	2709 41	ZION STA ; R	345. 0	CE	1	COMED_P7_345-L2221__R- N + 345-L2222__B-N-B	tower	1367 .0	136.87	141.54	DC	118.0 9
456867 28	2748 17	ZION EC ;RP	345. 0	CE	6994 32	PLS PR1	345. 0	WE C	1	COMED_P7_345-L2221__R- N + 345-L2222__B-N-B	tower	1859 .0	164.9	168.46	DC	126.0
456867 29	2748 17	ZION EC ;RP	345. 0	CE	6994 32	PLS PR1	345. 0	WE C	1	COMED_P7_345-L2221__R- N + 345-L2222__B-N-A	tower	1859 .0	155.14	158.71	DC	126.0
443420 22	2752 32	WILTON ;3M	345. 0	CE	2709 26	WILTON ; B	345. 0	CE	1	COMED_P4_112-65-BT5-6__	break er	1379 .0	112.3	139.55	DC	302.3 4
443421 08	2752 32	WILTON ;3M	345. 0	CE	2706 44	WILTON ;	765. 0	CE	1	COMED_P4_112-65-BT5-6__	break er	1379 .0	117.59	117.81	DC	292.9 8
443420 03	2752 33	WILTON ;4M	345. 0	CE	2709 27	WILTON ; R	345. 0	CE	1	COMED_P4_112-65-BT2-3__	break er	1379 .0	115.82	143.65	DC	308.7 6
443420 85	2752 33	WILTON ;4M	345. 0	CE	2706 44	WILTON ;	765. 0	CE	1	COMED_P4_112-65-BT2-3__	break er	1379 .0	120.04	120.26	DC	299.2 1
443429 92	6994 32	PLS PR1	345. 0	WEC	2748 17	ZION EC ;RP	345. 0	CE	1	COMED_P7_345-L2221__R- N + 345-L2222__B-N-A	tower	1859 .0	172.26	175.74	DC	122.1
443429 93	6994 32	PLS PR1	345. 0	WEC	2748 17	ZION EC ;RP	345. 0	CE	1	COMED_P7_345-L2221__R- N + 345-L2222__B-N-B	tower	1859 .0	150.69	154.17	DC	122.1
435206 65	9568 20	J1180 TAP	345. 0	AMI L	2477 12	05SULLIV AN	345. 0	AEP	1	AEP_P4_#3128_05EUGENE 345_A2	break er	1466 .0	174.0	175.66	DC	135.2 1
435209 79	9568 20	J1180 TAP	345. 0	AMI L	2477 12	05SULLIV AN	345. 0	AEP	1	AEP_P1-2_#286	single	1466 .0	118.05	123.14	DC	138.6 9
435209 80	9568 20	J1180 TAP	345. 0	AMI L	2477 12	05SULLIV AN	345. 0	AEP	1	Base Case	single	1334 .0	101.03	105.65	DC	114.3 7
435209	9568	J1180	345.	AMI	2477	05SULLIV	345.	AEP	1	AEP_P1-1_#4840	single	1466	102.5	106.63	DC	112.2

82	20	TAP	0	L	12	AN	0					.0				9
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24 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
43521048	243219	05DUMONT	345.0	AEP	255113	17STILLWELL	345.0	NIPS	1	COMED_P1-2_695_B2	operation	1409.0	121.53	147.24	DC	291.42
43521181	243229	05OLIVE	345.0	AEP	274804	UNIV PK N;RP	345.0	CE	1	COMED_P1-2_695_B2	operation	971.0	103.99	116.24	DC	202.76
44342792	255109	17MUNSTER	345.0	NIPS	270677	BURNHAM;OR	345.0	CE	1	COMED_P1-2_695_B2	operation	1441.0	98.88	115.0	DC	240.26
44342851	255112	17STJOHN	345.0	NIPS	274750	CRETE EC;BP	345.0	CE	1	COMED_P1-2_695_B2	operation	1399.0	94.6	112.94	DC	256.64
44342972	270678	BYRON ; B	345.0	CE	930480	AB1-089 TAP	345.0	CE	1	COMED_P1-2_345-L97116__R_FSA	operation	2058.0	82.81	113.07	DC	621.06
44342976	270678	BYRON ; B	345.0	CE	270694	CHERRY VA; B	345.0	CE	1	COMED_P1-2_345-L0622__R-R	operation	1441.0	85.65	116.51	DC	443.81
60838937	270678	BYRON ; B	345.0	CE	930480	AB1-089 TAP	345.0	CE	1	Base Case	operation	1679.0	77.31	107.73	DC	509.03
44342963	270679	BYRON ; R	345.0	CE	270695	CHERRY VA; R	345.0	CE	1	COMED_P1-2_345-L0621__B-R	operation	1479.0	87.39	118.81	DC	463.86
44342670	270694	CHERRY VA; B	345.0	CE	270759	GARDEN PR; R	345.0	CE	1	COMED_P1-2_345-L0626__B-R-B	operation	1479.0	114.38	150.02	DC	525.42
44342672	270694	CHERRY VA; B	345.0	CE	270759	GARDEN PR; R	345.0	CE	1	Base Case	operation	1201.0	95.19	111.31	DC	364.04
60838613	270700	CORDOVA ; B	345.0	CE	270828	NELSON ; B	345.0	CE	1	COMED_P1-2_345-L0404__R-B	operation	2058.0	133.7	157.06	DC	286.42
45686214	270728	E FRANKFO; B	345.0	CE	270766	GOODINGS ;3B	345.0	CE	1	Base Case	operation	1334.0	136.73	142.94	DC	157.65
60838640	270728	E FRANKFO; B	345.0	CE	270766	GOODINGS ;3B	345.0	CE	1	COMED_P1-2_695_B2	operation	1726.0	107.99	157.04	DC	217.73
4434280	27073	ELECT JCT; B	345.0	CE	27081	LOMBARD	345.0	CE	1	Base Case	operation	1201.0	96.44	101.39	DC	111.95

4	0		0		2	; B	0				n	0				
45686655	270743	ESS W407K;9T	345.0	CE	270751	ESS W407M;9T	345.0	CE	1	COMED_P 1-2_345- L16704TB- S	operatio n	1479.0	45.69	109.75	DC	403.56
45686656	270751	ESS W407M;9T	345.0	CE	270917	WAYNE ; R	345.0	CE	1	COMED_P 1-2_345- L16704TB- S	operatio n	1479.0	45.68	109.74	DC	403.56
44342592	270759	GARDEN PR; R	345.0	CE	270883	SILVER LK; R	345.0	CE	1	COMED_P 1-2_345- L0626__B- R-B	operatio n	1479.0	120.06	138.89	DC	525.42
44342595	270759	GARDEN PR; R	345.0	CE	270883	SILVER LK; R	345.0	CE	1	Base Case	operatio n	1201.0	110.56	126.63	DC	364.04
44342680	270770	GOODINGS ;4B	345.0	CE	270766	GOODINGS ;3B	345.0	CE	1	COMED_P 1-2_345- L11613AB- S	operatio n	1802.0	117.15	123.44	DC	211.84
44342685	270770	GOODINGS ;4B	345.0	CE	270766	GOODINGS ;3B	345.0	CE	1	Base Case	operatio n	1560.0	96.09	101.34	DC	152.83
60838756	270770	GOODINGS ;4B	345.0	CE	270810	LOCKPORT ; B	345.0	CE	1	COMED_P 1-2_345- L11604_R- S	operatio n	1479.0	69.91	129.12	DC	267.96
44342694	270828	NELSON ; B	345.0	CE	943410	AF1-012 TAP	345.0	CE	1	Base Case	operatio n	1334.0	98.13	105.8	DC	192.04
60838712	270828	NELSON ; B	345.0	CE	274768	LEE CO EC;BP	345.0	CE	1	Base Case	operatio n	1201.0	48.29	125.61	DC	620.7
60838713	270828	NELSON ; B	345.0	CE	274768	LEE CO EC;BP	345.0	CE	1	COMED_P 1-2_345- L93701_B- R	operatio n	1479.0	73.41	124.71	DC	624.9
45686420	270847	PLANO ; R	345.0	CE	270733	ELECT JCT;3R	345.0	CE	1	COMED_P 1-2_345- L16704TB- S	operatio n	1528.0	78.68	124.61	DC	274.3
60838638	270864	QUAD 1 3-11	345.0	CE	946320	AF1-296 TAP	345.0	CE	1	COMED_P 1-2_345- L15503_B- R	operatio n	2058.0	133.7	158.48	DC	284.74
44342570	270890	ESS H471 ;	345.0	CE	270828	NELSON ; B	345.0	CE	1	COMED_P 1-2_345- L15503_B- R	operatio n	2058.0	133.39	155.67	DC	284.74
44342700	270940	ZION STA ; B	345.0	CE	270914	WAUKEGA N ; B	345.0	CE	1	COMED_P 1-2_345- L2218_GR- N	operatio n	1479.0	120.58	124.4	DC	104.84
44342710	270942	ZION STA ;0B	345.0	CE	270915	WAUKEGA N ; R	345.0	CE	1	COMED_P 1-2_345- L2219__B- N	operatio n	1479.0	120.29	124.08	DC	104.46
45686641	274749	AURORA EC;RP	345.0	CE	270743	ESS W407K;9T	345.0	CE	1	COMED_P 1-2_345- L16704TB- S	operatio n	1479.0	46.66	110.72	DC	403.56
44342443	274750	CRETE EC;BP	345.0	CE	270728	E FRANKFO; B	345.0	CE	1	COMED_P 1- 2_695_B2	operatio n	1399.0	112.66	191.32	DC	260.04
44342511	274750	CRETE EC;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	Base Case	operatio n	1091.0	154.89	155.07	DC	158.32
44342512	274750	CRETE EC;BP	345.0	CE	255112	17STJOHN	345.0	NIPS	1	COMED_P 1- 2_695_B2	operatio n	1399.0	152.98	153.12	DC	248.7
44342814	274768	LEE CO EC;BP	345.0	CE	270678	BYRON ; B	345.0	CE	1	COMED_P 1-2_345- L15502_B- R-B	operatio n	1726.0	100.45	117.0	DC	540.52
44342818	274768	LEE CO EC;BP	345.0	CE	270678	BYRON ; B	345.0	CE	1	Base Case	operatio n	1334.0	85.48	110.41	DC	628.91
43521230	274804	UNIV PK N;RP	345.0	CE	243229	05OLIVE	345.0	AEP	1	COMED_P 1-	operatio n	971.0	102.84	103.49	DC	196.48

										2_695_B2						
44342558	274817	ZION EC ;RP	345.0	CE	270941	ZION STA ; R	345.0	CE	1	COMED_P1-2_345-L2221_R-N	operatio n	1201.0	135.98	140.79	DC	106.23
43521191	348885	7BUNSONVILLE	345.0	AMIL	243221	05EUGENE	345.0	AEP	1	AEP_P1-2_#8907-A	operatio n	1793.0	112.5	113.4	DC	122.81
44342879	930480	AB1-089 TAP	345.0	CE	270916	WAYNE ; B	345.0	CE	1	COMED_P1-2_345-L97116_R-FSA	operatio n	2058.0	93.86	124.12	DC	621.06
44342883	930480	AB1-089 TAP	345.0	CE	270916	WAYNE ; B	345.0	CE	1	Base Case	operatio n	1679.0	90.03	120.45	DC	509.03
44342604	943410	AF1-012 TAP	345.0	CE	270730	ELECT JCT; B	345.0	CE	1	Base Case	operatio n	1334.0	115.66	123.19	DC	192.04
60838617	946320	AF1-296 TAP	345.0	CE	270890	ESS H471 ;	345.0	CE	1	COMED_P1-2_345-L15503_B-R	operatio n	2058.0	133.52	155.8	DC	284.74
43520974	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	AEP_P1-2_#286	operatio n	1466.0	169.22	170.84	DC	138.69
43520975	956820	J1180 TAP	345.0	AMIL	247712	05SULLIVAN	345.0	AEP	1	Base Case	operatio n	1334.0	146.43	150.43	DC	114.37

25 Contingency Table

Contingency Name	Contingency Definition
COMED_P4_167-38-TR81____	CONTINGENCY 'COMED_P4_167-38-TR81____' 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 2 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 1 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 270846 TO BUS 272278 TO BUS 275354 CKT 1 / PLANO ; B 345 PLANO;1I 138 PLANO;1C 34.5 DISCONNECT BUS 272250 / PLANO ; B 138 END
COMED_P4_016-45-BT10-11	CONTINGENCY 'COMED_P4_016-45-BT10-11' TRIP BRANCH FROM BUS 270915 TO BUS 272739 TO BUS 275394 CKT 1 / WAUKEGAN ; R 345 WAUKEGAN ; R 138 WAUKEGAN ;1C 34.5 TRIP BRANCH FROM BUS 270915 TO BUS 270914 CKT 1 / WAUKEGAN ; R 345 WAUKEGAN ; B 345 TRIP BRANCH FROM BUS 270942 TO BUS 270915 CKT 1 / ZION STA ;0B 345 WAUKEGAN ; R 345 END
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_P2-1_154-CB_13____	

	CONTINGENCY 'COMED_P2-1_154-CB_13__' TRIP BRANCH FROM BUS 270857 TO BUS 270807 CKT 1 / PH117; R 345 LIBER; R 345 END
COMED_P4_016-45-BT6-11_	CONTINGENCY 'COMED_P4_016-45-BT6-11_' TRIP BRANCH FROM BUS 270914 TO BUS 270830 CKT 1 / WAUKEGAN ; B 345 NBROOK159; B 345 TRIP BRANCH FROM BUS 270915 TO BUS 270914 CKT 1 / WAUKEGAN ; R 345 WAUKEGAN ; B 345 TRIP BRANCH FROM BUS 275206 TO BUS 270830 CKT 1 / NBROOK159;2M 138 NBROOK159; B 345 TRIP BRANCH FROM BUS 275206 TO BUS 272120 CKT 1 / NBROOK159;2M 138 NBROOK159; B 138 TRIP BRANCH FROM BUS 275206 TO BUS 275306 CKT 1 / NBROOK159;2M 138 NBROOK159;2C 34.5 CLOSE BRANCH FROM BUS 272120 TO BUS 272121 CKT 1 / NBROOK159; B 138 NBROOK159; R 138 TRIP BRANCH FROM BUS 270942 TO BUS 270915 CKT 1 / ZION STA ;0B 345 WAUKEGAN ; R 345 END
COMED_P4_937-45-BT3-4__	CONTINGENCY 'COMED_P4_937-45-BT3-4__' TRIP BRANCH FROM BUS 274768 TO BUS 274759 CKT 1 / LEECO;BP 345 DELI 345 TRIP BRANCH FROM BUS 274759 TO BUS 274760 TO BUS 274761 CKT 1 / DELI 345 LEECO;G1 13.8 LEEEO;G2 13.8 TRIP BRANCH FROM BUS 274759 TO BUS 274762 TO BUS 274763 CKT 1 / DELI 345 LEECO;G3 13.8 LEEEO;G4 13.8 TRIP BRANCH FROM BUS 274759 TO BUS 274764 TO BUS 274765 CKT 1 / DELI 345 LEECO;G5 13.8 LEEEO;G6 13.8 TRIP BRANCH FROM BUS 274759 TO BUS 274766 TO BUS 274767 CKT 1 / DELI 345 LEECO;G7 13.8 LEEEO;G8 13.8 REMOVE UNIT 1 FROM BUS 274760 / LEECO;G1 13.8 REMOVE UNIT 2 FROM BUS 274761 / LEECO;G2 13.8 REMOVE UNIT 3 FROM BUS 274762 / LEECO;G3 13.8 REMOVE UNIT 4 FROM BUS 274763 / LEECO;G4 13.8 REMOVE UNIT 5 FROM BUS 274764 / LEECO;G5 13.8 REMOVE UNIT 6 FROM BUS 274765 / LEECO;G6 13.8 REMOVE UNIT 7 FROM BUS 274766 / LEECO;G7 13.8 REMOVE UNIT 8 FROM BUS 274767 / LEECO;G8 13.8 TRIP BRANCH FROM BUS 272528 TO BUS 946160 CKT 1 / S DIX; B 138 AF1-281 TAP 138 TRIP BRANCH FROM BUS 274768 TO BUS 272528 CKT 1 / LEECO;BP 345 S DIX; B 138 END
COMED_P1-2_695_B2	CONTINGENCY 'COMED_P1-2_695_B2' OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTO; 765 1 END
Base Case	
COMED_P1-2_345-L0621__B-R	CONTINGENCY 'COMED_P1-2_345-L0621__B-R' TRIP BRANCH FROM BUS 270678 TO BUS 270694 CKT 1 / BYRON; B 345 CHERR; B 345 END
COMED_P7_345-L16703_R-S_+_345-L16704TB-S	CONTINGENCY 'COMED_P7_345-L16703_R-S_+_345-L16704TB-S' TRIP BRANCH FROM BUS 270846 TO BUS 270847 CKT 1 / PLANO ; B 345 PLANO ; R 345 TRIP BRANCH FROM BUS 270847 TO BUS 270733 CKT 1 / PLANO ; R 345 ELEC JUNC;3R 345 TRIP BRANCH FROM BUS 270846 TO BUS 270730 CKT 1 / PLANO ; B 345 ELEC JUNC; B 345 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 2 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 1 / PLANO ; B 138 PLANO;1I 138

	TRIP BRANCH FROM BUS 270846 TO BUS 272278 TO BUS 275354 CKT 1 / PLANO ; B 345 PLANO;1I 138 PLANO;1C 34.5 END
COMED_P4_144-45-BT6-9__	CONTINGENCY 'COMED_P4_144-45-BT6-9__' 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 270917 TO BUS 270883 CKT 1 / WAYNE ; R 345 SILVER LK; R 345 END
AEP_P4_#7443_05DUMONT 765_A	CONTINGENCY 'AEP_P4_#7443_05DUMONT 765_A' OPEN BRANCH FROM BUS 243205 TO BUS 243206 CKT 1 / 243205 05COOK 765 243206 05DUMONT 765 1 OPEN BRANCH FROM BUS 243206 TO BUS 246999 CKT 1 / 243206 05DUMONT 765 246999 05SORENS 765 1 END
COMED_P4_156-45-BT10-13	CONTINGENCY 'COMED_P4_156-45-BT10-13' TRIP BRANCH FROM BUS 270695 TO BUS 270918 CKT 1 / CHERRY VA; R 345 WEMPLETOW; B 345 TRIP BRANCH FROM BUS 270695 TO BUS 270694 CKT 1 / CHERRY VA; R 345 CHERRY VA; B 345 TRIP BRANCH FROM BUS 275167 TO BUS 270695 CKT 1 / CHERRY VA;3M 138 CHERRY VA; R 345 TRIP BRANCH FROM BUS 275167 TO BUS 271193 CKT 1 / CHERRY VA;3M 138 CHERRY VA; R 138 TRIP BRANCH FROM BUS 275167 TO BUS 275267 CKT 1 / CHERRY VA;3M 138 CHERRY VA;3C 34.5 END
COMED_P2-2_156_CV-345R_10	CONTINGENCY 'COMED_P2-2_156_CV-345R_10' TRIP BRANCH FROM BUS 270695 TO BUS 270694 CKT 1 / CHERRY VA; R 345 CHERRY VA; B 345 TRIP BRANCH FROM BUS 275167 TO BUS 270695 CKT 1 / CHERRY VA;3M 138 CHERRY VA; R 345 TRIP BRANCH FROM BUS 275167 TO BUS 271193 CKT 1 / CHERRY VA;3M 138 CHERRY VA; R 138 TRIP BRANCH FROM BUS 275167 TO BUS 275267 CKT 1 / CHERRY VA;3M 138 CHERRY VA;3C 34.5 END
COMED_P1-2_345-L0626__B-R-B	CONTINGENCY 'COMED_P1-2_345-L0626__B-R-B' TRIP BRANCH FROM BUS 930480 TO BUS 270916 CKT 1 / AB1-089 TAP 345 WAYNE ; B 345 END
AEP_P4_#1750_05DUMONT	CONTINGENCY 'AEP_P4_#1750_05DUMONT' OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 OPEN BRANCH FROM BUS 243206 TO BUS 243219 CKT 2 / 243206 05DUMONT 765 243219 05DUMONT 345 1 END
COMED_P1-2_345-L0626__B-R-A	CONTINGENCY 'COMED_P1-2_345-L0626__B-R-A' TRIP BRANCH FROM BUS 270678 TO BUS 930480 CKT 1 / BYRON ; B 345 AB1-089 TAP 345 END
COMED_P4_111-45-L14321T	CONTINGENCY 'COMED_P4_111-45-L14321T' TRIP BRANCH FROM BUS 270928 TO BUS 270730 CKT 1 / WOLFS ; B 345 ELEC JUNC; 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 TRIP BRANCH FROM BUS 270730 TO BUS 270846 CKT 1 / ELEC JUNC; B 345 PLANO ; B 345 TRIP BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / ELEC JUNC; B 345 WAYNE ; B 345 DISCONNECT BUS 275239 / ELEC JUNC;2M 138 END

AEP_P1-2_#8907-A	CONTINGENCY 'AEP_P1-2_#8907-A' OPEN BRANCH FROM BUS 247712 TO BUS 956820 CKT 1 / 247712 05SULLIVAN 345 956820 J1180 TAP 345 1 END
AEP_P4_#2978_05DUMONT_NON_FSA	CONTINGENCY 'AEP_P4_#2978_05DUMONT_NON_FSA' OPEN BRANCH FROM BUS 243206 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 X1-020 OPEN BRANCH FROM BUS 243207 TO BUS 907040 CKT 1 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P1-2_345-L2221__R-N	CONTINGENCY 'COMED_P1-2_345-L2221__R-N' TRIP BRANCH FROM BUS 270941 TO BUS 699432 CKT 1 / ZION ; R 345 PLS PR2 345 END
COMED_P1-2_345-L93701_B-R	CONTINGENCY 'COMED_P1-2_345-L93701_B-R' TRIP BRANCH FROM BUS 274768 TO BUS 274759 CKT 1 / LEECO;BP 345 DELI 345 TRIP BRANCH FROM BUS 274759 TO BUS 274760 TO BUS 274761 CKT 1 / DELI 345 LEECO;G1 13.8 LEEEO;G2 13.8 TRIP BRANCH FROM BUS 274759 TO BUS 274762 TO BUS 274763 CKT 1 / DELI 345 LEECO;G3 13.8 LEEEO;G4 13.8 TRIP BRANCH FROM BUS 274759 TO BUS 274764 TO BUS 274765 CKT 1 / DELI 345 LEECO;G5 13.8 LEEEO;G6 13.8 TRIP BRANCH FROM BUS 274759 TO BUS 274766 TO BUS 274767 CKT 1 / DELI 345 LEECO;G7 13.8 LEEEO;G8 13.8 REMOVE UNIT 1 FROM BUS 274760 / LEECO;G1 13.8 REMOVE UNIT 2 FROM BUS 274761 / LEECO;G2 13.8 REMOVE UNIT 3 FROM BUS 274762 / LEECO;G3 13.8 REMOVE UNIT 4 FROM BUS 274763 / LEECO;G4 13.8 REMOVE UNIT 5 FROM BUS 274764 / LEECO;G5 13.8 REMOVE UNIT 6 FROM BUS 274765 / LEECO;G6 13.8 REMOVE UNIT 7 FROM BUS 274766 / LEECO;G7 13.8 REMOVE UNIT 8 FROM BUS 274767 / LEECO;G8 13.8 END
COMED_P1-2_345-L15616__R_NON_FSA	CONTINGENCY 'COMED_P1-2_345-L15616__R_NON_FSA' TRIP BRANCH FROM BUS 270694 TO BUS 270759 CKT 1 / CHERR; R 345 U3-021 GARDEN PRAIRIE TRIP BRANCH FROM BUS 270883 TO BUS 270759 CKT 1 END
COMED_P4_006-45-BT7-8__	CONTINGENCY 'COMED_P4_006-45-BT7-8__' TRIP BRANCH FROM BUS 270678 TO BUS 930480 CKT 1 / BYRON ; B 345 AB1-089 TAP 345 TRIP BRANCH FROM BUS 270678 TO BUS 270679 CKT 1 / BYRON ; B 345 BYRON ; R 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-L15616__R_FSA	CONTINGENCY 'COMED_P1-2_345-L15616__R_FSA' TRIP BRANCH FROM BUS 270694 TO BUS 270759 CKT 1 / CHERR; R 345 U3-021 GARDEN PRAIRIE

	END
COMED_P2-2_116_GG-345R__1	CONTINGENCY 'COMED_P2-2_116_GG-345R__1' TRIP BRANCH FROM BUS 270729 TO BUS 271385 TO BUS 275351 CKT 1 / E FRA; R 345 E FRA; R 138 E FRA;3C 34.5 DISCONNECT BUS 270767 / GOODI;1R 345 DISCONNECT BUS 275240 / GOODI;1M 138 END
COMED_P1-2_345-L15502_B-R-B	CONTINGENCY 'COMED_P1-2_345-L15502_B-R-B' TRIP BRANCH FROM BUS 943410 TO BUS 270730 CKT 1 / AF1-012 TAP 345 ELEC JUNC; B 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_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
AEP_P1-2_#286	CONTINGENCY 'AEP_P1-2_#286' OPEN BRANCH FROM BUS 243221 TO BUS 348885 CKT 1 / 243221 05EUGENE 345 348885 7BUNSONVILLE 345 1 END
AEP_P4_#2978_05DUMONT_FSA	CONTINGENCY 'AEP_P4_#2978_05DUMONT_FSA' OPEN BRANCH FROM BUS 243206 TO BUS 907040 CKT 1 / 243206 05DUMONT 765 X1-020 OPEN BRANCH FROM BUS 243206 TO BUS 270644 CKT 1 / 243206 05DUMONT 765 270644 WILTON ; 765 1 END
COMED_P1-2_345-L0624__R-R	CONTINGENCY 'COMED_P1-2_345-L0624__R-R' TRIP BRANCH FROM BUS 270679 TO BUS 270918 CKT 1 / BYRON; R 345 WEMPL; R 345 END
COMED_P1-2_345-L0404__-R-B	CONTINGENCY 'COMED_P1-2_345-L0404__-R-B' TRIP BRANCH FROM BUS 946320 TO BUS 270890 CKT 1 / AF1-296 TAP 345 H471 ; 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_P4_108-45-BT5-6__	

	CONTINGENCY 'COMED_P4_108-45-BT5-6__' TRIP BRANCH FROM BUS 274703 TO BUS 270811 CKT 1 / KEND
COMED_P1-2_345-L2218_GR-N	CONTINGENCY 'COMED_P1-2_345-L2218_GR-N' TRIP BRANCH FROM BUS 270942 TO BUS 270915 CKT 1 END / ZION STA ;0B 345 WAUKEGAN ; R 345
COMED_P1-2_345-L97116__-R_FSA	CONTINGENCY 'COMED_P1-2_345-L97116__-R_FSA' TRIP BRANCH FROM BUS 270759 TO BUS 270883 CKT 1 END / U3-021 SILVE; R 345
COMED_P4_006-45-BT3-8__	CONTINGENCY 'COMED_P4_006-45-BT3-8__' TRIP BRANCH FROM BUS 274768 TO BUS 270678 CKT 1 TRIP BRANCH FROM BUS 270678 TO BUS 270679 CKT 1 END / LEE CO EC;BP 345 BYRON ; B 345 / BYRON ; B 345 BYRON ; R 345
COMED_P1-2_345-L2219__B-N	CONTINGENCY 'COMED_P1-2_345-L2219__B-N' TRIP BRANCH FROM BUS 270940 TO BUS 270914 CKT 1 END / ZION STA ; B 345
COMED_P4_016-45-BT9-11__	CONTINGENCY 'COMED_P4_016-45-BT9-11__' TRIP BRANCH FROM BUS 270915 TO BUS 270831 CKT 1 TRIP BRANCH FROM BUS 275205 TO BUS 270831 CKT 1 345 TRIP BRANCH FROM BUS 275205 TO BUS 272121 CKT 1 138 TRIP BRANCH FROM BUS 275205 TO BUS 275305 CKT 1 34.5 CLOSE BRANCH FROM BUS 272120 TO BUS 272121 CKT 1 138 TRIP BRANCH FROM BUS 270915 TO BUS 270914 CKT 1 345 TRIP BRANCH FROM BUS 270942 TO BUS 270915 CKT 1 END / WAUKEGAN ; R 345 NBROOK159; R 345 / NBROOK159;1M 138 NBROOK159; R / NBROOK159;1M 138 NBROOK159; R / NBROOK159;1M 138 NBROOK159;1C / NBROOK159; B 138 NBROOK159; R / WAUKEGAN ; R 345 WAUKEGAN ; B / ZION STA ;0B 345 WAUKEGAN ; R 345
COMED_P1-2_345-L15503_B-R	CONTINGENCY 'COMED_P1-2_345-L15503_B-R' TRIP BRANCH FROM BUS 270828 TO BUS 270700 CKT 1 END / NELSO; B 345 CORDO; B 345
COMED_P7_345-L2221__R-N+_345-L2222__B-N-A	CONTINGENCY 'COMED_P7_345-L2221__R-N+_345-L2222__B-N-A' TRIP BRANCH FROM BUS 270940 TO BUS 270941 CKT 1 TRIP BRANCH FROM BUS 270940 TO BUS 270942 CKT 1 TRIP BRANCH FROM BUS 270941 TO BUS 699432 CKT 1 TRIP BRANCH FROM BUS 270942 TO BUS 955310 CKT 1 CLOSE BRANCH FROM BUS 270941 TO BUS 270942 CKT 1 END / ZION ; B 345 ZION ; R 345 / ZION ; B 345 ZION ;0B 345 / ZION ; R 345 PLS PR2 345 / ZION ;0B 345 J1010 TAP 345 / ZION ; R 345 ZION ;0B 345
COMED_P1-2_345-L11613AB-S	CONTINGENCY 'COMED_P1-2_345-L11613AB-S' TRIP BRANCH FROM BUS 270666 TO BUS 270664 CKT 1 TRIP BRANCH FROM BUS 270666 TO BUS 270926 CKT 1 TRIP BRANCH FROM BUS 270770 TO BUS 270666 CKT 1 END / B ISL;BT 345 B ISL; B 345 / B ISL;BT 345 WILTO; B 345 / GOODI;4B 345 B ISL;BT 345
AEP_P1-1_#4840	CONTINGENCY 'AEP_P1-1_#4840'

	OPEN BRANCH FROM BUS 243209 TO BUS 243443 CKT 2 / 243209 05ROCKPT 765 243443 05RKG2 26.0 2 REMOVE UNIT 2H FROM BUS 243443 / 243443 05RKG2 26.0 REMOVE UNIT 2L FROM BUS 243443 / 243443 05RKG2 26.0 END
COMED_P1-2_345-L0622__R-R	CONTINGENCY 'COMED_P1-2_345-L0622__R-R' TRIP BRANCH FROM BUS 270679 TO BUS 270695 CKT 1 / BYRON; R 345 CHERR; R 345 END
COMED_P1-2_345-L16704TB-S	CONTINGENCY 'COMED_P1-2_345-L16704TB-S' 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 2 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 272250 TO BUS 272278 CKT 1 / PLANO ; B 138 PLANO;1I 138 TRIP BRANCH FROM BUS 270846 TO BUS 272278 TO BUS 275354 CKT 1 / PLANO ; B 345 PLANO;1I 138 PLANO;1C 34.5 END
COMED_P4_116-45-L11602__	CONTINGENCY 'COMED_P4_116-45-L11602__' TRIP BRANCH FROM BUS 270767 TO BUS 270729 CKT 1 / GOODI;1R 345 E FRA; R 345 TRIP BRANCH FROM BUS 270729 TO BUS 271385 TO BUS 275351 CKT 1 / E FRA; R 345 E FRA; R 138 E FRA;3C 34.5 DISCONNECT BUS 270767 / GOODI;1R 345 DISCONNECT BUS 275240 / GOODI;1M 138 END
COMED_P4_112-65-BT2-3__	CONTINGENCY 'COMED_P4_112-65-BT2-3__' TRIP BRANCH FROM BUS 270644 TO BUS 270607 CKT 1 / WILTO; 765 COLLI; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270644 CKT 1 / WILTO;3M 345 WILTO; 765 TRIP BRANCH FROM BUS 275232 TO BUS 270926 CKT 1 / WILTO;3M 345 WILTO; B 345 TRIP BRANCH FROM BUS 275232 TO BUS 275332 CKT 1 / WILTO;3M 345 WILTO;3C 33 END
COMED_P7_345-L0621__B-R+_138-L15621_R-R	CONTINGENCY 'COMED_P7_345-L0621__B-R+_138-L15621_R-R' TRIP BRANCH FROM BUS 270678 TO BUS 270694 CKT 1 / BYRON; B 345 CHERR; B 345 TRIP BRANCH FROM BUS 271193 TO BUS 272517 CKT 1 / CHERR; R 138 STILL;RT 138 END
COMED_P7_345-L2221__R-N+_345-L2222__B-N-B	CONTINGENCY 'COMED_P7_345-L2221__R-N+_345-L2222__B-N-B' TRIP BRANCH FROM BUS 270940 TO BUS 270941 CKT 1 / ZION ; B 345 ZION ; R 345 TRIP BRANCH FROM BUS 270940 TO BUS 270942 CKT 1 / ZION ; B 345 ZION ;0B 345 TRIP BRANCH FROM BUS 270941 TO BUS 699432 CKT 1 / ZION ; R 345 PLS PR2 345 TRIP BRANCH FROM BUS 955310 TO BUS 699247 CKT 1 / J1010 TAP 345 ARCADN3 345 CLOSE BRANCH FROM BUS 270941 TO BUS 270942 CKT 1 / ZION ; R 345 ZION ;0B 345 END
COMED_P4_159-38-TR81__	CONTINGENCY 'COMED_P4_159-38-TR81__' TRIP BRANCH FROM BUS 270915 TO BUS 270831 CKT 1 / NBROOK159; R 345 TRIP BRANCH FROM BUS 275205 TO BUS 270831 CKT 1 / NB159;1M 138 NB159; R 345 TRIP BRANCH FROM BUS 275205 TO BUS 272121 CKT 1 / NB159;1M 138 NB159; R 138 TRIP BRANCH FROM BUS 275205 TO BUS 275305 CKT 1 / NB159;1M 138 NB159;1C 34.5 CLOSE BRANCH FROM BUS 272120 TO BUS 272121 CKT 1 / NB159; B 138 NB159; R 138 CLOSE LINE FROM BUS 271306 TO BUS 271307 CKT 1 / DEERF; B 138 DEERF; R 138 CLOSE LINE FROM BUS 272122 TO BUS 272123 CKT 1 / NB212; B 138 NB212; R 138 DISCONNECT BUS 271309 / DEERF;RT 138 DISCONNECT BUS 271679 / HIGHL;2R 138 DISCONNECT BUS 272121 / NB159; R 138

	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_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-L11604_R-S	CONTINGENCY 'COMED_P1-2_345-L11604_R-S' TRIP BRANCH FROM BUS 270767 TO BUS 270811 CKT 1 / GOODI;2R 345 LOCKP; R 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
COMED_P7_345-L0621__B-R+_345-L0622__R-R	CONTINGENCY 'COMED_P7_345-L0621__B-R+_345-L0622__R-R' TRIP BRANCH FROM BUS 270678 TO BUS 270694 CKT 1 / BYRON; B 345 CHERR; B 345 TRIP BRANCH FROM BUS 270679 TO BUS 270695 CKT 1 / BYRON; R 345 CHERR; R 345 END

26 Flow Gate Details

The following indices contain additional information about each flowgate presented in the body of the report. For each index, 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
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											%	%		
43521085	255113	17STILLWELL	NIPS	243219	05DUMONT	AEP	1	COMED_P1-2_695_B2	single	1409.0	90.32	100.99	DC	282.4

Bus #	Bus	MW Impact
274723	RIVER EC ;12	4.4883
274724	RIVER EC ;11	4.4553
274788	SE CHICAG;5U (Deactivation : 06/01/20)	7.5156
274789	SE CHICAG;6U (Deactivation : 06/01/20)	7.5354
274790	SE CHICAG;7U (Deactivation : 06/01/20)	7.6346
274791	SE CHICAG;8U (Deactivation : 06/01/20)	7.6346
274792	SE CHICAG;9U (Deactivation : 06/01/20)	7.5445
274793	SE CHICAG;0U (Deactivation : 06/01/20)	7.5445
274794	SE CHICAG;1U (Deactivation : 06/01/20)	7.5445
274795	SE CHICAG;2U (Deactivation : 06/01/20)	7.5445
274798	UNIV PARK;1U	1.2579
274801	UNIV PARK;4U	1.2485
274826	FISK ;BP	2.3485
274827	FISK ;RP	1.6644
274830	U3-021 1	6.0841
274831	U3-021 2	6.0841
276160	W4-084	0.4194
276161	W4-086	0.2425
276164	X3-005 C	0.0870
293540	O-012 C	0.4974
914321	Y2-103 (Withdrawn : 12/24/2019)	44.9116
915011	Y3-013 1	3.7426
915021	Y3-013 2	3.7426
915031	Y3-013 3	3.7426
919581	AA2-030	17.5220
919621	AA2-039 C	2.0850
924041	AB2-047 C O1	3.3614
924471	AB2-096	42.2510
925161	AB2-173 (Withdrawn : 12/24/2019)	3.1249
925581	AC1-033 C	1.4007
926311	AC1-109 1	1.9029
926321	AC1-109 2	1.9029
926331	AC1-110 1	1.8969
926341	AC1-110 2	1.8969
926351	AC1-111 1	0.7616
926361	AC1-111 2	0.7616
926371	AC1-111 3	0.7616
926381	AC1-111 4	0.7616
926391	AC1-111 5	0.7616
926401	AC1-111 6	0.7616
926431	AC1-114	2.3725
926821	AC1-168 C O1	1.1400
926841	AC1-171 C O1	1.0362
927091	AC1-204 1	72.4476
927101	AC1-204 2	72.4239
927201	AC1-214 C O1	2.0470
927451	AC1-142A 1	4.2136
927461	AC1-142A 2	4.2138

927511	AC1-113 1	1.1863
927521	AC1-113 2	1.1863
930481	AB1-089	65.5715
930501	AB1-091 O1	76.9365
930741	AB1-122 1O1	71.4161
930751	AB1-122 2O1	73.8648
932881	AC2-115 1	2.3725
932891	AC2-115 2	2.3725
932921	AC2-116	0.8304
932931	AC2-117	5.1303
933341	AC2-147 C	0.8696
933411	AC2-154 C	2.6391
933431	AC2-156 C O1	0.9536
933911	AD1-013 C	1.8530
933931	AD1-016 C	0.9268
934051	AD1-031 C O1	2.8441
934101	AD1-039 1	6.9988
934111	AD1-039 2	7.2387
934431	AD1-067 C	0.1318
934651	AD1-096 C	0.8889
934701	AD1-098 C O1	6.9023
934721	AD1-100 C	19.5037
934871	AD1-116 C	0.9467
934971	AD1-129 C	0.9017
935001	AD1-133 C O1	20.6596
936291	AD2-038 C O1	2.3271
936371	AD2-047 C O1	4.7225
936461	AD2-060	1.4723
936511	AD2-066 C O1	8.3930
936791	AD2-102 C	14.0984
937001	AD2-134 C	2.7428
937311	AD2-172 C	2.4531
937321	AD2-175 C (Withdrawn : 12/10/2019)	17.2037
937401	AD2-194 1	7.7908
937411	AD2-194 2	7.7882
937531	AD2-214 C	4.3919
938511	AE1-070 1	9.1541
938521	AE1-070 2	8.3723
938851	AE1-113 C	7.9578
938861	AE1-114 C O1	3.9186
939051	AE1-134 1	1.3616
939061	AE1-134 2	1.3616
939321	AE1-163 C O1	5.8477
939351	AE1-166 C O1	5.4399
939401	AE1-172 C O1	5.2547
939631	AE1-193 C	9.0251
939641	AE1-194 C	9.0251
939651	AE1-195 C	9.0251
939681	AE1-198 C	26.7976
939741	AE1-205 C O1	8.6880
940101	AE1-252 C O1	10.5562
940501	AE2-035 C	1.3002
940621	AE2-049 C O1	5.0382

940631	AE2-050 C O1	6.3035
941131	AE2-107 C	3.8704
941551	AE2-152 C O1	6.2768
941561	AE2-153 C O1	4.7339
941731	AE2-173 O1	5.1714
942111	AE2-223 C	2.0168
942421	AE2-255 C O1	3.0143
942651	AE2-281 C O1	0.8354
942881	AE2-307 C O1	11.5565
942911	AE2-310 C O1	4.8921
942991	AE2-321 C	8.1592
943121	AE2-341 C	12.7307
943381	AF1-009 C	0.3165
943401	AF1-011 C	1.7123
943411	AF1-012 C	6.3366
943591	AF1-030 C O2	4.5204
943801	AF1-048 C	2.0215
943921	AF1-060	0.7429
944041	AF1-072	1.1395
944911	AF1-156 C	6.4150
945351	AF1-200 FTIR	149.6704
946161	AF1-281 C O2	8.4678
946321	AF1-296 C O2	2.0924
946501	AF1-314 C	2.9718
946521	AF1-316 C O2	3.4431
946531	AF1-317 C O1	1.2070
946541	AF1-318 C O2	3.0976
946661	AF1-330 C	1.0600
946671	AF1-331	1.2755
946681	AF1-332 C	1.2070
951721	J643	27.1477
953871	J847	13.8159
954751	J351	446.6809
955741	J1058	38.3430
WEC	WEC	4.4094
CBM-W2	CBM-W2	25.6183
NY	NY	1.3571
CBM-W1	CBM-W1	79.0132
TVA	TVA	1.7136
CHEOAH	CHEOAH	0.0115
CBM-S1	CBM-S1	7.0205
MADISON	MADISON	22.9260
MEC	MEC	15.3561
BLUEG	BLUEG	1.7169
TRIMBLE	TRIMBLE	0.6038
CATAWBA	CATAWBA	0.3080

Index 2

ID	FROM BUS#	FROM BUS	FROM BUS	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT	POST PROJECT	AC DC	MW IMPACT
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			AREA								LOADING %	LOADING %		
44342126	270678	BYRON ; B	CE	270694	CHERRY VA; B	CE	1	COMED_P4_006- 45-BT7-8__	breaker	1441.0	115.25	185.61	DC	1012.9

Bus #	Bus	MW Impact
274656	BYRON ;1U	81.1826
274760	LEE CO EC;1U	3.4478
274761	LEE CO EC;2U	3.4478
274763	LEE CO EC;4U	3.4128
274764	LEE CO EC;5U	3.4565
274765	LEE CO EC;6U	3.4565
274766	LEE CO EC;7U	3.4041
274767	LEE CO EC;8U	3.4041
274859	EASYSR;U1 E	25.5457
274860	EASYSR;U2 E	25.5457
276160	W4-084	0.2851
276172	Z1-108 BAT	1.7754
293516	O-009 E1	8.6742
293517	O-009 E2	4.4058
293518	O-009 E3	4.8520
293715	O-029 E	9.2737
293716	O-029 E	5.0846
293717	O-029 E	4.6733
919581	AA2-030	25.5877
920273	AA2-123 BAT	2.9120
925161	AB2-173 (Withdrawn : 12/24/2019)	4.5634
937531	AD2-214 C	4.6322
937532	AD2-214 E	3.0881
939051	AE1-134 1	1.9883
939061	AE1-134 2	1.9883
943401	AF1-011 C	1.6363
943402	AF1-011 E	1.7260
943411	AF1-012 C	7.5906
943412	AF1-012 E	5.0604
943803	AF1-048 BAT	7.8081
943922	AF1-060 BAT	1.4410
945351	AF1-200 FTIR	1012.9009
946161	AF1-281 C O2	19.7447
946162	AF1-281 E O2	11.2827
946321	AF1-296 C O2	2.4439
946322	AF1-296 E O2	11.4416
946531	AF1-317 C O1	1.4458
946532	AF1-317 E O1	2.1688
946681	AF1-332 C	1.4458
946682	AF1-332 E	2.1688
954792	J952 E	4.1607
954901	J963	0.8428
955051	J981 C	2.4027
955052	J981 E	12.9993
955971	J1084	19.4550
956411	J1131	10.4710
CBM-W2	CBM-W2	6.8878

NY	NY	0.1963
TVA	TVA	0.6748
O-066	O-066	2.2982
CBM-S2	CBM-S2	0.0289
CBM-S1	CBM-S1	3.0502
TILTON	TILTON	0.0025
G-007	G-007	0.3546
MADISON	MADISON	1.2842
MEC	MEC	6.4116
GIBSON	GIBSON	0.0339
BLUEG	BLUEG	0.3594
TRIMBLE	TRIMBLE	0.1241
CATAWBA	CATAWBA	0.0017

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
60838939	270678	BYRON ; B	CE	930480	AB1-089 TAP	CE	1	COMED_P1-2_345-L97116_-R_FSA	single	2058.0	73.54	103.76	DC	621.06

Bus #	Bus	MW Impact
274656	BYRON ;1U	49.7772
274657	BYRON ;2U	48.5028
274822	ROCKFORD ;11	3.4407
274824	ROCKFORD ;12	3.4107
274830	U3-021 1	13.2164
274831	U3-021 2	13.2164
276160	W4-084	0.4416
290266	R-018	0.2011
919581	AA2-030	19.2088
924471	AB2-096	91.7805
925161	AB2-173 (Withdrawn : 12/24/2019)	3.4258
926431	AC1-114	3.8162
927511	AC1-113 1	1.9082
927521	AC1-113 2	2.2449
932881	AC2-115 1	4.4898
932891	AC2-115 2	4.4898
932921	AC2-116	1.3357
933341	AC2-147 C	1.0593
933911	AD1-013 C	1.1506
933931	AD1-016 C	0.5183
934431	AD1-067 C	0.0845
934651	AD1-096 C	1.2600
934701	AD1-098 C O1	4.5760
934971	AD1-129 C	1.0630
936791	AD2-102 C	28.9692

937001	AD2-134 C	1.7594
937311	AD2-172 C	3.6466
937531	AD2-214 C	4.2677
938861	AE1-114 C O1	5.1448
939051	AE1-134 1	1.4927
939061	AE1-134 2	1.4927
940501	AE2-035 C	1.9327
941131	AE2-107 C	1.9329
942991	AE2-321 C	5.0560
943381	AF1-009 C	0.2098
943401	AF1-011 C	1.5591
943411	AF1-012 C	5.5211
943801	AF1-048 C	1.2527
943921	AF1-060	1.1044
945351	AF1-200 FTIR	621.0616
946161	AF1-281 C O2	13.1104
946321	AF1-296 C O2	2.0080
946501	AF1-314 C	4.4176
946531	AF1-317 C O1	1.0516
946661	AF1-330 C	0.5926
946671	AF1-331	0.7920
946681	AF1-332 C	1.0516
950101	J390	89.0206
952431	J760	5.4564
952511	J584 C	1.1306
953111	J807 C	1.3195
953681	J818	15.5526
953691	J819 C	1.6072
953901	J850	23.4475
954001	J864	4.7936
955221	J1000	4.0785
955251	J1003	3.8685
955971	J1084	12.2085
956371	J1127	6.0040
956391	J1129	9.0057
956581	J1154	7.8322
956901	J1188	6.1855
WEC	WEC	1.2647
CBM-W2	CBM-W2	9.4513
NY	NY	0.3263
CBM-W1	CBM-W1	48.6139
TVA	TVA	0.9688
CBM-S1	CBM-S1	4.2089
TILTON	TILTON	0.1814
MADISON	MADISON	13.1322
MEC	MEC	10.7480
GIBSON	GIBSON	0.1321
BLUEG	BLUEG	0.7152
TRIMBLE	TRIMBLE	0.2421
CATAWBA	CATAWBA	0.0178

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
44342962	270679	BYRON ; R	CE	270695	CHERRY VA; R	CE	1	COMED_P1-2_345-L0621_B-R	single	1479.0	87.27	117.68	DC	463.86

Bus #	Bus	MW Impact
274656	BYRON ;1U	37.1776
274657	BYRON ;2U	36.5767
274699	CORDOVA ;1C	1.2422
274700	CORDOVA ;2C	1.2422
274701	CORDOVA ;1S	1.3974
274715	NELSON EC;1C	1.9031
274716	NELSON EC;1S	1.3886
274717	NELSON EC;2C	1.9178
274718	NELSON EC;2S	1.4010
274760	LEE CO EC;1U	1.5337
274761	LEE CO EC;2U	1.5337
274762	LEE CO EC;3U	1.5123
274763	LEE CO EC;4U	1.5181
274764	LEE CO EC;5U	1.5376
274765	LEE CO EC;6U	1.5376
274766	LEE CO EC;7U	1.5142
274767	LEE CO EC;8U	1.5142
274857	BIG SKY ;U1	0.4665
274858	BIG SKY ;U2	0.4665
919221	AA1-146	1.7753
919581	AA2-030	12.7186
925161	AB2-173 (Withdrawn : 12/24/2019)	2.2683
927531	AC1-185 1	0.1166
927541	AC1-185 2	0.1166
927551	AC1-185 3	0.1166
927561	AC1-185 4	0.1166
927571	AC1-185 5	0.1166
927581	AC1-185 6	0.1166
927591	AC1-185 7	0.1166
927601	AC1-185 8	0.1166
930481	AB1-089	103.1360
937531	AD2-214 C	1.8117
939051	AE1-134 1	0.9883
939061	AE1-134 2	0.9883
943411	AF1-012 C	7.1158
945351	AF1-200 FTIR	463.8579
946161	AF1-281 C O2	19.4964
946321	AF1-296 C O2	2.3059
946531	AF1-317 C O1	1.3554
946681	AF1-332 C	1.3554
955971	J1084	8.1480

CBM-W2	CBM-W2	2.1294
NY	NY	0.1786
TVA	TVA	0.1288
CHEOAH	CHEOAH	0.0280
CBM-S1	CBM-S1	0.2556
TILTON	TILTON	0.1090
MADISON	MADISON	1.6430
MEC	MEC	3.0461
GIBSON	GIBSON	0.1021
CALDERWOOD	CALDERWOOD	0.0263
BLUEG	BLUEG	0.4409
TRIMBLE	TRIMBLE	0.1458
CATAWBA	CATAWBA	0.0522

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
44342673	270694	CHERRY VA; B	CE	270759	GARDEN PR; R	CE	1	COMED_P1-2_345-L0626_B-R-B	single	1479.0	102.58	138.15	DC	525.42

Bus #	Bus	MW Impact
274656	BYRON ;1U	42.1114
274657	BYRON ;2U	41.1894
274760	LEE CO EC;1U	1.9754
274761	LEE CO EC;2U	1.9754
274763	LEE CO EC;4U	1.9554
274764	LEE CO EC;5U	1.9804
274765	LEE CO EC;6U	1.9804
274766	LEE CO EC;7U	1.9504
274767	LEE CO EC;8U	1.9504
274822	ROCKFORD ;11	3.8569
274823	ROCKFORD ;21	3.9580
274824	ROCKFORD ;12	3.8233
274856	ECOGROVE ;U1	0.6030
276160	W4-084	0.4261
276162	X1-087	0.4632
290266	R-018	0.2279
919581	AA2-030	17.0282
925161	AB2-173 (Withdrawn : 12/24/2019)	3.0369
926431	AC1-114	5.0332
927511	AC1-113 1	2.5165
927521	AC1-113 2	2.5165
930481	AB1-089	141.9825
932881	AC2-115 1	5.0330
932891	AC2-115 2	5.0330
932921	AC2-116	1.7616

933341	AC2-147 C	1.0610
933911	AD1-013 C	1.2866
934431	AD1-067 C	0.0927
934651	AD1-096 C	1.6485
934701	AD1-098 C O1	4.9705
934971	AD1-129 C	1.1407
936791	AD2-102 C	28.8924
937001	AD2-134 C	1.9303
937311	AD2-172 C	4.5358
937531	AD2-214 C	3.8616
938861	AE1-114 C O1	6.1972
939051	AE1-134 1	1.3232
939061	AE1-134 2	1.3232
940501	AE2-035 C	4.5358
941131	AE2-107 C	2.2573
942991	AE2-321 C	4.0947
943381	AF1-009 C	0.2279
943401	AF1-011 C	1.4321
943411	AF1-012 C	4.9459
943801	AF1-048 C	1.0145
943921	AF1-060	2.5919
945351	AF1-200 FTIR	525.4167
946161	AF1-281 C O2	11.3129
946321	AF1-296 C O2	1.7836
946501	AF1-314 C	10.3675
946531	AF1-317 C O1	0.9421
946671	AF1-331	0.8856
946681	AF1-332 C	0.9421
950101	J390	86.1284
952431	J760	5.4840
952511	J584 C	1.0925
953111	J807 C	1.2468
953681	J818	14.6899
953691	J819 C	1.5319
953901	J850	21.8575
954001	J864	4.5392
955221	J1000	3.7985
955251	J1003	3.4750
955971	J1084	11.0085
956371	J1127	5.7909
956391	J1129	8.8075
956581	J1154	7.3988
956901	J1188	5.9840
WEC	WEC	0.6631
CBM-W2	CBM-W2	8.5913
NY	NY	0.2765
CBM-W1	CBM-W1	41.2079
TVA	TVA	0.8918
CBM-S1	CBM-S1	3.9277
TILTON	TILTON	0.1424
MADISON	MADISON	11.5476
MEC	MEC	9.5499
GIBSON	GIBSON	0.1037

BLUEG	BLUEG	0.5920
TRIMBLE	TRIMBLE	0.2015
CATAWBA	CATAWBA	0.0077

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
44342594	270759	GARDEN PR; R	CE	270883	SILVER LK; R	CE	1	COMED_P1-2_345-L0626_B-R-B	single	1479.0	115.08	150.65	DC	525.42

Bus #	Bus	MW Impact
274656	BYRON ;1U	42.1114
274657	BYRON ;2U	41.1894
274823	ROCKFORD ;21	3.9580
274830	U3-021 1	25.1259
274831	U3-021 2	25.1259
276160	W4-084	0.4261
290266	R-018	0.2279
919581	AA2-030	17.0282
924471	AB2-096	174.4855
925161	AB2-173 (Withdrawn : 12/24/2019)	3.0369
926431	AC1-114	5.0332
927511	AC1-113 1	2.1390
927521	AC1-113 2	2.1390
930481	AB1-089	141.9825
932881	AC2-115 1	4.2781
932891	AC2-115 2	4.2781
932921	AC2-116	1.7616
933341	AC2-147 C	1.0610
933911	AD1-013 C	1.2866
934431	AD1-067 C	0.0927
934651	AD1-096 C	1.4012
934701	AD1-098 C O1	4.9705
934971	AD1-129 C	1.1407
936791	AD2-102 C	24.5585
937001	AD2-134 C	1.9303
937311	AD2-172 C	3.8554
937531	AD2-214 C	3.8616
938861	AE1-114 C O1	5.2676
939051	AE1-134 1	1.3232
939061	AE1-134 2	1.3232
940501	AE2-035 C	2.0434
941131	AE2-107 C	2.2573
942991	AE2-321 C	4.0947
943381	AF1-009 C	0.2279
943401	AF1-011 C	1.4321

943411	AF1-012 C	4.9459
943801	AF1-048 C	1.0145
943921	AF1-060	1.1676
945351	AF1-200 FTIR	525.4167
946161	AF1-281 C O2	11.3129
946321	AF1-296 C O2	1.7836
946501	AF1-314 C	4.6706
946531	AF1-317 C O1	0.9421
946671	AF1-331	0.8856
946681	AF1-332 C	0.9421
950101	J390	86.1284
952431	J760	5.4840
952511	J584 C	1.0925
953111	J807 C	1.2468
953681	J818	14.6899
953691	J819 C	1.5319
953901	J850	21.8575
954001	J864	4.5392
955221	J1000	3.7985
955251	J1003	3.4750
955971	J1084	11.0085
956371	J1127	5.7909
956391	J1129	8.8075
956581	J1154	7.3988
956901	J1188	5.9840
WEC	WEC	0.6631
CBM-W2	CBM-W2	8.5913
NY	NY	0.2765
CBM-W1	CBM-W1	41.2079
TVA	TVA	0.8918
CBM-S1	CBM-S1	3.9277
TILTON	TILTON	0.1424
MADISON	MADISON	11.5476
MEC	MEC	9.5499
GIBSON	GIBSON	0.1037
BLUEG	BLUEG	0.5920
TRIMBLE	TRIMBLE	0.2015
CATAWBA	CATAWBA	0.0077

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
44342058	270770	GOODINGS ;4B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_116-45-L11614_	breaker	1802.0	119.87	124.78	DC	165.43

Bus #	Bus	MW Impact
274730	ELWOOD EC;6P	4.1109
274732	ELWOOD EC;7P	4.1109

274734	ELWOOD EC;8P	4.1109
274736	ELWOOD EC;9P	4.1109
274830	U3-021 1	3.5116
274831	U3-021 2	3.5116
274859	EASYR;U1 E	6.6104
274860	EASYR;U2 E	6.6104
274861	TOP CROP ;1U	0.8105
274862	TOP CROP ;2U	1.5733
276160	W4-084	0.2529
276161	W4-086	0.1241
276167	Z1-106 E2	0.6789
276168	Z1-106 E1	0.6791
276170	Z1-108 E	1.4117
290021	O50 E	20.5455
290051	GSG-6; E	5.7036
290108	LEEDK;1U E	12.8333
293516	O-009 E1	5.6903
293517	O-009 E2	2.8902
293518	O-009 E3	3.1829
293644	O22 E1	23.2266
293645	O22 E2	45.0870
293715	O-029 E	6.0836
293716	O-029 E	3.3355
293717	O-029 E	3.0657
293771	O-035 E	4.0976
294401	BSHIL;1U E	5.7494
294410	BSHIL;2U E	5.7494
294763	P-046 E	5.5053
914321	Y2-103 (Withdrawn : 12/24/2019)	26.2211
915011	Y3-013 1	2.1851
915021	Y3-013 2	2.1851
915031	Y3-013 3	2.1851
918052	AA1-018 E OP	15.5739
919581	AA2-030	10.7854
919621	AA2-039 C	1.4014
919622	AA2-039 E	9.3787
920272	AA2-123 E	1.3969
924471	AB2-096	24.3861
925161	AB2-173 (Withdrawn : 12/24/2019)	1.9235
925581	AC1-033 C	0.9416
925582	AC1-033 E	6.3035
926311	AC1-109 1	0.9948
926321	AC1-109 2	0.9948
926331	AC1-110 1	1.0220
926341	AC1-110 2	1.0220
926351	AC1-111 1	0.3898
926361	AC1-111 2	0.3898
926371	AC1-111 3	0.3898
926381	AC1-111 4	0.3898
926391	AC1-111 5	0.3898
926401	AC1-111 6	0.3898
926431	AC1-114	1.3801
926821	AC1-168 C O1	0.5814

926822	AC1-168 E O1	3.9017
926841	AC1-171 C O1	0.8192
926842	AC1-171 E O1	5.4720
927091	AC1-204 1	93.1157
927101	AC1-204 2	92.6177
927201	AC1-214 C O1	1.3151
927202	AC1-214 E O1	4.1806
927451	AC1-142A 1	3.3015
927461	AC1-142A 2	3.3228
927511	AC1-113 1	0.6900
927521	AC1-113 2	0.6900
930481	AB1-089	38.0685
930741	AB1-122 1O1	55.2825
930751	AB1-122 2O1	76.6604
932881	AC2-115 1	1.3801
932891	AC2-115 2	1.3801
932921	AC2-116	0.4830
933341	AC2-147 C	0.5211
933342	AC2-147 E	0.8502
933431	AC2-156 C O1	0.4334
933432	AC2-156 E O1	0.7071
933911	AD1-013 C	0.9994
933912	AD1-013 E	1.5965
933931	AD1-016 C	0.5308
933932	AD1-016 E	0.8661
934051	AD1-031 C O1	1.9114
934052	AD1-031 E O1	3.1187
934101	AD1-039 1	5.4177
934111	AD1-039 2	7.5127
934431	AD1-067 C	0.0716
934432	AD1-067 E	0.3011
934651	AD1-096 C	0.5221
934652	AD1-096 E	0.8518
934701	AD1-098 C O1	3.7737
934702	AD1-098 E O1	2.7552
934871	AD1-116 C	0.9070
934872	AD1-116 E	1.4798
934971	AD1-129 C	0.5203
934972	AD1-129 E	0.3468
935001	AD1-133 C O1	12.4664
935002	AD1-133 E O1	8.3110
936291	AD2-038 C O1	2.3722
936292	AD2-038 E O1	15.8756
936511	AD2-066 C O1	5.3771
936512	AD2-066 E O1	3.5847
936791	AD2-102 C	8.2681
936792	AD2-102 E	5.5121
937001	AD2-134 C	1.4910
937002	AD2-134 E	6.1594
937311	AD2-172 C	1.4451
937312	AD2-172 E	1.9957
937401	AD2-194 1	10.0133
937411	AD2-194 2	9.9598

937531	AD2-214 C	2.7730
937532	AD2-214 E	1.8487
938511	AE1-070 1	11.7657
938521	AE1-070 2	10.7068
938851	AE1-113 C	8.4750
938852	AE1-113 E	30.0478
938861	AE1-114 C O1	2.3340
938862	AE1-114 E O1	7.9629
939051	AE1-134 1	0.8381
939061	AE1-134 2	0.8381
939321	AE1-163 C O1	5.9609
939322	AE1-163 E O1	36.6173
939683	AE1-198 BAT	26.8833
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.3226
940501	AE2-035 C	0.7659
940502	AE2-035 E	1.0577
941131	AE2-107 C	2.0348
941132	AE2-107 E	1.3565
942421	AE2-255 C O1	3.2102
942422	AE2-255 E O1	9.6307
942651	AE2-281 C O1	0.8516
942652	AE2-281 E O1	5.2310
942883	AE2-307 BAT	7.2855
942991	AE2-321 C	4.6756
942992	AE2-321 E	2.3029
943381	AF1-009 C	0.1730
943382	AF1-009 E	0.6921
943401	AF1-011 C	1.0734
943402	AF1-011 E	1.1322
943411	AF1-012 C	3.8504
943412	AF1-012 E	2.5669
943422	AF1-013 E	0.8651
943801	AF1-048 C	1.1584
943802	AF1-048 E	0.7723
943921	AF1-060	0.4377
944041	AF1-072	0.6386
945351	AF1-200 FTIR	87.6753
946161	AF1-281 C O2	5.1093
946162	AF1-281 E O2	2.9196
946321	AF1-296 C O2	1.3420
946322	AF1-296 E O2	6.2830
946501	AF1-314 C	1.7507
946502	AF1-314 E	8.1954
946521	AF1-316 C O2	2.2433
946522	AF1-316 E O2	3.3649
946531	AF1-317 C O1	0.7334
946532	AF1-317 E O1	1.1001
946541	AF1-318 C O2	1.6959
946542	AF1-318 E O2	7.9407
946661	AF1-330 C	0.6071
946662	AF1-330 E	0.1333
946671	AF1-331	0.6879
946681	AF1-332 C	0.7334

946682	AF1-332 E	1.1001
954981	J974 C	3.4047
954982	J974 E	18.4203
990901	L-005 E	8.8179
WEC	WEC	2.6060
CBM-W2	CBM-W2	15.9951
NY	NY	0.5524
CBM-W1	CBM-W1	38.3557
TVA	TVA	1.3202
O-066	O-066	6.4714
CBM-S1	CBM-S1	5.8106
G-007	G-007	1.0005
MADISON	MADISON	13.7773
MEC	MEC	10.0727
GIBSON	GIBSON	0.0202
BLUEG	BLUEG	0.8819
TRIMBLE	TRIMBLE	0.3061
CATAWBA	CATAWBA	0.0577

Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44342698	270828	NELSON ; B	CE	943410	AF1-012 TAP	CE	1	COMED_P1-2_345-L0626__B-R-B	single	1656.0	84.78	101.85	DC	286.02

Bus #	Bus	MW Impact
274656	BYRON ;1U	22.9240
274657	BYRON ;2U	22.3211
274662	QUAD CITI;1U	24.8212
274663	QUAD CITI;2U	24.8679
274699	CORDOVA ;1C	4.3621
274700	CORDOVA ;2C	4.3621
274701	CORDOVA ;1S	4.9074
274715	NELSON EC;1C	6.2145
274716	NELSON EC;1S	4.5344
274717	NELSON EC;2C	6.2625
274718	NELSON EC;2S	4.5750
274760	LEE CO EC;1U	2.3720
274761	LEE CO EC;2U	2.3720
274762	LEE CO EC;3U	2.3389
274763	LEE CO EC;4U	2.3479
274764	LEE CO EC;5U	2.3780
274765	LEE CO EC;6U	2.3780
274766	LEE CO EC;7U	2.3419
274767	LEE CO EC;8U	2.3419
274857	BIG SKY ;U1	0.7215
274858	BIG SKY ;U2	0.7215
276156	O-029 C	0.3064
276157	O-029 C	0.3312
276158	O-029 C	0.6045
276160	W4-084	0.7356
293513	O-009 C1	0.5659
293514	O-009 C2	0.2871
293515	O-009 C3	0.3174
919221	AA1-146	5.7973
919581	AA2-030	41.5328
919621	AA2-039 C	1.5479
925161	AB2-173 (Withdrawn : 12/24/2019)	7.4071
925581	AC1-033 C	1.0401
926431	AC1-114	1.7904
927201	AC1-214 C O1	1.2340
927511	AC1-113 1	0.8951
927521	AC1-113 2	0.8951
927531	AC1-185 1	0.1804
927541	AC1-185 2	0.1804
927551	AC1-185 3	0.1804

927561	AC1-185 4	0.1804
927571	AC1-185 5	0.1804
927581	AC1-185 6	0.1804
927591	AC1-185 7	0.1804
927601	AC1-185 8	0.1804
930481	AB1-089	77.2695
932881	AC2-115 1	1.7903
932891	AC2-115 2	1.7903
932921	AC2-116	0.6267
933341	AC2-147 C	1.3691
934051	AD1-031 C O1	2.1125
934431	AD1-067 C	0.0767
934651	AD1-096 C	0.8862
934701	AD1-098 C O1	4.3470
934971	AD1-129 C	0.4876
936791	AD2-102 C	11.3995
937001	AD2-134 C	1.5973
937311	AD2-172 C	2.4096
937531	AD2-214 C	8.5084
938861	AE1-114 C O1	5.5903
939051	AE1-134 1	3.2274
939061	AE1-134 2	3.2274
940501	AE2-035 C	1.2771
943381	AF1-009 C	0.1993
943401	AF1-011 C	5.7746
943921	AF1-060	0.7298
945351	AF1-200 FTIR	286.0193
946161	AF1-281 C O2	30.1532
946321	AF1-296 C O2	7.9233
946501	AF1-314 C	2.9190
950471	J438 C	2.5906
951381	J504	4.5690
951421	J514	2.6997
951511	J530 C	4.1705
953111	J807 C	1.0606
954091	J873 C	2.7072
954861	J959 C	1.9747
954901	J963	1.0700
955051	J981 C	2.8919
955211	J999	9.5460
955221	J1000	4.2440
955971	J1084	23.6700
956411	J1131	12.6770
956831	J1181 C	2.5600
CPL	CPL	0.0966
WEC	WEC	0.7809
CBM-W2	CBM-W2	16.9779
NY	NY	0.2588
CBM-W1	CBM-W1	51.9665
TVA	TVA	1.9236
CBM-S2	CBM-S2	1.8785
CBM-S1	CBM-S1	9.3038
MADISON	MADISON	14.8821

MEC	MEC	15.6644
BLUEG	BLUEG	0.3385
TRIMBLE	TRIMBLE	0.1280

Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
60838780	274768	LEE CO EC;BP	CE	270828	NELSON ; B	CE	1	COMED_P1-2_345-L0626_B-R-B	single	1479.0	70.69	122.55	DC	775.07

Bus #	Bus	MW Impact
274656	BYRON ;1U	62.1208
274657	BYRON ;2U	60.4561
274760	LEE CO EC;1U	6.6836
274761	LEE CO EC;2U	6.6836
274762	LEE CO EC;3U	6.5904
274763	LEE CO EC;4U	6.6159
274764	LEE CO EC;5U	6.7006
274765	LEE CO EC;6U	6.7006
274766	LEE CO EC;7U	6.5989
274767	LEE CO EC;8U	6.5989
274822	ROCKFORD ;11	3.6684
274823	ROCKFORD ;21	3.7628
274824	ROCKFORD ;12	3.6364
274830	U3-021 1	9.5263
274831	U3-021 2	9.5263
274857	BIG SKY ;U1	2.0330
274858	BIG SKY ;U2	2.0330
290266	R-018	0.2144
924471	AB2-096	66.1551
926431	AC1-114	4.7850
927511	AC1-113 1	2.3935
927521	AC1-113 2	2.3935
927531	AC1-185 1	0.5083
927541	AC1-185 2	0.5083
927551	AC1-185 3	0.5083
927561	AC1-185 4	0.5083
927571	AC1-185 5	0.5083
927581	AC1-185 6	0.5083
927591	AC1-185 7	0.5083
927601	AC1-185 8	0.5083
930481	AB1-089	209.4675
932881	AC2-115 1	4.7870
932891	AC2-115 2	4.7870
932921	AC2-116	1.6748
933931	AD1-016 C	1.0350

934971	AD1-129 C	1.3516
936791	AD2-102 C	33.5100
937311	AD2-172 C	2.5370
940501	AE2-035 C	1.3446
942991	AE2-321 C	9.3837
943801	AF1-048 C	2.3248
943921	AF1-060	0.7684
945351	AF1-200 FTIR	775.0705
946161	AF1-281 C O2	84.9632
946501	AF1-314 C	3.0734
946661	AF1-330 C	1.1836
950101	J390	131.1406
952431	J760	7.3800
952511	J584 C	1.4264
953681	J818	23.9667
953901	J850	35.0500
955251	J1003	6.2790
955581	J1042 C	4.1061
955601	J1044 C	13.1720
955631	J1047	26.3440
955671	J1051	6.1325
955691	J1053	35.2290
956371	J1127	7.8932
956391	J1129	12.9643
956581	J1154	12.0675
956901	J1188	8.6880
DUCKCREEK	DUCKCREEK	4.6106
NEWTON	NEWTON	1.7171
FARMERCITY	FARMERCITY	0.2326
WEC	WEC	2.6507
NY	NY	0.3639
CBM-W1	CBM-W1	7.1933
PRAIRIE	PRAIRIE	6.5298
COFFEEN	COFFEEN	1.0834
EDWARDS	EDWARDS	1.4606
CHEOAH	CHEOAH	0.6336
TILTON	TILTON	0.6747
GIBSON	GIBSON	0.5416
CALDERWOOD	CALDERWOOD	0.6327
BLUEG	BLUEG	1.4253
TRIMBLE	TRIMBLE	0.4458
CATAWBA	CATAWBA	0.3672

Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44342884	930480	AB1-089 TAP	CE	270916	WAYNE ; B	CE	1	COMED_P1-2_345-L97116_-R_FSA	single	2058.0	84.66	114.88	DC	621.06

Bus #	Bus	MW Impact
274656	BYRON ;1U	49.7772
274657	BYRON ;2U	48.5028
274822	ROCKFORD ;11	3.4407
274824	ROCKFORD ;12	3.4107
274830	U3-021 1	13.2164
274831	U3-021 2	13.2164
276160	W4-084	0.4416
290266	R-018	0.2011
919581	AA2-030	19.2088
924471	AB2-096	91.7805
925161	AB2-173 (Withdrawn : 12/24/2019)	3.4258
926431	AC1-114	3.8162
927511	AC1-113 1	1.9082
927521	AC1-113 2	1.9082
930481	AB1-089	224.1085
932881	AC2-115 1	4.4898
932891	AC2-115 2	4.4898
932921	AC2-116	1.3357
933341	AC2-147 C	1.0593
933911	AD1-013 C	1.1506
933931	AD1-016 C	0.5183
934431	AD1-067 C	0.0845
934651	AD1-096 C	1.2600
934701	AD1-098 C O1	4.5760
934971	AD1-129 C	1.0630
936791	AD2-102 C	28.9692
937001	AD2-134 C	1.7594
937311	AD2-172 C	3.6466
937531	AD2-214 C	4.2677
938861	AE1-114 C O1	5.1448
939051	AE1-134 1	1.4927
939061	AE1-134 2	1.4927
940501	AE2-035 C	1.9327
941131	AE2-107 C	1.9329
942991	AE2-321 C	5.0560
943381	AF1-009 C	0.2098
943401	AF1-011 C	1.5591
943411	AF1-012 C	5.5211
943801	AF1-048 C	1.2527
943921	AF1-060	1.1044
945351	AF1-200 FTIR	621.0616
946161	AF1-281 C O2	13.1104
946321	AF1-296 C O2	2.0080
946501	AF1-314 C	4.4176
946531	AF1-317 C O1	1.0516
946661	AF1-330 C	0.5926
946671	AF1-331	0.7920
946681	AF1-332 C	1.0516
950101	J390	89.0206
952431	J760	5.4564

952511	J584 C	1.1306
953111	J807 C	1.3195
953681	J818	15.5526
953691	J819 C	1.6072
953901	J850	23.4475
954001	J864	4.7936
955221	J1000	4.0785
955241	J1002	6.6211
955251	J1003	3.8685
955971	J1084	12.2085
956371	J1127	6.0040
956391	J1129	9.0057
956581	J1154	7.8322
956901	J1188	6.1855
WEC	WEC	1.2647
CBM-W2	CBM-W2	9.4513
NY	NY	0.3263
CBM-W1	CBM-W1	48.6139
TVA	TVA	0.9688
CBM-S1	CBM-S1	4.2089
TILTON	TILTON	0.1814
MADISON	MADISON	13.1322
MEC	MEC	10.7480
GIBSON	GIBSON	0.1321
BLUEG	BLUEG	0.7152
TRIMBLE	TRIMBLE	0.2421
CATAWBA	CATAWBA	0.0178

Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44342607	943410	AF1-012 TAP	CE	270730	ELECT JCT; B	CE	1	Base Case	single	1334.0	94.39	100.59	DC	192.04

Bus #	Bus	MW Impact
274662	QUAD CITI;1U	22.7165
274663	QUAD CITI;2U	22.7587
274699	CORDOVA ;1C	3.9927
274700	CORDOVA ;2C	3.9927
274701	CORDOVA ;1S	4.4918
274715	NELSON EC;1C	5.7113
274716	NELSON EC;1S	4.1673
274717	NELSON EC;2C	5.7554
274718	NELSON EC;2S	4.2046
274760	LEE CO EC;1U	2.0281
274761	LEE CO EC;2U	2.0281
274762	LEE CO EC;3U	1.9998
274763	LEE CO EC;4U	2.0075

274764	LEE CO EC;5U	2.0332
274765	LEE CO EC;6U	2.0332
274766	LEE CO EC;7U	2.0024
274767	LEE CO EC;8U	2.0024
274857	BIG SKY ;U1	0.6169
274858	BIG SKY ;U2	0.6169
276156	O-029 C	0.2795
276157	O-029 C	0.3021
276158	O-029 C	0.5514
276160	W4-084	0.6609
293513	O-009 C1	0.5161
293514	O-009 C2	0.2618
293515	O-009 C3	0.2895
919221	AA1-146	5.3279
919581	AA2-030	38.1698
919621	AA2-039 C	1.4170
925161	AB2-173 (Withdrawn : 12/24/2019)	6.8074
925581	AC1-033 C	0.9522
926431	AC1-114	1.2792
927201	AC1-214 C O1	1.1313
927511	AC1-113 1	0.6395
927521	AC1-113 2	0.6395
927531	AC1-185 1	0.1542
927541	AC1-185 2	0.1542
927551	AC1-185 3	0.1542
927561	AC1-185 4	0.1542
927571	AC1-185 5	0.1542
927581	AC1-185 6	0.1542
927591	AC1-185 7	0.1542
927601	AC1-185 8	0.1542
930481	AB1-089	34.3052
932881	AC2-115 1	1.2789
932891	AC2-115 2	1.2789
932921	AC2-116	0.4477
933341	AC2-147 C	1.1927
933911	AD1-013 C	0.7887
934051	AD1-031 C O1	1.9338
934431	AD1-067 C	0.0653
934651	AD1-096 C	0.7167
934701	AD1-098 C O1	3.7236
936791	AD2-102 C	7.9081
937001	AD2-134 C	1.3589
937311	AD2-172 C	1.9064
937531	AD2-214 C	7.7671
938861	AE1-114 C O1	4.7423
939051	AE1-134 1	2.9661
939061	AE1-134 2	2.9661
940501	AE2-035 C	1.0104
943381	AF1-009 C	0.1707
943401	AF1-011 C	5.2668
943411	AF1-012 C	36.2502
943921	AF1-060	0.5774
945351	AF1-200 FTIR	101.7828

946161	AF1-281 C O2	25.7810
946321	AF1-296 C O2	7.2607
946501	AF1-314 C	2.3094
946531	AF1-317 C O1	6.9048
946671	AF1-331	0.5429
946681	AF1-332 C	6.9048
950181	J407 C	2.4216
950401	J041 C	1.2116
950471	J438 C	2.3790
950501	J449 C	2.6139
951031	J344 C	2.1510
951221	J475 C	2.6052
951381	J504	4.1715
951421	J514	2.4711
951441	J523 C	1.8207
951511	J530 C	3.8425
951841	J555 C	1.4224
952021	J614 C	0.6291
953011	J885 C	0.6044
953111	J807 C	0.8692
953231	J447 C	1.5018
954091	J873 C	2.4520
954301	J898 C	0.9468
954861	J959 C	1.7704
954901	J963	0.9851
954931	J967 C	1.4772
955051	J981 C	2.6720
955211	J999	8.7430
955221	J1000	3.6485
955871	J1072	9.4695
955971	J1084	21.8655
956231	J1110	5.9830
956381	J1128	8.9895
956411	J1131	11.7120
956761	J1174	17.9190
956771	J1175 C	2.7954
956781	J1176 C	1.4244
956831	J1181 C	2.3001
CPL	CPL	0.1131
WEC	WEC	0.5638
CBM-W2	CBM-W2	15.5856
NY	NY	0.2096
CBM-W1	CBM-W1	44.6232
TVA	TVA	1.7822
CBM-S2	CBM-S2	1.9190
CBM-S1	CBM-S1	8.6989
MADISON	MADISON	12.9246
MEC	MEC	14.0674
BLUEG	BLUEG	0.2292
TRIMBLE	TRIMBLE	0.0907

Index 12

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44342185	255109	17MUNSTER	NIPS	270677	BURNHAM ;OR	CE	1	COMED_P4_023-65-BT4-5	breaker	1441.0	98.89	115.01	DC	240.3

Bus #	Bus	MW Impact
276153	W2-048 E	-0.7843
276165	Z1-106 BAT2	1.2303
276166	Z1-106 BAT1	1.2303
276171	Z1-107 BAT	2.5788
276172	Z1-108 BAT	2.4174
909052	X2-022 E	-11.3426
918052	AA1-018 E OP	-14.2849
920273	AA2-123 BAT	2.3714
936973	AD2-131 BAT	2.9590
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.5366
941732	AE2-173 BAT	5.0050
942883	AE2-307 BAT	9.2490
942913	AE2-310 BAT	5.7652
943383	AF1-009 BAT	2.9030
943403	AF1-011 BAT	3.2013
943423	AF1-013 BAT	2.9030
943803	AF1-048 BAT	6.1800
943922	AF1-060 BAT	1.3590
945352	AF1-200 NFW	240.3030
945882	AF1-253 BAT	5.3719
946163	AF1-281 BAT	2.2088
946533	AF1-317 BAT	5.5080
946683	AF1-332 BAT	5.5080
950311	G934 C	2.1546
950312	G934 E	8.6184
950351	J466	2.0835
950791	J201 C	0.2804
950792	J201 E	1.1216
950871	J246 C	0.1000
950872	J246 E	0.4002
950942	J325 E	0.2770
951531	J533 C	2.8584
951532	J533 E	11.4336
951571	J538 C	2.0976
951572	J538 E	8.3904
951721	J643	25.2542
951731	J446 C	1.7110
951732	J446 E	9.2570
951811	J513 C	0.9996
951812	J513 E	5.4083
951941	J602 C	2.1955
951942	J602 E	11.8785

952161	J571	0.4701
952201	J589 C	2.2218
952202	J589 E	12.0202
952312	J646 E	0.1099
952401	J752 C	1.0856
952402	J752 E	5.8734
952581	J740 C	2.0402
952582	J740 E	11.0378
952611	J717 C	2.2066
952612	J717 E	11.9384
952761	J728 C	2.0521
952762	J728 E	11.1174
952881	J758	14.4680
952971	J793	90.8214
953071	J794 C	0.1384
953072	J794 E	0.7487
953161	J837 C	2.0412
953162	J837 E	11.0434
953171	J838 C	1.0201
953172	J838 E	5.5189
953271	J701 C	0.5323
953272	J701 E	2.8796
953291	J796	16.8447
953321	J799	12.7764
953361	J806	10.6475
953421	J841	49.4629
953771	J832	7.1430
953781	J833	6.7540
953811	J839	6.8900
953871	J847	13.0599
953941	J857	8.9827
954111	J875	10.3110
954171	J883 C	0.9130
954172	J883 E	4.9398
954381	J906 C	1.1393
954382	J906 E	6.1637
954421	J913 C	10.4624
954591	J937	39.6381
954751	J351	75.6112
954941	J968 C	2.0402
954942	J968 E	11.0378
955021	J978 C	1.1260
955022	J978 E	6.0920
955071	J984 C	2.2408
955072	J984 E	12.1232
955121	J989	5.5824
955141	J992	13.7900
955181	J996	5.4184
955261	J1005	14.0940
955341	J1013	5.8176
955351	J1014 C	3.5005
955352	J1014 E	2.1003
955491	J1031 C	1.2219

955492	J1031 E	6.6111
955591	J1043 C	1.4490
955592	J1043 E	25.6763
955621	J1046	3.3200
955721	J1056 C	2.0941
955722	J1056 E	11.3299
955741	J1058	35.5650
955781	J1062	13.2800
955791	J1063	15.7710
955801	J1064 C	2.2695
955802	J1064 E	12.2785
955811	J1065 C	2.2364
955812	J1065 E	12.0996
955821	J1067	19.0824
955831	J1068 C	2.1150
955832	J1068 E	11.4430
955841	J1069 C	2.0402
955842	J1069 E	11.0378
955861	J1071	7.2860
955961	J1083	4.9546
956011	J1088	10.5735
956021	J1089	11.9731
956031	J1090	6.3216
956161	J1103	1.3926
956251	J1112	12.3330
956291	J1117	5.6488
956301	J1119	42.0720
956741	J1172	3.5000
956751	J1173	5.4792
956801	J1178	4.6007
DUCKCREEK	DUCKCREEK	10.6399
LGEE	LGEE	0.6150
NEWTON	NEWTON	2.1748
CPL	CPL	0.6787
FARMERCITY	FARMERCITY	0.3737
G-007A	G-007A	4.5888
VFT	VFT	12.3518
PRAIRIE	PRAIRIE	8.9243
COFFEEN	COFFEEN	2.1616
CBM-S2	CBM-S2	4.4217
EDWARDS	EDWARDS	3.5105
TILTON	TILTON	1.1069

Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
44343206	270679	BYRON ; R	CE	270918	WEMPLETOW; B	CE	1	COMED_P7_345-L0621__B-R_+ 345-L0622__R-R	tower	2084.0	87.08	116.9	DC	620.41

Bus #	Bus	MW Impact
274656	BYRON ;1U	49.7250
274657	BYRON ;2U	48.9155
274760	LEE CO EC;1U	2.0261
274761	LEE CO EC;2U	2.0261
274763	LEE CO EC;4U	2.0055
274764	LEE CO EC;5U	2.0312
274765	LEE CO EC;6U	2.0312
274767	LEE CO EC;8U	2.0004
274859	EASYR;U1 E	15.0120
274860	EASYR;U2 E	15.0120
276172	Z1-108 BAT	1.2626
293516	O-009 E1	4.0801
293517	O-009 E2	2.0724
293518	O-009 E3	2.2823
293715	O-029 E	4.3621
293716	O-029 E	2.3917
293717	O-029 E	2.1982
919581	AA2-030	13.9522
920273	AA2-123 BAT	2.6498
925161	AB2-173 (Withdrawn : 12/24/2019)	2.4883
930481	AB1-089	139.5845
937531	AD2-214 C	2.1255
937532	AD2-214 E	1.4170
939051	AE1-134 1	1.0842
939061	AE1-134 2	1.0842
943401	AF1-011 C	0.7697
943402	AF1-011 E	0.8118
943411	AF1-012 C	4.2104
943412	AF1-012 E	2.8069
943803	AF1-048 BAT	7.1524
943922	AF1-060 BAT	2.3560
945351	AF1-200 FTIR	620.4105
946161	AF1-281 C O2	11.6030
946162	AF1-281 E O2	6.6303
946321	AF1-296 C O2	1.2001
946322	AF1-296 E O2	5.6184
946531	AF1-317 C O1	0.8020
946532	AF1-317 E O1	1.2030
946681	AF1-332 C	0.8020
946682	AF1-332 E	1.2030
954702	J844 E	8.0394
955971	J1084	12.7635
956411	J1131	6.9030
NEWTON	NEWTON	0.2998
FARMERCITY	FARMERCITY	0.0657
NY	NY	0.2715
PRAIRIE	PRAIRIE	0.5553
O-066	O-066	3.2525
COFFEEN	COFFEEN	0.0772
CHEOAH	CHEOAH	0.2272

TILTON	TILTON	0.1915
G-007	G-007	0.5034
GIBSON	GIBSON	0.2184
CALDERWOOD	CALDERWOOD	0.2256
BLUEG	BLUEG	0.7690
TRIMBLE	TRIMBLE	0.2476
CATAWBA	CATAWBA	0.1635

Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
60838334	270695	CHERRY VA; R	CE	275165	CHERRY VA;1M	CE	1	COMED_P4_156-45-BT10-13	breaker	480.0	84.87	102.98	DC	164.0

Bus #	Bus	MW Impact
920273	AA2-123 BAT	2.2434
930481	AB1-089	31.4020
943383	AF1-009 BAT	2.3378
943423	AF1-013 BAT	2.3378
943803	AF1-048 BAT	6.9635
943922	AF1-060 BAT	1.1222
945351	AF1-200 FTIR	86.9203
WEC	WEC	0.0920
CBM-W2	CBM-W2	0.7781
NY	NY	0.0376
CBM-W1	CBM-W1	4.2409
TVA	TVA	0.0756
O-066	O-066	0.4435
CBM-S1	CBM-S1	0.2982
TILTON	TILTON	0.0290
G-007	G-007	0.0686
MADISON	MADISON	1.2076
MEC	MEC	1.0360
GIBSON	GIBSON	0.0202
BLUEG	BLUEG	0.0903
TRIMBLE	TRIMBLE	0.0301
CATAWBA	CATAWBA	0.0059

Index 15

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
45685948	270731	ELECT JCT;4R	CE	274749	AURORA EC;RP	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	91.95	124.78	DC	485.46

Bus #	Bus	MW Impact
276165	Z1-106 BAT2	1.7240
276166	Z1-106 BAT1	1.7334
276172	Z1-108 BAT	5.4856
920273	AA2-123 BAT	5.1266
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6648
943383	AF1-009 BAT	2.9610
943403	AF1-011 BAT	3.4488
943423	AF1-013 BAT	2.9610
943803	AF1-048 BAT	13.2651
943922	AF1-060 BAT	2.3630
945352	AF1-200 NFW	485.4570
946163	AF1-281 BAT	3.4950
946533	AF1-317 BAT	6.3525
946683	AF1-332 BAT	6.3525
950311	G934 C	1.7661
950312	G934 E	7.0644
950351	J466	1.7412
950791	J201 C	0.2330
950792	J201 E	0.9322
950871	J246 C	0.0822
950872	J246 E	0.3289
950942	J325 E	0.2319
950981	J333	8.7635
950991	J334	9.1710
951531	J533 C	2.3496
951532	J533 E	9.3984
951571	J538 C	1.7421
951572	J538 E	6.9684
951721	J643	10.3215
951731	J446 C	1.7247
951732	J446 E	9.3313
951811	J513 C	0.8891
951812	J513 E	4.8103
951941	J602 C	1.8208
951942	J602 E	9.8512
952161	J571	0.3788
952201	J589 C	1.8296
952202	J589 E	9.8984
952312	J646 E	0.0924
952401	J752 C	0.9062
952402	J752 E	4.9028
952581	J740 C	1.7859
952582	J740 E	9.6621
952611	J717 C	1.8252
952612	J717 E	9.8747
952761	J728 C	1.6974
952762	J728 E	9.1956
952801	J754 C	2.4557
952802	J754 E	13.2860
952881	J758	11.7720

952971	J793	76.3984
953071	J794 C	0.1142
953072	J794 E	0.6178
953161	J837 C	1.7868
953162	J837 E	9.6669
953171	J838 C	0.8929
953172	J838 E	4.8311
953271	J701 C	0.4441
953272	J701 E	2.4028
953291	J796	13.9576
953321	J799	10.8505
953351	J805	10.4196
953361	J806	8.7314
953421	J841	40.9898
953741	J826 C	0.7820
953742	J826 E	4.2310
953771	J832	5.8720
953781	J833	5.7390
953811	J839	5.7860
953851	J845 C	0.9510
953852	J845 E	5.1450
953871	J847	5.3055
953941	J857	7.3383
954111	J875	8.6640
954171	J883 C	0.7145
954172	J883 E	3.8655
954181	J884	5.0520
954351	J903	5.2810
954381	J906 C	0.9245
954382	J906 E	5.0015
954421	J913 C	9.1584
954591	J937	31.8058
954751	J351	42.8288
954772	J515 E	20.6440
954941	J968 C	1.7859
954942	J968 E	9.6621
955021	J978 C	0.9201
955022	J978 E	4.9779
955071	J984 C	1.8367
955072	J984 E	9.9373
955121	J989	4.6520
955141	J992	11.5480
955151	J993	10.5340
955181	J996	4.5944
955261	J1005	11.6800
955341	J1013	4.7064
955351	J1014 C	2.9080
955352	J1014 E	1.7448
955401	J1022 C	1.1730
955402	J1022 E	6.3465
955491	J1031 C	1.2568
955492	J1031 E	6.7997
955591	J1043 C	1.1818

955592	J1043 E	20.9415
955621	J1046	2.8515
955721	J1056 C	1.7865
955722	J1056 E	9.6655
955741	J1058	17.6130
955781	J1062	11.4060
955791	J1063	16.4430
955801	J1064 C	1.8467
955802	J1064 E	9.9913
955811	J1065 C	1.8349
955812	J1065 E	9.9271
955821	J1067	13.8816
955831	J1068 C	1.7931
955832	J1068 E	9.7009
955841	J1069 C	1.7859
955842	J1069 E	9.6621
955861	J1071	5.9200
955961	J1083	4.0887
956011	J1088	8.7585
956021	J1089	9.9229
956031	J1090	5.2416
956161	J1103	1.1620
956251	J1112	8.8320
956291	J1117	4.6696
956301	J1119	34.9200
956561	J1152	10.5140
956741	J1172	2.9115
956751	J1173	4.6144
956801	J1178	3.7967
DUCKCREEK	DUCKCREEK	2.2846
LGEE	LGEE	0.4279
NEWTON	NEWTON	0.0999
CPL	CPL	0.3222
FARMERCITY	FARMERCITY	0.3550
G-007A	G-007A	2.3016
VFT	VFT	6.1920
PRAIRIE	PRAIRIE	3.8564
COFFEEN	COFFEEN	0.2716
CBM-S2	CBM-S2	1.9768
EDWARDS	EDWARDS	0.6590

Index 16

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
45685800	270743	ESS	CE	270751	ESS	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	53.59	140.92	DC	488.9

Bus #	Bus	MW Impact
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274737	AURORA EC;1P	4.8077
274739	AURORA EC;2P	4.8077
276165	Z1-106 BAT2	1.7404
276166	Z1-106 BAT1	1.7498
276172	Z1-108 BAT	5.5184
920273	AA2-123 BAT	5.1594
926311	AC1-109 1	3.3990
926321	AC1-109 2	3.3990
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6720
943383	AF1-009 BAT	3.0020
943403	AF1-011 BAT	3.4980
943423	AF1-013 BAT	3.0020
943803	AF1-048 BAT	13.3507
943922	AF1-060 BAT	2.3827
945352	AF1-200 NFTW	488.9010
946163	AF1-281 BAT	3.5278
946533	AF1-317 BAT	6.4345
946683	AF1-332 BAT	6.4345
950311	G934 C	1.7661
950312	G934 E	7.0644
950351	J466	1.7412
950791	J201 C	0.2330
950792	J201 E	0.9322
950871	J246 C	0.0822
950872	J246 E	0.3289
950942	J325 E	0.2319
950981	J333	8.7635
950991	J334	9.1710
951531	J533 C	2.3496
951532	J533 E	9.3984
951571	J538 C	1.7421
951572	J538 E	6.9684
951721	J643	10.3215
951731	J446 C	1.7247
951732	J446 E	9.3313
951811	J513 C	0.8891
951812	J513 E	4.8103
951941	J602 C	1.8208
951942	J602 E	9.8512
952161	J571	0.3788
952201	J589 C	1.8296
952202	J589 E	9.8984
952312	J646 E	0.0924
952401	J752 C	0.9062
952402	J752 E	4.9028
952581	J740 C	1.7859
952582	J740 E	9.6621
952611	J717 C	1.8252
952612	J717 E	9.8747
952761	J728 C	1.6974
952762	J728 E	9.1956
952801	J754 C	2.4557
952802	J754 E	13.2860

952881	J758	11.7720
952971	J793	76.3984
953071	J794 C	0.1142
953072	J794 E	0.6178
953161	J837 C	1.7868
953162	J837 E	9.6669
953171	J838 C	0.8929
953172	J838 E	4.8311
953271	J701 C	0.4441
953272	J701 E	2.4028
953291	J796	13.9576
953321	J799	10.8505
953351	J805	10.4196
953361	J806	8.7314
953421	J841	40.9898
953741	J826 C	0.7820
953742	J826 E	4.2310
953771	J832	5.8720
953781	J833	5.7390
953811	J839	5.7860
953851	J845 C	0.9510
953852	J845 E	5.1450
953871	J847	5.3055
953941	J857	7.3383
954111	J875	8.6640
954171	J883 C	0.7145
954172	J883 E	3.8655
954181	J884	5.0520
954351	J903	5.2810
954381	J906 C	0.9245
954382	J906 E	5.0015
954421	J913 C	9.1584
954591	J937	31.8058
954751	J351	42.8288
954772	J515 E	20.6440
954941	J968 C	1.7859
954942	J968 E	9.6621
955021	J978 C	0.9201
955022	J978 E	4.9779
955071	J984 C	1.8367
955072	J984 E	9.9373
955121	J989	4.6520
955141	J992	11.5480
955151	J993	10.5340
955181	J996	4.5944
955261	J1005	11.6800
955341	J1013	4.7064
955351	J1014 C	2.9080
955352	J1014 E	1.7448
955401	J1022 C	1.1730
955402	J1022 E	6.3465
955491	J1031 C	1.2568
955492	J1031 E	6.7997

955591	J1043 C	1.1818
955592	J1043 E	20.9415
955621	J1046	2.8515
955721	J1056 C	1.7865
955722	J1056 E	9.6655
955741	J1058	17.6130
955781	J1062	11.4060
955791	J1063	16.4430
955801	J1064 C	1.8467
955802	J1064 E	9.9913
955811	J1065 C	1.8349
955812	J1065 E	9.9271
955821	J1067	13.8816
955831	J1068 C	1.7931
955832	J1068 E	9.7009
955841	J1069 C	1.7859
955842	J1069 E	9.6621
955861	J1071	5.9200
955961	J1083	4.0887
956011	J1088	8.7585
956021	J1089	9.9229
956031	J1090	5.2416
956161	J1103	1.1620
956251	J1112	8.8320
956291	J1117	4.6696
956301	J1119	34.9200
956561	J1152	10.5140
956741	J1172	2.9115
956751	J1173	4.6144
956801	J1178	3.7967
DUCKCREEK	DUCKCREEK	2.4734
LGEE	LGEE	0.3343
NEWTON	NEWTON	0.2761
CPL	CPL	0.2137
FARMERCITY	FARMERCITY	0.3642
G-007A	G-007A	1.9084
VFT	VFT	5.1342
PRAIRIE	PRAIRIE	4.2800
COFFEEN	COFFEEN	0.3583
CBM-S2	CBM-S2	1.0288
EDWARDS	EDWARDS	0.7165
CHEOAH	CHEOAH	0.0646
CALDERWOOD	CALDERWOOD	0.0691

Index 17

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
45685803	270751	ESS	CE	270917	WAYNE ; R	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	53.58	140.9	DC	488.9

Bus #	Bus	MW Impact
274737	AURORA EC;1P	4.8077
274739	AURORA EC;2P	4.8077
276165	Z1-106 BAT2	1.7404
276166	Z1-106 BAT1	1.7498
276172	Z1-108 BAT	5.5184
920273	AA2-123 BAT	5.1594
926311	AC1-109 1	3.3990
926321	AC1-109 2	3.3990
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6720
943383	AF1-009 BAT	3.0020
943403	AF1-011 BAT	3.4980
943423	AF1-013 BAT	3.0020
943803	AF1-048 BAT	13.3507
943922	AF1-060 BAT	2.3827
945352	AF1-200 NFW	488.9010
946163	AF1-281 BAT	3.5278
946533	AF1-317 BAT	6.4345
946683	AF1-332 BAT	6.4345
950311	G934 C	1.7661
950312	G934 E	7.0644
950351	J466	1.7412
950791	J201 C	0.2330
950792	J201 E	0.9322
950871	J246 C	0.0822
950872	J246 E	0.3289
950942	J325 E	0.2319
950981	J333	8.7635
950991	J334	9.1710
951531	J533 C	2.3496
951532	J533 E	9.3984
951571	J538 C	1.7421
951572	J538 E	6.9684
951721	J643	10.3215
951731	J446 C	1.7247
951732	J446 E	9.3313
951811	J513 C	0.8891
951812	J513 E	4.8103
951941	J602 C	1.8208
951942	J602 E	9.8512
952161	J571	0.3788
952201	J589 C	1.8296
952202	J589 E	9.8984
952312	J646 E	0.0924
952401	J752 C	0.9062
952402	J752 E	4.9028
952581	J740 C	1.7859
952582	J740 E	9.6621
952611	J717 C	1.8252
952612	J717 E	9.8747
952761	J728 C	1.6974

952762	J728 E	9.1956
952801	J754 C	2.4557
952802	J754 E	13.2860
952881	J758	11.7720
952971	J793	76.3984
953071	J794 C	0.1142
953072	J794 E	0.6178
953161	J837 C	1.7868
953162	J837 E	9.6669
953171	J838 C	0.8929
953172	J838 E	4.8311
953271	J701 C	0.4441
953272	J701 E	2.4028
953291	J796	13.9576
953321	J799	10.8505
953351	J805	10.4196
953361	J806	8.7314
953421	J841	40.9898
953741	J826 C	0.7820
953742	J826 E	4.2310
953771	J832	5.8720
953781	J833	5.7390
953811	J839	5.7860
953851	J845 C	0.9510
953852	J845 E	5.1450
953871	J847	5.3055
953941	J857	7.3383
954111	J875	8.6640
954171	J883 C	0.7145
954172	J883 E	3.8655
954181	J884	5.0520
954351	J903	5.2810
954381	J906 C	0.9245
954382	J906 E	5.0015
954421	J913 C	9.1584
954591	J937	31.8058
954751	J351	42.8288
954772	J515 E	20.6440
954941	J968 C	1.7859
954942	J968 E	9.6621
955021	J978 C	0.9201
955022	J978 E	4.9779
955071	J984 C	1.8367
955072	J984 E	9.9373
955121	J989	4.6520
955141	J992	11.5480
955151	J993	10.5340
955181	J996	4.5944
955261	J1005	11.6800
955341	J1013	4.7064
955351	J1014 C	2.9080
955352	J1014 E	1.7448
955401	J1022 C	1.1730

955402	J1022 E	6.3465
955491	J1031 C	1.2568
955492	J1031 E	6.7997
955591	J1043 C	1.1818
955592	J1043 E	20.9415
955621	J1046	2.8515
955721	J1056 C	1.7865
955722	J1056 E	9.6655
955741	J1058	17.6130
955781	J1062	11.4060
955791	J1063	16.4430
955801	J1064 C	1.8467
955802	J1064 E	9.9913
955811	J1065 C	1.8349
955812	J1065 E	9.9271
955821	J1067	13.8816
955831	J1068 C	1.7931
955832	J1068 E	9.7009
955841	J1069 C	1.7859
955842	J1069 E	9.6621
955861	J1071	5.9200
955961	J1083	4.0887
956011	J1088	8.7585
956021	J1089	9.9229
956031	J1090	5.2416
956161	J1103	1.1620
956251	J1112	8.8320
956291	J1117	4.6696
956301	J1119	34.9200
956561	J1152	10.5140
956741	J1172	2.9115
956751	J1173	4.6144
956801	J1178	3.7967
DUCKCREEK	DUCKCREEK	2.4734
LGEE	LGEE	0.3343
NEWTON	NEWTON	0.2761
CPL	CPL	0.2137
FARMERCITY	FARMERCITY	0.3642
G-007A	G-007A	1.9084
VFT	VFT	5.1342
PRAIRIE	PRAIRIE	4.2800
COFFEEN	COFFEEN	0.3583
CBM-S2	CBM-S2	1.0288
EDWARDS	EDWARDS	0.7165
CHEOAH	CHEOAH	0.0646
CALDERWOOD	CALDERWOOD	0.0691

Index 18

ID	FROM BUS#	FROM BUS	FROM BUS	TO BUS#	TO BUS	TO BUS	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT	POST PROJECT	AC DC	MW IMPACT
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			AREA			AREA					LOADING %	LOADING %		
60838025	270770	GOODINGS ;4B	CE	270810	LOCKPORT ; B	CE	1	COMED_P4_108- 45-BT5-6__	breaker	1479.0	84.67	152.31	DC	290.64

Bus #	Bus	MW Impact
274751	CRETE EC ;1U	1.1413
274752	CRETE EC ;2U	1.1413
274753	CRETE EC ;3U	1.1413
274754	CRETE EC ;4U	1.1413
274788	SE CHICAG;5U (Deativation : 06/01/20)	2.1790
274789	SE CHICAG;6U (Deativation : 06/01/20)	2.1848
274790	SE CHICAG;7U (Deativation : 06/01/20)	2.2135
274791	SE CHICAG;8U (Deativation : 06/01/20)	2.2135
274792	SE CHICAG;9U (Deativation : 06/01/20)	1.7230
274793	SE CHICAG;0U (Deativation : 06/01/20)	1.7230
274794	SE CHICAG;1U (Deativation : 06/01/20)	1.7230
274795	SE CHICAG;2U (Deativation : 06/01/20)	1.7230
274861	TOP CROP ;1U	0.3157
274862	TOP CROP ;2U	0.6129
276165	Z1-106 BAT2	1.4400
276166	Z1-106 BAT1	1.4405
276172	Z1-108 BAT	3.2854
293644	O22 E1	9.0478
293645	O22 E2	17.5634
910542	X3-005 E	0.3028
920273	AA2-123 BAT	3.0836
939631	AE1-193 C	7.0675
939632	AE1-193 E	47.2976
939641	AE1-194 C	7.0675
939642	AE1-194 E	47.2976
939651	AE1-195 C	7.0675
939652	AE1-195 E	47.2976
939681	AE1-198 C	20.9849
939682	AE1-198 E	17.8317
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.8566
943383	AF1-009 BAT	3.0505
943403	AF1-011 BAT	2.9679
943423	AF1-013 BAT	3.0505
943803	AF1-048 BAT	8.0090
943922	AF1-060 BAT	1.6093
945352	AF1-200 NFTW	290.6400
946163	AF1-281 BAT	2.4682
946533	AF1-317 BAT	5.9385
946683	AF1-332 BAT	5.9385
950311	G934 C	1.8189
950312	G934 E	7.2756
950351	J466	1.7763
950791	J201 C	0.2384
950792	J201 E	0.9536
950871	J246 C	0.0846
950872	J246 E	0.3383
950942	J325 E	0.2364

951531	J533 C	2.4164
951532	J533 E	9.6656
951571	J538 C	1.7823
951572	J538 E	7.1292
951721	J643	16.4605
951731	J446 C	1.6789
951732	J446 E	9.0831
951811	J513 C	0.9305
951812	J513 E	5.0342
951941	J602 C	1.8645
951942	J602 E	10.0875
952161	J571	0.3932
952201	J589 C	1.8798
952202	J589 E	10.1702
952312	J646 E	0.0940
952401	J752 C	0.9249
952402	J752 E	5.0041
952581	J740 C	1.8673
952582	J740 E	10.1027
952611	J717 C	1.8714
952612	J717 E	10.1246
952761	J728 C	1.7403
952762	J728 E	9.4283
952881	J758	12.1620
952971	J793	77.6939
953071	J794 C	0.1172
953072	J794 E	0.6342
953161	J837 C	1.8683
953162	J837 E	10.1077
953171	J838 C	0.9337
953172	J838 E	5.0513
953271	J701 C	0.4534
953272	J701 E	2.4532
953291	J796	14.2970
953321	J799	10.9847
953361	J806	8.9862
953421	J841	41.9866
953771	J832	6.0380
953781	J833	5.8080
953811	J839	5.8890
953871	J847	8.5077
953941	J857	7.5670
954111	J875	8.8140
954171	J883 C	0.7842
954172	J883 E	4.2430
954351	J903	5.0490
954381	J906 C	0.9567
954382	J906 E	5.1763
954421	J913 C	9.5760
954591	J937	33.0737
954751	J351	50.4357
954941	J968 C	1.8673
954942	J968 E	10.1027

955021	J978 C	0.9489
955022	J978 E	5.1341
955071	J984 C	1.8917
955072	J984 E	10.2343
955121	J989	4.7520
955141	J992	11.8460
955151	J993	10.0260
955181	J996	4.6544
955261	J1005	11.9640
955341	J1013	4.8776
955351	J1014 C	2.9745
955352	J1014 E	1.7847
955491	J1031 C	1.2095
955492	J1031 E	6.5440
955591	J1043 C	1.2202
955592	J1043 E	21.6219
955621	J1046	2.8710
955721	J1056 C	1.8043
955722	J1056 E	9.7617
955741	J1058	32.1990
955781	J1062	11.4840
955791	J1063	15.9270
955801	J1064 C	1.9088
955802	J1064 E	10.3272
955811	J1065 C	1.8885
955812	J1065 E	10.2175
955821	J1067	15.7560
955831	J1068 C	1.8168
955832	J1068 E	9.8292
955841	J1069 C	1.8673
955842	J1069 E	10.1027
955861	J1071	6.1230
955961	J1083	4.1958
956011	J1088	8.9730
956021	J1089	10.1643
956031	J1090	5.3658
956161	J1103	1.1864
956251	J1112	9.8415
956291	J1117	4.7880
956301	J1119	35.7300
956561	J1152	10.0300
956741	J1172	2.9770
956751	J1173	4.6896
956801	J1178	3.8961
DUCKCREEK	DUCKCREEK	3.1436
LGEE	LGEE	0.5015
NEWTON	NEWTON	0.2815
CPL	CPL	0.4339
FARMERCITY	FARMERCITY	0.3244
G-007A	G-007A	2.7883
VFT	VFT	7.5078
PRAIRIE	PRAIRIE	4.0346
COFFEEN	COFFEEN	0.5047

CBM-S2	CBM-S2	2.9131
EDWARDS	EDWARDS	1.0104

Index 19

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
44342264	270806	LIBERTYVI; B	CE	270856	P HTS 117; B	CE	1	COMED_P4_016-45-BT6-11_	breaker	1201.0	97.22	103.06	DC	130.95

Bus #	Bus	MW Impact
274683	WAUKEGAN ;8U	5.9530
274725	ZION EC ;1P	3.7504
274726	ZION EC ;2P	3.7504
274727	ZION EC ;3P	3.7504
274828	WAUKEGAN ;BP	1.6932
274830	U3-021 1	3.0708
274831	U3-021 2	3.0708
276159	W4-082	0.1719
276170	Z1-108 E	1.3566
294763	P-046 E	4.1840
914321	Y2-103 (Withdrawn : 12/24/2019)	58.6224
915011	Y3-013 1	4.8852
915021	Y3-013 2	4.8852
915031	Y3-013 3	4.8852
920272	AA2-123 E	1.2602
924471	AB2-096	21.3248
926431	AC1-114	1.1484
927511	AC1-113 1	0.5743
927521	AC1-113 2	0.5743
930481	AB1-089	30.4576
932881	AC2-115 1	1.1487
932891	AC2-115 2	1.1487
932921	AC2-116	0.4019
933931	AD1-016 C	0.4789
933932	AD1-016 E	0.7813
934651	AD1-096 C	0.3674
934652	AD1-096 E	0.5995
934971	AD1-129 C	0.4471
934972	AD1-129 E	0.2981
936791	AD2-102 C	7.5205
936792	AD2-102 E	5.0136
937311	AD2-172 C	1.0983
937312	AD2-172 E	1.5167
938861	AE1-114 C O1	1.5363
938862	AE1-114 E O1	5.2416
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5295
940501	AE2-035 C	0.5821
940502	AE2-035 E	0.8039

942991	AE2-321 C	4.1915
942992	AE2-321 E	2.0645
943801	AF1-048 C	1.0385
943802	AF1-048 E	0.6923
943921	AF1-060	0.3326
944041	AF1-072	0.6271
945351	AF1-200 FTIR	69.4047
946501	AF1-314 C	1.3305
946502	AF1-314 E	6.2285
946661	AF1-330 C	0.5477
946662	AF1-330 E	0.1202
950101	J390	47.5254
951391	J505	9.2540
952381	J703	10.8911
952391	J704	4.6451
952431	J760	1.5675
952511	J584 C	0.5587
952512	J584 E	3.0227
953151	J831	4.3636
953491	J947	24.6260
953681	J818	10.9873
953701	J821 C	0.9851
953702	J821 E	5.3296
953891	J849	10.6500
953901	J850	18.1225
954001	J864	2.5010
954141	J878	23.2460
954191	J886	13.8690
954741	J928 C	1.0631
954742	J928 E	5.7517
955091	J986	10.1388
955241	J1002	7.1428
955251	J1003	3.9280
955301	J1009	55.5840
955311	J1010	57.9240
955321	J1011	57.9240
955581	J1042 C	2.8272
955582	J1042 E	16.0208
955601	J1044 C	9.6730
955602	J1044 E	9.6730
955631	J1047	19.3460
955671	J1051	4.6945
955691	J1053	28.6050
955981	J1085 C	2.5216
955982	J1085 E	13.6424
956141	J1101	1.8492
956171	J1104	11.1300
956321	J1121	14.5080
956371	J1127	3.0978
956391	J1129	4.1873
956571	J1153	15.7785
956581	J1154	5.5290
956731	J1171	9.1490

956852	J1183 E	0.1150
956901	J1188	3.2440
WEC	WEC	4.4185
CBM-W2	CBM-W2	4.9140
NY	NY	0.1449
CBM-W1	CBM-W1	51.3285
TVA	TVA	0.5418
O-066	O-066	1.6934
CBM-S2	CBM-S2	0.1156
CBM-S1	CBM-S1	2.4282
TILTON	TILTON	0.0907
G-007	G-007	0.2621
MADISON	MADISON	9.4409
MEC	MEC	5.6696
GIBSON	GIBSON	0.0584
BLUEG	BLUEG	0.3142
TRIMBLE	TRIMBLE	0.1074

Index 20

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
44342134	270807	LIBERTYVI; R	CE	270857	P HTS 117; R	CE	1	COMED_P4_016-45-BT6-11_	breaker	1479.0	112.62	119.59	DC	192.47

Bus #	Bus	MW Impact
274683	WAUKEGAN ;8U	7.0111
274725	ZION EC ;1P	5.3769
274726	ZION EC ;2P	5.3769
274727	ZION EC ;3P	5.3769
274828	WAUKEGAN ;BP	1.9941
274830	U3-021 1	5.6339
274831	U3-021 2	5.6339
274859	EASYSR;U1 E	5.9584
274860	EASYSR;U2 E	5.9584
276160	W4-084	0.1944
276170	Z1-108 E	2.7850
290051	GSG-6; E	3.8213
293516	O-009 E1	3.5153
293517	O-009 E2	1.7855
293518	O-009 E3	1.9663
293715	O-029 E	3.7582
293716	O-029 E	2.0606
293717	O-029 E	1.8939
294763	P-046 E	6.4022
914321	Y2-103 (Withdrawn : 12/24/2019)	84.0456
915011	Y3-013 1	7.0038
915021	Y3-013 2	7.0038
915031	Y3-013 3	7.0038

919581	AA2-030	7.8549
920272	AA2-123 E	2.1413
924471	AB2-096	46.0285
925161	AB2-173 (Withdrawn : 12/24/2019)	1.4009
926431	AC1-114	1.8052
927511	AC1-113 1	0.9028
927521	AC1-113 2	0.9028
930481	AB1-089	41.5561
932881	AC2-115 1	1.8056
932891	AC2-115 2	1.8056
932921	AC2-116	0.6318
933341	AC2-147 C	0.4742
933342	AC2-147 E	0.7736
933911	AD1-013 C	0.6698
933912	AD1-013 E	1.0700
933931	AD1-016 C	0.8137
933932	AD1-016 E	1.3276
934431	AD1-067 C	0.0480
934432	AD1-067 E	0.2018
934651	AD1-096 C	0.5760
934652	AD1-096 E	0.9397
934701	AD1-098 C O1	2.5498
934702	AD1-098 E O1	1.8617
934971	AD1-129 C	0.7330
934972	AD1-129 E	0.4887
936791	AD2-102 C	11.0527
936792	AD2-102 E	7.3685
937001	AD2-134 C	0.9989
937002	AD2-134 E	4.1266
937311	AD2-172 C	1.6806
937312	AD2-172 E	2.3208
937531	AD2-214 C	1.9119
937532	AD2-214 E	1.2746
938861	AE1-114 C O1	2.3302
938862	AE1-114 E O1	7.9501
939051	AE1-134 1	0.6104
939061	AE1-134 2	0.6104
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.6236
940501	AE2-035 C	0.8907
940502	AE2-035 E	1.2300
942991	AE2-321 C	7.0988
942992	AE2-321 E	3.4964
943381	AF1-009 C	0.1169
943382	AF1-009 E	0.4676
943401	AF1-011 C	0.6631
943402	AF1-011 E	0.6995
943411	AF1-012 C	2.4768
943412	AF1-012 E	1.6512
943422	AF1-013 E	0.5845
943801	AF1-048 C	1.7588
943802	AF1-048 E	1.1725
943921	AF1-060	0.5090
944041	AF1-072	0.7263

945351	AF1-200 FTIR	102.0093
946161	AF1-281 C O2	4.6054
946162	AF1-281 E O2	2.6316
946321	AF1-296 C O2	0.9007
946322	AF1-296 E O2	4.2170
946501	AF1-314 C	2.0359
946502	AF1-314 E	9.5306
946531	AF1-317 C O1	0.4718
946532	AF1-317 E O1	0.7076
946661	AF1-330 C	0.9306
946662	AF1-330 E	0.2043
946671	AF1-331	0.4610
946681	AF1-332 C	0.4718
946682	AF1-332 E	0.7076
950101	J390	65.3702
951391	J505	11.4180
952381	J703	13.5248
952391	J704	5.7700
952431	J760	2.3319
952511	J584 C	0.7717
952512	J584 E	4.1753
953111	J807 C	0.8215
953112	J807 E	4.4444
953151	J831	5.3460
953331	J801	3.8310
953491	J947	30.3460
953681	J818	14.5558
953691	J819 C	1.0552
953692	J819 E	5.7090
953701	J821 C	1.2421
953702	J821 E	6.7200
953891	J849	13.2237
953901	J850	23.7875
954001	J864	3.4001
954141	J878	29.2980
954191	J886	17.1135
954511	J926 C	0.8328
954512	J926 E	4.5057
954691	J732	35.7619
954741	J928 C	1.3201
954742	J928 E	7.1418
955091	J986	12.8539
955241	J1002	9.1476
955251	J1003	5.0585
955301	J1009	70.8680
955311	J1010	61.1880
955321	J1011	61.1880
955581	J1042 C	3.6768
955582	J1042 E	20.8352
955601	J1044 C	12.5070
955602	J1044 E	12.5070
955631	J1047	25.0140
955671	J1051	5.9175

955691	J1053	35.9040
955981	J1085 C	3.2072
955982	J1085 E	17.3518
956141	J1101	2.2818
956171	J1104	13.6250
956321	J1121	18.1740
956371	J1127	4.2660
956391	J1129	5.8409
956571	J1153	19.3605
956581	J1154	7.3252
956731	J1171	11.4480
956852	J1183 E	0.1428
956901	J1188	4.4485
WEC	WEC	5.5270
CBM-W2	CBM-W2	6.7322
NY	NY	0.1908
CBM-W1	CBM-W1	66.3405
TVA	TVA	0.7434
O-066	O-066	2.2310
CBM-S2	CBM-S2	0.2081
CBM-S1	CBM-S1	3.3484
TILTON	TILTON	0.1222
G-007	G-007	0.3453
MADISON	MADISON	12.4065
MEC	MEC	7.6749
GIBSON	GIBSON	0.0743
BLUEG	BLUEG	0.4114
TRIMBLE	TRIMBLE	0.1402

Index 21

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
60838107	270828	NELSON ; B	CE	274768	LEE CO EC;BP	CE	1	COMED_P4_937-45-BT3-4__	breaker	1479.0	80.17	126.93	DC	625.21

Bus #	Bus	MW Impact
274715	NELSON EC;1C	6.6266
274716	NELSON EC;1S	4.8351
274717	NELSON EC;2C	6.6778
274718	NELSON EC;2S	4.8784
276160	W4-084	0.4947
276165	Z1-106 BAT2	0.5084
276166	Z1-106 BAT1	0.5072
276172	Z1-108 BAT	1.9230
293516	O-009 E1	13.4336
293517	O-009 E2	6.8232
293518	O-009 E3	7.5142
293715	O-029 E	14.3620

293716	O-029 E	7.8744
293717	O-029 E	7.2375
293771	O-035 E	4.0694
294401	BSHIL;1U E	6.5389
294410	BSHIL;2U E	6.5389
919221	AA1-146	6.1816
919581	AA2-030	44.2866
919621	AA2-039 C	1.5939
919622	AA2-039 E	10.6665
920273	AA2-123 BAT	2.7802
925161	AB2-173 (Withdrawn : 12/24/2019)	7.8982
925581	AC1-033 C	1.0710
925582	AC1-033 E	7.1697
926821	AC1-168 C O1	0.4340
926822	AC1-168 E O1	2.9126
926841	AC1-171 C O1	0.4514
926842	AC1-171 E O1	3.0152
927201	AC1-214 C O1	1.3061
927202	AC1-214 E O1	4.1519
933341	AC2-147 C	0.4840
933342	AC2-147 E	0.7898
934051	AD1-031 C O1	2.1751
934052	AD1-031 E O1	3.5488
937531	AD2-214 C	8.3416
937532	AD2-214 E	5.5610
939051	AE1-134 1	3.4414
939061	AE1-134 2	3.4414
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.2826
943401	AF1-011 C	2.5341
943402	AF1-011 E	2.6730
943411	AF1-012 C	24.8325
943412	AF1-012 E	16.5550
943803	AF1-048 BAT	7.3983
943922	AF1-060 BAT	1.1064
945352	AF1-200 NFTW	625.2120
946321	AF1-296 C O2	8.1305
946322	AF1-296 E O2	38.0649
946531	AF1-317 C O1	4.7300
946532	AF1-317 E O1	7.0950
946541	AF1-318 C O2	1.2837
946542	AF1-318 E O2	6.0109
946681	AF1-332 C	4.7300
946682	AF1-332 E	7.0950
950401	J041 C	1.2278
950402	J041 E	4.9111
950471	J438 C	2.8019
950472	J438 E	11.2075
951031	J344 C	2.5279
951032	J344 E	7.5837
951221	J475 C	3.1596
951222	J475 E	12.6384
951351	J500 C	5.3780
951352	J500 E	21.5120

951381	J504	4.5605
951421	J514	2.7921
951451	J524 C	3.1392
951452	J524 E	2.0928
951491	J528 C	2.0880
951492	J528 E	8.3520
951511	J530 C	4.6935
951512	J530 E	18.7740
951551	J535 C	2.1395
951552	J535 E	8.5579
951821	J541 C	4.0566
951822	J541 E	21.9474
951841	J555 C	1.7251
951842	J555 E	9.3335
952191	J583 C	1.6785
952192	J583 E	9.0809
952231	J598 C	3.0425
952232	J598 E	16.4605
953231	J447 C	1.2826
953232	J447 E	6.9389
954091	J873 C	2.4040
954092	J873 E	13.0060
954702	J844 E	13.7092
954792	J952 E	5.8509
954861	J959 C	1.4868
954862	J959 E	8.0442
954901	J963	1.1913
954921	J966 C	3.6554
954922	J966 E	19.7766
955051	J981 C	3.3671
955052	J981 E	18.2169
955201	J998	2.9255
955211	J999	9.9380
955431	J1025 C	2.5689
955432	J1025 E	13.8981
955661	J1050 C	2.1211
955662	J1050 E	11.4757
955971	J1084	27.2970
956411	J1131	14.6850
956421	J1132	2.6730
956431	J1135	3.8300
956781	J1176 C	1.1400
956782	J1176 E	6.1680
956791	J1177 C	3.0425
956792	J1177 E	16.4605
956831	J1181 C	1.9959
956832	J1181 E	10.7981
956841	J1182	14.6450
990901	L-005 E	8.8505
LGEE	LGEE	0.3007
CPL	CPL	0.4677
G-007A	G-007A	0.6881
VFT	VFT	1.8511

CBM-W2	CBM-W2	17.4938
CBM-W1	CBM-W1	3.7030
TVA	TVA	2.2204
CBM-S2	CBM-S2	4.8263
CBM-S1	CBM-S1	11.8428
MADISON	MADISON	4.1630
MEC	MEC	11.6172

Index 22

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
45685782	274749	AURORA EC;RP	CE	270743	ESS W407K;9T	CE	1	COMED_P4_111-45-L16704T	breaker	1479.0	54.56	141.88	DC	488.9

Bus #	Bus	MW Impact
274737	AURORA EC;1P	4.8077
274739	AURORA EC;2P	4.8077
276165	Z1-106 BAT2	1.7404
276166	Z1-106 BAT1	1.7498
276172	Z1-108 BAT	5.5184
920273	AA2-123 BAT	5.1594
926311	AC1-109 1	3.3990
926321	AC1-109 2	3.3990
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6720
943383	AF1-009 BAT	3.0020
943403	AF1-011 BAT	3.4980
943423	AF1-013 BAT	3.0020
943803	AF1-048 BAT	13.3507
943922	AF1-060 BAT	2.3827
945352	AF1-200 NFTW	488.9010
946163	AF1-281 BAT	3.5278
946533	AF1-317 BAT	6.4345
946683	AF1-332 BAT	6.4345
950311	G934 C	1.7661
950312	G934 E	7.0644
950351	J466	1.7412
950791	J201 C	0.2330
950792	J201 E	0.9322
950871	J246 C	0.0822
950872	J246 E	0.3289
950942	J325 E	0.2319
950981	J333	8.7635
950991	J334	9.1710
951531	J533 C	2.3496
951532	J533 E	9.3984
951571	J538 C	1.7421
951572	J538 E	6.9684
951721	J643	10.3215

951731	J446 C	1.7247
951732	J446 E	9.3313
951811	J513 C	0.8891
951812	J513 E	4.8103
951941	J602 C	1.8208
951942	J602 E	9.8512
952161	J571	0.3788
952201	J589 C	1.8296
952202	J589 E	9.8984
952312	J646 E	0.0924
952401	J752 C	0.9062
952402	J752 E	4.9028
952581	J740 C	1.7859
952582	J740 E	9.6621
952611	J717 C	1.8252
952612	J717 E	9.8747
952761	J728 C	1.6974
952762	J728 E	9.1956
952801	J754 C	2.4557
952802	J754 E	13.2860
952881	J758	11.7720
952971	J793	76.3984
953071	J794 C	0.1142
953072	J794 E	0.6178
953161	J837 C	1.7868
953162	J837 E	9.6669
953171	J838 C	0.8929
953172	J838 E	4.8311
953271	J701 C	0.4441
953272	J701 E	2.4028
953291	J796	13.9576
953321	J799	10.8505
953351	J805	10.4196
953361	J806	8.7314
953421	J841	40.9898
953741	J826 C	0.7820
953742	J826 E	4.2310
953771	J832	5.8720
953781	J833	5.7390
953811	J839	5.7860
953851	J845 C	0.9510
953852	J845 E	5.1450
953871	J847	5.3055
953941	J857	7.3383
954111	J875	8.6640
954171	J883 C	0.7145
954172	J883 E	3.8655
954181	J884	5.0520
954351	J903	5.2810
954381	J906 C	0.9245
954382	J906 E	5.0015
954421	J913 C	9.1584
954591	J937	31.8058

954751	J351	42.8288
954772	J515 E	20.6440
954941	J968 C	1.7859
954942	J968 E	9.6621
955021	J978 C	0.9201
955022	J978 E	4.9779
955071	J984 C	1.8367
955072	J984 E	9.9373
955121	J989	4.6520
955141	J992	11.5480
955151	J993	10.5340
955181	J996	4.5944
955261	J1005	11.6800
955341	J1013	4.7064
955351	J1014 C	2.9080
955352	J1014 E	1.7448
955401	J1022 C	1.1730
955402	J1022 E	6.3465
955491	J1031 C	1.2568
955492	J1031 E	6.7997
955591	J1043 C	1.1818
955592	J1043 E	20.9415
955621	J1046	2.8515
955721	J1056 C	1.7865
955722	J1056 E	9.6655
955741	J1058	17.6130
955781	J1062	11.4060
955791	J1063	16.4430
955801	J1064 C	1.8467
955802	J1064 E	9.9913
955811	J1065 C	1.8349
955812	J1065 E	9.9271
955821	J1067	13.8816
955831	J1068 C	1.7931
955832	J1068 E	9.7009
955841	J1069 C	1.7859
955842	J1069 E	9.6621
955861	J1071	5.9200
955961	J1083	4.0887
956011	J1088	8.7585
956021	J1089	9.9229
956031	J1090	5.2416
956161	J1103	1.1620
956251	J1112	8.8320
956291	J1117	4.6696
956301	J1119	34.9200
956561	J1152	10.5140
956741	J1172	2.9115
956751	J1173	4.6144
956801	J1178	3.7967
DUCKCREEK	DUCKCREEK	2.4734
LGEE	LGEE	0.3343
NEWTON	NEWTON	0.2761

CPL	CPL	0.2137
FARMERCITY	FARMERCITY	0.3642
G-007A	G-007A	1.9084
VFT	VFT	5.1342
PRAIRIE	PRAIRIE	4.2800
COFFEEN	COFFEEN	0.3583
CBM-S2	CBM-S2	1.0288
EDWARDS	EDWARDS	0.7165
CHEOAH	CHEOAH	0.0646
CALDERWOOD	CALDERWOOD	0.0691

Index 23

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
60838336	275165	CHERRY VA;1M	CE	271193	CHERRY VA; R	CE	1	COMED_P4_156-45-BT10-13	breaker	480.0	84.87	102.98	DC	164.0

Bus #	Bus	MW Impact
920273	AA2-123 BAT	2.2434
930481	AB1-089	31.4020
943383	AF1-009 BAT	2.3378
943423	AF1-013 BAT	2.3378
943803	AF1-048 BAT	6.9635
943922	AF1-060 BAT	1.1222
945351	AF1-200 FTIR	86.9203
WEC	WEC	0.0920
CBM-W2	CBM-W2	0.7781
NY	NY	0.0376
CBM-W1	CBM-W1	4.2409
TVA	TVA	0.0756
O-066	O-066	0.4435
CBM-S1	CBM-S1	0.2982
TILTON	TILTON	0.0290
G-007	G-007	0.0686
MADISON	MADISON	1.2076
MEC	MEC	1.0360
GIBSON	GIBSON	0.0202
BLUEG	BLUEG	0.0903
TRIMBLE	TRIMBLE	0.0301
CATAWBA	CATAWBA	0.0059

Index 24

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING	POST PROJECT LOADING	AC DC	MW IMPACT
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59924697	243215	05COOK	AEP	945100	AF1-175 TAP	AEP	1	AEP_P4_#7443_05DUMONT 765_A	breaker	1409.0	% 146.88	% 151.43	DC	136.56
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Bus #	Bus	MW Impact
243440	05CKG1	41.2175
243441	05CKG2	46.5229
244412	05WTRV SLR C	0.0440
247528	05COVRT1	6.1898
247529	05COVRT2	6.1898
247530	05COVRT3	6.1898
247531	05COVRT4	3.7150
247532	05COVRT5	3.7150
247533	05COVRT6	3.7150
247604	X1-042	0.0602
247651	AA2-116	173.4132
247966	05WTRV SLR E	0.3156
276165	Z1-106 BAT2	0.6773
276166	Z1-106 BAT1	0.6773
276171	Z1-107 BAT	1.4114
276172	Z1-108 BAT	1.3446
918052	AA1-018 E OP	-7.7481
920273	AA2-123 BAT	1.3286
925961	AC1-072	0.5742
926581	AC1-141	15.8759
933281	AC2-140 C	11.0325
933282	AC2-140 E	0.5807
936141	AD2-020 C O1	7.3215
936142	AD2-020 E O1	4.5065
936601	AD2-075	29.8236
938261	AE1-039	0.1150
939391	AE1-170 C O1	6.1288
939392	AE1-170 E O1	8.4636
939683	AE1-198 BAT	7.1600
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.2985
940262	AE2-008 BAT	9.8800
942681	AE2-284	3.8670
942883	AE2-307 BAT	5.3963
942913	AE2-310 BAT	2.8464
943021	AE2-325 C	3.7081
943022	AE2-325 E	1.1110
943383	AF1-009 BAT	1.6353
943423	AF1-013 BAT	1.6353
943803	AF1-048 BAT	3.4645
943922	AF1-060 BAT	0.7758
944161	AF1-084 C	6.7387
944162	AF1-084 E	3.8489
944961	AF1-161 C	2.9570
944962	AF1-161 E	2.9570
945111	AF1-176 C O2	6.7111
945112	AF1-176 E O2	6.2214
945352	AF1-200 NFTW	72.3784

946163	AF1-281 BAT	1.2746
946533	AF1-317 BAT	3.1810
946683	AF1-332 BAT	3.1810
950311	G934 C	4.3704
950312	G934 E	17.4816
950351	J466	3.5046
950791	J201 C	0.4967
950792	J201 E	1.9867
950871	J246 C	0.1977
950872	J246 E	0.7908
950942	J325 E	0.4578
951531	J533 C	5.6488
951532	J533 E	22.5952
951571	J538 C	3.2103
951572	J538 E	12.8412
951941	J602 C	3.9693
951942	J602 E	21.4747
952161	J571	0.8906
952201	J589 C	4.2813
952202	J589 E	23.1627
952312	J646 E	0.1726
952401	J752 C	1.8470
952402	J752 E	9.9930
952611	J717 C	4.0930
952612	J717 E	22.1441
952761	J728 C	3.8064
952762	J728 E	20.6212
952881	J758	26.2120
952971	J793	142.8818
953071	J794 C	0.2622
953072	J794 E	1.4183
953271	J701 C	0.9086
953272	J701 E	4.9160
953291	J796	30.8095
953321	J799	17.9758
953361	J806	18.5907
953421	J841	90.2912
953771	J832	13.9260
953781	J833	9.4350
953811	J839	11.0370
953941	J857	15.9561
954111	J875	15.4590
954381	J906 C	2.4565
954382	J906 E	13.2905
954591	J937	79.0730
955021	J978 C	2.3216
955022	J978 E	12.5604
955071	J984 C	4.5452
955072	J984 E	24.5908
955121	J989	9.5752
955181	J996	7.4992
955261	J1005	25.7840
955341	J1013	9.5264

955351	J1014 C	5.7235
955352	J1014 E	3.4341
955591	J1043 C	3.0974
955592	J1043 E	54.8859
955621	J1046	4.1955
955721	J1056 C	2.8195
955722	J1056 E	15.2545
955781	J1062	16.7820
955801	J1064 C	4.9184
955802	J1064 E	26.6096
955811	J1065 C	4.4516
955812	J1065 E	24.0844
955831	J1068 C	3.0180
955832	J1068 E	16.3280
955861	J1071	15.5350
955961	J1083	8.5113
956011	J1088	19.1100
956021	J1089	21.5866
956031	J1090	10.5219
956161	J1103	2.3774
956291	J1117	9.7248
956301	J1119	69.4260
956741	J1172	6.1420
956751	J1173	8.0720
956801	J1178	7.9034
DUCKCREEK	DUCKCREEK	6.7996
NEWTON	NEWTON	4.0713
FARMERCITY	FARMERCITY	0.2663
G-007A	G-007A	2.1721
VFT	VFT	5.8630
PRAIRIE	PRAIRIE	9.7844
COFFEEN	COFFEEN	2.2963
EDWARDS	EDWARDS	2.1612
CHEOAH	CHEOAH	0.6206
TILTON	TILTON	2.8060
GIBSON	GIBSON	1.3912
CALDERWOOD	CALDERWOOD	0.6267
BLUEG	BLUEG	2.9321
TRIMBLE	TRIMBLE	0.9232
CATAWBA	CATAWBA	0.2138

Index 25

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
43520715	243219	05DUMONT	AEP	255113	17STILLWELL	NIPS	1	COMED_P4_023-65-BT4-5	breaker	1409.0	121.55	147.25	DC	291.44

Bus #	Bus	MW Impact
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247651	AA2-116	48.5564
276153	W2-048 E	-0.9958
276165	Z1-106 BAT2	1.4843
276166	Z1-106 BAT1	1.4842
276171	Z1-107 BAT	3.1064
276172	Z1-108 BAT	2.9226
909052	X2-022 E	-14.4012
918052	AA1-018 E OP	-16.2450
920273	AA2-123 BAT	2.8698
926581	AC1-141	4.4453
933281	AC2-140 C	2.2875
933282	AC2-140 E	0.1204
936973	AD2-131 BAT	3.8370
938671	AE1-089 C	8.8909
938672	AE1-089 E	12.2049
939683	AE1-198 BAT	14.5426
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6491
940261	AE2-008	5.4441
941732	AE2-173 BAT	6.0780
942883	AE2-307 BAT	11.6767
942913	AE2-310 BAT	6.4880
943383	AF1-009 BAT	3.5140
943403	AF1-011 BAT	3.9048
943423	AF1-013 BAT	3.5140
943803	AF1-048 BAT	7.4792
943922	AF1-060 BAT	1.6493
945352	AF1-200 NFTW	291.4380
945882	AF1-253 BAT	7.1153
946163	AF1-281 BAT	2.6854
946533	AF1-317 BAT	6.6995
946683	AF1-332 BAT	6.6995
950311	G934 C	2.9529
950312	G934 E	11.8116
950351	J466	2.8554
950791	J201 C	0.3842
950792	J201 E	1.5366
950871	J246 C	0.1371
950872	J246 E	0.5484
950942	J325 E	0.3796
951531	J533 C	3.9172
951532	J533 E	15.6688
951571	J538 C	2.8110
951572	J538 E	11.2440
951731	J446 C	1.8848
951732	J446 E	10.1972
951941	J602 C	3.0074
951942	J602 E	16.2706
952161	J571	0.6273
952201	J589 C	3.0429
952202	J589 E	16.4631
952312	J646 E	0.1506
952401	J752 C	1.4876
952402	J752 E	8.0484

952581	J740 C	1.6851
952582	J740 E	9.1169
952611	J717 C	3.0229
952612	J717 E	16.3548
952761	J728 C	2.8113
952762	J728 E	15.2300
952811	J759	3.8157
952821	J762	10.8140
952861	J783 C	3.6228
952862	J783 E	0.1509
952881	J758	19.4800
952971	J793	124.4927
953071	J794 C	0.1896
953072	J794 E	1.0256
953161	J837 C	1.6860
953162	J837 E	9.1214
953171	J838 C	0.8426
953172	J838 E	4.5584
953271	J701 C	0.7293
953272	J701 E	3.9458
953291	J796	23.0778
953321	J799	17.5146
953351	J805	12.4275
953361	J806	14.3934
953421	J841	67.7641
953771	J832	9.7820
953781	J833	9.2570
953811	J839	9.4440
953831	J842 C	1.6034
953832	J842 E	8.6746
953841	J843 C	1.6299
953842	J843 E	8.8181
953931	J856	4.1888
953941	J857	12.1164
954111	J875	14.0595
954351	J903	6.4640
954381	J906 C	1.5591
954382	J906 E	8.4349
954421	J913 C	8.6416
954591	J937	53.8210
954941	J968 C	1.6851
954942	J968 E	9.1169
955021	J978 C	1.5419
955022	J978 E	8.3421
955071	J984 C	3.0710
955072	J984 E	16.6150
955121	J989	7.6440
955141	J992	11.8220
955151	J993	11.9880
955181	J996	7.3952
955261	J1005	19.3120
955341	J1013	7.5328
955351	J1014 C	4.7675

955352	J1014 E	2.8605
955371	J1016	2.6300
955451	J1027	7.7385
955461	J1028	7.8735
955491	J1031 C	1.6209
955492	J1031 E	8.7696
955591	J1043 C	1.9872
955592	J1043 E	35.2132
955621	J1046	4.5630
955721	J1056 C	2.8720
955722	J1056 E	15.5380
955781	J1062	18.2520
955791	J1063	17.3430
955801	J1064 C	3.1106
955802	J1064 E	16.8294
955811	J1065 C	3.0626
955812	J1065 E	16.5694
955831	J1068 C	2.8979
955832	J1068 E	15.6781
955841	J1069 C	1.6851
955842	J1069 E	9.1169
955861	J1071	9.9730
955891	J1074	10.5200
955961	J1083	6.7396
956011	J1088	14.4690
956021	J1089	16.3880
956031	J1090	8.6103
956161	J1103	1.9082
956291	J1117	7.6928
956301	J1119	57.3720
956561	J1152	12.6460
956741	J1172	4.7945
956751	J1173	7.4752
956801	J1178	6.2582
956911	J1189	0.2548
DUCKCREEK	DUCKCREEK	13.1824
LGEE	LGEE	0.5306
NEWTON	NEWTON	3.4986
CPL	CPL	0.7898
FARMERCITY	FARMERCITY	0.4675
G-007A	G-007A	5.7276
VFT	VFT	15.4220
PRAIRIE	PRAIRIE	12.1298
COFFEEN	COFFEEN	2.9459
CBM-S2	CBM-S2	4.8725
EDWARDS	EDWARDS	4.3267
TILTON	TILTON	2.1943
GIBSON	GIBSON	0.2179
CALDERWOOD	CALDERWOOD	0.0010
AC1-056	AC1-056	6.4410

Index 26

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
43520814	243229	05OLIVE	AEP	274804	UNIV PK N;RP	CE	1	COMED_P4_023-65-BT4-5__	breaker	971.0	103.99	116.24	DC	202.76

Bus #	Bus	MW Impact
276153	W2-048 E	-0.6480
276165	Z1-106 BAT2	1.0363
276166	Z1-106 BAT1	1.0363
276171	Z1-107 BAT	2.2020
276172	Z1-108 BAT	2.0406
909052	X2-022 E	-9.3707
918052	AA1-018 E OP	-12.3149
920273	AA2-123 BAT	2.0012
938671	AE1-089 C	6.2578
938672	AE1-089 E	8.5904
939683	AE1-198 BAT	5.5402
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.4538
940261	AE2-008	3.8318
941732	AE2-173 BAT	4.0995
942883	AE2-307 BAT	8.2635
942913	AE2-310 BAT	4.2988
943383	AF1-009 BAT	2.4438
943403	AF1-011 BAT	2.7033
943423	AF1-013 BAT	2.4438
943803	AF1-048 BAT	5.2153
943922	AF1-060 BAT	1.1467
945101	AF1-175 C O2	3.0264
945102	AF1-175 E O2	2.0176
945352	AF1-200 NFW	107.4601
945501	AF1-215 C O2	4.0942
945502	AF1-215 E O2	2.7295
946163	AF1-281 BAT	1.8636
946533	AF1-317 BAT	4.6460
946683	AF1-332 BAT	4.6460
950311	G934 C	1.9944
950312	G934 E	7.9776
950351	J466	1.8993
950791	J201 C	0.2566
950792	J201 E	1.0262
950871	J246 C	0.0924
950872	J246 E	0.3695
950942	J325 E	0.2522
951531	J533 C	2.6396
951532	J533 E	10.5584
951571	J538 C	1.8834
951572	J538 E	7.5336

951811	J513 C	0.8215
951812	J513 E	4.4447
951941	J602 C	2.0121
951942	J602 E	10.8859
952161	J571	0.4272
952201	J589 C	2.0464
952202	J589 E	11.0716
952312	J646 E	0.0997
952401	J752 C	0.9904
952402	J752 E	5.3586
952581	J740 C	1.8455
952582	J740 E	9.9845
952611	J717 C	2.0262
952612	J717 E	10.9623
952761	J728 C	1.8843
952762	J728 E	10.2084
952881	J758	13.1460
952971	J793	82.4135
953071	J794 C	0.1273
953072	J794 E	0.6887
953161	J837 C	1.8464
953162	J837 E	9.9895
953171	J838 C	0.9227
953172	J838 E	4.9923
953271	J701 C	0.4857
953272	J701 E	2.6278
953291	J796	15.4537
953321	J799	11.5101
953361	J806	9.6656
953421	J841	45.3703
953771	J832	6.5850
953781	J833	6.0810
953811	J839	6.2600
953941	J857	8.1567
954111	J875	9.3030
954381	J906 C	1.0592
954382	J906 E	5.7308
954421	J913 C	9.4640
954591	J937	36.3319
954751	J351	36.4555
954941	J968 C	1.8455
954942	J968 E	9.9845
955021	J978 C	1.0432
955022	J978 E	5.6438
955071	J984 C	2.0742
955072	J984 E	11.2218
955121	J989	5.0944
955141	J992	10.6420
955181	J996	4.8680
955261	J1005	12.9320
955341	J1013	5.1864
955351	J1014 C	3.1730
955352	J1014 E	1.9038

955591	J1043 C	1.3482
955592	J1043 E	23.8901
955621	J1046	2.9765
955721	J1056 C	1.8823
955722	J1056 E	10.1837
955781	J1062	11.9060
955801	J1064 C	2.1138
955802	J1064 E	11.4362
955811	J1065 C	2.0654
955812	J1065 E	11.1746
955821	J1067	12.4224
955831	J1068 C	1.9066
955832	J1068 E	10.3154
955841	J1069 C	1.8455
955842	J1069 E	9.9845
955861	J1071	6.7670
955961	J1083	4.5031
956011	J1088	9.6840
956021	J1089	10.9650
956031	J1090	5.7366
956161	J1103	1.2708
956251	J1112	8.3055
956291	J1117	5.1392
956301	J1119	38.1660
956741	J1172	3.2000
956751	J1173	4.9392
956801	J1178	4.1814
DUCKCREEK	DUCKCREEK	9.0162
LGEE	LGEE	0.5209
NEWTON	NEWTON	1.7944
CPLE	CPLE	0.5854
FARMERCITY	FARMERCITY	0.3148
G-007A	G-007A	3.9343
VFT	VFT	10.5909
PRAIRIE	PRAIRIE	7.4494
COFFEEN	COFFEEN	1.7943
CBM-S2	CBM-S2	3.8379
EDWARDS	EDWARDS	2.9792
TILTON	TILTON	0.9072

Index 27

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
44342004	270644	WILTON ;	CE	275233	WILTON ;4M	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	115.82	143.65	DC	308.76

Bus #	Bus	MW Impact
238965	02MNFDG1 (Deativation : 02/05/19)	16.8813

238966	02MNFDG2 (Deactivation : 02/05/19)	16.8813
238967	02MNFDG3 (Deactivation : 06/01/21)	16.8813
276153	W2-048 E	-1.1545
276165	Z1-106 BAT2	1.5698
276166	Z1-106 BAT1	1.5697
276171	Z1-107 BAT	3.2132
276172	Z1-108 BAT	3.0888
909052	X2-022 E	-16.6959
918052	AA1-018 E OP	-17.3564
920273	AA2-123 BAT	3.0356
932801	AC2-104 C (Withdrawn : 11/07/2019)	2.8257
932802	AC2-104 E (Withdrawn : 11/07/2019)	18.9112
933281	AC2-140 C	2.3786
933282	AC2-140 E	0.1252
934771	AD1-104 C	2.2776
934772	AD1-104 E	15.2423
936973	AD2-131 BAT	4.3315
939683	AE1-198 BAT	10.5696
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6844
941732	AE2-173 BAT	7.4305
942883	AE2-307 BAT	13.0200
942913	AE2-310 BAT	6.7916
943383	AF1-009 BAT	3.7245
943403	AF1-011 BAT	4.1634
943423	AF1-013 BAT	3.7245
943803	AF1-048 BAT	7.9125
943922	AF1-060 BAT	1.7483
945352	AF1-200 NTFW	308.7630
945882	AF1-253 BAT	7.9306
946163	AF1-281 BAT	2.8498
946533	AF1-317 BAT	7.1115
946683	AF1-332 BAT	7.1115
950311	G934 C	2.7465
950312	G934 E	10.9860
950351	J466	2.7120
950791	J201 C	0.3628
950792	J201 E	1.4510
950871	J246 C	0.1279
950872	J246 E	0.5117
950942	J325 E	0.3612
950981	J333	8.9403
951531	J533 C	3.6548
951532	J533 E	14.6192
951571	J538 C	2.6964
951572	J538 E	10.7856
951731	J446 C	2.2885
951732	J446 E	12.3815
951811	J513 C	1.0141
951812	J513 E	5.4863
951941	J602 C	2.8333
951942	J602 E	15.3287
952161	J571	0.5830
952201	J589 C	2.8458

952202	J589 E	15.3962
952312	J646 E	0.1441
952401	J752 C	1.4113
952402	J752 E	7.6357
952581	J740 C	2.2405
952582	J740 E	12.1215
952611	J717 C	2.8397
952612	J717 E	15.3634
952761	J728 C	2.6409
952762	J728 E	14.3069
952801	J754 C	2.4107
952802	J754 E	13.0425
952811	J759	4.0705
952821	J762	11.4760
952861	J783 C	3.8640
952862	J783 E	0.1610
952881	J758	18.1800
952971	J793	119.0593
953071	J794 C	0.1776
953072	J794 E	0.9611
953161	J837 C	2.2416
953162	J837 E	12.1276
953171	J838 C	1.1202
953172	J838 E	6.0608
953271	J701 C	0.6916
953272	J701 E	3.7419
953291	J796	21.7203
953321	J799	16.9250
953351	J805	13.3051
953361	J806	13.5098
953421	J841	63.7907
953771	J832	9.1300
953781	J833	8.9520
953811	J839	9.0150
953831	J842 C	1.7191
953832	J842 E	9.3009
953841	J843 C	1.7503
953842	J843 E	9.4697
953931	J856	4.4808
953941	J857	11.3430
954111	J875	13.4775
954171	J883 C	0.7730
954172	J883 E	4.1822
954351	J903	6.9150
954381	J906 C	1.4355
954382	J906 E	7.7665
954421	J913 C	11.4896
954591	J937	49.0702
954751	J351	46.5582
954941	J968 C	2.2405
954942	J968 E	12.1215
955021	J978 C	1.4301
955022	J978 E	7.7369

955071	J984 C	2.8564
955072	J984 E	15.4536
955121	J989	7.2416
955141	J992	16.6220
955151	J993	12.9880
955181	J996	7.1584
955261	J1005	18.1760
955341	J1013	7.2072
955351	J1014 C	4.5155
955352	J1014 E	2.7093
955371	J1016	2.8195
955451	J1027	8.3205
955461	J1028	8.4510
955491	J1031 C	1.7222
955492	J1031 E	9.3178
955591	J1043 C	1.8382
955592	J1043 E	32.5729
955621	J1046	4.4555
955721	J1056 C	2.7883
955722	J1056 E	15.0857
955781	J1062	17.8220
955791	J1063	20.9910
955801	J1064 C	2.8710
955802	J1064 E	15.5330
955811	J1065 C	2.8526
955812	J1065 E	15.4334
955821	J1067	15.0096
955831	J1068 C	2.7958
955832	J1068 E	15.1262
955841	J1069 C	2.2405
955842	J1069 E	12.1215
955861	J1071	9.1940
955891	J1074	11.2780
955961	J1083	6.3413
956011	J1088	13.6230
956021	J1089	15.4377
956031	J1090	8.1369
956161	J1103	1.8096
956251	J1112	11.0925
956291	J1117	7.2472
956301	J1119	54.2280
956561	J1152	13.5240
956741	J1172	4.5320
956751	J1173	7.1816
956801	J1178	5.8884
956911	J1189	0.2735
DUCKCREEK	DUCKCREEK	14.2245
LGEE	LGEE	0.7262
NEWTON	NEWTON	3.5469
CPL	CPL	0.9149
FARMERCITY	FARMERCITY	0.4980
G-007A	G-007A	6.2215
VFT	VFT	16.7507

PRAIRIE	PRAIRIE	12.8763
COFFEEN	COFFEEN	3.2133
CBM-S2	CBM-S2	5.8725
EDWARDS	EDWARDS	4.6659
TILTON	TILTON	2.1275
GIBSON	GIBSON	0.0426
AC1-056	AC1-056	6.9570

Index 28

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
44342023	270644	WILTON ;	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	112.3	139.55	DC	302.34

Bus #	Bus	MW Impact
238965	02MNFDG1 (Deativation : 02/05/19)	16.5264
238966	02MNFDG2 (Deativation : 02/05/19)	16.5264
238967	02MNFDG3 (Deativation : 06/01/21)	16.5264
276153	W2-048 E	-1.1314
276165	Z1-106 BAT2	1.5370
276166	Z1-106 BAT1	1.5369
276171	Z1-107 BAT	3.1460
276172	Z1-108 BAT	3.0242
909052	X2-022 E	-16.3619
918052	AA1-018 E OP	-16.9848
920273	AA2-123 BAT	2.9722
932801	AC2-104 C (Withdrawn : 11/07/2019)	2.7671
932802	AC2-104 E (Withdrawn : 11/07/2019)	18.5190
933281	AC2-140 C	2.3292
933282	AC2-140 E	0.1226
934771	AD1-104 C	2.2304
934772	AD1-104 E	14.9262
936973	AD2-131 BAT	4.2440
939683	AE1-198 BAT	10.3507
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6701
941732	AE2-173 BAT	7.2830
942883	AE2-307 BAT	12.7575
942913	AE2-310 BAT	6.6524
943383	AF1-009 BAT	3.6470
943403	AF1-011 BAT	4.0770
943423	AF1-013 BAT	3.6470
943803	AF1-048 BAT	7.7470
943922	AF1-060 BAT	1.7118
945352	AF1-200 NTFW	302.3370
945882	AF1-253 BAT	7.7711
946163	AF1-281 BAT	2.7904
946533	AF1-317 BAT	6.9635
946683	AF1-332 BAT	6.9635

950311	G934 C	2.6895
950312	G934 E	10.7580
950351	J466	2.6559
950791	J201 C	0.3553
950792	J201 E	1.4211
950871	J246 C	0.1253
950872	J246 E	0.5011
950942	J325 E	0.3538
950981	J333	8.7516
951531	J533 C	3.5792
951532	J533 E	14.3168
951571	J538 C	2.6406
951572	J538 E	10.5624
951731	J446 C	2.2411
951732	J446 E	12.1249
951811	J513 C	0.9930
951812	J513 E	5.3726
951941	J602 C	2.7749
951942	J602 E	15.0131
952161	J571	0.5710
952201	J589 C	2.7868
952202	J589 E	15.0772
952312	J646 E	0.1411
952401	J752 C	1.3820
952402	J752 E	7.4770
952581	J740 C	2.1940
952582	J740 E	11.8700
952611	J717 C	2.7810
952612	J717 E	15.0459
952761	J728 C	2.5863
952762	J728 E	14.0112
952811	J759	3.9858
952821	J762	11.2360
952861	J783 C	3.7834
952862	J783 E	0.1576
952881	J758	17.8040
952971	J793	116.5872
953071	J794 C	0.1740
953072	J794 E	0.9413
953161	J837 C	2.1951
953162	J837 E	11.8760
953171	J838 C	1.0970
953172	J838 E	5.9350
953271	J701 C	0.6773
953272	J701 E	3.6646
953291	J796	21.2710
953321	J799	16.5734
953351	J805	13.0265
953361	J806	13.2312
953421	J841	62.4710
953771	J832	8.9410
953781	J833	8.7670
953811	J839	8.8280

953831	J842 C	1.6832
953832	J842 E	9.1068
953841	J843 C	1.7135
953842	J843 E	9.2705
953931	J856	4.3872
953941	J857	11.1081
954111	J875	13.1985
954171	J883 C	0.7570
954172	J883 E	4.0958
954351	J903	6.7700
954381	J906 C	1.4059
954382	J906 E	7.6061
954421	J913 C	11.2512
954591	J937	48.0591
954751	J351	45.6065
954941	J968 C	2.1940
954942	J968 E	11.8700
955021	J978 C	1.4004
955022	J978 E	7.5766
955071	J984 C	2.7971
955072	J984 E	15.1329
955121	J989	7.0912
955141	J992	16.2780
955151	J993	12.7160
955181	J996	7.0104
955261	J1005	17.8000
955341	J1013	7.0576
955351	J1014 C	4.4220
955352	J1014 E	2.6532
955371	J1016	2.7605
955451	J1027	8.1450
955461	J1028	8.2740
955491	J1031 C	1.6864
955492	J1031 E	9.1241
955591	J1043 C	1.8002
955592	J1043 E	31.8995
955621	J1046	4.3630
955721	J1056 C	2.7306
955722	J1056 E	14.7734
955781	J1062	17.4520
955791	J1063	20.5560
955801	J1064 C	2.8114
955802	J1064 E	15.2106
955811	J1065 C	2.7936
955812	J1065 E	15.1144
955821	J1067	14.7000
955831	J1068 C	2.7378
955832	J1068 E	14.8122
955841	J1069 C	2.1940
955842	J1069 E	11.8700
955861	J1071	9.0040
955891	J1074	11.0420
955961	J1083	6.2104

956011	J1088	13.3410
956021	J1089	15.1181
956031	J1090	7.9686
956161	J1103	1.7722
956251	J1112	10.8645
956291	J1117	7.0968
956301	J1119	53.1060
956561	J1152	13.2420
956741	J1172	4.4385
956751	J1173	7.0328
956801	J1178	5.7668
956911	J1189	0.2678
DUCKCREEK	DUCKCREEK	13.9297
LGEE	LGEE	0.7108
NEWTON	NEWTON	3.4760
CPLE	CPLE	0.8957
FARMERCITY	FARMERCITY	0.4876
G-007A	G-007A	6.0920
VFT	VFT	16.3959
PRAIRIE	PRAIRIE	12.6154
COFFEEN	COFFEEN	3.1483
CBM-S2	CBM-S2	5.7453
EDWARDS	EDWARDS	4.5692
TILTON	TILTON	2.0853
GIBSON	GIBSON	0.0426
AC1-056	AC1-056	6.8160

Index 29

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
60838013	270728	E FRANKFO; B	CE	270766	GOODINGS ;3B	CE	1	COMED_P4_023-65-BT4-5__	breaker	1726.0	107.88	157.04	DC	217.54

Bus #	Bus	MW Impact
274751	CRETE EC ;1U	3.7298
274752	CRETE EC ;2U	3.7298
274753	CRETE EC ;3U	3.7298
274754	CRETE EC ;4U	3.7298
276165	Z1-106 BAT2	1.0780
276166	Z1-106 BAT1	1.0781
276171	Z1-107 BAT	1.9676
276172	Z1-108 BAT	2.2276
918052	AA1-018 E OP	-12.2949
920273	AA2-123 BAT	2.1670
939631	AE1-193 C	23.0964
939632	AE1-193 E	154.5685
939641	AE1-194 C	23.0964

939642	AE1-194 E	154.5685
939651	AE1-195 C	23.0964
939652	AE1-195 E	154.5685
939681	AE1-198 C	68.5787
939682	AE1-198 E	58.2741
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.5223
940631	AE2-050 C O1	3.4338
940632	AE2-050 E O1	2.2892
941732	AE2-173 BAT	2.6695
942881	AE2-307 C O1	6.2952
942882	AE2-307 E O1	2.2892
943383	AF1-009 BAT	2.4890
943403	AF1-011 BAT	2.8167
943423	AF1-013 BAT	2.4890
943803	AF1-048 BAT	5.6439
943922	AF1-060 BAT	1.2277
945352	AF1-200 NFTW	217.5390
946163	AF1-281 BAT	1.9872
946533	AF1-317 BAT	4.9155
946683	AF1-332 BAT	4.9155
950311	G934 C	1.8165
950312	G934 E	7.2660
950351	J466	1.7577
950791	J201 C	0.2365
950792	J201 E	0.9459
950871	J246 C	0.0843
950872	J246 E	0.3374
950942	J325 E	0.2337
951531	J533 C	2.4100
951532	J533 E	9.6400
951571	J538 C	1.7667
951572	J538 E	7.0668
951721	J643	18.3330
951811	J513 C	0.8916
951812	J513 E	4.8238
951941	J602 C	1.8517
951942	J602 E	10.0183
952161	J571	0.3950
952201	J589 C	1.8729
952202	J589 E	10.1331
952312	J646 E	0.0927
952401	J752 C	0.9157
952402	J752 E	4.9543
952581	J740 C	1.8339
952582	J740 E	9.9221
952611	J717 C	1.8608
952612	J717 E	10.0672
952761	J728 C	1.7305
952762	J728 E	9.3749
952881	J758	12.1640
952971	J793	76.6363
953071	J794 C	0.1167
953072	J794 E	0.6313

953161	J837 C	1.8349
953162	J837 E	9.9270
953171	J838 C	0.9170
953172	J838 E	4.9610
953271	J701 C	0.4490
953272	J701 E	2.4293
953291	J796	14.2062
953321	J799	10.7862
953361	J806	8.9594
953421	J841	41.7128
953771	J832	6.0210
953781	J833	5.7020
953811	J839	5.8140
953871	J847	9.8397
953941	J857	7.5557
954111	J875	8.6955
954171	J883 C	0.7789
954172	J883 E	4.2139
954381	J906 C	0.9597
954382	J906 E	5.1923
954421	J913 C	9.4048
954591	J937	33.2716
954751	J351	44.9579
954941	J968 C	1.8339
954942	J968 E	9.9221
955021	J978 C	0.9489
955022	J978 E	5.1341
955071	J984 C	1.8892
955072	J984 E	10.2208
955121	J989	4.7080
955141	J992	11.7740
955181	J996	4.5728
955261	J1005	11.8860
955341	J1013	4.8872
955351	J1014 C	2.9490
955352	J1014 E	1.7694
955591	J1043 C	1.2216
955592	J1043 E	21.6468
955621	J1046	2.8055
955721	J1056 C	1.7684
955722	J1056 E	9.5676
955741	J1058	55.1040
955781	J1062	11.2220
955801	J1064 C	1.9132
955802	J1064 E	10.3508
955811	J1065 C	1.8851
955812	J1065 E	10.1989
955821	J1067	16.6224
955831	J1068 C	1.7853
955832	J1068 E	9.6587
955841	J1069 C	1.8339
955842	J1069 E	9.9221
955861	J1071	6.1380

955961	J1083	4.1720
956011	J1088	8.9145
956021	J1089	10.0963
956031	J1090	5.3244
956161	J1103	1.1748
956251	J1112	10.1850
956291	J1117	4.7584
956301	J1119	35.4360
956741	J1172	2.9520
956751	J1173	4.6216
956801	J1178	3.8740
DUCKCREEK	DUCKCREEK	10.1700
LGEE	LGEE	0.4068
NEWTON	NEWTON	1.6150
CPLE	CPLE	0.3883
FARMERCITY	FARMERCITY	0.3367
G-007A	G-007A	3.0736
VFT	VFT	8.2754
PRAIRIE	PRAIRIE	7.3822
COFFEEN	COFFEEN	1.5897
CBM-S2	CBM-S2	2.2080
EDWARDS	EDWARDS	3.3397
CHEOAH	CHEOAH	0.0405
TILTON	TILTON	0.6369
CALDERWOOD	CALDERWOOD	0.0472

Index 30

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
43520886	270771	GREENACRE; T	CE	243229	05OLIVE	AEP	1	AEP_P4_#2978_05DUMONT_NON_FSA	breaker	971.0	101.95	102.06	DC	159.08

Bus #	Bus	MW Impact
274751	CRETE EC ;1U	1.7551
274752	CRETE EC ;2U	1.7551
274753	CRETE EC ;3U	1.7551
274754	CRETE EC ;4U	1.7551
274788	SE CHICAG;5U (Deactivation : 06/01/20)	3.0011
274789	SE CHICAG;6U (Deactivation : 06/01/20)	3.0091
274790	SE CHICAG;7U (Deactivation : 06/01/20)	3.0487
274791	SE CHICAG;8U (Deactivation : 06/01/20)	3.0487
274792	SE CHICAG;9U (Deactivation : 06/01/20)	3.0948
274793	SE CHICAG;0U (Deactivation : 06/01/20)	3.0948
274794	SE CHICAG;1U (Deactivation : 06/01/20)	3.0948
274795	SE CHICAG;2U (Deactivation : 06/01/20)	3.0948
274830	U3-021 1	3.4285
274831	U3-021 2	3.4285

274881	PILOT HIL;1E	10.4613
275149	KELLYCK ;1E	10.4613
276161	W4-086	0.1351
276167	Z1-106 E2	0.7104
276168	Z1-106 E1	0.7104
276169	Z1-107 E	1.4472
276170	Z1-108 E	1.4005
290021	O50 E	10.9303
290051	GSG-6; E	5.9047
290108	LEEDK;1U E	13.6646
293061	N-015 E	8.6537
293644	O22 E1	6.1217
293645	O22 E2	11.8833
294392	P-010 E	10.9902
910542	X3-005 E	0.4382
914321	Y2-103 (Withdrawn : 12/24/2019)	25.3429
915011	Y3-013 1	2.1119
915021	Y3-013 2	2.1119
915031	Y3-013 3	2.1119
918052	AA1-018 E OP	8.9217
920272	AA2-123 E	1.3746
924471	AB2-096	23.8089
926311	AC1-109 1	1.0716
926321	AC1-109 2	1.0716
926331	AC1-110 1	1.0687
926341	AC1-110 2	1.0687
926351	AC1-111 1	0.4286
926361	AC1-111 2	0.4286
926371	AC1-111 3	0.4286
926381	AC1-111 4	0.4286
926391	AC1-111 5	0.4286
926401	AC1-111 6	0.4286
926431	AC1-114	1.3365
927091	AC1-204 1	41.1371
927101	AC1-204 2	41.0992
927451	AC1-142A 1	2.3892
927461	AC1-142A 2	2.3898
927511	AC1-113 1	0.6683
927521	AC1-113 2	0.6683
930481	AB1-089	36.9419
930501	AB1-091 O1	41.4766
930741	AB1-122 1O1	40.1068
930751	AB1-122 2O1	41.9445
932881	AC2-115 1	1.3365
932891	AC2-115 2	1.3365
932921	AC2-116	0.4678
933411	AC2-154 C	1.4197
933412	AC2-154 E	2.3164
933431	AC2-156 C O1	0.5363
933432	AC2-156 E O1	0.8750
933911	AD1-013 C	1.0429
933912	AD1-013 E	1.6659
933931	AD1-016 C	0.5224

933932	AD1-016 E	0.8523
934101	AD1-039 1	3.9305
934111	AD1-039 2	4.1106
934431	AD1-067 C	0.0741
934432	AD1-067 E	0.3117
934701	AD1-098 C O1	3.8847
934702	AD1-098 E O1	2.8362
934721	AD1-100 C	10.9102
934722	AD1-100 E	50.9142
934871	AD1-116 C	0.5196
934872	AD1-116 E	0.8477
934971	AD1-129 C	0.5081
934972	AD1-129 E	0.3387
936371	AD2-047 C O1	2.5406
936372	AD2-047 E O1	12.4041
936461	AD2-060	0.7921
936511	AD2-066 C O1	4.7020
936512	AD2-066 E O1	3.1347
937001	AD2-134 C	1.5436
937002	AD2-134 E	6.3765
937321	AD2-175 C (Withdrawn : 12/10/2019)	9.2736
937322	AD2-175 E (Withdrawn : 12/10/2019)	6.1824
937401	AD2-194 1	4.4237
937411	AD2-194 2	4.4197
938511	AE1-070 1	5.1979
938521	AE1-070 2	4.7511
938851	AE1-113 C	4.5088
938852	AE1-113 E	15.9856
939351	AE1-166 C O1	3.0564
939352	AE1-166 E O1	2.8213
939631	AE1-193 C	10.8686
939632	AE1-193 E	72.7363
939641	AE1-194 C	10.8686
939642	AE1-194 E	72.7363
939651	AE1-195 C	10.8686
939652	AE1-195 E	72.7363
939681	AE1-198 C	32.2715
939682	AE1-198 E	27.4224
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.3114
940621	AE2-049 C O1	2.7218
940622	AE2-049 E O1	1.8145
940631	AE2-050 C O1	3.7164
940632	AE2-050 E O1	2.4776
940752	AE2-062 E	0.0402
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0402
941131	AE2-107 C	2.1783
941132	AE2-107 E	1.4522
941551	AE2-152 C O1	3.5266
941552	AE2-152 E O1	2.3511
941561	AE2-153 C O1	2.6560
941562	AE2-153 E O1	12.4349
942421	AE2-255 C O1	1.7079
942422	AE2-255 E O1	5.1236

942881	AE2-307 C O1	6.8133
942882	AE2-307 E O1	2.4776
942911	AE2-310 C O1	2.6429
942912	AE2-310 E O1	0.7100
942991	AE2-321 C	4.5981
942992	AE2-321 E	2.2648
943121	AE2-341 C	7.1572
943122	AE2-341 E	3.5146
943381	AF1-009 C	0.1781
943382	AF1-009 E	0.7124
943422	AF1-013 E	0.8905
943591	AF1-030 C O2	2.5410
943592	AF1-030 E O2	1.2459
943801	AF1-048 C	1.1392
943802	AF1-048 E	0.7595
944041	AF1-072	0.6424
944911	AF1-156 C	3.5992
944912	AF1-156 E	2.3995
945351	AF1-200 FTIR	8.4253
946521	AF1-316 C O2	1.9288
946522	AF1-316 E O2	2.8933
946661	AF1-330 C	0.5974
946662	AF1-330 E	0.1311
946671	AF1-331	0.7178
951721	J643	15.6310
953871	J847	8.4483
955741	J1058	43.9140
WEC	WEC	2.4860
CBM-W2	CBM-W2	13.9230
NY	NY	0.7388
CBM-W1	CBM-W1	41.2830
TVA	TVA	0.9800
O-066	O-066	8.7226
CBM-S1	CBM-S1	4.1492
G-007	G-007	1.3478
MADISON	MADISON	12.6242
MEC	MEC	8.5981
BLUEG	BLUEG	0.8090
TRIMBLE	TRIMBLE	0.2827
CATAWBA	CATAWBA	0.1515

Index 31

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
44342109	270926	WILTON ; B	CE	275232	WILTON ;3M	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	117.59	117.81	DC	292.98

Bus #	Bus	MW Impact
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274771	LINCOLN ;2U	3.0480
274772	LINCOLN ;3U	3.0480
274773	LINCOLN ;4U	3.0480
274774	LINCOLN ;5U	3.0480
274775	LINCOLN ;6U	3.0480
274776	LINCOLN ;7U	3.0480
274777	LINCOLN ;8U	3.0480
274830	U3-021 1	6.3043
274831	U3-021 2	6.3043
274881	PILOT HIL;1E	19.9420
274890	CAYUG;1U E	17.0075
274891	CAYUG;2U E	17.0075
275149	KELLYCK ;1E	19.9420
276161	W4-086	0.2521
276167	Z1-106 E2	1.3064
276168	Z1-106 E1	1.3064
276169	Z1-107 E	2.6741
276170	Z1-108 E	2.5706
290021	O50 E	20.0287
290051	GSG-6; E	10.8928
290108	LEEDK;1U E	25.1957
293061	N-015 E	16.4444
293644	O22 E1	10.5927
293645	O22 E2	20.5622
294392	P-010 E	20.8844
910542	X3-005 E	0.7563
914321	Y2-103 (Withdrawn : 12/24/2019)	46.3651
915011	Y3-013 1	3.8638
915021	Y3-013 2	3.8638
915031	Y3-013 3	3.8638
917502	Z2-087 E	21.5431
918052	AA1-018 E OP	16.9848
920272	AA2-123 E	2.5264
924041	AB2-047 C O1	4.0239
924042	AB2-047 E O1	26.9289
924471	AB2-096	43.7801
926311	AC1-109 1	1.9768
926321	AC1-109 2	1.9768
926331	AC1-110 1	1.9636
926341	AC1-110 2	1.9636
926351	AC1-111 1	0.7895
926361	AC1-111 2	0.7895
926371	AC1-111 3	0.7895
926381	AC1-111 4	0.7895
926391	AC1-111 5	0.7895
926401	AC1-111 6	0.7895
926431	AC1-114	2.4604
927091	AC1-204 1	75.0465
927101	AC1-204 2	75.0465
927451	AC1-142A 1	4.3262
927461	AC1-142A 2	4.3259
927511	AC1-113 1	1.2302
927521	AC1-113 2	1.2302

930481	AB1-089	68.0119
930501	AB1-091 O1	79.3488
930741	AB1-122 1O1	75.3115
930751	AB1-122 2O1	76.2401
932881	AC2-115 1	2.4604
932891	AC2-115 2	2.4604
932921	AC2-116	0.8611
933411	AC2-154 C	2.7064
933412	AC2-154 E	4.4157
933431	AC2-156 C O1	0.9894
933432	AC2-156 E O1	1.6143
933911	AD1-013 C	1.9234
933912	AD1-013 E	3.0725
933931	AD1-016 C	0.9600
933932	AD1-016 E	1.5663
934101	AD1-039 1	7.3805
934111	AD1-039 2	7.4715
934431	AD1-067 C	0.1368
934432	AD1-067 E	0.5751
934701	AD1-098 C O1	7.1671
934702	AD1-098 E O1	5.2327
934721	AD1-100 C	24.8549
934722	AD1-100 E	115.9893
934871	AD1-116 C	0.9892
934872	AD1-116 E	1.6139
934971	AD1-129 C	0.9346
934972	AD1-129 E	0.6230
935001	AD1-133 C O1	23.0265
935002	AD1-133 E O1	15.3510
936291	AD2-038 C O1	2.4304
936292	AD2-038 E O1	16.2649
936371	AD2-047 C O1	4.8431
936372	AD2-047 E O1	23.6455
936461	AD2-060	1.5099
936511	AD2-066 C O1	8.7651
936512	AD2-066 E O1	5.8434
937001	AD2-134 C	2.8475
937002	AD2-134 E	11.7632
937321	AD2-175 C (Withdrawn : 12/10/2019)	17.7568
937322	AD2-175 E (Withdrawn : 12/10/2019)	11.8378
937401	AD2-194 1	8.0702
937411	AD2-194 2	8.0702
938511	AE1-070 1	9.4825
938521	AE1-070 2	8.6755
938851	AE1-113 C	8.2618
938852	AE1-113 E	29.2920
939321	AE1-163 C O1	6.1071
939322	AE1-163 E O1	37.5153
939351	AE1-166 C O1	6.4997
939352	AE1-166 E O1	5.9997
939401	AE1-172 C O1	6.7954
939402	AE1-172 E O1	31.8837
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5696

939741	AE1-205 C O1	10.4001
939742	AE1-205 E O1	14.3621
940101	AE1-252 C O1	13.6514
940102	AE1-252 E O1	9.1010
940621	AE2-049 C O1	5.1697
940622	AE2-049 E O1	3.4464
940631	AE2-050 C O1	6.8967
940632	AE2-050 E O1	4.5978
940752	AE2-062 E	0.0716
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0716
941131	AE2-107 C	4.0158
941132	AE2-107 E	2.6772
941551	AE2-152 C O1	7.4996
941552	AE2-152 E O1	4.9997
941561	AE2-153 C O1	5.1253
941562	AE2-153 E O1	23.9957
941731	AE2-173 O1	6.1905
942111	AE2-223 C	2.4143
942112	AE2-223 E	16.1573
942421	AE2-255 C O1	3.1295
942422	AE2-255 E O1	9.3885
942651	AE2-281 C O1	0.8724
942652	AE2-281 E O1	5.3593
942881	AE2-307 C O1	12.6440
942882	AE2-307 E O1	4.5978
942911	AE2-310 C O1	5.0198
942912	AE2-310 E O1	1.3486
942991	AE2-321 C	8.4519
942992	AE2-321 E	4.1629
943121	AE2-341 C	13.2096
943122	AE2-341 E	6.4866
943381	AF1-009 C	0.3286
943382	AF1-009 E	1.3144
943422	AF1-013 E	1.6430
943591	AF1-030 C O2	4.6906
943592	AF1-030 E O2	2.2998
943801	AF1-048 C	2.0940
943802	AF1-048 E	1.3960
944041	AF1-072	1.1799
944911	AF1-156 C	6.9454
944912	AF1-156 E	4.6302
945351	AF1-200 FTIR	29.8909
946521	AF1-316 C O2	3.5846
946522	AF1-316 E O2	5.3769
946661	AF1-330 C	1.0980
946662	AF1-330 E	0.2410
946671	AF1-331	1.3239
WEC	WEC	4.5593
CBM-W2	CBM-W2	25.8886
NY	NY	1.4400
CBM-W1	CBM-W1	77.6746
TVA	TVA	1.6184
O-066	O-066	17.0957

CHEOAH	CHEOAH	0.0776
CBM-S1	CBM-S1	6.0492
G-007	G-007	2.6426
MADISON	MADISON	24.2726
MEC	MEC	16.0219
CALDERWOOD	CALDERWOOD	0.0636
BLUEG	BLUEG	2.3054
TRIMBLE	TRIMBLE	0.7964
CATAWBA	CATAWBA	0.3626

Index 32

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
44342084	270927	WILTON ; R	CE	275233	WILTON ;4M	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	120.04	120.26	DC	299.21

Bus #	Bus	MW Impact
274771	LINCOLN ;2U	3.1304
274772	LINCOLN ;3U	3.1304
274773	LINCOLN ;4U	3.1304
274774	LINCOLN ;5U	3.1304
274775	LINCOLN ;6U	3.1304
274776	LINCOLN ;7U	3.1304
274777	LINCOLN ;8U	3.1304
274830	U3-021 1	6.4384
274831	U3-021 2	6.4384
274881	PILOT HIL;1E	20.3585
274890	CAYUG;1U E	17.3471
274891	CAYUG;2U E	17.3471
275149	KELLYCK ;1E	20.3585
276161	W4-086	0.2575
276167	Z1-106 E2	1.3343
276168	Z1-106 E1	1.3342
276169	Z1-107 E	2.7312
276170	Z1-108 E	2.6255
290021	O50 E	20.4558
290051	GSG-6; E	11.1243
290108	LEEDK;1U E	25.7329
293061	N-015 E	16.7882
293644	O22 E1	10.8167
293645	O22 E2	20.9971
294392	P-010 E	21.3210
910542	X3-005 E	0.7728
914321	Y2-103 (Withdrawn : 12/24/2019)	47.3566
915011	Y3-013 1	3.9464
915021	Y3-013 2	3.9464
915031	Y3-013 3	3.9464
917502	Z2-087 E	21.9794

918052	AA1-018 E OP	17.3564
920272	AA2-123 E	2.5803
924041	AB2-047 C O1	4.1054
924042	AB2-047 E O1	27.4743
924471	AB2-096	44.7113
926311	AC1-109 1	2.0188
926321	AC1-109 2	2.0188
926331	AC1-110 1	2.0054
926341	AC1-110 2	2.0054
926351	AC1-111 1	0.8064
926361	AC1-111 2	0.8064
926371	AC1-111 3	0.8064
926381	AC1-111 4	0.8064
926391	AC1-111 5	0.8064
926401	AC1-111 6	0.8064
926431	AC1-114	2.5128
927091	AC1-204 1	76.6590
927101	AC1-204 2	76.6542
927451	AC1-142A 1	4.4192
927461	AC1-142A 2	4.4192
927511	AC1-113 1	1.2564
927521	AC1-113 2	1.2564
930481	AB1-089	69.4611
930501	AB1-091 O1	80.9991
930741	AB1-122 1O1	76.9097
930751	AB1-122 2O1	77.8676
932881	AC2-115 1	2.5128
932891	AC2-115 2	2.5128
932921	AC2-116	0.8795
933411	AC2-154 C	2.7629
933412	AC2-154 E	4.5080
933431	AC2-156 C O1	1.0105
933432	AC2-156 E O1	1.6487
933911	AD1-013 C	1.9643
933912	AD1-013 E	3.1378
933931	AD1-016 C	0.9805
933932	AD1-016 E	1.5998
934101	AD1-039 1	7.5372
934111	AD1-039 2	7.6310
934431	AD1-067 C	0.1397
934432	AD1-067 E	0.5873
934701	AD1-098 C O1	7.3194
934702	AD1-098 E O1	5.3439
934721	AD1-100 C	25.3483
934722	AD1-100 E	118.2919
934871	AD1-116 C	1.0108
934872	AD1-116 E	1.6492
934971	AD1-129 C	0.9545
934972	AD1-129 E	0.6363
935001	AD1-133 C O1	23.5039
935002	AD1-133 E O1	15.6692
936291	AD2-038 C O1	2.4828
936292	AD2-038 E O1	16.6155

936371	AD2-047 C O1	4.9442
936372	AD2-047 E O1	24.1394
936461	AD2-060	1.5414
936511	AD2-066 C O1	8.9509
936512	AD2-066 E O1	5.9673
937001	AD2-134 C	2.9081
937002	AD2-134 E	12.0133
937321	AD2-175 C (Withdrawn : 12/10/2019)	18.1248
937322	AD2-175 E (Withdrawn : 12/10/2019)	12.0832
937401	AD2-194 1	8.2436
937411	AD2-194 2	8.2431
938511	AE1-070 1	9.6863
938521	AE1-070 2	8.8614
938851	AE1-113 C	8.4380
938852	AE1-113 E	29.9165
939321	AE1-163 C O1	6.2388
939322	AE1-163 E O1	38.3238
939351	AE1-166 C O1	6.6307
939352	AE1-166 E O1	6.1207
939401	AE1-172 C O1	6.9298
939402	AE1-172 E O1	32.5144
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5818
939741	AE1-205 C O1	10.6108
939742	AE1-205 E O1	14.6529
940101	AE1-252 C O1	13.9215
940102	AE1-252 E O1	9.2810
940621	AE2-049 C O1	5.2778
940622	AE2-049 E O1	3.5186
940631	AE2-050 C O1	7.0386
940632	AE2-050 E O1	4.6924
940752	AE2-062 E	0.0731
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0731
941131	AE2-107 C	4.1013
941132	AE2-107 E	2.7342
941551	AE2-152 C O1	7.6508
941552	AE2-152 E O1	5.1006
941561	AE2-153 C O1	5.2309
941562	AE2-153 E O1	24.4902
941731	AE2-173 O1	6.3159
942111	AE2-223 C	2.4632
942112	AE2-223 E	16.4846
942421	AE2-255 C O1	3.1962
942422	AE2-255 E O1	9.5886
942651	AE2-281 C O1	0.8913
942652	AE2-281 E O1	5.4748
942881	AE2-307 C O1	12.9041
942882	AE2-307 E O1	4.6924
942911	AE2-310 C O1	5.1249
942912	AE2-310 E O1	1.3768
942991	AE2-321 C	8.6325
942992	AE2-321 E	4.2518
943121	AE2-341 C	13.4901
943122	AE2-341 E	6.6243

943381	AF1-009 C	0.3356
943382	AF1-009 E	1.3423
943422	AF1-013 E	1.6779
943591	AF1-030 C O2	4.7903
943592	AF1-030 E O2	2.3488
943801	AF1-048 C	2.1387
943802	AF1-048 E	1.4258
944041	AF1-072	1.2051
944911	AF1-156 C	7.0885
944912	AF1-156 E	4.7257
945351	AF1-200 FTIR	30.5262
946521	AF1-316 C O2	3.6607
946522	AF1-316 E O2	5.4911
946661	AF1-330 C	1.1214
946662	AF1-330 E	0.2462
946671	AF1-331	1.3520
WEC	WEC	4.6566
CBM-W2	CBM-W2	26.4209
NY	NY	1.4710
CBM-W1	CBM-W1	79.3384
TVA	TVA	1.6506
O-066	O-066	17.4586
CHEOAH	CHEOAH	0.0796
CBM-S1	CBM-S1	6.1685
G-007	G-007	2.6988
MADISON	MADISON	24.7867
MEC	MEC	16.3603
CALDERWOOD	CALDERWOOD	0.0651
BLUEG	BLUEG	2.3558
TRIMBLE	TRIMBLE	0.8136
CATAWBA	CATAWBA	0.3707

Index 33

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
44342701	270940	ZION STA ; B	CE	270914	WAUKEGAN ; B	CE	1	COMED_P1-2_345-L2218_GR-N	single	1479.0	115.95	123.03	DC	104.84

Bus #	Bus	MW Impact
274656	BYRON ;1U	8.4030
274657	BYRON ;2U	8.2360
274725	ZION EC ;1P	6.5188
274726	ZION EC ;2P	6.5188
274727	ZION EC ;3P	6.5188
274822	ROCKFORD ;11	0.8405
274823	ROCKFORD ;21	0.8620

274824	ROCKFORD ;12	0.8332
274830	U3-021 1	2.2011
274831	U3-021 2	2.2011
274856	ECOGROVE ;U1	0.1480
290266	R-018	0.0480
914321	Y2-103 (Withdrawn : 12/24/2019)	101.8944
915011	Y3-013 1	8.4912
915021	Y3-013 2	8.4912
915031	Y3-013 3	8.4912
924471	AB2-096	17.9830
926431	AC1-114	1.0962
927511	AC1-113 1	0.5484
927521	AC1-113 2	0.5484
932881	AC2-115 1	1.0968
932891	AC2-115 2	1.0968
932921	AC2-116	0.3837
936791	AD2-102 C	8.6856
937311	AD2-172 C	1.1130
940501	AE2-035 C	1.1130
943921	AF1-060	0.6360
945351	AF1-200 FTIR	104.8432
946501	AF1-314 C	2.5440
950101	J390	55.2685
951391	J505	15.1460
952381	J703	17.5484
952391	J704	7.4801
952511	J584 C	0.6445
953151	J831	7.3232
953331	J801	4.0981
953491	J947	42.1660
953681	J818	14.9700
953691	J819 C	0.8746
953701	J821 C	1.5235
953891	J849	17.1662
953901	J850	25.3475
954001	J864	3.0943
954141	J878	32.2520
954191	J886	22.6965
954511	J926 C	0.9020
954691	J732	41.6745
954741	J928 C	1.7135
955091	J986	15.4957
955241	J1002	10.6643
955251	J1003	5.7975
955301	J1009	98.6040
955311	J1010	107.8080
955321	J1011	107.8080
955581	J1042 C	3.6957
955601	J1044 C	12.8960
955631	J1047	25.7920
955671	J1051	7.3305
955691	J1053	45.1590
955981	J1085 C	3.8025

956051	J1092	5.1840
956141	J1101	3.0262
956171	J1104	18.6600
956321	J1121	22.8560
956371	J1127	3.5958
956391	J1129	4.6586
956571	J1153	26.3310
956581	J1154	7.5315
956731	J1171	14.5490
956901	J1188	3.8725
LGEE	LGEE	0.0211
CPL	CPL	0.1257
WEC	WEC	7.2456
CBM-W2	CBM-W2	7.8133
NY	NY	0.0398
CBM-W1	CBM-W1	78.8756
TVA	TVA	0.9940
CBM-S2	CBM-S2	1.5433
CBM-S1	CBM-S1	4.9842
MADISON	MADISON	12.9205
MEC	MEC	7.4032

Index 34

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
44343026	270942	ZION STA ;0B	CE	270915	WAUKEGAN ; R	CE	1	COMED_P7_345-L2221__R-N_+ 345-L2222__B-N-B	tower	1768.0	129.97	133.58	DC	118.09

Bus #	Bus	MW Impact
274725	ZION EC ;1P	9.6634
274726	ZION EC ;2P	9.6634
274727	ZION EC ;3P	9.6634
274830	U3-021 1	2.8424
274831	U3-021 2	2.8424
294763	P-046 E	4.2446
914321	Y2-103 (Withdrawn : 12/24/2019)	151.0488
915011	Y3-013 1	12.5874
915021	Y3-013 2	12.5874
915031	Y3-013 3	12.5874
920272	AA2-123 E	0.8745
924471	AB2-096	19.7391
926431	AC1-114	1.1178
927511	AC1-113 1	0.5591
927521	AC1-113 2	0.5591
932881	AC2-115 1	1.1183
932891	AC2-115 2	1.1183

932921	AC2-116	0.3912
933931	AD1-016 C	0.3323
933932	AD1-016 E	0.5422
934651	AD1-096 C	0.3411
934652	AD1-096 E	0.5565
934971	AD1-129 C	0.3720
934972	AD1-129 E	0.2480
936791	AD2-102 C	8.7710
936792	AD2-102 E	5.8473
937311	AD2-172 C	1.1142
937312	AD2-172 E	1.5387
938861	AE1-114 C O1	1.5187
938862	AE1-114 E O1	5.1814
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.4642
940501	AE2-035 C	0.5905
940502	AE2-035 E	0.8155
942991	AE2-321 C	2.9597
942992	AE2-321 E	1.4578
943801	AF1-048 C	0.7333
943802	AF1-048 E	0.4889
943921	AF1-060	0.3374
945351	AF1-200 FTIR	62.5883
946501	AF1-314 C	1.3498
946502	AF1-314 E	6.3186
946661	AF1-330 C	0.3800
946662	AF1-330 E	0.0834
950101	J390	70.7967
951391	J505	17.8920
952381	J703	20.7355
952391	J704	8.8384
952431	J760	1.6860
952511	J584 C	0.8098
952512	J584 E	4.3814
953111	J807 C	0.8128
953112	J807 E	4.3973
953151	J831	8.7532
953331	J801	4.8070
953491	J947	52.3600
953681	J818	18.0752
953691	J819 C	1.0811
953692	J819 E	5.8490
953701	J821 C	1.7970
953702	J821 E	9.7224
953891	J849	20.2837
953901	J850	30.3825
953921	J855 C	0.8358
953922	J855 E	4.5222
954001	J864	3.7080
954061	J870	10.7160
954071	J871	5.3580
954141	J878	44.7400
954191	J886	26.8095
954511	J926 C	1.0583

954512	J926 E	5.7255
954691	J732	49.0246
954741	J928 C	2.0246
954742	J928 E	10.9538
955091	J986	18.3291
955241	J1002	12.6750
955251	J1003	6.9290
955301	J1009	132.3200
955311	J1010	213.4720
955321	J1011	213.4720
955501	J1032	2.6735
955581	J1042 C	5.0460
955582	J1042 E	28.5940
955601	J1044 C	17.5030
955602	J1044 E	17.5030
955631	J1047	35.0060
955671	J1051	8.8115
955691	J1053	54.2010
955771	J1061	16.0410
955981	J1085 C	4.4778
955982	J1085 E	24.2262
956051	J1092	6.0720
956141	J1101	3.5746
956171	J1104	22.3230
956321	J1121	26.9880
956371	J1127	4.5564
956391	J1129	5.9358
956571	J1153	31.3890
956581	J1154	9.0938
956731	J1171	17.3320
956811	J1179	15.5010
956852	J1183 E	0.2190
956901	J1188	4.8340
CPL	CPL	0.1005
WEC	WEC	8.8805
CBM-W2	CBM-W2	8.5258
NY	NY	0.0846
CBM-W1	CBM-W1	93.7625
TVA	TVA	1.0612
O-066	O-066	0.9542
CBM-S2	CBM-S2	1.3988
CBM-S1	CBM-S1	5.2142
TILTON	TILTON	0.0340
G-007	G-007	0.1466
MADISON	MADISON	15.2772
MEC	MEC	8.5488
BLUEG	BLUEG	0.0937
TRIMBLE	TRIMBLE	0.0384

Index 35

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
44341911	274750	CRETE EC ;BP	CE	270728	E FRANKFO; B	CE	1	AEP_P4_#1750_05DUMONT	breaker	1399.0	113.51	191.39	DC	258.93

Bus #	Bus	MW Impact
274751	CRETE EC ;1U	5.2477
274752	CRETE EC ;2U	5.2477
274753	CRETE EC ;3U	5.2477
274754	CRETE EC ;4U	5.2477
276153	W2-048 E	-0.8184
276165	Z1-106 BAT2	1.3181
276166	Z1-106 BAT1	1.3181
276171	Z1-107 BAT	2.5352
276172	Z1-108 BAT	2.6038
909052	X2-022 E	-11.8348
918052	AA1-018 E OP	-13.5451
920273	AA2-123 BAT	2.5538
936973	AD2-131 BAT	3.1115
939631	AE1-193 C	32.4961
939632	AE1-193 E	217.4739
939641	AE1-194 C	32.4961
939642	AE1-194 E	217.4739
939651	AE1-195 C	32.4961
939652	AE1-195 E	217.4739
939681	AE1-198 C	96.4884
939682	AE1-198 E	81.9902
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.5802
941732	AE2-173 BAT	5.1520
942883	AE2-307 BAT	11.9100
942913	AE2-310 BAT	4.9000
943383	AF1-009 BAT	3.1120
943403	AF1-011 BAT	3.4566
943423	AF1-013 BAT	3.1120
943803	AF1-048 BAT	6.6555
943922	AF1-060 BAT	1.4645
945101	AF1-175 C O2	2.0822
945102	AF1-175 E O2	1.3881
945352	AF1-200 NFW	258.9300
945882	AF1-253 BAT	5.6517
946163	AF1-281 BAT	2.3822
946533	AF1-317 BAT	5.9430
946683	AF1-332 BAT	5.9430
950311	G934 C	2.3172
950312	G934 E	9.2688
950351	J466	2.2326
950791	J201 C	0.3008

950792	J201 E	1.2030
950871	J246 C	0.1075
950872	J246 E	0.4301
950942	J325 E	0.2967
951531	J533 C	3.0724
951532	J533 E	12.2896
951571	J538 C	2.2461
951572	J538 E	8.9844
951721	J643	25.2210
951731	J446 C	1.8470
951732	J446 E	9.9930
951811	J513 C	1.1122
951812	J513 E	6.0173
951941	J602 C	2.3559
951942	J602 E	12.7461
952161	J571	0.5053
952201	J589 C	2.3868
952202	J589 E	12.9132
952312	J646 E	0.1176
952401	J752 C	1.1634
952402	J752 E	6.2946
952581	J740 C	2.3029
952582	J740 E	12.4591
952611	J717 C	2.3686
952612	J717 E	12.8149
952761	J728 C	2.2028
952762	J728 E	11.9336
952881	J758	15.5340
952971	J793	97.2067
953071	J794 C	0.1486
953072	J794 E	0.8041
953161	J837 C	2.3040
953162	J837 E	12.4654
953171	J838 C	1.1514
953172	J838 E	6.2296
953271	J701 C	0.5705
953272	J701 E	3.0864
953291	J796	18.0780
953321	J799	13.6534
953351	J805	10.1211
953361	J806	11.4223
953421	J841	53.0782
953771	J832	7.6750
953781	J833	7.2160
953811	J839	7.3770
953871	J847	13.5297
953941	J857	9.6411
954111	J875	11.0310
954171	J883 C	0.9923
954172	J883 E	5.3685
954351	J903	5.2510
954381	J906 C	1.2269
954382	J906 E	6.6381

954421	J913 C	11.8096
954591	J937	42.6234
954751	J351	59.8052
954941	J968 C	2.3029
954942	J968 E	12.4591
955021	J978 C	1.2113
955022	J978 E	6.5537
955071	J984 C	2.4099
955072	J984 E	13.0381
955121	J989	5.9840
955141	J992	14.8560
955151	J993	10.0800
955181	J996	5.7896
955261	J1005	15.1280
955341	J1013	6.2448
955351	J1014 C	3.7500
955352	J1014 E	2.2500
955491	J1031 C	1.3038
955492	J1031 E	7.0542
955591	J1043 C	1.5600
955592	J1043 E	27.6432
955621	J1046	3.5420
955721	J1056 C	2.2361
955722	J1056 E	12.0979
955741	J1058	75.8400
955781	J1062	14.1680
955791	J1063	17.0640
955801	J1064 C	2.4442
955802	J1064 E	13.2238
955811	J1065 C	2.4043
955812	J1065 E	13.0077
955821	J1067	21.4680
955831	J1068 C	2.2604
955832	J1068 E	12.2296
955841	J1069 C	2.3029
955842	J1069 E	12.4591
955861	J1071	7.8450
955961	J1083	5.3123
956011	J1088	11.3445
956021	J1089	12.8469
956031	J1090	6.7743
956161	J1103	1.4926
956251	J1112	13.2090
956291	J1117	6.0568
956301	J1119	45.0720
956561	J1152	10.2980
956741	J1172	3.7535
956751	J1173	5.8600
956801	J1178	4.9328
DUCKCREEK	DUCKCREEK	11.6129
LGEE	LGEE	0.6236
NEWTON	NEWTON	2.2822
CPLE	CPLE	0.6635

FARMERCITY	FARMERCITY	0.4037
G-007A	G-007A	4.6440
VFT	VFT	12.5001
PRAIRIE	PRAIRIE	9.5545
COFFEEN	COFFEEN	2.2810
CBM-S2	CBM-S2	4.2136
EDWARDS	EDWARDS	3.8367
TILTON	TILTON	1.1075
AC1-056	AC1-056	5.1570

Index 36

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
44341940	274750	CRETE EC ;BP	CE	255112	17STJOHN	NIPS	1	AEP_P4_#2978_05DUMONT_FSA	breaker	1399.0	153.46	153.6	DC	247.66

Bus #	Bus	MW Impact
274654	BRAIDWOOD;1U	23.9615
274655	BRAIDWOOD;2U	23.3097
274660	LASCO STA;1U	22.0266
274661	LASCO STA;2U	22.1098
274687	WILL CNTY;4U	10.1107
274704	KENDALL ;1C	3.5538
274705	KENDALL ;1S	2.3763
274706	KENDALL ;2C	3.5538
274707	KENDALL ;2S	2.3763
274751	CRETE EC ;1U	5.2285
274752	CRETE EC ;2U	5.2285
274753	CRETE EC ;3U	5.2285
274754	CRETE EC ;4U	5.2285
274830	U3-021 1	5.3426
274831	U3-021 2	5.3426
274861	TOP CROP ;1U	0.4249
274862	TOP CROP ;2U	0.8248
276161	W4-086	0.2058
276167	Z1-106 E2	1.1059
276168	Z1-106 E1	1.1059
276169	Z1-107 E	2.1252
276170	Z1-108 E	2.1847
290021	O50 E	17.2584
290051	GSG-6; E	9.1750
290108	LEEDK;1U E	21.2313
293061	N-015 E	13.7210
293644	O22 E1	12.1764
293645	O22 E2	23.6364
294392	P-010 E	17.4257
914321	Y2-103 (Withdrawn : 12/24/2019)	39.6056

915011	Y3-013 1	3.3005
915021	Y3-013 2	3.3005
915031	Y3-013 3	3.3005
920272	AA2-123 E	2.1427
924471	AB2-096	37.1012
926311	AC1-109 1	1.6676
926321	AC1-109 2	1.6676
926331	AC1-110 1	1.6635
926341	AC1-110 2	1.6635
926351	AC1-111 1	0.6658
926361	AC1-111 2	0.6658
926371	AC1-111 3	0.6658
926381	AC1-111 4	0.6658
926391	AC1-111 5	0.6658
926401	AC1-111 6	0.6658
926431	AC1-114	2.0811
927091	AC1-204 1	65.2484
927101	AC1-204 2	65.1345
927451	AC1-142A 1	3.7789
927461	AC1-142A 2	3.7813
927511	AC1-113 1	1.0406
927521	AC1-113 2	1.0406
930481	AB1-089	57.5306
930741	AB1-122 1O1	62.1446
930751	AB1-122 2O1	66.4260
932881	AC2-115 1	2.0811
932891	AC2-115 2	2.0811
932921	AC2-116	0.7284
933431	AC2-156 C O1	0.8314
933432	AC2-156 E O1	1.3565
933911	AD1-013 C	1.6205
933912	AD1-013 E	2.5887
933931	AD1-016 C	0.8142
933932	AD1-016 E	1.3285
934101	AD1-039 1	6.0902
934111	AD1-039 2	6.5097
934431	AD1-067 C	0.1152
934432	AD1-067 E	0.4844
934701	AD1-098 C O1	6.0361
934702	AD1-098 E O1	4.4070
934721	AD1-100 C	16.6043
934722	AD1-100 E	77.4868
934971	AD1-129 C	0.7915
934972	AD1-129 E	0.5277
936511	AD2-066 C O1	7.2643
936512	AD2-066 E O1	4.8428
937001	AD2-134 C	2.3985
937002	AD2-134 E	9.9081
937401	AD2-194 1	7.0166
937411	AD2-194 2	7.0043
938511	AE1-070 1	8.2445
938521	AE1-070 2	7.5297
938851	AE1-113 C	7.1191

938852	AE1-113 E	25.2404
939351	AE1-166 C O1	4.7090
939352	AE1-166 E O1	4.3467
939631	AE1-193 C	32.3771
939632	AE1-193 E	216.6778
939641	AE1-194 C	32.3771
939642	AE1-194 E	216.6778
939651	AE1-195 C	32.3771
939652	AE1-195 E	216.6778
939681	AE1-198 C	96.1352
939682	AE1-198 E	81.6900
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.4869
940631	AE2-050 C O1	14.1318
940632	AE2-050 E O1	9.4212
940752	AE2-062 E	0.1405
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.1405
941131	AE2-107 C	3.3842
941132	AE2-107 E	2.2561
941551	AE2-152 C O1	5.4334
941552	AE2-152 E O1	3.6223
941561	AE2-153 C O1	4.0766
941562	AE2-153 E O1	19.0859
942421	AE2-255 C O1	2.6966
942422	AE2-255 E O1	8.0899
942881	AE2-307 C O1	25.9083
942882	AE2-307 E O1	9.4212
942991	AE2-321 C	7.1672
942992	AE2-321 E	3.5301
943121	AE2-341 C	11.0889
943122	AE2-341 E	5.4453
943381	AF1-009 C	0.2767
943382	AF1-009 E	1.1070
943422	AF1-013 E	1.3837
943591	AF1-030 C O2	3.9355
943592	AF1-030 E O2	1.9296
943801	AF1-048 C	1.7757
943802	AF1-048 E	1.1838
944041	AF1-072	1.0018
944911	AF1-156 C	5.5243
944912	AF1-156 E	3.6828
945351	AF1-200 FTIR	37.8648
946521	AF1-316 C O2	2.9781
946522	AF1-316 E O2	4.4671
946661	AF1-330 C	0.9312
946662	AF1-330 E	0.2044
946671	AF1-331	1.1154
WEC	WEC	3.8773
CBM-W2	CBM-W2	18.8534
NY	NY	1.1972
CBM-W1	CBM-W1	52.7046
TVA	TVA	1.1214
O-066	O-066	14.1658
CHEOAH	CHEOAH	0.1041

CBM-S1	CBM-S1	3.7658
G-007	G-007	2.1892
MADISON	MADISON	19.9987
MEC	MEC	13.1776
GIBSON	GIBSON	0.1818
CALDERWOOD	CALDERWOOD	0.0929
BLUEG	BLUEG	2.0433
TRIMBLE	TRIMBLE	0.6917
CATAWBA	CATAWBA	0.3080

Index 37

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
44342997	274817	ZION EC ;RP	CE	270941	ZION STA ; R	CE	1	COMED_P7_345-L2221__R-N_+_345-L2222__B-N-A	tower	1367.0	151.69	156.35	DC	118.09

Bus #	Bus	MW Impact
274725	ZION EC ;1P	9.6634
274726	ZION EC ;2P	9.6634
274727	ZION EC ;3P	9.6634
274830	U3-021 1	2.8424
274831	U3-021 2	2.8424
294763	P-046 E	4.2446
914321	Y2-103 (Withdrawn : 12/24/2019)	151.0488
915011	Y3-013 1	12.5874
915021	Y3-013 2	12.5874
915031	Y3-013 3	12.5874
920272	AA2-123 E	0.8745
924471	AB2-096	19.7391
926431	AC1-114	1.1178
927511	AC1-113 1	0.5591
927521	AC1-113 2	0.5591
932881	AC2-115 1	1.1183
932891	AC2-115 2	1.1183
932921	AC2-116	0.3912
933931	AD1-016 C	0.3323
933932	AD1-016 E	0.5422
934651	AD1-096 C	0.3411
934652	AD1-096 E	0.5565
934971	AD1-129 C	0.3720
934972	AD1-129 E	0.2480
936791	AD2-102 C	8.7710
936792	AD2-102 E	5.8473
937311	AD2-172 C	1.1142
937312	AD2-172 E	1.5387
938861	AE1-114 C O1	1.5187

938862	AE1-114 E O1	5.1814
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.4642
940501	AE2-035 C	0.5905
940502	AE2-035 E	0.8155
942991	AE2-321 C	2.9597
942992	AE2-321 E	1.4578
943801	AF1-048 C	0.7333
943802	AF1-048 E	0.4889
943921	AF1-060	0.3374
945351	AF1-200 FTIR	62.5883
946501	AF1-314 C	1.3498
946502	AF1-314 E	6.3186
946661	AF1-330 C	0.3800
946662	AF1-330 E	0.0834
950101	J390	70.7967
951391	J505	17.8920
952381	J703	20.7355
952391	J704	8.8384
952431	J760	1.6860
952511	J584 C	0.8098
952512	J584 E	4.3814
953111	J807 C	0.8128
953112	J807 E	4.3973
953151	J831	8.7532
953331	J801	4.8070
953491	J947	52.3600
953681	J818	18.0752
953691	J819 C	1.0811
953692	J819 E	5.8490
953701	J821 C	1.7970
953702	J821 E	9.7224
953891	J849	20.2837
953901	J850	30.3825
953921	J855 C	0.8358
953922	J855 E	4.5222
954001	J864	3.7080
954061	J870	10.7160
954071	J871	5.3580
954141	J878	44.7400
954191	J886	26.8095
954511	J926 C	1.0583
954512	J926 E	5.7255
954691	J732	49.0246
954741	J928 C	2.0246
954742	J928 E	10.9538
955091	J986	18.3291
955241	J1002	12.6750
955251	J1003	6.9290
955301	J1009	132.3200
955311	J1010	101.2520
955321	J1011	101.2520
955501	J1032	2.6735
955581	J1042 C	5.0460

955582	J1042 E	28.5940
955601	J1044 C	17.5030
955602	J1044 E	17.5030
955631	J1047	35.0060
955671	J1051	8.8115
955691	J1053	54.2010
955771	J1061	16.0410
955981	J1085 C	4.4778
955982	J1085 E	24.2262
956051	J1092	6.0720
956141	J1101	3.5746
956171	J1104	22.3230
956321	J1121	26.9880
956371	J1127	4.5564
956391	J1129	5.9358
956571	J1153	31.3890
956581	J1154	9.0938
956731	J1171	17.3320
956811	J1179	15.5010
956852	J1183 E	0.2190
956901	J1188	4.8340
CPL	CPL	0.1005
WEC	WEC	8.8805
CBM-W2	CBM-W2	8.5258
NY	NY	0.0846
CBM-W1	CBM-W1	93.7625
TVA	TVA	1.0612
O-066	O-066	0.9542
CBM-S2	CBM-S2	1.3988
CBM-S1	CBM-S1	5.2142
TILTON	TILTON	0.0340
G-007	G-007	0.1466
MADISON	MADISON	15.2772
MEC	MEC	8.5488
BLUEG	BLUEG	0.0937
TRIMBLE	TRIMBLE	0.0384

Index 38

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
45686728	274817	ZION EC ;RP	CE	699432	PLS PR1	WEC	1	COMED_P7_345-L2221__R-N+_345-L2222__B-N-B	tower	1859.0	164.9	168.46	DC	126.0

Bus #	Bus	MW Impact
274725	ZION EC ;1P	3.9614
274726	ZION EC ;2P	3.9614

274727	ZION EC ;3P	3.9614
914321	Y2-103 (Withdrawn : 12/24/2019)	61.9200
915011	Y3-013 1	5.1600
915021	Y3-013 2	5.1600
915031	Y3-013 3	5.1600
943922	AF1-060 BAT	0.8353
945352	AF1-200 NFTW	66.7800
946163	AF1-281 BAT	1.0304
950311	G934 C	3.1584
950312	G934 E	12.6336
950351	J466	3.1302
950791	J201 C	0.4184
950792	J201 E	1.6734
950871	J246 C	0.1472
950872	J246 E	0.5888
950942	J325 E	0.4170
950981	J333	16.6838
950991	J334	17.5698
951531	J533 C	4.2056
951532	J533 E	16.8224
951571	J538 C	3.1320
951572	J538 E	12.5280
951601	J620	7.4170
951631	J456 C	1.7040
951632	J456 E	9.2190
951641	J484	67.3176
951691	J586	13.0865
951721	J643	19.7208
951731	J446 C	3.1705
951732	J446 E	17.1535
951741	J474 C	2.1635
951742	J474 E	11.7051
951771	J481 C	9.6889
951772	J481 E	0.4750
951781	J483	7.0952
951811	J513 C	1.6299
951812	J513 E	8.8181
951831	J544	7.1839
951941	J602 C	3.2666
951942	J602 E	17.6734
951951	J603	7.4200
951961	J604	7.6279
952121	J472	64.8138
952141	J552	7.3940
952161	J571	0.6765
952181	J581	5.8232
952201	J589 C	3.2769
952202	J589 E	17.7291
952251	J641	10.9480
952271	J644	9.0420
952312	J646 E	0.1665
952401	J752 C	1.6285
952402	J752 E	8.8105

952521	J680	7.3110
952581	J740 C	3.2548
952582	J740 E	17.6092
952601	J679	7.6770
952611	J717 C	3.2723
952612	J717 E	17.7042
952651	J756 C	2.8016
952652	J756 E	15.1574
952711	J683	3.7300
952761	J728 C	3.0432
952762	J728 E	16.4866
952791	J753	6.9390
952801	J754 C	4.6637
952802	J754 E	25.2318
952811	J759	6.6409
952821	J762	18.6960
952861	J783 C	6.3605
952862	J783 E	0.2650
952871	J757 C	3.9035
952872	J757 E	21.1192
952881	J758	21.0640
952971	J793	137.5409
953051	J663	7.5190
953071	J794 C	0.2046
953072	J794 E	1.1071
953141	J830	7.6680
953161	J837 C	3.2564
953162	J837 E	17.6180
953171	J838 C	1.6274
953172	J838 E	8.8046
953181	J919	13.0860
953191	J639	3.7455
953201	J715 C	1.4374
953202	J715 E	7.7766
953251	J697	10.9455
953271	J701 C	0.7981
953272	J701 E	4.3180
953291	J796	25.0353
953321	J799	19.5823
953351	J805	19.6154
953361	J806	15.6465
953371	J808	7.5646
953401	J811	8.7140
953421	J841	73.5275
953431	J853	12.3029
953441	J893	7.2500
953451	J908	7.6360
953481	J934	14.9560
953611	J800	22.0150
953641	J813	21.8800
953651	J815	22.2475
953671	J817	8.9321
953741	J826 C	1.5207

953742	J826 E	8.2273
953761	J829	24.1200
953771	J832	10.5110
953781	J833	10.3590
953791	J834	7.5190
953811	J839	10.4120
953831	J842 C	2.9656
953832	J842 E	16.0444
953841	J843 C	2.9827
953842	J843 E	16.1373
953851	J845 C	1.8362
953852	J845 E	9.9346
953871	J847	10.1385
953881	J848 C	3.4819
953882	J848 E	18.8381
953931	J856	7.5896
953941	J857	13.1397
953951	J859	11.5919
954021	J866 C	2.3728
954022	J866 E	12.8372
954111	J875	15.6030
954171	J883 C	1.3100
954172	J883 E	7.0876
954181	J884	9.8220
954211	J888	1.9793
954351	J903	9.8990
954381	J906 C	1.6495
954382	J906 E	8.9245
954391	J907	7.4510
954401	J909	7.5490
954411	J912	8.9200
954421	J913 C	16.6912
954591	J937	56.7047
954641	J944	14.9020
954681	J949 C	15.9749
954702	J844 E	9.4727
954721	J750 C	2.0707
954722	J750 E	11.2028
954751	J351	77.1129
954761	J468 C	2.8879
954762	J468 E	16.3647
954772	J515 E	39.3400
954821	J955	92.9136
954831	J956	12.1340
954941	J968 C	3.2548
954942	J968 E	17.6092
954981	J974 C	3.4379
954982	J974 E	18.5996
955001	J976	19.4400
955021	J978 C	1.6446
955022	J978 E	8.8974
955031	J979 C	2.7855
955032	J979 E	15.0705

955041	J980 C	2.7855
955042	J980 E	15.0705
955071	J984 C	3.2847
955072	J984 E	17.7713
955081	J985	9.0756
955101	J987	6.2530
955121	J989	8.3568
955131	J991	17.1920
955141	J992	20.8540
955151	J993	19.7960
955161	J994	5.8550
955171	J995	8.2200
955181	J996	8.2912
955261	J1005	20.9480
955311	J1010	90.6840
955321	J1011	90.6840
955341	J1013	8.4264
955351	J1014 C	5.2245
955352	J1014 E	3.1347
955371	J1016	4.7700
955391	J1021 C	3.0214
955392	J1021 E	16.3466
955401	J1022 C	2.2810
955402	J1022 E	12.3410
955431	J1025 C	2.4514
955432	J1025 E	13.2626
955441	J1026 C	3.7059
955442	J1026 E	20.0501
955451	J1027	14.3820
955461	J1028	14.3685
955491	J1031 C	2.3363
955492	J1031 E	12.6397
955511	J1033	3.7535
955521	J1034 C	1.1261
955522	J1034 E	15.7647
955551	J1039	3.2400
955591	J1043 C	2.1108
955592	J1043 E	37.4034
955621	J1046	5.1580
955711	J1055 C	2.0096
955712	J1055 E	10.8726
955721	J1056 C	3.2270
955722	J1056 E	17.4590
955741	J1058	33.9930
955751	J1059	22.9500
955781	J1062	20.6320
955791	J1063	30.3600
955801	J1064 C	3.2963
955802	J1064 E	17.8337
955811	J1065 C	3.2829
955812	J1065 E	17.7611
955821	J1067	25.3968
955831	J1068 C	3.2348

955832	J1068 E	17.5012
955841	J1069 C	3.2548
955842	J1069 E	17.6092
955861	J1071	10.5680
955891	J1074	19.0800
955961	J1083	7.3346
956001	J1087	15.1260
956011	J1088	15.7110
956021	J1089	17.8024
956031	J1090	9.4122
956071	J1094	11.4270
956091	J1096	12.2805
956151	J1102	6.3392
956161	J1103	2.0882
956201	J1107	15.1920
956241	J1111	11.8305
956251	J1112	15.9675
956281	J1115 C	3.0086
956282	J1115 E	16.2774
956291	J1117	8.3784
956301	J1119	62.7240
956341	J1123 C	1.4197
956342	J1123 E	7.6808
956451	J1139	14.4660
956501	J1145	14.2250
956561	J1152	19.7560
956641	J1161	7.5804
956741	J1172	5.2275
956751	J1173	8.3144
956801	J1178	6.8107
956821	J1180	7.0995
956911	J1189	0.4798
DUCKCREEK	DUCKCREEK	1.6374
NEWTON	NEWTON	1.0251
FARMERCITY	FARMERCITY	0.4752
NY	NY	0.0100
PRAIRIE	PRAIRIE	6.0520
O-066	O-066	0.2218
COFFEEN	COFFEEN	0.6781
EDWARDS	EDWARDS	0.3440
CHEOAH	CHEOAH	0.4930
TILTON	TILTON	0.0832
G-007	G-007	0.0354
GIBSON	GIBSON	0.1747
CALDERWOOD	CALDERWOOD	0.4940
BLUEG	BLUEG	0.2986
TRIMBLE	TRIMBLE	0.0812
CATAWBA	CATAWBA	0.2285

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
44342022	275232	WILTON ;3M	CE	270926	WILTON ; B	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	112.3	139.55	DC	302.34

Bus #	Bus	MW Impact
238965	02MNFDG1 (Deativation : 02/05/19)	16.5264
238966	02MNFDG2 (Deativation : 02/05/19)	16.5264
238967	02MNFDG3 (Deativation : 06/01/21)	16.5264
276153	W2-048 E	-1.1314
276165	Z1-106 BAT2	1.5370
276166	Z1-106 BAT1	1.5369
276171	Z1-107 BAT	3.1460
276172	Z1-108 BAT	3.0242
909052	X2-022 E	-16.3619
918052	AA1-018 E OP	-16.9848
920273	AA2-123 BAT	2.9722
932801	AC2-104 C (Withdrawn : 11/07/2019)	2.7671
932802	AC2-104 E (Withdrawn : 11/07/2019)	18.5190
933281	AC2-140 C	2.3292
933282	AC2-140 E	0.1226
934771	AD1-104 C	2.2304
934772	AD1-104 E	14.9262
936973	AD2-131 BAT	4.2440
939683	AE1-198 BAT	10.3507
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6701
941732	AE2-173 BAT	7.2830
942883	AE2-307 BAT	12.7575
942913	AE2-310 BAT	6.6524
943383	AF1-009 BAT	3.6470
943403	AF1-011 BAT	4.0770
943423	AF1-013 BAT	3.6470
943803	AF1-048 BAT	7.7470
943922	AF1-060 BAT	1.7118
945352	AF1-200 NFTW	302.3370
945882	AF1-253 BAT	7.7711
946163	AF1-281 BAT	2.7904
946533	AF1-317 BAT	6.9635
946683	AF1-332 BAT	6.9635
950311	G934 C	2.6895
950312	G934 E	10.7580
950351	J466	2.6559
950791	J201 C	0.3553
950792	J201 E	1.4211
950871	J246 C	0.1253
950872	J246 E	0.5011
950942	J325 E	0.3538
950981	J333	8.7516
951531	J533 C	3.5792
951532	J533 E	14.3168
951571	J538 C	2.6406
951572	J538 E	10.5624

951731	J446 C	2.2411
951732	J446 E	12.1249
951811	J513 C	0.9930
951812	J513 E	5.3726
951941	J602 C	2.7749
951942	J602 E	15.0131
952161	J571	0.5710
952201	J589 C	2.7868
952202	J589 E	15.0772
952312	J646 E	0.1411
952401	J752 C	1.3820
952402	J752 E	7.4770
952581	J740 C	2.1940
952582	J740 E	11.8700
952611	J717 C	2.7810
952612	J717 E	15.0459
952761	J728 C	2.5863
952762	J728 E	14.0112
952811	J759	3.9858
952821	J762	11.2360
952861	J783 C	3.7834
952862	J783 E	0.1576
952881	J758	17.8040
952971	J793	116.5872
953071	J794 C	0.1740
953072	J794 E	0.9413
953161	J837 C	2.1951
953162	J837 E	11.8760
953171	J838 C	1.0970
953172	J838 E	5.9350
953271	J701 C	0.6773
953272	J701 E	3.6646
953291	J796	21.2710
953321	J799	16.5734
953351	J805	13.0265
953361	J806	13.2312
953421	J841	62.4710
953771	J832	8.9410
953781	J833	8.7670
953811	J839	8.8280
953831	J842 C	1.6832
953832	J842 E	9.1068
953841	J843 C	1.7135
953842	J843 E	9.2705
953931	J856	4.3872
953941	J857	11.1081
954111	J875	13.1985
954171	J883 C	0.7570
954172	J883 E	4.0958
954351	J903	6.7700
954381	J906 C	1.4059
954382	J906 E	7.6061
954421	J913 C	11.2512

954591	J937	48.0591
954751	J351	45.6065
954941	J968 C	2.1940
954942	J968 E	11.8700
955021	J978 C	1.4004
955022	J978 E	7.5766
955071	J984 C	2.7971
955072	J984 E	15.1329
955121	J989	7.0912
955141	J992	16.2780
955151	J993	12.7160
955181	J996	7.0104
955261	J1005	17.8000
955341	J1013	7.0576
955351	J1014 C	4.4220
955352	J1014 E	2.6532
955371	J1016	2.7605
955451	J1027	8.1450
955461	J1028	8.2740
955491	J1031 C	1.6864
955492	J1031 E	9.1241
955591	J1043 C	1.8002
955592	J1043 E	31.8995
955621	J1046	4.3630
955721	J1056 C	2.7306
955722	J1056 E	14.7734
955781	J1062	17.4520
955791	J1063	20.5560
955801	J1064 C	2.8114
955802	J1064 E	15.2106
955811	J1065 C	2.7936
955812	J1065 E	15.1144
955821	J1067	14.7000
955831	J1068 C	2.7378
955832	J1068 E	14.8122
955841	J1069 C	2.1940
955842	J1069 E	11.8700
955861	J1071	9.0040
955891	J1074	11.0420
955961	J1083	6.2104
956011	J1088	13.3410
956021	J1089	15.1181
956031	J1090	7.9686
956161	J1103	1.7722
956251	J1112	10.8645
956291	J1117	7.0968
956301	J1119	53.1060
956561	J1152	13.2420
956741	J1172	4.4385
956751	J1173	7.0328
956801	J1178	5.7668
956911	J1189	0.2678
DUCKCREEK	DUCKCREEK	13.9297

LGEE	LGEE	0.7108
NEWTON	NEWTON	3.4760
CPLE	CPLE	0.8957
FARMERCITY	FARMERCITY	0.4876
G-007A	G-007A	6.0920
VFT	VFT	16.3959
PRAIRIE	PRAIRIE	12.6154
COFFEEN	COFFEEN	3.1483
CBM-S2	CBM-S2	5.7453
EDWARDS	EDWARDS	4.5692
TILTON	TILTON	2.0853
GIBSON	GIBSON	0.0426
AC1-056	AC1-056	6.8160

Index 40

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
44342108	275232	WILTON ;3M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT5-6__	breaker	1379.0	117.59	117.81	DC	292.98

Bus #	Bus	MW Impact
274771	LINCOLN ;2U	3.0480
274772	LINCOLN ;3U	3.0480
274773	LINCOLN ;4U	3.0480
274774	LINCOLN ;5U	3.0480
274775	LINCOLN ;6U	3.0480
274776	LINCOLN ;7U	3.0480
274777	LINCOLN ;8U	3.0480
274830	U3-021 1	6.3043
274831	U3-021 2	6.3043
274881	PILOT HIL;1E	19.9420
274890	CAYUG;1U E	17.0075
274891	CAYUG;2U E	17.0075
275149	KELLYCK ;1E	19.9420
276161	W4-086	0.2521
276167	Z1-106 E2	1.3064
276168	Z1-106 E1	1.3064
276169	Z1-107 E	2.6741
276170	Z1-108 E	2.5706
290021	O50 E	20.0287
290051	GSG-6; E	10.8928
290108	LEEDK;1U E	25.1957
293061	N-015 E	16.4444
293644	O22 E1	10.5927
293645	O22 E2	20.5622
294392	P-010 E	20.8844
910542	X3-005 E	0.7563
914321	Y2-103 (Withdrawn : 12/24/2019)	46.3651

915011	Y3-013 1	3.8638
915021	Y3-013 2	3.8638
915031	Y3-013 3	3.8638
917502	Z2-087 E	21.5431
918052	AA1-018 E OP	16.9848
920272	AA2-123 E	2.5264
924041	AB2-047 C O1	4.0239
924042	AB2-047 E O1	26.9289
924471	AB2-096	43.7801
926311	AC1-109 1	1.9768
926321	AC1-109 2	1.9768
926331	AC1-110 1	1.9636
926341	AC1-110 2	1.9636
926351	AC1-111 1	0.7895
926361	AC1-111 2	0.7895
926371	AC1-111 3	0.7895
926381	AC1-111 4	0.7895
926391	AC1-111 5	0.7895
926401	AC1-111 6	0.7895
926431	AC1-114	2.4604
927091	AC1-204 1	75.0465
927101	AC1-204 2	75.0465
927451	AC1-142A 1	4.3262
927461	AC1-142A 2	4.3259
927511	AC1-113 1	1.2302
927521	AC1-113 2	1.2302
930481	AB1-089	68.0119
930501	AB1-091 O1	79.3488
930741	AB1-122 1O1	75.3115
930751	AB1-122 2O1	76.2401
932881	AC2-115 1	2.4604
932891	AC2-115 2	2.4604
932921	AC2-116	0.8611
933411	AC2-154 C	2.7064
933412	AC2-154 E	4.4157
933431	AC2-156 C O1	0.9894
933432	AC2-156 E O1	1.6143
933911	AD1-013 C	1.9234
933912	AD1-013 E	3.0725
933931	AD1-016 C	0.9600
933932	AD1-016 E	1.5663
934101	AD1-039 1	7.3805
934111	AD1-039 2	7.4715
934431	AD1-067 C	0.1368
934432	AD1-067 E	0.5751
934701	AD1-098 C O1	7.1671
934702	AD1-098 E O1	5.2327
934721	AD1-100 C	24.8549
934722	AD1-100 E	115.9893
934871	AD1-116 C	0.9892
934872	AD1-116 E	1.6139
934971	AD1-129 C	0.9346
934972	AD1-129 E	0.6230

935001	AD1-133 C O1	23.0265
935002	AD1-133 E O1	15.3510
936291	AD2-038 C O1	2.4304
936292	AD2-038 E O1	16.2649
936371	AD2-047 C O1	4.8431
936372	AD2-047 E O1	23.6455
936461	AD2-060	1.5099
936511	AD2-066 C O1	8.7651
936512	AD2-066 E O1	5.8434
937001	AD2-134 C	2.8475
937002	AD2-134 E	11.7632
937321	AD2-175 C (Withdrawn : 12/10/2019)	17.7568
937322	AD2-175 E (Withdrawn : 12/10/2019)	11.8378
937401	AD2-194 1	8.0702
937411	AD2-194 2	8.0702
938511	AE1-070 1	9.4825
938521	AE1-070 2	8.6755
938851	AE1-113 C	8.2618
938852	AE1-113 E	29.2920
939321	AE1-163 C O1	6.1071
939322	AE1-163 E O1	37.5153
939351	AE1-166 C O1	6.4997
939352	AE1-166 E O1	5.9997
939401	AE1-172 C O1	6.7954
939402	AE1-172 E O1	31.8837
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5696
939741	AE1-205 C O1	10.4001
939742	AE1-205 E O1	14.3621
940101	AE1-252 C O1	13.6514
940102	AE1-252 E O1	9.1010
940621	AE2-049 C O1	5.1697
940622	AE2-049 E O1	3.4464
940631	AE2-050 C O1	6.8967
940632	AE2-050 E O1	4.5978
940752	AE2-062 E	0.0716
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0716
941131	AE2-107 C	4.0158
941132	AE2-107 E	2.6772
941551	AE2-152 C O1	7.4996
941552	AE2-152 E O1	4.9997
941561	AE2-153 C O1	5.1253
941562	AE2-153 E O1	23.9957
941731	AE2-173 O1	6.1905
942111	AE2-223 C	2.4143
942112	AE2-223 E	16.1573
942421	AE2-255 C O1	3.1295
942422	AE2-255 E O1	9.3885
942651	AE2-281 C O1	0.8724
942652	AE2-281 E O1	5.3593
942881	AE2-307 C O1	12.6440
942882	AE2-307 E O1	4.5978
942911	AE2-310 C O1	5.0198
942912	AE2-310 E O1	1.3486

942991	AE2-321 C	8.4519
942992	AE2-321 E	4.1629
943121	AE2-341 C	13.2096
943122	AE2-341 E	6.4866
943381	AF1-009 C	0.3286
943382	AF1-009 E	1.3144
943422	AF1-013 E	1.6430
943591	AF1-030 C O2	4.6906
943592	AF1-030 E O2	2.2998
943801	AF1-048 C	2.0940
943802	AF1-048 E	1.3960
944041	AF1-072	1.1799
944911	AF1-156 C	6.9454
944912	AF1-156 E	4.6302
945351	AF1-200 FTIR	29.8909
946521	AF1-316 C O2	3.5846
946522	AF1-316 E O2	5.3769
946661	AF1-330 C	1.0980
946662	AF1-330 E	0.2410
946671	AF1-331	1.3239
WEC	WEC	4.5593
CBM-W2	CBM-W2	25.8886
NY	NY	1.4400
CBM-W1	CBM-W1	77.6746
TVA	TVA	1.6184
O-066	O-066	17.0957
CHEOAH	CHEOAH	0.0776
CBM-S1	CBM-S1	6.0492
G-007	G-007	2.6426
MADISON	MADISON	24.2726
MEC	MEC	16.0219
CALDERWOOD	CALDERWOOD	0.0636
BLUEG	BLUEG	2.3054
TRIMBLE	TRIMBLE	0.7964
CATAWBA	CATAWBA	0.3626

Index 41

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
44342003	275233	WILTON	CE	270927	WILTON	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	115.82	143.65	DC	308.76

Bus #	Bus	MW Impact
238965	02MNFDG1 (Deativation : 02/05/19)	16.8813
238966	02MNFDG2 (Deativation : 02/05/19)	16.8813
238967	02MNFDG3 (Deativation : 06/01/21)	16.8813
276153	W2-048 E	-1.1545
276165	Z1-106 BAT2	1.5698

276166	Z1-106 BAT1	1.5697
276171	Z1-107 BAT	3.2132
276172	Z1-108 BAT	3.0888
909052	X2-022 E	-16.6959
918052	AA1-018 E OP	-17.3564
920273	AA2-123 BAT	3.0356
932801	AC2-104 C (Withdrawn : 11/07/2019)	2.8257
932802	AC2-104 E (Withdrawn : 11/07/2019)	18.9112
933281	AC2-140 C	2.3786
933282	AC2-140 E	0.1252
934771	AD1-104 C	2.2776
934772	AD1-104 E	15.2423
936973	AD2-131 BAT	4.3315
939683	AE1-198 BAT	10.5696
939733	AE1-204 BAT (Withdrawn : 11/18/2019)	0.6844
941732	AE2-173 BAT	7.4305
942883	AE2-307 BAT	13.0200
942913	AE2-310 BAT	6.7916
943383	AF1-009 BAT	3.7245
943403	AF1-011 BAT	4.1634
943423	AF1-013 BAT	3.7245
943803	AF1-048 BAT	7.9125
943922	AF1-060 BAT	1.7483
945352	AF1-200 NFTW	308.7630
945882	AF1-253 BAT	7.9306
946163	AF1-281 BAT	2.8498
946533	AF1-317 BAT	7.1115
946683	AF1-332 BAT	7.1115
950311	G934 C	2.7465
950312	G934 E	10.9860
950351	J466	2.7120
950791	J201 C	0.3628
950792	J201 E	1.4510
950871	J246 C	0.1279
950872	J246 E	0.5117
950942	J325 E	0.3612
950981	J333	8.9403
951531	J533 C	3.6548
951532	J533 E	14.6192
951571	J538 C	2.6964
951572	J538 E	10.7856
951731	J446 C	2.2885
951732	J446 E	12.3815
951811	J513 C	1.0141
951812	J513 E	5.4863
951941	J602 C	2.8333
951942	J602 E	15.3287
952161	J571	0.5830
952201	J589 C	2.8458
952202	J589 E	15.3962
952312	J646 E	0.1441
952401	J752 C	1.4113
952402	J752 E	7.6357

952581	J740 C	2.2405
952582	J740 E	12.1215
952611	J717 C	2.8397
952612	J717 E	15.3634
952761	J728 C	2.6409
952762	J728 E	14.3069
952801	J754 C	2.4107
952802	J754 E	13.0425
952811	J759	4.0705
952821	J762	11.4760
952861	J783 C	3.8640
952862	J783 E	0.1610
952881	J758	18.1800
952971	J793	119.0593
953071	J794 C	0.1776
953072	J794 E	0.9611
953161	J837 C	2.2416
953162	J837 E	12.1276
953171	J838 C	1.1202
953172	J838 E	6.0608
953271	J701 C	0.6916
953272	J701 E	3.7419
953291	J796	21.7203
953321	J799	16.9250
953351	J805	13.3051
953361	J806	13.5098
953421	J841	63.7907
953771	J832	9.1300
953781	J833	8.9520
953811	J839	9.0150
953831	J842 C	1.7191
953832	J842 E	9.3009
953841	J843 C	1.7503
953842	J843 E	9.4697
953931	J856	4.4808
953941	J857	11.3430
954111	J875	13.4775
954171	J883 C	0.7730
954172	J883 E	4.1822
954351	J903	6.9150
954381	J906 C	1.4355
954382	J906 E	7.7665
954421	J913 C	11.4896
954591	J937	49.0702
954751	J351	46.5582
954941	J968 C	2.2405
954942	J968 E	12.1215
955021	J978 C	1.4301
955022	J978 E	7.7369
955071	J984 C	2.8564
955072	J984 E	15.4536
955121	J989	7.2416
955141	J992	16.6220

955151	J993	12.9880
955181	J996	7.1584
955261	J1005	18.1760
955341	J1013	7.2072
955351	J1014 C	4.5155
955352	J1014 E	2.7093
955371	J1016	2.8195
955451	J1027	8.3205
955461	J1028	8.4510
955491	J1031 C	1.7222
955492	J1031 E	9.3178
955591	J1043 C	1.8382
955592	J1043 E	32.5729
955621	J1046	4.4555
955721	J1056 C	2.7883
955722	J1056 E	15.0857
955781	J1062	17.8220
955791	J1063	20.9910
955801	J1064 C	2.8710
955802	J1064 E	15.5330
955811	J1065 C	2.8526
955812	J1065 E	15.4334
955821	J1067	15.0096
955831	J1068 C	2.7958
955832	J1068 E	15.1262
955841	J1069 C	2.2405
955842	J1069 E	12.1215
955861	J1071	9.1940
955891	J1074	11.2780
955961	J1083	6.3413
956011	J1088	13.6230
956021	J1089	15.4377
956031	J1090	8.1369
956161	J1103	1.8096
956251	J1112	11.0925
956291	J1117	7.2472
956301	J1119	54.2280
956561	J1152	13.5240
956741	J1172	4.5320
956751	J1173	7.1816
956801	J1178	5.8884
956911	J1189	0.2735
DUCKCREEK	DUCKCREEK	14.2245
LGEE	LGEE	0.7262
NEWTON	NEWTON	3.5469
CPL	CPL	0.9149
FARMERCITY	FARMERCITY	0.4980
G-007A	G-007A	6.2215
VFT	VFT	16.7507
PRAIRIE	PRAIRIE	12.8763
COFFEEN	COFFEEN	3.2133
CBM-S2	CBM-S2	5.8725
EDWARDS	EDWARDS	4.6659

TILTON	TILTON	2.1275
GIBSON	GIBSON	0.0426
AC1-056	AC1-056	6.9570

Index 42

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
44342085	275233	WILTON ;4M	CE	270644	WILTON ;	CE	1	COMED_P4_112-65-BT2-3__	breaker	1379.0	120.04	120.26	DC	299.21

Bus #	Bus	MW Impact
274771	LINCOLN ;2U	3.1304
274772	LINCOLN ;3U	3.1304
274773	LINCOLN ;4U	3.1304
274774	LINCOLN ;5U	3.1304
274775	LINCOLN ;6U	3.1304
274776	LINCOLN ;7U	3.1304
274777	LINCOLN ;8U	3.1304
274830	U3-021 1	6.4384
274831	U3-021 2	6.4384
274881	PILOT HIL;1E	20.3585
274890	CAYUG;1U E	17.3471
274891	CAYUG;2U E	17.3471
275149	KELLYCK ;1E	20.3585
276161	W4-086	0.2575
276167	Z1-106 E2	1.3343
276168	Z1-106 E1	1.3342
276169	Z1-107 E	2.7312
276170	Z1-108 E	2.6255
290021	O50 E	20.4558
290051	GSG-6; E	11.1243
290108	LEEDK;1U E	25.7329
293061	N-015 E	16.7882
293644	O22 E1	10.8167
293645	O22 E2	20.9971
294392	P-010 E	21.3210
910542	X3-005 E	0.7728
914321	Y2-103 (Withdrawn : 12/24/2019)	47.3566
915011	Y3-013 1	3.9464
915021	Y3-013 2	3.9464
915031	Y3-013 3	3.9464
917502	Z2-087 E	21.9794
918052	AA1-018 E OP	17.3564
920272	AA2-123 E	2.5803
924041	AB2-047 C O1	4.1054
924042	AB2-047 E O1	27.4743
924471	AB2-096	44.7113
926311	AC1-109 1	2.0188

926321	AC1-109 2	2.0188
926331	AC1-110 1	2.0054
926341	AC1-110 2	2.0054
926351	AC1-111 1	0.8064
926361	AC1-111 2	0.8064
926371	AC1-111 3	0.8064
926381	AC1-111 4	0.8064
926391	AC1-111 5	0.8064
926401	AC1-111 6	0.8064
926431	AC1-114	2.5128
927091	AC1-204 1	76.6590
927101	AC1-204 2	76.6542
927451	AC1-142A 1	4.4192
927461	AC1-142A 2	4.4192
927511	AC1-113 1	1.2564
927521	AC1-113 2	1.2564
930481	AB1-089	69.4611
930501	AB1-091 O1	80.9991
930741	AB1-122 1O1	76.9097
930751	AB1-122 2O1	77.8676
932881	AC2-115 1	2.5128
932891	AC2-115 2	2.5128
932921	AC2-116	0.8795
933411	AC2-154 C	2.7629
933412	AC2-154 E	4.5080
933431	AC2-156 C O1	1.0105
933432	AC2-156 E O1	1.6487
933911	AD1-013 C	1.9643
933912	AD1-013 E	3.1378
933931	AD1-016 C	0.9805
933932	AD1-016 E	1.5998
934101	AD1-039 1	7.5372
934111	AD1-039 2	7.6310
934431	AD1-067 C	0.1397
934432	AD1-067 E	0.5873
934701	AD1-098 C O1	7.3194
934702	AD1-098 E O1	5.3439
934721	AD1-100 C	25.3483
934722	AD1-100 E	118.2919
934871	AD1-116 C	1.0108
934872	AD1-116 E	1.6492
934971	AD1-129 C	0.9545
934972	AD1-129 E	0.6363
935001	AD1-133 C O1	23.5039
935002	AD1-133 E O1	15.6692
936291	AD2-038 C O1	2.4828
936292	AD2-038 E O1	16.6155
936371	AD2-047 C O1	4.9442
936372	AD2-047 E O1	24.1394
936461	AD2-060	1.5414
936511	AD2-066 C O1	8.9509
936512	AD2-066 E O1	5.9673
937001	AD2-134 C	2.9081

937002	AD2-134 E	12.0133
937321	AD2-175 C (Withdrawn : 12/10/2019)	18.1248
937322	AD2-175 E (Withdrawn : 12/10/2019)	12.0832
937401	AD2-194 1	8.2436
937411	AD2-194 2	8.2431
938511	AE1-070 1	9.6863
938521	AE1-070 2	8.8614
938851	AE1-113 C	8.4380
938852	AE1-113 E	29.9165
939321	AE1-163 C O1	6.2388
939322	AE1-163 E O1	38.3238
939351	AE1-166 C O1	6.6307
939352	AE1-166 E O1	6.1207
939401	AE1-172 C O1	6.9298
939402	AE1-172 E O1	32.5144
939732	AE1-204 E (Withdrawn : 11/18/2019)	0.5818
939741	AE1-205 C O1	10.6108
939742	AE1-205 E O1	14.6529
940101	AE1-252 C O1	13.9215
940102	AE1-252 E O1	9.2810
940621	AE2-049 C O1	5.2778
940622	AE2-049 E O1	3.5186
940631	AE2-050 C O1	7.0386
940632	AE2-050 E O1	4.6924
940752	AE2-062 E	0.0731
940762	AE2-063 E (Withdrawn : 01/14/2020)	0.0731
941131	AE2-107 C	4.1013
941132	AE2-107 E	2.7342
941551	AE2-152 C O1	7.6508
941552	AE2-152 E O1	5.1006
941561	AE2-153 C O1	5.2309
941562	AE2-153 E O1	24.4902
941731	AE2-173 O1	6.3159
942111	AE2-223 C	2.4632
942112	AE2-223 E	16.4846
942421	AE2-255 C O1	3.1962
942422	AE2-255 E O1	9.5886
942651	AE2-281 C O1	0.8913
942652	AE2-281 E O1	5.4748
942881	AE2-307 C O1	12.9041
942882	AE2-307 E O1	4.6924
942911	AE2-310 C O1	5.1249
942912	AE2-310 E O1	1.3768
942991	AE2-321 C	8.6325
942992	AE2-321 E	4.2518
943121	AE2-341 C	13.4901
943122	AE2-341 E	6.6243
943381	AF1-009 C	0.3356
943382	AF1-009 E	1.3423
943422	AF1-013 E	1.6779
943591	AF1-030 C O2	4.7903
943592	AF1-030 E O2	2.3488
943801	AF1-048 C	2.1387

943802	AF1-048 E	1.4258
944041	AF1-072	1.2051
944911	AF1-156 C	7.0885
944912	AF1-156 E	4.7257
945351	AF1-200 FTIR	30.5262
946521	AF1-316 C O2	3.6607
946522	AF1-316 E O2	5.4911
946661	AF1-330 C	1.1214
946662	AF1-330 E	0.2462
946671	AF1-331	1.3520
WEC	WEC	4.6566
CBM-W2	CBM-W2	26.4209
NY	NY	1.4710
CBM-W1	CBM-W1	79.3384
TVA	TVA	1.6506
O-066	O-066	17.4586
CHEOAH	CHEOAH	0.0796
CBM-S1	CBM-S1	6.1685
G-007	G-007	2.6988
MADISON	MADISON	24.7867
MEC	MEC	16.3603
CALDERWOOD	CALDERWOOD	0.0651
BLUEG	BLUEG	2.3558
TRIMBLE	TRIMBLE	0.8136
CATAWBA	CATAWBA	0.3707

Index 43

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
44342992	699432	PLS PR1	WEC	274817	ZION EC ;RP	CE	1	COMED_P7_345-L2221__R-N_+_345-L2222__B-N-A	tower	1859.0	172.26	175.74	DC	122.1

Bus #	Bus	MW Impact
274859	EASYR;U1 E	4.2040
274860	EASYR;U2 E	4.2040
294763	P-046 E	4.7335
926431	AC1-114	1.0934
927511	AC1-113 1	0.5471
927521	AC1-113 2	0.5471
932881	AC2-115 1	1.0943
932891	AC2-115 2	1.0943
932921	AC2-116	0.3827
933341	AC2-147 C	0.3456
933342	AC2-147 E	0.5639
936791	AD2-102 C	13.9212
936792	AD2-102 E	9.2808

937311	AD2-172 C	1.2425
937312	AD2-172 E	1.7159
937531	AD2-214 C	1.8408
937532	AD2-214 E	1.2272
938861	AE1-114 C O1	1.7083
938862	AE1-114 E O1	5.8282
940501	AE2-035 C	0.6585
940502	AE2-035 E	0.9094
943921	AF1-060	0.3763
945351	AF1-200 FTIR	64.7130
946161	AF1-281 C O2	3.2494
946162	AF1-281 E O2	1.8568
946321	AF1-296 C O2	0.9204
946322	AF1-296 E O2	4.3091
946501	AF1-314 C	1.5052
946502	AF1-314 E	7.0464
950002	G736 E	10.9920
950022	J299 E	3.7872
950101	J390	121.5302
950111	J391	2.7380
950452	J436 E	7.8180
950462	J437 E	7.8180
950481	J442 C	2.1936
950482	J442 E	8.7744
950561	G830 C	1.1535
950562	G830 E	4.6142
951241	J485	3.4041
951262	J488 E	8.1061
951292	J493 E	8.6235
951391	J505	34.5140
951412	J510 E	13.3452
951441	J523 C	1.6596
951442	J523 E	1.1064
952021	J614 C	0.6123
952022	J614 E	3.3127
952061	J302 C	0.8800
952062	J302 E	4.7609
952131	J503 C	0.8713
952132	J503 E	4.7137
952381	J703	39.7456
952391	J704	16.9361
952431	J760	2.0832
952511	J584 C	1.3592
952512	J584 E	7.3534
952551	J718	4.0809
952991	J713 C	2.7546
952992	J713 E	14.9034
953021	J628 C	4.4491
953022	J628 E	24.0709
953031	J545 C	1.6059
953032	J545 E	8.6886
953061	J722 C	1.7110
953062	J722 E	9.2570

953111	J807 C	1.3203
953112	J807 E	7.1433
953151	J831	17.1056
953331	J801	8.6217
953491	J947	103.7060
953522	J580 E	17.0845
953551	J705 C	0.9182
953552	J705 E	4.9678
953561	J706 C	0.9182
953562	J706 E	4.9678
953601	J743 C	2.2886
953602	J743 E	12.3822
953632	J803 E	1.6442
953661	J816	4.1178
953681	J818	32.1825
953691	J819 C	1.7910
953692	J819 E	9.6895
953701	J821 C	3.3848
953702	J821 E	18.3125
953891	J849	38.8837
953901	J850	54.6600
953921	J855 C	1.4822
953922	J855 E	8.0188
954001	J864	6.2510
954051	J869	4.2088
954061	J870	19.0020
954071	J871	9.5010
954141	J878	91.4240
954161	J880 C	1.3745
954162	J880 E	7.4365
954191	J886	51.7125
954221	J889 C	1.6684
954222	J889 E	9.0266
954291	J897 C	2.1133
954292	J897 E	11.4337
954301	J898 C	0.9455
954302	J898 E	5.1155
954331	J901 C	1.8477
954332	J901 E	9.9963
954371	J905	2.7452
954511	J926 C	1.9072
954512	J926 E	10.3183
954532	J929 E	1.3877
954561	J933 C	1.6261
954562	J933 E	8.7979
954661	J946	13.9060
954691	J732	90.7552
954741	J928 C	3.8812
954742	J928 E	20.9981
954782	J951 E	6.0560
954931	J967 C	1.2400
954932	J967 E	6.7085
954991	J975 C	1.6059

954992	J975 E	8.6886
955091	J986	34.3445
955191	J997	11.0640
955221	J1000	3.4015
955241	J1002	23.5066
955251	J1003	12.7970
955301	J1009	264.1720
955311	J1010	200.4440
955321	J1011	200.4440
955501	J1032	4.5750
955531	J1037	1.2801
955542	J1038 E	2.3153
955561	J1040 C	2.7755
955562	J1040 E	11.1020
955581	J1042 C	9.8691
955582	J1042 E	55.9249
955601	J1044 C	34.3860
955602	J1044 E	34.3860
955631	J1047	68.7720
955671	J1051	16.7670
955691	J1053	103.5330
955701	J1054	2.4489
955771	J1061	27.4500
955871	J1072	7.9485
955981	J1085 C	8.3388
955982	J1085 E	45.1152
956051	J1092	10.8490
956141	J1101	6.8950
956171	J1104	43.6780
956181	J1105	15.3220
956191	J1106 C	3.8253
956192	J1106 E	20.6959
956211	J1108	11.5140
956221	J1109 C	2.2453
956222	J1109 E	12.1474
956231	J1110	5.4490
956321	J1121	51.2400
956351	J1124	7.0500
956371	J1127	7.7445
956381	J1128	7.5180
956391	J1129	9.8170
956461	J1140	8.2080
956481	J1143	8.1310
956541	J1149	11.9080
956571	J1153	61.1685
956581	J1154	16.1887
956721	J1170	13.9060
956731	J1171	33.0920
956811	J1179	27.2610
956852	J1183 E	0.4199
956891	J1187 C	1.3643
956892	J1187 E	7.3809
956901	J1188	8.2190

LGEE	LGEE	0.1232
CPLE	CPLE	0.3460
G-007A	G-007A	0.0815
VFT	VFT	0.2193
WEC	WEC	17.3389
CBM-W2	CBM-W2	16.2817
CBM-W1	CBM-W1	176.9414
TVA	TVA	2.1448
CBM-S2	CBM-S2	3.8899
CBM-S1	CBM-S1	10.9738
MADISON	MADISON	27.2624
MEC	MEC	14.8381

Index 44

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
43520665	956820	J1180 TAP	AMIL	247712	05SULLIVAN	AEP	1	AEP_P4_#3128_05EUGENE 345_A2	breaker	1466.0	174.0	175.66	DC	135.21

Bus #	Bus	MW Impact
274650	KINCAID ;1U	13.2935
274651	KINCAID ;2U	13.2881
274830	U3-021 1	2.7041
274831	U3-021 2	2.7041
274853	TWINGROVE;U1	0.7109
274854	TWINGROVE;U2	0.7109
274859	EASYSR;U1 E	5.8271
274860	EASYSR;U2 E	5.8271
274880	GENERATOR;	0.9428
274882	W4-005 E	45.2314
274890	CAYUG;1U E	8.8128
274891	CAYUG;2U E	8.8128
276153	W2-048 E	1.9673
276160	W4-084	0.2292
290021	O50 E	9.3214
290051	GSG-6; E	4.7952
290108	LEEDK;1U E	10.5825
290261	S-027 E	20.3734
290265	S-028 E	20.3734
293516	O-009 E1	5.4176
293517	O-009 E2	2.7517
293518	O-009 E3	3.0304
293715	O-029 E	5.7921
293716	O-029 E	3.1757
293717	O-029 E	2.9188
293771	O-035 E	4.3612
294401	BSHIL;1U E	5.9282
294410	BSHIL;2U E	5.9282

294763	P-046 E	4.6206
909052	X2-022 E	28.4500
917501	Z2-087 C	0.3697
917502	Z2-087 E	17.7254
919581	AA2-030	9.9647
919621	AA2-039 C	1.4450
919622	AA2-039 E	9.6704
924041	AB2-047 C O1	3.3108
924042	AB2-047 E O1	22.1567
924261	AB2-070 C O1	3.8233
924262	AB2-070 E O1	25.5867
924471	AB2-096	18.7782
925161	AB2-173 (Withdrawn : 12/24/2019)	1.7771
925581	AC1-033 C	0.9706
925582	AC1-033 E	6.4981
925771	AC1-053 C	3.8589
925772	AC1-053 E	25.8251
926431	AC1-114	1.1147
926821	AC1-168 C O1	0.7027
926822	AC1-168 E O1	4.7157
926841	AC1-171 C O1	1.0402
926842	AC1-171 E O1	6.9481
927201	AC1-214 C O1	1.3997
927202	AC1-214 E O1	4.4496
927511	AC1-113 1	0.5573
927521	AC1-113 2	0.5573
930481	AB1-089	30.3454
930741	AB1-122 1O1	26.3466
932881	AC2-115 1	1.1147
932891	AC2-115 2	1.1147
932921	AC2-116	0.3901
933341	AC2-147 C	0.4607
933342	AC2-147 E	0.7516
933911	AD1-013 C	0.8334
933912	AD1-013 E	1.3313
934051	AD1-031 C O1	1.9711
934052	AD1-031 E O1	3.2161
934101	AD1-039 1	2.9653
934431	AD1-067 C	0.0602
934432	AD1-067 E	0.2532
934651	AD1-096 C	0.4390
934652	AD1-096 E	0.7162
934701	AD1-098 C O1	3.1871
934702	AD1-098 E O1	2.3269
934971	AD1-129 C	0.4060
934972	AD1-129 E	0.2707
935001	AD1-133 C O1	12.2568
935002	AD1-133 E O1	8.1712
935141	AD1-148	7.4152
936291	AD2-038 C O1	1.1619
936292	AD2-038 E O1	7.7758
936511	AD2-066 C O1	4.0672
936512	AD2-066 E O1	2.7115

936771	AD2-100 C	22.4746
936772	AD2-100 E	14.9831
936791	AD2-102 C	6.7983
936792	AD2-102 E	4.5322
936971	AD2-131 C	1.4805
936972	AD2-131 E	7.4380
937001	AD2-134 C	1.2535
937002	AD2-134 E	5.1784
937211	AD2-159 C	4.8880
937212	AD2-159 E	22.8845
937311	AD2-172 C	1.2129
937312	AD2-172 E	1.6750
937531	AD2-214 C	2.7616
937532	AD2-214 E	1.8410
938851	AE1-113 C	3.8451
938852	AE1-113 E	13.6326
938861	AE1-114 C O1	2.0270
938862	AE1-114 E O1	6.9158
939051	AE1-134 1	0.7743
939061	AE1-134 2	0.7743
939321	AE1-163 C O1	2.9197
939322	AE1-163 E O1	17.9351
939401	AE1-172 C O1	2.9630
939402	AE1-172 E O1	13.9023
939741	AE1-205 C O1	8.5571
939742	AE1-205 E O1	11.8169
940101	AE1-252 C O1	5.9525
940102	AE1-252 E O1	3.9683
940501	AE2-035 C	0.6428
940502	AE2-035 E	0.8877
941343	AE2-130 BAT	31.7940
941731	AE2-173 O1	5.0935
942111	AE2-223 C	1.9865
942112	AE2-223 E	13.2940
942421	AE2-255 C O1	1.4565
942422	AE2-255 E O1	4.3694
942481	AE2-261 C	31.0721
942482	AE2-261 E	20.7147
942602	AE2-276 BAT	14.0055
942651	AE2-281 C O1	0.4171
942652	AE2-281 E O1	2.5622
943381	AF1-009 C	0.1461
943382	AF1-009 E	0.5845
943401	AF1-011 C	1.0220
943402	AF1-011 E	1.0780
943411	AF1-012 C	3.3977
943412	AF1-012 E	2.2652
943422	AF1-013 E	0.7306
943921	AF1-060	0.3673
944221	AF1-090 C O2	7.0030
944222	AF1-090 E O2	32.7870
945351	AF1-200 FTIR	71.6589
945881	AF1-253	21.0091

946161	AF1-281 C O2	4.5038
946162	AF1-281 E O2	2.5736
946321	AF1-296 C O2	1.3738
946322	AF1-296 E O2	6.4318
946501	AF1-314 C	1.4694
946502	AF1-314 E	6.8784
946521	AF1-316 C O2	1.5473
946522	AF1-316 E O2	2.3210
946531	AF1-317 C O1	0.6472
946532	AF1-317 E O1	0.9708
946541	AF1-318 C O2	1.9677
946542	AF1-318 E O2	9.2135
946671	AF1-331	0.5737
946681	AF1-332 C	0.6472
946682	AF1-332 E	0.9708
951741	J474 C	1.9020
951742	J474 E	10.2905
952251	J641	9.9834
952271	J644	9.2422
952651	J756 C	2.2026
952652	J756 E	11.9168
952871	J757 C	3.9305
952872	J757 E	21.2652
953371	J808	8.8051
953401	J811	17.7527
953431	J853	10.8085
953641	J813	39.5225
953651	J815	31.4750
953671	J817	10.3791
953741	J826 C	1.6144
953742	J826 E	8.7346
953851	J845 C	1.6818
953852	J845 E	9.0990
953881	J848 C	5.1492
953882	J848 E	27.8583
953951	J859	9.4027
954181	J884	7.3910
954411	J912	14.0350
954681	J949 C	32.7828
954721	J750 C	2.0377
954722	J750 E	11.0243
954761	J468 C	5.2098
954762	J468 E	29.5221
954821	J955	107.6504
954831	J956	13.0280
955001	J976	22.7910
955031	J979 C	4.1193
955032	J979 E	22.2867
955041	J980 C	4.1193
955042	J980 E	22.2867
955101	J987	7.0950
955131	J991	40.7140
955161	J994	6.4670

955171	J995	8.4020
955391	J1021 C	3.5231
955392	J1021 E	19.0609
955401	J1022 C	2.4217
955402	J1022 E	13.1018
955441	J1026 C	3.8351
955442	J1026 E	20.7489
955551	J1039	3.7985
956071	J1094	13.5180
956091	J1096	11.0880
956151	J1102	5.2353
956241	J1111	10.7055
956281	J1115 C	2.8027
956282	J1115 E	15.1633
956341	J1123 C	1.5243
956342	J1123 E	8.2467
956451	J1139	21.9840
956501	J1145	16.0975
956821	J1180	36.4837
990901	L-005 E	9.1892
CPL	CPL	0.5987
WEC	WEC	2.0236
CBM-W2	CBM-W2	71.4987
NY	NY	0.4524
CBM-W1	CBM-W1	61.4366
TVA	TVA	7.8036
O-066	O-066	5.0870
CBM-S2	CBM-S2	8.6527
CBM-S1	CBM-S1	36.9853
G-007	G-007	0.7842
MADISON	MADISON	25.3331
MEC	MEC	15.7740
BLUEG	BLUEG	2.7012
TRIMBLE	TRIMBLE	0.9995

27 Short Circuit

The following breakers are overdutied: None