



**Generation Interconnection
Feasibility Study Report
for
Queue Project AF2-245
SPURLOCK-FLEMINGSBURG 345 KV
79.2 MW Capacity / 132 MW Energy**

July 2020

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1 Introduction

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

2 Preface

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

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

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

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

3 General

The Interconnection Customer (IC), has proposed a Solar; Storage generating facility located in Mason County, Kentucky. The installed facilities will have a total capability of 132 MW with 79.2 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is June 01, 2023. This study does not imply a TO commitment to this in-service date.

Queue Number	AF2-245
Project Name	SPURLOCK-FLEMINGSBURG 345 KV
State	Kentucky
County	Mason
Transmission Owner	EKPC
MFO	132
MWE	132
MWC	79.2
Fuel	Solar; Storage
Basecase Study Year	2023

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

4 Point of Interconnection

AF2-245 will interconnect with the AEP transmission system along one of the following Points of Interconnection:

Primary POI: Tap - Spurlock to Flemingburg 138 kV line

Secondary POI: Tap - Spurlock to North Clark 345 kV line

5 Cost Summary

The AF2-245 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$6,345,000
Total System Network Upgrade Costs	\$122,639,478
Total Costs	\$128,984,478

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

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

6 Transmission Owner Scope of Work

The total physical interconnection costs is given in the tables below:

6.1 Attachment Facilities

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

Description	Total Cost
Install necessary equipment (a 138 kV isolation switch structure and associated switch, plus interconnection metering, fiber-optic connection and telecommunications equipment, circuit breaker and associated switches, and relay panel) at the new Parker Lane switching station, to accept the IC generator lead line/bus (Estimated time to implement is 24 months)	\$530,000
Total Attachment Facility Costs	\$530,000

6.2 Direct Connection Cost Estimate

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

Description	Total Cost
Construct a new 138 kV switching station (Parker Lane Switching) to facilitate connection of the IC solar generation project to the existing Spurlock-Flemingsburg 138 kV line (Estimated time to implement is 24 months)	\$3,685,000
Total Direct Connection Facility Costs	\$3,685,000

6.3 Non-Direct Connection Cost Estimate

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

Description	Total Cost
Construct facilities to loop the existing Spurlock-Flemingsburg 138 kV line into the new Parker Lane switching station (Estimated time to implement is 24 months)	\$530,000
Modify relays and/or settings at Dale substation for the existing line to the new Three Forks Tap switching station (Estimated time to implement is 9 months)	\$65,000
Modify relays and/or settings at Fawkes substation for the existing line to the new Three Forks Tap switching station (Estimated time to implement is 9 months)	\$65,000
Install OPGW on the Parker Lane-Spurlock 138 kV line (12.5 miles) (Estimated time to implement is 24 months)	\$1,470,000
Total Non-Direct Connection Facility Costs	\$2,130,000

7 Incremental Capacity Transfer Rights (ICTRs)

Will be determined at a later study phase

8 Interconnection Customer Requirements

It is understood that the Interconnection Customer (IC) is responsible for all costs associated with this interconnection. The costs above are reimbursable to the Transmission Owner. The cost of the IC's generating plant and the costs for the line connecting the generating plant to the Point of Interconnection are not included in this report; these are assumed to be the IC's responsibility.

The Generation Interconnection Agreement does not in or by itself establish a requirement for the Transmission Owner to provide power for consumption at the developer's facilities. A separate agreement may be reached with the local utility that provides service in the area to ensure that infrastructure is in place to meet this demand and proper metering equipment is installed. It is the responsibility of the developer to contact the local service provider to determine if a local service agreement is required.

1. An Interconnection Customer entering the New Services Queue on or after October 1, 2012 with a proposed new Customer Facility that has a Maximum Facility Output equal to or greater than 100 MW shall install and maintain, at its expense, phasor measurement units (PMUs). See Section 8.5.3 of Appendix 2 to the Interconnection Service Agreement as well as section 4.3 of PJM Manual 14D for additional information.
2. The Interconnection Customer may be required to install and/or pay for metering as necessary to properly track real time output of the facility as well as installing metering which shall be used for billing purposes. See Section 8 of Appendix 2 to the Interconnection Service Agreement as well as Section 4 of PJM Manual 14D for additional information.

9 Revenue Metering and SCADA Requirements

9.1 PJM Requirements

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

9.2 Meteorological Data Reporting Requirements

Solar generation facilities shall provide the Transmission Provider with site-specific meteorological data including:

- Back Panel temperature (Fahrenheit)
- Irradiance (Watts/meter²)
- Ambient air temperature (Fahrenheit) – (Accepted, not required)
- Wind speed (meters/second) – (Accepted, not required)

- Wind direction (decimal degrees from true north) – (Accepted, not required)

9.3 Interconnected Transmission Owner Requirements

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

<http://www.pjm.com/planning/design-engineering/to-tech-standards/>

10 Summer Peak - Load Flow Analysis – Primary POI

The Queue Project AF2-245 was evaluated as a 132.1 MW (Capacity 79.2 MW) injection tapping the Spurlock to Flemingburg 138 kV line in the EKPC area. Project AF2-245 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-245 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

10.1 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 IMPACT
1018412 11	34258 3	4FLEMINGSB RG	138. 0	EKPC	34258 9	4GODDAR D	138. 0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	single	217.0	87.14	123.64	DC	79.2
1018412 47	95954 0	AF2-245 TAP	138. 0	EKPC	34266 4	4SPURLO CK	138. 0	EKPC	1	342583 4FLEMINGSB RG 138 945680 AF1-233 TAP 138 1	single	255.0	77.65	108.71	DC	79.2
1018412 48	95954 0	AF2-245 TAP	138. 0	EKPC	34266 4	4SPURLO CK	138. 0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-A	single	255.0	77.65	108.71	DC	79.2

10.2 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPACT
9881006 8	25301 4	09CLINTO	345. 0	DAY	25302 7	09GREENE	345. 0	DAY	1	DAY_P7345 69 34598 34524	tower	1374. 0	99.77	100.19	DC	12.72
9881006 1	25310 0	09ATLNTA	345. 0	DAY	25311 0	09ADKINS	345. 0	DAY	1	DAY_P7_49 5	tower	1195. 0	99.86	101.0	DC	13.6
1001478 28	34192 3	2MURPHYS VIL	69.0	EKPC	32501 9	2KENTON- 6	69.0	LGE E	1	EKPC_P4-6_SPUR N39-92T	breaker	66.0	90.99	116.76	DC	17.0
1018409 87	34192 3	2MURPHYS VIL	69.0	EKPC	34209 1	2PLUMVIL LE	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	63.0	69.32	118.26	DC	30.83
1018410 29	34258 9	4GODDARD	138. 0	EKPC	34153 6	2GODDAR D	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	117.0	87.03	108.53	DC	25.15
1018410 89	34263 4	4PLUMVILLE	138. 0	EKPC	34209 1	2PLUMVIL LE	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	152.0	84.61	103.64	DC	28.91
1001475 75	34264 9	4ROWAN CO	138. 0	EKPC	32430 2	4RODBUR N	138. 0	LGE E	1	EKPC_P2-3_SPUR N39-844-A	bus	191.0	80.49	102.86	DC	42.73
1001476 75	34264 9	4ROWAN CO	138. 0	EKPC	32430 2	4RODBUR N	138. 0	LGE E	1	EKPC_P4-2_SPUR N39-844	breaker	191.0	80.49	102.86	DC	42.73

10.3 Contribution to Previously Identified Overloads

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

ID	FROM BUS #	FROM BUS	kV	FROM BUS AREA	TO BUS #	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADING %	POST PROJE CT LOADING %	AC DC	MW IMPACT
953936 40	2434 53	05BEATTY	345 .0	AEP	2434 54	05BIXBY	345 .0	AEP	1	AEP_P4_#3196_05BEATTY 345_302E	breaker	120 3.0	126.5 8	127.1 3	DC	14.48
953936 41	2434 53	05BEATTY	345 .0	AEP	2434 54	05BIXBY	345 .0	AEP	1	AEP_P4_#10715_05COLE 345_C	breaker	120 3.0	125.6 6	126.1 9	DC	13.93
953936 93	2434 53	05BEATTY	345 .0	AEP	2440 22	05COLE	345 .0	AEP	1	AEP_P4_#8094_05BIXBY 345_C	breaker	120 3.0	111.6 1	112.0 6	DC	12.1
953936 94	2434 53	05BEATTY	345 .0	AEP	2440 22	05COLE	345 .0	AEP	1	AEP_P4_#3195_05BEATTY 345_304E	breaker	120 3.0	112.2 5	112.7 1	DC	12.3
958231 03	2468 00		138 .0	AEP	2470 34	05EMERS S	138 .0	AEP	1	DAY_P734541 34553	tower	185. 0	122.5 2	125.4 1	DC	11.89
958222 39	2469 46	05WLDC AT	138 .0	AEP	2430 19	05HILLSB	138 .0	AEP	1	EKPC_P2-3_SPUR N39-1474	bus	185. 0	122.4 6	124.3 1	DC	7.58
958224 31	2469 46	05WLDC AT	138 .0	AEP	2430 19	05HILLSB	138 .0	AEP	1	DAY_P4_L34553-1	breaker	185. 0	122.9 9	124.7 4	DC	7.17
958224 32	2469 46	05WLDC AT	138 .0	AEP	2430 19	05HILLSB	138 .0	AEP	1	EKPC_P4-2_SPUR N39-1474	breaker	185. 0	122.4 6	124.3 1	DC	7.58
958230 67	2469 46	05WLDC AT	138 .0	AEP	2430 19	05HILLSB	138 .0	AEP	1	DAY_P734541 34553	tower	185. 0	175.2 6	178.1 6	DC	11.89
958231 11	2470 34	05EMER SS	138 .0	AEP	2469 46	05WLDC A T	138 .0	AEP	1	DAY_P734541 34553	tower	185. 0	121.2 8	124.1 7	DC	11.89
100671 471	2500 54	08LONG BR	138 .0	DEO &K	2500 77	08MTZIO N	138 .0	DEO &K	1	DAY_P734541 34553	tower	284. 0	130.7 2	136.2 5	DC	15.67
100671 472	2500 77	08MTZI ON	138 .0	DEO &K	2499 91	08BUFTN 1	138 .0	DEO &K	1	DAY_P734541 34553	tower	298. 0	120.2 9	125.5 5	DC	15.67
953943 20	3242 67	4KENTON	138 .0	LGEE	2468 00		138 .0	AEP	1	DAY_P734541 34553	tower	185. 0	125.5 5	128.4 4	DC	11.89
101840 818	3420 91	2PLUMV ILLE	69. 0	EKPC	3419 23	2MURPH YSVIL	69. 0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	63.0	163.6 9	212.6 4	DC	30.83
100148 796	3425 44	4AVON-R	138 .0	EKPC	3242 75	4LOUDON AVE	138 .0	LGEE	1	DAY_P734541 34553	tower	203. 0	122.5 1	124.2 1	DC	7.67
988099 87	3425 59	4BOONE CO	138 .0	EKPC	2500 54	08LONGB R	138 .0	DEO &K	1	DAY_P734541 34553	tower	284. 0	138.0 8	143.6 1	DC	15.67
101840 917	3425 71	4CRANSTON	138 .0	EKPC	3426 49	4ROWAN CO	138 .0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	255. 0	105.7 2	136.2 9	DC	77.94
101840 915	3425 89	4GODDARD	138 .0	EKPC	3425 71	4CRANSTON	138 .0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	255. 0	105.8	136.3 6	DC	77.94
100147 674	3426 49	4ROWAN CO	138 .0	EKPC	3243 02	4RODBURN	138 .0	LGEE	1	EKPC_P4-6_SPUR N39-92T	breaker	191. 0	111.7 9	148.3 6	DC	69.85
100148 743	3426 61	4SPUR-KENT-R	138 .0	EKPC	3242 67	4KENTON	138 .0	LGEE	1	DAY_P734541 34553	tower	281. 0	126.2 1	132.4 6	DC	17.56
101842 078	3426 64	4SPURL OCK	138 .0	EKPC	3426 61	4SPUR-KENT-R	138 .0	EKPC	1	DAY_P734541 34553	tower	291. 0	121.9 8	128.0 1	DC	17.56
988092 15	3428 38	7SPURL OCK	345 .0	EKPC	2530 77	09STUART	345 .0	DAY	1	DEOK_P2-2_C1 SILVER GROVE 345 BUS	bus	153 2.0	136.5 5	140.5 4	DC	60.82
988093 32	3428 38	7SPURL OCK	345 .0	EKPC	2530 77	09STUART	345 .0	DAY	1	DEOK_P2-3_C2 816 SILVERGROVE	breaker	153 2.0	136.7 2	140.7 2	DC	60.85
988093 33	3428 38	7SPURL OCK	345 .0	EKPC	2530 77	09STUART	345 .0	DAY	1	DEOK_P2-3_C2 1493_RED BANK	breaker	153 2.0	136.6 1	140.6 1	DC	60.82
988095 49	3428 38	7SPURL OCK	345 .0	EKPC	2530 77	09STUART	345 .0	DAY	1	Base Case	single	124 0.0	129.6 2	132.3 5	DC	33.77
988095 50	3428 38	7SPURL OCK	345 .0	EKPC	2530 77	09STUART	345 .0	DAY	1	DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	single	153 2.0	123.0	125.3 9	DC	36.49
988099 93	3428 38	7SPURL OCK	345 .0	EKPC	2530 77	09STUART	345 .0	DAY	1	DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSI LGRVZIMMER	tower	153 2.0	136.5 6	140.5 5	DC	60.82

10.4 Potential Congestion due to Local Energy Deliverability

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

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/D C	MW IMPACT
95393935	243453	05BEATTY	345.0	AEP	243454	05BIXBY	345.0	AEP	1	AEP_P1-2_#10137	operation	1203.0	118.58	119.11	DC	13.93
95822670	246946	05WLDCAT	138.0	AEP	243019	05HILLSB	138.0	AEP	1	DAY-P1-STU SPUR	operation	185.0	122.48	124.23	DC	7.19
101841210	342583	4FLEMINGSBURG	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	217.0	136.18	197.0	DC	132.0
101841213	342583	4FLEMINGSBURG	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	Base Case	operation	197.0	100.54	112.37	DC	23.29
100148253	342649	4ROWAN CO	138.0	EKPC	324302	4RODBURN	138.0	LGE E	1	EKPC_P1-2_SPUR-GODD 138-B	operation	191.0	80.28	102.54	DC	42.53
98809546	342838	7SPURLOCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	Base Case	operation	1240.0	141.41	145.9	DC	56.28
98809547	342838	7SPURLOCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	operation	1532.0	136.51	140.5	DC	60.82
101841300	939140	AE1-144 TAP	138.0	EKPC	342634	4PLUMVILLE	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	186.0	115.1	150.15	DC	65.18
101841400	939140	AE1-144 TAP	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	186.0	87.36	122.4	DC	65.18
101841249	945680	AF1-233 TAP	138.0	EKPC	342583	4FLEMINGSBURG	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	255.0	119.37	171.14	DC	132.0
101841251	945680	AF1-233 TAP	138.0	EKPC	342583	4FLEMINGSBURG	138.0	EKPC	1	Base Case	operation	229.0	90.38	100.55	DC	23.29
101841241	959540	AF2-245 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	342583 4FLEMINGSBURG 138 945680 AF1-233 TAP 138 1	operation	255.0	119.37	171.14	DC	132.0
101841242	959540	AF2-245 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-A	operation	255.0	119.37	171.14	DC	132.0
101841246	959540	AF2-245 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	Base Case	operation	229.0	62.39	109.87	DC	108.71

10.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
101840987	6	2MURPHYSVIL 69.0 kV - 2PLUMVILLE 69.0 kV Ckt 1	<u>EKPC</u> r0061 (1434) : Replace the 4/0 copper bus and jumpers at the Murphysville substation using 750 MCM copper or equivalent Project Type : FAC Cost : \$120,000 Time Estimate : 6.0 Months r0062 (1435) : Replace the 4/0 copper bus and jumpers at the Plumville substation using 750 MCM copper or equivalent Project Type : FAC Cost : \$120,000 Time Estimate : 6.0 Months EKPC-r0097a (1507) : Increase the maximum operating temperature of the 266 MCM ACSR conductor in the Murphysville - Plumville 69 kV line section to 266 degrees F (9.9 miles) Project Type : FAC Cost : \$650,000 Time Estimate : 9.0 Months	\$890,000
95823103	12	138.0 kV - 05EMERSS 138.0 kV Ckt 1	<u>AEP</u> AEPO0039a (494) : A Sag Study will be required on the 4.5 miles of ACSR ~ 477 ~ 26/7 ~ HAWK- Conductor to mitigate the overload. Depending on the sag study results, the cost for this upgrade is expected to be between \$18,000 (no remediations required, just sag study) and \$6.75 million (complete line reconductor/rebuild). New rating after sag study: S/N: 185 S/E: 257. 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 : \$18,000 Time Estimate : Sag Study : 6 - 12 Months	\$18,000

ID	Idx	Facility	Upgrade Description	Cost
100147575,100 147675,100147 674	9	4ROWAN CO 138.0 kV - 4RODBURN 138.0 kV Ckt 1	<u>EKPC</u> r0045 (1418) : Replace the 800A wave trap at Rodburn substation with 1200A equipment. Project Type : FAC Cost : \$90,000 Time Estimate : 9.0 Months r0046 (1419) : LGEE violation (non PJM area). EKPC emergency rating at 255 MVA The external (i.e. Non-PJM) Transmission Owner, LGEE, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : 9.0 Months EKPC-r0093a (1489) : Increase the maximum operating temperature of the 795 MCM ACSR conductor in the Rowan County - Rodburn 138 kV line section to 275 degrees F (1.45 miles) Project Type : FAC Cost : \$130,000 Time Estimate : 9.0 Months <u>LGEE</u> NonPJMArea (1630) : The external (i.e. Non-PJM) Transmission Owner, LGEE, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$220,000
95822239,9582 2432,95822431, 95823067	13	05WLDCAT 138.0 kV - 05HILLSB 138.0 kV Ckt 1	<u>AEP</u> N5472 (512) : A Sag Study will be required on the 10 miles of ACSR ~ 477 ~ 26/7 ~ HAWK- Conductor to mitigate the overload. Depending on the sag study results, the cost for this upgrade is expected to be between \$40,000 (no remediations required, just sag study) and \$15 million (complete line reconductor/rebuild). New rating after sag study: S/N: 185 S/E: 257. 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 : \$186,000 Time Estimate : 6-12 Months N5857 (516) : Rebuild / reconductor 10 miles of ACSR ~ 477 ~ 26/7 ~ HAWK- Conductor Section 1. Estimated cost: \$15 million. Project Type : FAC Cost : \$15,040,000 Time Estimate : 24-36 Months	\$15,040,000

ID	Idx	Facility	Upgrade Description	Cost
98810068	3	09CLINTO 345.0 kV - 09GREENE 345.0 kV Ckt 1	<u>DAY</u> r190005 (977) : Replace Clinton 2000A wave trap with 3000A Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months r190007 (978) : Replace Greene 2000A wave trap with 3000A Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months	\$200,000
101841211	1	4FLEMINGSBRG 138.0 kV - 4GODDARD 138.0 kV Ckt 1	<u>EKPC</u> EKPC-r0106 (1522) : Increase the maximum operating temperature of the 954 MCM ACSR conductor in the Flemingsburg-Goddard 138 kV line section to 212 degrees F (9.2 miles) Project Type : FAC Cost : \$740,000 Time Estimate : 24.0 Months	\$740,000
101840917	21	4CRANSTON 138.0 kV - 4ROWAN CO 138.0 kV Ckt 1	<u>EKPC</u> EKPC-r0096a (1503) : Replace the 750 MCM copper bus and jumpers at the Rowan County substation with bundled 500 MCM copper or equivalent equipment Project Type : FAC Cost : \$190,000 Time Estimate : 9.0 Months EKPC-r0096b (1504) : Replace the 1200A wave trap at Rowan County substation with 1600A equipment. Project Type : FAC Cost : \$110,000 Time Estimate : 9.0 Months EKPC-r0096c (1505) : Replace the 795 MCM ACSR line conductor in the Cranston-Rowan County 138 kV line with 954 MCM ACSS conductor (7.5 miles) Project Type : FAC Cost : \$8,575,000 Time Estimate : 32.0 Months EKPC-r0096d (1506) : Replace the 795 MCM ACSR jumpers at the Goddard substation with bundled 500 MCM copper or equivalent equipment Project Type : FAC Cost : \$10,000 Time Estimate : 9.0 Months	\$8,885,000
100671472	16	08MTZION 138.0 kV - 08BUFTN1 138.0 kV Ckt 1	<u>DEOK</u> n6785b (1010) : Rebuild the line, replace switch at Mt. Zion Project Type : FAC Cost : \$5,369,948 Time Estimate : 30.0 Months	\$5,369,948

ID	Idx	Facility	Upgrade Description	Cost
101841089	8	4PLUMVILLE 138.0 kV - 2PLUMVILLE 69.0 kV Ckt 1	<u>EKPC</u> EKPC-r0092 (1488) : Replace the 69 kV, 1200A current transformer at Plumville with a 2000A current transformer. Project Type : FAC Cost : \$35,000 Time Estimate : 6.0 Months	\$35,000
101841248,101 841247	2	AF2-245 TAP 138.0 kV - 4SPURLOCK 138.0 kV Ckt 1	<u>EKPC</u> EKPC-r0088 (1483) : Increase the maximum operating temperature of the 795 MCM ACSR conductor in the AF2-245 Tap-Spurlock 138 kV line section to 275 degrees F (3.64 miles) Project Type : FAC Cost : \$330,000 Time Estimate : 9.0 Months	\$330,000
100147828	5	2MURPHYSVIL 69.0 kV - 2KENTON-6 69.0 kV Ckt 1	<u>EKPC</u> EKPC-r0105a (1520) : Replace the 4/0 copper bus and jumpers at the Murphysville substation with 500 MCM copper or equivalent equipment Project Type : FAC Cost : \$130,000 Time Estimate : 9.0 Months EKPC-r0105b (1521) : Change the Zone 3 relay setting at Murphysville substation associated with the line protection to at least 89 MVA LTE rating. Project Type : FAC Cost : \$0 Time Estimate : 6.0 Months <u>LGEE</u> NonPJMArea (1630) : The external (i.e. Non-PJM) Transmission Owner, LGEE, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$130,000
101841029	7	4GODDARD 138.0 kV - 2GODDARD 69.0 kV Ckt 1	<u>EKPC</u> EKPC-r0091 (1487) : Replace the existing Goddard 138/69 kV, 100 MVA transformer with a 150 MVA transformer. Project Type : FAC Cost : \$2,145,000 Time Estimate : 18.0 Months	\$2,145,000

ID	Idx	Facility	Upgrade Description	Cost
98809332,9880 9333,98809550, 98809215,9880 9993,98809549	25	7SPURLOCK 345.0 kV - 09STUART 345.0 kV Ckt 1	<u>Dayton</u> DAYr190039 (959) : Reconductor Stuart-Spurlock line with twin bundle 1033 Curlew ACCR conductor Project Type : FAC Cost : \$17,000,000 Time Estimate : 18.0 Months DAYr190040 (960) : Replace Stuart substation riser conductor with 2500AAC (parallel) Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months DAYr190041 (961) : Reconductor Stuart substation conductor with twin bundle 1033 Curlew ACCR conductor Project Type : FAC Cost : \$250,000 Time Estimate : 12.0 Months r190002 (975) : Replace substation riser conductor with 2500AAC (parallel) Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months DAYr20011 (995) : Replace wavetrapp on Stuart-Spurlock line Project Type : FAC Cost : \$300,000 Time Estimate : 18.0 Months <u>EKPC</u> r0040 (1413) : Replace the 1500A interconnection metering CTs with 2000A equipment. Project Type : FAC Cost : \$150,000 Time Estimate : 9.0 Months r0041 (1414) : Replace the 3000A wave trap with 3600A equipment. Project Type : FAC Cost : \$170,000 Time Estimate : 9.0 Months r0042 (1415) : Construct a new 345 kV circuit (Id 2) between the EKPC Spurlock and DP&L Stuart substations (circuit length approximately 8.5 miles) Project Type : CON Cost : \$30,000,000 Time Estimate : 48.0 Months	\$48,070,000
98810061	4	09ATLNTA 345.0 kV - 09ADKINS 345.0 kV Ckt 1	<u>DAY</u> r190011 (982) : Replace metering equipment to increase thermal line rating Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months	\$100,000

ID	Idx	Facility	Upgrade Description	Cost
98809987	20	4BOONE CO 138.0 kV - 08LONGBR 138.0 kV Ckt 1	<u>DAY</u> r0052 (1425) : Replace the 954 MCM ACSR line conductor in the Boone County-Longbranch 138 kV line with 954 MCM ACSS conductor (2.3 miles) Project Type : FAC Cost : \$2,590,000 Time Estimate : 14.0 Months r0010 (1472) : upgrade jumpers associated with Boone 138kV bus using 2-500 MCM 37 CU conductor or equivalent Project Type : FAC Cost : \$20,000 Time Estimate : 6 Months EKPC-r0094a (1492) : Replace the 1200A disconnect switches N15-813 and N15-815 at the Boone County substation with 1600A equipment Project Type : FAC Cost : \$200,000 Time Estimate : 9.0 Months EKPC-r0094b (1493) : Replace the 750 MCM copper substation jumpers at the Boone County substation with bundled 500 MCM copper or equivalent equipment Project Type : FAC Cost : \$15,000 Time Estimate : 9.0 Months EKPC-r0094c (1494) : Replace the 750 MCM copper substation bus and jumpers at the Longbranch substation with bundled 500 MCM copper or equivalent equipment Project Type : FAC Cost : \$190,000 Time Estimate : 9.0 Months	\$3,015,000
100148743	23	4SPUR-KENT-R 138.0 kV - 4KENTON 138.0 kV Ckt 1	<u>EKPC</u> EKPC-r0098 (1511) : Replace the 795 MCM ACSR line conductor in the Spurlock-Kenton 138 kV line with 954 MCM ACSS conductor (4.4 miles) Project Type : FAC Cost : \$5,030,000 Time Estimate : 25.0 Months <u>LGEE</u> NonPJMArea (1630) : The external (i.e. Non-PJM) Transmission Owner, LGEE, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$5,030,000

ID	Idx	Facility	Upgrade Description	Cost
100148796	19	4AVON-R 138.0 kV - 4LOUDON AVE 138.0 kV Ckt 1	<u>EKPC</u> r0020 (1393) : LGEE violation (non PJM area). EKPC emergency rating is 281 MVA. The external (i.e. Non-PJM) Transmission Owner, LGEE, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : 0.0 Months <u>LGEE</u> NonPJMArea (1630) : The external (i.e. Non-PJM) Transmission Owner, LGEE, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$0
95823111	14	05EMERSS 138.0 kV - 05WLDCAT 138.0 kV Ckt 1	<u>AEP</u> AEPO0006a (401) : Perform sag study on AEP's portion of Wildcat-Kenton 138kV circuit, , 1.3 miles of 477 ACSR 26/7 Hawk conductor to mitigate the overload. The new ratings after sag study will be: S/N: 185 MVA, S/E 257MVA: MVA, Depending on the sag study results, the cost for this upgrade is expected to be between \$20,000 (no remediation required, just sag study) and \$1.95 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 : \$20,000 Time Estimate : 6-12 Months	\$20,000

ID	Idx	Facility	Upgrade Description	Cost
101840915	22	4GODDARD 138.0 kV - 4CRANSTON 138.0 kV Ckt 1	<u>EKPC</u> EKPC-r0095a (1499) : Replace the 750 MCM copper substation bus at the Goddard substation with bundled 500 MCM copper or equivalent equipment Project Type : FAC Cost : \$170,000 Time Estimate : 9.0 Months EKPC-r0095b (1500) : Replace the 1200A wave trap at Goddard substation with 1600A equipment. Project Type : FAC Cost : \$110,000 Time Estimate : 9.0 Months EKPC-r0095c (1501) : Replace the 795 MCM ACSR line conductor in the Goddard-Cranston 138 kV line with 954 MCM ACSS conductor (12.7 miles) Project Type : FAC Cost : \$14,520,000 Time Estimate : 42.0 Months EKPC-r0095d (1502) : Replace the 795 MCM ACSR jumpers at the Goddard substation with bundled 500 MCM copper or equivalent equipment Project Type : FAC Cost : \$20,000 Time Estimate : 9.0 Months	\$14,820,000

ID	Idx	Facility	Upgrade Description	Cost
101840818	18	2PLUMVILLE 69.0 kV - 2MURPHYSVIL 69.0 kV Ckt 1	<u>EKPC</u> r0061 (1434) : Replace the 4/0 copper bus and jumpers at the Murphysville substation using 750 MCM copper or equivalent Project Type : FAC Cost : \$120,000 Time Estimate : 6.0 Months r0062 (1435) : Replace the 4/0 copper bus and jumpers at the Plumville substation using 750 MCM copper or equivalent Project Type : FAC Cost : \$120,000 Time Estimate : 6.0 Months r0063 (1436) : Replace the 600A disconnect switches N34-613 and N34-615 at the Plumville substation with 1200A equipment Project Type : FAC Cost : \$100,000 Time Estimate : 9.0 Months r0064 (1437) : Change the Zone 3 relay setting at Murphysville associated with the line protection to at least 108 MVA LTE rating. Project Type : FAC Cost : \$0 Time Estimate : 6.0 Months EKPC-r0097b (1508) : Change the current transformer setting at Murphysville substation associated with circuit breaker N4-604 from 600A to 800A. Project Type : FAC Cost : \$0 Time Estimate : 6.0 Months EKPC-r0097c (1509) : Change the current transformer setting at Plumville substation associated with circuit breaker N34-614 from 600A to 800A. Project Type : FAC Cost : \$0 Time Estimate : 6.0 Months EKPC-r0097d (1510) : Rebuild the Plumville - Murphysville 69 kV line section using 954 MCM ACSR conductor at 212 degrees F (9.9 miles) Project Type : FAC Cost : \$9,090,000 Time Estimate : 20.0 Months	\$9,430,000

ID	Idx	Facility	Upgrade Description	Cost
95394320	17	4KENTON 138.0 kV - 138.0 kV Ckt 1	<u>AEP</u> AEPO0040a (495) : A Sag Study will be required on the 24 miles of ACSR ~ 477 ~ 26/7 ~ HAWK- Conductor section 1 to mitigate the overload. Depending on the sag study results, the cost for this upgrade is expected to be between \$96,000 (no remediations required, just sag study) and \$36 million (complete line reconductor/rebuild). New rating after sag study: S/N: 185 S/E: 257. 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 : \$96,000 Time Estimate : Sag Study : 6 - 12 Months <u>LGEE</u> NonPJM Area (1630) : The external (i.e. Non-PJM) Transmission Owner, LGEE, will not evaluate this violation until the impact study phase. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$96,000
95393641,95393640	10	05BEATTY 345.0 kV - 05BIXBY 345.0 kV Ckt 1	<u>AEP</u> AEPO0003a (394) : Upgrade/Replace Three 345kV 1600A switches at Beatty station Project Type : FAC Cost : \$1,500,000 Time Estimate : 12-18 Months AEPO0003b (395) : 1) A sag study will be required on the 9.5 miles of ACSR ~ 954 ~ 45/7 ~ Bundled - Conductor Section 1 to mitigate the overload. Depending on the sag study results, the cost for this upgrade is expected to be between \$38,000 (no remediation required, just sag study) and \$19 million (complete line reconductor/rebuild). New rating after sag study: S/N: 1409 S/E: 1887. 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 : \$38,000 Time Estimate : 12-18 Months AEPO0003c (396) : Upgrade/Replace four 345kV 2000A Bixby switches Project Type : FAC Cost : \$1,500,000 Time Estimate : 12-18 Months	\$3,038,000
95393694,95393693	11	05BEATTY 345.0 kV - 05COLE 345.0 kV Ckt 1	<u>AEP</u> AEPO0001a (389) : Upgrade/Replace 3-345kV 1600A switches at Beatty station Project Type : FAC Cost : \$1,500,000 Time Estimate : 12-18 Months	\$1,500,000

ID	Idx	Facility	Upgrade Description	Cost
100671471	15	08LONGBR 138.0 kV - 08MTZION 138.0 kV Ckt 1	<u>DEOK</u> n30581 (1002) : Rebuild the line Project Type : FAC Cost : \$3,047,530 Time Estimate : 30.0 Months	\$3,047,530
101842078	24	4SPURLOCK 138.0 kV - 4SPUR-KENT-R 138.0 kV Ckt 1	<u>EKPC</u> n6041 (1385) : Replace the 5% 1200A reactor at Spurlock with a 7.5% 1600A reactor Project Type : FAC Cost : \$600,000 Time Estimate : 9.0 Months EKPC-r0100a (1514) : Replace the 1200A wave trap at Spurlock substation with 2000A equipment. Project Type : FAC Cost : \$110,000 Time Estimate : 9.0 Months	\$710,000
			TOTAL COST	\$122,639,478

10.6 Flow Gate Details – Primary POI

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

10.6.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
101841211	342583	4FLEMINGSBRG	EKPC	342589	4GODDARD	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	single	217.0	87.14	123.64	DC	79.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945681	AF1-233 C	150.6000	80/20	150.6000
945911	AF1-256 C	48.0000	80/20	48.0000
959541	AF2-245 C	79.2000	80/20	79.2000

10.6.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
101841248	959540	AF2-245 TAP	EKPC	342664	4SPURLOCK	EKPC	1	EKPC_P1-2_SPUR-GODD 138-A	single	255.0	77.65	108.71	DC	79.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945681	AF1-233 C	150.6000	80/20	150.6000
945911	AF1-256 C	48.0000	80/20	48.0000
959541	AF2-245 C	79.2000	80/20	79.2000

10.6.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
98810068	253014	09CLINTO	DAY	253027	09GREENE	DAY	1	DAY_P734569 34598 34524	tower	1374.0	99.77	100.19	DC	12.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250166	HLCRST AB114	1.0066	50/50	1.0066
251830	BIOENGRY	0.0963	50/50	0.0963
342957	1SPURLK1G	5.1919	50/50	5.1919
342960	1SPURLK2G	9.7262	50/50	9.7262
342963	1SPURLK3G	5.1110	50/50	5.1110
342966	1SPURLK4G	5.1110	50/50	5.1110
923522	AB1-169 C OP	161.0510	50/50	161.0510
925981	AC1-074 C O1	2.9793	Adder	3.51
925982	AC1-074 E O1	1.2768	Adder	1.5
926061	AC1-085 C	59.0991	50/50	59.0991
926062	AC1-085 E	96.4249	50/50	96.4249
927181	AC1-212 C	-0.1250	Adder	-0.15
927183	AC1-212 BAT	1.5397	Merchant Transmission	1.5397
930062	AB1-014 E	9.5216	50/50	9.5216
932381	AC2-055 C	1.2076	Adder	1.42
932382	AC2-055 E	1.9703	Adder	2.32
932421	AC2-060 C	4.2818	Adder	5.04
932422	AC2-060 E	2.4085	Adder	2.83
932461	AC2-066 C	0.6040	50/50	0.6040
932462	AC2-066 E	5.7130	50/50	5.7130
932481	AC2-068 C	-2.6185	Adder	-3.08
932551	AC2-075 C	0.7076	Adder	0.83
932552	AC2-075 E	0.3565	Adder	0.42
932661	AC2-088 C O1	4.4655	50/50	4.4655
932662	AC2-088 E O1	3.6748	50/50	3.6748
934491	AD1-073 C	0.8831	Adder	1.04
934492	AD1-073 E	0.4549	Adder	0.54
935031	AD1-136 C	0.6280	50/50	0.6280
935032	AD1-136 E	0.5349	50/50	0.5349
936251	AD2-031 C O1	6.1756	50/50	6.1756
936252	AD2-031 E O1	10.0759	50/50	10.0759
936381	AD2-048 C	2.4313	Adder	2.86
936382	AD2-048 E	1.2131	Adder	1.43
938271	AE1-040 C O1	2.2237	Adder	2.62
938272	AE1-040 E O1	1.1189	Adder	1.32
938921	AE1-120	5.4058	50/50	5.4058
939141	AE1-144 C O1	5.9322	Adder	6.98
939142	AE1-144 E O1	2.9439	Adder	3.46
940531	AE2-038 C O1	3.9572	Adder	4.66
940532	AE2-038 E O1	1.9601	Adder	2.31
941411	AE2-138 C	11.4673	Adder	13.49
941412	AE2-138 E	4.2413	Adder	4.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941981	AE2-210 C O1	3.9513	Adder	4.65
941982	AE2-210 E O1	1.4863	Adder	1.75
942091	AE2-221 C	91.0890	50/50	91.0890
942092	AE2-221 E	60.7260	50/50	60.7260
942591	AE2-275 C O1	2.9996	Adder	3.53
942592	AE2-275 E O1	1.1283	Adder	1.33
942891	AE2-308 C O1	5.0331	Adder	5.92
942892	AE2-308 E O1	1.8302	Adder	2.15
943111	AE2-339 C	1.3864	Adder	1.63
943112	AE2-339 E	0.6828	Adder	0.8
943201	AE2-318 C	4.7889	Adder	5.63
943202	AE2-318 E	2.3375	Adder	2.75
943771	AF1-045	2.2306	Adder	2.62
943773	AF1-045 E	1.4894	Adder	1.75
943863	AF1-053 BAT	3.1392	Merchant Transmission	3.1392
944521	AF1-117 C	7.0298	Adder	8.27
944522	AF1-117 E	2.1655	Adder	2.55
944621	AF1-127 C O1	3.1528	Adder	3.71
944622	AF1-127 E O1	1.5528	Adder	1.83
944941	AF1-159	3.5753	50/50	3.5753
945681	AF1-233 C	11.3378	Adder	13.34
945682	AF1-233 E	5.6012	Adder	6.59
945861	AF1-251 C	7.8742	Adder	9.26
945862	AF1-251 E	5.2495	Adder	6.18
945911	AF1-256 C	3.6349	Adder	4.28
945912	AF1-256 E	2.4232	Adder	2.85
946021	AF1-267 C	1.6587	Adder	1.95
946022	AF1-267 E	0.7621	Adder	0.9
946171	AF1-282 C	23.3286	50/50	23.3286
946172	AF1-282 E	15.5524	50/50	15.5524
946181	AF1-283 C	30.3272	50/50	30.3272
946182	AF1-283 E	20.2181	50/50	20.2181
946511	AF1-315 C O1	2.6900	Adder	3.16
946512	AF1-315 E O1	1.7934	Adder	2.11
957393	AF2-033 BAT	2.5640	50/50	2.5640
958171	AF2-111 C	6.7487	Adder	14.98
958172	AF2-111 E	4.4991	Adder	9.99
959541	AF2-245 C	3.4370	Adder	7.63
959542	AF2-245 E	2.2913	Adder	5.09
960151	AF2-306	0.7058	Adder	1.57
960161	AF2-307 C	1.0750	Adder	2.39
960162	AF2-307 E	0.7167	Adder	1.59
960571	AF2-348 C	6.6217	Adder	14.7
960572	AF2-348 E	4.4144	Adder	9.8
960641	AF2-355 C O1	3.2525	Adder	7.22
960642	AF2-355 E O1	2.8911	Adder	6.42
961491	AF2-440 C	5.9358	50/50	5.9358
961492	AF2-440 E	5.9358	50/50	5.9358
WEC	WEC	0.0205	Confirmed LTF	0.0205
LGEE	LGEE	1.2990	Confirmed LTF	1.2990
CPLE	CPLE	0.3995	Confirmed LTF	0.3995
CBM-W2	CBM-W2	7.1335	Confirmed LTF	7.1335

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
NY	NY	0.1587	Confirmed LTF	0.1587
TVA	TVA	1.6576	Confirmed LTF	1.6576
O-066	O-066	1.6666	Confirmed LTF	1.6666
CBM-S2	CBM-S2	4.3812	Confirmed LTF	4.3812
CBM-S1	CBM-S1	11.8172	Confirmed LTF	11.8172
G-007	G-007	0.2548	Confirmed LTF	0.2548
MEC	MEC	0.5975	Confirmed LTF	0.5975

10.6.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
98810061	253100	09ATLNTA	DAY	253110	09ADKINS	DAY	1	DAY_P7_495	tower	1195.0	99.86	101.0	DC	13.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251830	BIOENGRY	0.0862	50/50	0.0862
342957	1SPURLK1G	5.5386	50/50	5.5386
342960	1SPURLK2G	10.2549	50/50	10.2549
342963	1SPURLK3G	5.3888	50/50	5.3888
342966	1SPURLK4G	5.3888	50/50	5.3888
923522	AB1-169 C OP	162.9870	50/50	162.9870
925921	AC1-068 C	18.8380	50/50	18.8380
925922	AC1-068 E	8.8096	50/50	8.8096
925931	AC1-069 C	18.8380	50/50	18.8380
925932	AC1-069 E	8.8096	50/50	8.8096
925981	AC1-074 C O1	3.4148	Adder	4.02
925982	AC1-074 E O1	1.4635	Adder	1.72
926061	AC1-085 C	22.5218	50/50	22.5218
926062	AC1-085 E	36.7462	50/50	36.7462
926791	AC1-165 C	18.6164	50/50	18.6164
926792	AC1-165 E	9.0312	50/50	9.0312
926801	AC1-166 C	18.6164	50/50	18.6164
926802	AC1-166 E	9.0312	50/50	9.0312
930062	AB1-014 E	5.9413	Adder	6.99
932381	AC2-055 C	1.8225	50/50	1.8225
932382	AC2-055 E	2.9736	50/50	2.9736
932421	AC2-060 C	6.4621	50/50	6.4621
932422	AC2-060 E	3.6349	50/50	3.6349
932462	AC2-066 E	3.5648	Adder	4.19
932551	AC2-075 C	0.8110	Adder	0.95
932552	AC2-075 E	0.4086	Adder	0.48
932661	AC2-088 C O1	3.9986	50/50	3.9986
932662	AC2-088 E O1	3.2905	50/50	3.2905
934491	AD1-073 C	1.3328	50/50	1.3328
934492	AD1-073 E	0.6866	50/50	0.6866
935031	AD1-136 C	0.5623	50/50	0.5623
935032	AD1-136 E	0.4790	50/50	0.4790
936251	AD2-031 C O1	1.4579	Adder	1.72
936252	AD2-031 E O1	2.3786	Adder	2.8
936381	AD2-048 C	2.7906	Adder	3.28
936382	AD2-048 E	1.3923	Adder	1.64
938271	AE1-040 C O1	4.1118	50/50	4.1118
938272	AE1-040 E O1	2.0689	50/50	2.0689
938921	AE1-120	3.3731	Adder	3.97
939141	AE1-144 C O1	6.3978	Adder	7.53
939142	AE1-144 E O1	3.1749	Adder	3.74
940531	AE2-038 C O1	4.2678	Adder	5.02
940532	AE2-038 E O1	2.1140	Adder	2.49

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941411	AE2-138 C	12.6789	Adder	14.92
941412	AE2-138 E	4.6895	Adder	5.52
941981	AE2-210 C O1	4.3688	Adder	5.14
941982	AE2-210 E O1	1.6433	Adder	1.93
942091	AE2-221 C	26.6706	50/50	26.6706
942092	AE2-221 E	17.7804	50/50	17.7804
942981	AE2-320 C O1	37.0666	50/50	37.0666
942982	AE2-320 E O1	18.3394	50/50	18.3394
943111	AE2-339 C	1.5736	Adder	1.85
943112	AE2-339 E	0.7751	Adder	0.91
943191	AE2-319 C O1	37.0666	50/50	37.0666
943192	AE2-319 E O1	18.3394	50/50	18.3394
943201	AE2-318 C	4.3845	Adder	5.16
943202	AE2-318 E	2.1401	Adder	2.52
943771	AF1-045	2.0422	Adder	2.4
943773	AF1-045 E	1.3636	Adder	1.6
944521	AF1-117 C	81.7770	50/50	81.7770
944522	AF1-117 E	25.1910	50/50	25.1910
944621	AF1-127 C O1	3.5008	Adder	4.12
944622	AF1-127 E O1	1.7243	Adder	2.03
944941	AF1-159	0.8440	Adder	0.99
945681	AF1-233 C	12.1994	Adder	14.35
945682	AF1-233 E	6.0268	Adder	7.09
945861	AF1-251 C	8.7247	Adder	10.26
945862	AF1-251 E	5.8164	Adder	6.84
945911	AF1-256 C	3.9095	Adder	4.6
945912	AF1-256 E	2.6063	Adder	3.07
946102	AF1-275 BAT	3.6640	Merchant Transmission	3.6640
946171	AF1-282 C	8.8902	50/50	8.8902
946172	AF1-282 E	5.9268	50/50	5.9268
946181	AF1-283 C	11.5573	50/50	11.5573
946182	AF1-283 E	7.7048	50/50	7.7048
946511	AF1-315 C O1	2.4140	Adder	2.84
946512	AF1-315 E O1	1.6094	Adder	1.89
958171	AF2-111 C	15.9420	50/50	15.9420
958172	AF2-111 E	10.6280	50/50	10.6280
959541	AF2-245 C	8.1608	50/50	8.1608
959542	AF2-245 E	5.4405	50/50	5.4405
960151	AF2-306	0.7830	Adder	1.74
960161	AF2-307 C	1.1926	Adder	2.65
960162	AF2-307 E	0.7951	Adder	1.76
960571	AF2-348 C	15.6705	50/50	15.6705
960572	AF2-348 E	10.4470	50/50	10.4470
961491	AF2-440 C	0.9093	Adder	2.02
961492	AF2-440 E	0.9093	Adder	2.02
WEC	WEC	0.2889	Confirmed LTF	0.2889
LGEE	LGEE	1.9779	Confirmed LTF	1.9779
CPL	CPL	0.3883	Confirmed LTF	0.3883
CBM-W2	CBM-W2	13.5135	Confirmed LTF	13.5135
NY	NY	0.3639	Confirmed LTF	0.3639
CBM-W1	CBM-W1	7.7187	Confirmed LTF	7.7187
TVA	TVA	2.3912	Confirmed LTF	2.3912

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	4.1866	Confirmed LTF	4.1866
CBM-S2	CBM-S2	4.8147	Confirmed LTF	4.8147
CBM-S1	CBM-S1	17.3382	Confirmed LTF	17.3382
G-007	G-007	0.6448	Confirmed LTF	0.6448
MEC	MEC	1.8957	Confirmed LTF	1.8957

10.6.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
100147828	341923	2MURPHYSVIL	EKPC	325019	2KENTON-6	LGEE	1	EKPC_P4-6_SPUR N39-92T	breaker	66.0	90.99	116.76	DC	17.0

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	6.0472	50/50	6.0472
936382	AD2-048 E	3.0171	50/50	3.0171
939141	AE1-144 C O1	13.5851	50/50	13.5851
939142	AE1-144 E O1	6.7417	50/50	6.7417
940531	AE2-038 C O1	9.0624	50/50	9.0624
940532	AE2-038 E O1	4.4888	50/50	4.4888
945681	AF1-233 C	19.4003	50/50	19.4003
945682	AF1-233 E	9.5842	50/50	9.5842
945911	AF1-256 C	6.1834	50/50	6.1834
945912	AF1-256 E	4.1222	50/50	4.1222
959541	AF2-245 C	10.2025	50/50	10.2025
959542	AF2-245 E	6.8017	50/50	6.8017
960151	AF2-306	0.6947	Adder	1.54
960161	AF2-307 C	1.0581	Adder	2.35
960162	AF2-307 E	0.7054	Adder	1.57
WEC	WEC	0.0044	Confirmed LTF	0.0044
LGEE	LGEE	0.1198	Confirmed LTF	0.1198
CPLE	CPLE	0.0556	Confirmed LTF	0.0556
G-007A	G-007A	0.0072	Confirmed LTF	0.0072
VFT	VFT	0.0193	Confirmed LTF	0.0193
CBM-W2	CBM-W2	0.8354	Confirmed LTF	0.8354
NY	NY	0.0006	Confirmed LTF	0.0006
CBM-W1	CBM-W1	0.1001	Confirmed LTF	0.1001
TVA	TVA	0.2450	Confirmed LTF	0.2450
CBM-S2	CBM-S2	0.6127	Confirmed LTF	0.6127
CBM-S1	CBM-S1	1.5506	Confirmed LTF	1.5506
MADISON	MADISON	0.4939	Confirmed LTF	0.4939
MEC	MEC	0.0779	Confirmed LTF	0.0779

10.6.6 Index 6

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
101840987	341923	2MURPHYSVIL	EKPC	342091	2PLUMVILLE	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	63.0	69.32	118.26	DC	30.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	3.1462	Adder	3.7
936382	AD2-048 E	1.5697	Adder	1.85
945683	AF1-233 BAT	8.7596	50/50	8.7596
959543	AF2-245 BAT	30.8339	50/50	30.8339
960152	AF2-306 BAT	1.3371	Merchant Transmission	1.3371
WEC	WEC	0.0142	Confirmed LTF	0.0142
LGEE	LGEE	0.0719	Confirmed LTF	0.0719
CALDERWOOD	CALDERWOOD	0.0358	Confirmed LTF	0.0358
CBM-W2	CBM-W2	0.0983	Confirmed LTF	0.0983
NY	NY	0.0083	Confirmed LTF	0.0083
CBM-W1	CBM-W1	0.5129	Confirmed LTF	0.5129
O-066	O-066	0.1277	Confirmed LTF	0.1277
CHEOAH	CHEOAH	0.0360	Confirmed LTF	0.0360
G-007	G-007	0.0198	Confirmed LTF	0.0198
MEC	MEC	0.0493	Confirmed LTF	0.0493
CATAWBA	CATAWBA	0.0207	Confirmed LTF	0.0207

10.6.7 Index 7

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
101841029	342589	4GODDARD	EKPC	341536	2GODDARD	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	117.0	87.03	108.53	DC	25.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	11.6362	50/50	11.6362
939142	AE1-144 E O1	5.7746	50/50	5.7746
940531	AE2-038 C O1	7.7623	50/50	7.7623
940532	AE2-038 E O1	3.8449	50/50	3.8449
945681	AF1-233 C	28.6893	50/50	28.6893
945682	AF1-233 E	14.1732	50/50	14.1732
945911	AF1-256 C	9.1440	50/50	9.1440
945912	AF1-256 E	6.0960	50/50	6.0960
959541	AF2-245 C	15.0876	50/50	15.0876
959542	AF2-245 E	10.0584	50/50	10.0584
960152	AF2-306 BAT	4.8841	50/50	4.8841
NEWTON	NEWTON	0.0140	Confirmed LTF	0.0140
FARMERCITY	FARMERCITY	0.0010	Confirmed LTF	0.0010
G-007A	G-007A	0.0024	Confirmed LTF	0.0024
VFT	VFT	0.0064	Confirmed LTF	0.0064
CALDERWOOD	CALDERWOOD	0.0293	Confirmed LTF	0.0293
PRAIRIE	PRAIRIE	0.0568	Confirmed LTF	0.0568
CHEOAH	CHEOAH	0.0290	Confirmed LTF	0.0290
EDWARDS	EDWARDS	0.0021	Confirmed LTF	0.0021
TILTON	TILTON	0.0038	Confirmed LTF	0.0038
GIBSON	GIBSON	0.0093	Confirmed LTF	0.0093
BLUEG	BLUEG	0.0347	Confirmed LTF	0.0347
TRIMBLE	TRIMBLE	0.0089	Confirmed LTF	0.0089
CATAWBA	CATAWBA	0.0101	Confirmed LTF	0.0101

10.6.8 Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
101841089	342634	4PLUMVILLE	EKPC	342091	2PLUMVILLE	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	152.0	84.61	103.64	DC	28.91

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	25.9680	50/50	25.9680
939142	AE1-144 E O1	12.8868	50/50	12.8868
940531	AE2-038 C O1	17.3228	50/50	17.3228
940532	AE2-038 E O1	8.5804	50/50	8.5804
945681	AF1-233 C	32.9859	50/50	32.9859
945682	AF1-233 E	16.2958	50/50	16.2958
945911	AF1-256 C	10.5134	50/50	10.5134
945912	AF1-256 E	7.0090	50/50	7.0090
959541	AF2-245 C	17.3472	50/50	17.3472
959542	AF2-245 E	11.5648	50/50	11.5648
NEWTON	NEWTON	0.0441	Confirmed LTF	0.0441
CPLE	CPLE	0.0265	Confirmed LTF	0.0265
FARMERCITY	FARMERCITY	0.0013	Confirmed LTF	0.0013
G-007A	G-007A	0.0360	Confirmed LTF	0.0360
VFT	VFT	0.0968	Confirmed LTF	0.0968
TVA	TVA	0.0336	Confirmed LTF	0.0336
PRAIRIE	PRAIRIE	0.0646	Confirmed LTF	0.0646
EDWARDS	EDWARDS	0.0133	Confirmed LTF	0.0133
CBM-S2	CBM-S2	0.2428	Confirmed LTF	0.2428
TILTON	TILTON	0.0315	Confirmed LTF	0.0315
MADISON	MADISON	0.2117	Confirmed LTF	0.2117
GIBSON	GIBSON	0.0339	Confirmed LTF	0.0339
BLUEG	BLUEG	0.1614	Confirmed LTF	0.1614
TRIMBLE	TRIMBLE	0.0540	Confirmed LTF	0.0540

10.6.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
100147674	342649	4ROWAN CO	EKPC	324302	4RODBURN	LGEE	1	EKPC_P4-6_SPUR N39-92T	breaker	191.0	111.79	148.36	DC	69.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	38.4006	50/50	38.4006
939142	AE1-144 E O1	19.0566	50/50	19.0566
940531	AE2-038 C O1	25.6163	50/50	25.6163
940532	AE2-038 E O1	12.6885	50/50	12.6885
945681	AF1-233 C	79.6915	50/50	79.6915
945682	AF1-233 E	39.3695	50/50	39.3695
945911	AF1-256 C	25.3997	50/50	25.3997
945912	AF1-256 E	16.9331	50/50	16.9331
959541	AF2-245 C	41.9095	50/50	41.9095
959542	AF2-245 E	27.9396	50/50	27.9396
960151	AF2-306	5.0099	50/50	5.0099
960161	AF2-307 C	7.6305	50/50	7.6305
960162	AF2-307 E	5.0870	50/50	5.0870
NEWTON	NEWTON	0.1160	Confirmed LTF	0.1160
CPLE	CPLE	0.0509	Confirmed LTF	0.0509
FARMERCITY	FARMERCITY	0.0042	Confirmed LTF	0.0042
G-007A	G-007A	0.0911	Confirmed LTF	0.0911
VFT	VFT	0.2451	Confirmed LTF	0.2451
PRAIRIE	PRAIRIE	0.2170	Confirmed LTF	0.2170
EDWARDS	EDWARDS	0.0329	Confirmed LTF	0.0329
CBM-S2	CBM-S2	0.4335	Confirmed LTF	0.4335
TILTON	TILTON	0.0750	Confirmed LTF	0.0750
MADISON	MADISON	0.3488	Confirmed LTF	0.3488
GIBSON	GIBSON	0.0923	Confirmed LTF	0.0923
BLUEG	BLUEG	0.4184	Confirmed LTF	0.4184
TRIMBLE	TRIMBLE	0.1336	Confirmed LTF	0.1336

10.6.10 Index 10

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
95393640	243453	05BEATTY	AEP	243454	05BIXBY	AEP	1	AEP_P4_#3196_05BEATTY 345_302E	breaker	1203.0	126.58	127.13	DC	14.48

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250164	08BKJDB1	0.1468	Adder	0.17
250165	08BKJDB2	0.1468	Adder	0.17
251827	WILLYESP	0.4708	Adder	0.55
251828	CLNTESP1	0.4765	Adder	0.56
251829	CLNTESP2	0.3177	Adder	0.37
253110	09ADKINS	37.2264	50/50	37.2264
253261	09MON D	0.3207	50/50	0.3207
904722	V4-073 E	0.2007	Adder	0.24
913222	Y1-054 E	1.5349	Adder	1.81
918802	AA1-099 E	0.3177	Adder	0.37
923522	AB1-169 C OP	128.9926	Adder	151.76
925921	AC1-068 C	12.4590	50/50	12.4590
925922	AC1-068 E	5.8264	50/50	5.8264
925931	AC1-069 C	12.4590	50/50	12.4590
925932	AC1-069 E	5.8264	50/50	5.8264
925981	AC1-074 C O1	4.1012	Adder	4.82
925982	AC1-074 E O1	1.7577	Adder	2.07
926011	AC1-078 C O1	7.8983	Adder	9.29
926012	AC1-078 E O1	13.1639	Adder	15.49
926061	AC1-085 C	23.9871	50/50	23.9871
926062	AC1-085 E	39.1369	50/50	39.1369
926101	AC1-089 C O1 (Suspended)	4.2244	Adder	4.97
926102	AC1-089 E O1 (Suspended)	6.8924	Adder	8.11
926791	AC1-165 C	12.3124	50/50	12.3124
926792	AC1-165 E	5.9730	50/50	5.9730
926801	AC1-166 C	12.3124	50/50	12.3124
926802	AC1-166 E	5.9730	50/50	5.9730
927181	AC1-212 C	0.1257	Adder	0.15
927182	AC1-212 E	1.1911	Adder	1.4
930062	AB1-014 E	8.0690	Adder	9.49
932381	AC2-055 C	1.8552	Adder	2.18
932382	AC2-055 E	3.0269	Adder	3.56
932421	AC2-060 C	6.5780	Adder	7.74
932422	AC2-060 E	3.7002	Adder	4.35
932431	AC2-061 C	4.2930	Adder	5.05
932432	AC2-061 E	4.3522	Adder	5.12
932462	AC2-066 E	4.8414	Adder	5.7
932481	AC2-068 C	3.1039	Adder	3.65
932482	AC2-068 E	5.0834	Adder	5.98
932551	AC2-075 C	0.9740	Adder	1.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
932552	AC2-075 E	0.4907	Adder	0.58
932661	AC2-088 C O1	4.0523	Adder	4.77
932662	AC2-088 E O1	3.3347	Adder	3.92
932841	AC2-111 C O1	2.0610	Adder	2.42
932842	AC2-111 E O1	3.3627	Adder	3.96
934491	AD1-073 C	1.3567	Adder	1.6
934492	AD1-073 E	0.6989	Adder	0.82
934561	AD1-081 C	1.5797	Adder	1.86
934562	AD1-081 E	0.8138	Adder	0.96
935031	AD1-136 C	0.5698	Adder	0.67
935032	AD1-136 E	0.4854	Adder	0.57
935041	AD1-140 C O1	11.5394	Adder	13.58
935042	AD1-140 E O1	9.5399	Adder	11.22
936251	AD2-031 C O1	2.4091	Adder	2.83
936252	AD2-031 E O1	3.9306	Adder	4.62
936381	AD2-048 C	3.3733	Adder	3.97
936382	AD2-048 E	1.6830	Adder	1.98
938051	AE1-007 C	0.8902	Adder	1.05
938052	AE1-007 E	1.4524	Adder	1.71
938271	AE1-040 C O1	4.0663	Adder	4.78
938272	AE1-040 E O1	2.0460	Adder	2.41
938921	AE1-120	4.5811	Adder	5.39
939141	AE1-144 C O1	6.9356	Adder	8.16
939142	AE1-144 E O1	3.4419	Adder	4.05
940531	AE2-038 C O1	4.6266	Adder	5.44
940532	AE2-038 E O1	2.2917	Adder	2.7
941411	AE2-138 C	14.2309	Adder	16.74
941412	AE2-138 E	5.2635	Adder	6.19
941511	AE2-148 C	184.4823	50/50	184.4823
941512	AE2-148 E	83.4419	50/50	83.4419
941941	AE2-206 C O1	2.6832	Adder	3.16
941942	AE2-206 E O1	3.7054	Adder	4.36
941981	AE2-210 C O1	4.9036	Adder	5.77
941982	AE2-210 E O1	1.8445	Adder	2.17
942051	AE2-217 C	9.8153	Adder	11.55
942052	AE2-217 E	6.5435	Adder	7.7
942061	AE2-218 C	10.6318	Adder	12.51
942062	AE2-218 E	7.2216	Adder	8.5
942091	AE2-221 C	30.1338	50/50	30.1338
942092	AE2-221 E	20.0892	50/50	20.0892
942521	AE2-267 C O1	2.7171	Adder	3.2
942522	AE2-267 E O1	1.6795	Adder	1.98
942621	AE2-278 C	6.7957	Adder	7.99
942622	AE2-278 E	4.5330	Adder	5.33
942951	AE2-315	3.0422	Adder	3.58
942981	AE2-320 C O1	24.5148	50/50	24.5148
942982	AE2-320 E O1	12.1292	50/50	12.1292
943111	AE2-339 C	1.8463	Adder	2.17
943112	AE2-339 E	0.9094	Adder	1.07
943191	AE2-319 C O1	24.5148	50/50	24.5148
943192	AE2-319 E O1	12.1292	50/50	12.1292
943201	AE2-318 C	6.6259	Adder	7.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943202	AE2-318 E	3.2341	Adder	3.8
943771	AF1-045	3.0862	Adder	3.63
943773	AF1-045 E	2.0607	Adder	2.42
943943	AF1-062 BAT	20.4820	Merchant Transmission	20.4820
944031	AF1-071 C	0.5152	Adder	0.61
944032	AF1-071 E	0.8407	Adder	0.99
944101	AF1-078 C	1.2197	Adder	1.43
944102	AF1-078 E	1.6843	Adder	1.98
944521	AF1-117 C	52.2383	50/50	52.2383
944522	AF1-117 E	16.0917	50/50	16.0917
944621	AF1-127 C O1	3.9587	Adder	4.66
944622	AF1-127 E O1	1.9498	Adder	2.29
944941	AF1-159	1.3947	Adder	1.64
945561	AF1-221 C O1	9.2959	Adder	10.94
945562	AF1-221 E O1	2.7941	Adder	3.29
945631	AF1-228 C	45.6146	50/50	45.6146
945632	AF1-228 E	30.4098	50/50	30.4098
945681	AF1-233 C	13.1581	Adder	15.48
945682	AF1-233 E	6.5004	Adder	7.65
945841	AF1-249 C	1.2131	Adder	1.43
945842	AF1-249 E	0.4506	Adder	0.53
945861	AF1-251 C	9.8265	Adder	11.56
945862	AF1-251 E	6.5510	Adder	7.71
945911	AF1-256 C	4.2126	Adder	4.96
945912	AF1-256 E	2.8084	Adder	3.3
946171	AF1-282 C	9.4686	50/50	9.4686
946172	AF1-282 E	6.3124	50/50	6.3124
946181	AF1-283 C	12.3092	50/50	12.3092
946182	AF1-283 E	8.2061	50/50	8.2061
946511	AF1-315 C O1	3.5741	Adder	4.2
946512	AF1-315 E O1	2.3827	Adder	2.8
957171	AF2-011 O1	1.3358	Adder	2.97
957181	AF2-012 O1	6.9463	Adder	15.42
957391	AF2-033 C	0.4850	Adder	1.08
957392	AF2-033 E	0.7275	Adder	1.61
957401	AF2-034 C	0.4103	Adder	0.91
957402	AF2-034 E	0.3495	Adder	0.78
957721	AF2-066 C O1	2.7880	Adder	6.19
957722	AF2-066 E O1	1.8587	Adder	4.13
957731	AF2-067 C O1	1.4163	Adder	3.14
957732	AF2-067 E O1	0.9442	Adder	2.1
957851	AF2-079 C O1	5.3769	Adder	11.94
957852	AF2-079 E O1	3.5846	Adder	7.96
958171	AF2-111 C	7.5312	Adder	16.72
958172	AF2-111 E	5.0208	Adder	11.14
958291	AF2-123 C O1	1.0327	Adder	2.29
958292	AF2-123 E O1	1.4237	Adder	3.16
959073	AF2-198 BAT	1.2101	Merchant Transmission	1.2101
959191	AF2-210 C	6.0450	Adder	13.42
959192	AF2-210 E	4.0300	Adder	8.95
959201	AF2-211 C	2.1559	Adder	4.79
959202	AF2-211 E	1.4373	Adder	3.19

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959211	AF2-212 C O1	3.3470	Adder	7.43
959212	AF2-212 E O1	2.2313	Adder	4.95
959271	AF2-218 C O1	1.5520	Adder	3.45
959272	AF2-218 E O1	1.0350	Adder	2.3
959541	AF2-245 C	3.9144	Adder	8.69
959542	AF2-245 E	2.6096	Adder	5.79
959721	AF2-263 C	2.1867	Adder	4.85
959722	AF2-263 E	1.4578	Adder	3.24
960071	AF2-298 C O1	1.8836	Adder	4.18
960072	AF2-298 E O1	1.2600	Adder	2.8
960151	AF2-306	0.8891	Adder	1.97
960161	AF2-307 C	1.3542	Adder	3.01
960162	AF2-307 E	0.9028	Adder	2.0
960571	AF2-348 C	7.4285	Adder	16.49
960572	AF2-348 E	4.9523	Adder	10.99
961491	AF2-440 C	1.4760	Adder	3.28
961492	AF2-440 E	1.4760	Adder	3.28
WEC	WEC	0.7396	Confirmed LTF	0.7396
LGEE	LGEE	3.2313	Confirmed LTF	3.2313
CPL	CPL	0.2335	Confirmed LTF	0.2335
CBM-W2	CBM-W2	24.2260	Confirmed LTF	24.2260
NY	NY	0.9335	Confirmed LTF	0.9335
CBM-W1	CBM-W1	22.9058	Confirmed LTF	22.9058
TVA	TVA	3.5392	Confirmed LTF	3.5392
O-066	O-066	11.0746	Confirmed LTF	11.0746
CBM-S2	CBM-S2	4.5315	Confirmed LTF	4.5315
CBM-S1	CBM-S1	26.5057	Confirmed LTF	26.5057
G-007	G-007	1.7087	Confirmed LTF	1.7087
MEC	MEC	4.0726	Confirmed LTF	4.0726

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPAC T
95393694	243453	05BEATTY	AEP	244022	05COL E	AEP	1	AEP_P4_#3195_05BEATTY 345_304E	breaker	1203.0	112.25	112.71	DC	12.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
247964	Y1-063 BAT	0.3052	Merchant Transmission	0.3052
250164	08BKJDB1	0.1226	Adder	0.14
250165	08BKJDB2	0.1226	Adder	0.14
251827	WILLYESP	0.3878	Adder	0.46
251828	CLNTESP1	0.4057	Adder	0.48
251829	CLNTESP2	0.2704	Adder	0.32
253110	09ADKINS	31.2953	50/50	31.2953
253261	09MON D	0.2539	50/50	0.2539
904722	V4-073 E	0.1614	Adder	0.19
913222	Y1-054 E	1.2706	Adder	1.49
918802	AA1-099 E	0.2704	Adder	0.32
923522	AB1-169 C OP	110.0869	Adder	129.51
925921	AC1-068 C	10.4948	50/50	10.4948
925922	AC1-068 E	4.9079	50/50	4.9079
925931	AC1-069 C	10.4948	50/50	10.4948
925932	AC1-069 E	4.9079	50/50	4.9079
925981	AC1-074 C O1	3.4524	Adder	4.06
925982	AC1-074 E O1	1.4796	Adder	1.74
926011	AC1-078 C O1	4.7724	Adder	5.61
926012	AC1-078 E O1	7.9540	Adder	9.36
926061	AC1-085 C	20.0503	50/50	20.0503
926062	AC1-085 E	32.7137	50/50	32.7137
926101	AC1-089 C O1 (Suspended)	3.6749	Adder	4.32
926102	AC1-089 E O1 (Suspended)	5.9959	Adder	7.05
926791	AC1-165 C	10.3713	50/50	10.3713
926792	AC1-165 E	5.0313	50/50	5.0313
926801	AC1-166 C	10.3713	50/50	10.3713
926802	AC1-166 E	5.0313	50/50	5.0313
930062	AB1-014 E	6.7785	Adder	7.97
932381	AC2-055 C	1.7406	Adder	2.05
932382	AC2-055 E	2.8399	Adder	3.34
932421	AC2-060 C	6.1717	Adder	7.26
932422	AC2-060 E	3.4716	Adder	4.08
932431	AC2-061 C	3.7370	Adder	4.4
932432	AC2-061 E	3.7884	Adder	4.46
932462	AC2-066 E	4.0671	Adder	4.78
932481	AC2-068 C	2.4618	Adder	2.9
932482	AC2-068 E	4.0317	Adder	4.74
932551	AC2-075 C	0.8200	Adder	0.96
932552	AC2-075 E	0.4131	Adder	0.49

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
932661	AC2-088 C O1	3.4275	Adder	4.03
932662	AC2-088 E O1	2.8206	Adder	3.32
932841	AC2-111 C O1	1.6279	Adder	1.92
932842	AC2-111 E O1	2.6561	Adder	3.12
934491	AD1-073 C	1.2729	Adder	1.5
934492	AD1-073 E	0.6557	Adder	0.77
934561	AD1-081 C	0.9545	Adder	1.12
934562	AD1-081 E	0.4917	Adder	0.58
935031	AD1-136 C	0.4820	Adder	0.57
935032	AD1-136 E	0.4106	Adder	0.48
935041	AD1-140 C O1	8.4174	Adder	9.9
935042	AD1-140 E O1	6.9589	Adder	8.19
936251	AD2-031 C O1	2.3927	50/50	2.3927
936252	AD2-031 E O1	3.9038	50/50	3.9038
936381	AD2-048 C	2.8441	Adder	3.35
936382	AD2-048 E	1.4190	Adder	1.67
938051	AE1-007 C	0.7060	Adder	0.83
938052	AE1-007 E	1.1519	Adder	1.36
938271	AE1-040 C O1	4.3159	50/50	4.3159
938272	AE1-040 E O1	2.1716	50/50	2.1716
938921	AE1-120	3.8485	Adder	4.53
939141	AE1-144 C O1	5.8953	Adder	6.94
939142	AE1-144 E O1	2.9256	Adder	3.44
940531	AE2-038 C O1	3.9327	Adder	4.63
940532	AE2-038 E O1	1.9480	Adder	2.29
941411	AE2-138 C	12.0013	Adder	14.12
941412	AE2-138 E	4.4389	Adder	5.22
941511	AE2-148 C	154.5298	50/50	154.5298
941512	AE2-148 E	69.8943	50/50	69.8943
941981	AE2-210 C O1	4.1353	Adder	4.87
941982	AE2-210 E O1	1.5555	Adder	1.83
942061	AE2-218 C	8.0099	Adder	9.42
942062	AE2-218 E	5.4407	Adder	6.4
942091	AE2-221 C	24.9786	50/50	24.9786
942092	AE2-221 E	16.6524	50/50	16.6524
942521	AE2-267 C O1	2.2359	Adder	2.63
942522	AE2-267 E O1	1.3821	Adder	1.63
942951	AE2-315	2.4471	Adder	2.88
942981	AE2-320 C O1	20.6500	50/50	20.6500
942982	AE2-320 E O1	10.2170	50/50	10.2170
943111	AE2-339 C	1.5527	Adder	1.83
943112	AE2-339 E	0.7648	Adder	0.9
943191	AE2-319 C O1	20.6500	50/50	20.6500
943192	AE2-319 E O1	10.2170	50/50	10.2170
943201	AE2-318 C	5.5475	Adder	6.53
943202	AE2-318 E	2.7077	Adder	3.19
943771	AF1-045	2.5839	Adder	3.04
943773	AF1-045 E	1.7253	Adder	2.03
944031	AF1-071 C	0.4070	Adder	0.48
944032	AF1-071 E	0.6640	Adder	0.78
944521	AF1-117 C	44.0077	50/50	44.0077
944522	AF1-117 E	13.5563	50/50	13.5563

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944621	AF1-127 C O1	3.3373	Adder	3.93
944622	AF1-127 E O1	1.6437	Adder	1.93
944941	AF1-159	1.3852	50/50	1.3852
945631	AF1-228 C	38.2453	50/50	38.2453
945632	AF1-228 E	25.4969	50/50	25.4969
945681	AF1-233 C	11.1855	Adder	13.16
945682	AF1-233 E	5.5259	Adder	6.5
945841	AF1-249 C	1.0038	Adder	1.18
945842	AF1-249 E	0.3728	Adder	0.44
945861	AF1-251 C	8.2860	Adder	9.75
945862	AF1-251 E	5.5240	Adder	6.5
945911	AF1-256 C	3.5810	Adder	4.21
945912	AF1-256 E	2.3873	Adder	2.81
946102	AF1-275 BAT	18.6570	50/50	18.6570
946171	AF1-282 C	7.9146	50/50	7.9146
946172	AF1-282 E	5.2764	50/50	5.2764
946181	AF1-283 C	10.2890	50/50	10.2890
946182	AF1-283 E	6.8593	50/50	6.8593
946511	AF1-315 C O1	2.9945	Adder	3.52
946512	AF1-315 E O1	1.9963	Adder	2.35
957171	AF2-011 O1	1.0647	Adder	2.36
957181	AF2-012 O1	5.5365	Adder	12.29
957391	AF2-033 C	0.3768	Adder	0.84
957392	AF2-033 E	0.5651	Adder	1.25
957401	AF2-034 C	0.3359	Adder	0.75
957402	AF2-034 E	0.2861	Adder	0.64
957721	AF2-066 C O1	2.1771	Adder	4.83
957722	AF2-066 E O1	1.4514	Adder	3.22
957731	AF2-067 C O1	1.1092	Adder	2.46
957732	AF2-067 E O1	0.7395	Adder	1.64
957851	AF2-079 C O1	4.1272	Adder	9.16
957852	AF2-079 E O1	2.7515	Adder	6.11
958171	AF2-111 C	6.3852	Adder	14.17
958172	AF2-111 E	4.2568	Adder	9.45
959191	AF2-210 C	4.9887	Adder	11.07
959192	AF2-210 E	3.3258	Adder	7.38
959201	AF2-211 C	1.7029	Adder	3.78
959202	AF2-211 E	1.1353	Adder	2.52
959271	AF2-218 C O1	1.1765	Adder	2.61
959272	AF2-218 E O1	0.7846	Adder	1.74
959541	AF2-245 C	3.3243	Adder	7.38
959542	AF2-245 E	2.2162	Adder	4.92
960071	AF2-298 C O1	1.4929	Adder	3.31
960072	AF2-298 E O1	0.9986	Adder	2.22
960151	AF2-306	0.7563	Adder	1.68
960161	AF2-307 C	1.1519	Adder	2.56
960162	AF2-307 E	0.7679	Adder	1.7
960571	AF2-348 C	6.2960	Adder	13.98
960572	AF2-348 E	4.1973	Adder	9.32
961491	AF2-440 C	1.2678	Adder	2.81
961492	AF2-440 E	1.2678	Adder	2.81
WEC	WEC	0.4237	Confirmed LTF	0.4237

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LGEE	LGEE	2.6306	Confirmed LTF	2.6306
CPL	CPL	0.2739	Confirmed LTF	0.2739
CBM-W2	CBM-W2	18.1490	Confirmed LTF	18.1490
NY	NY	0.6890	Confirmed LTF	0.6890
CBM-W1	CBM-W1	11.8845	Confirmed LTF	11.8845
TVA	TVA	2.8350	Confirmed LTF	2.8350
O-066	O-066	8.1514	Confirmed LTF	8.1514
CBM-S2	CBM-S2	4.3350	Confirmed LTF	4.3350
CBM-S1	CBM-S1	21.3426	Confirmed LTF	21.3426
G-007	G-007	1.2574	Confirmed LTF	1.2574
MEC	MEC	2.6457	Confirmed LTF	2.6457

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
95823103	246800		AEP	247034	05EMERSS	AEP	1	DAY_P734541 34553	tower	185.0	122.52	125.41	DC	11.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251831	Z1-080 BAT	0.5184	Merchant Transmission	0.5184
918803	AA1-099 BAT	0.3456	Merchant Transmission	0.3456
925981	AC1-074 C O1	2.6689	Adder	3.14
925982	AC1-074 E O1	1.1438	Adder	1.35
932551	AC2-075 C	0.6339	Adder	0.75
932552	AC2-075 E	0.3193	Adder	0.38
936381	AD2-048 C	3.0978	Adder	3.64
936382	AD2-048 E	1.5456	Adder	1.82
939141	AE1-144 C O1	6.3821	Adder	7.51
939142	AE1-144 E O1	3.1672	Adder	3.73
940531	AE2-038 C O1	4.2574	Adder	5.01
940532	AE2-038 E O1	2.1088	Adder	2.48
941411	AE2-138 C	8.9441	Adder	10.52
941412	AE2-138 E	3.3081	Adder	3.89
941981	AE2-210 C O1	3.0819	Adder	3.63
941982	AE2-210 E O1	1.1593	Adder	1.36
943111	AE2-339 C	1.1511	Adder	1.35
943112	AE2-339 E	0.5669	Adder	0.67
944621	AF1-127 C O1	2.4848	Adder	2.92
944622	AF1-127 E O1	1.2239	Adder	1.44
945681	AF1-233 C	11.7219	Adder	13.79
945682	AF1-233 E	5.7909	Adder	6.81
945861	AF1-251 C	6.1721	Adder	7.26
945862	AF1-251 E	4.1147	Adder	4.84
945911	AF1-256 C	3.7320	Adder	4.39
945912	AF1-256 E	2.4880	Adder	2.93
958171	AF2-111 C	4.9735	Adder	11.04
958172	AF2-111 E	3.3157	Adder	7.36
959541	AF2-245 C	3.2133	Adder	7.13
959542	AF2-245 E	2.1422	Adder	4.76
960151	AF2-306	0.7520	Adder	1.67
960161	AF2-307 C	1.1453	Adder	2.54
960162	AF2-307 E	0.7635	Adder	1.69
960571	AF2-348 C	4.8924	Adder	10.86
960572	AF2-348 E	3.2616	Adder	7.24
WEC	WEC	0.0627	Confirmed LTF	0.0627
LGEE	LGEE	0.9242	Confirmed LTF	0.9242
CPL	CPL	0.1402	Confirmed LTF	0.1402
CBM-W2	CBM-W2	4.5045	Confirmed LTF	4.5045
NY	NY	0.0769	Confirmed LTF	0.0769
CBM-W1	CBM-W1	1.7639	Confirmed LTF	1.7639
TVA	TVA	1.0150	Confirmed LTF	1.0150

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	0.8669	Confirmed LTF	0.8669
CBM-S2	CBM-S2	1.8091	Confirmed LTF	1.8091
CBM-S1	CBM-S1	7.5913	Confirmed LTF	7.5913
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	1.9233	Confirmed LTF	1.9233
MEC	MEC	0.5291	Confirmed LTF	0.5291

10.6.13 Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
95823067	246946	05WLDCAT	AEP	243019	05HILLSB	AEP	1	DAY_P73454134553	tower	185.0	175.26	178.16	DC	11.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251831	Z1-080 BAT	0.5184	Merchant Transmission	0.5184
918803	AA1-099 BAT	0.3456	Merchant Transmission	0.3456
925981	AC1-074 C O1	2.6689	Adder	3.14
925982	AC1-074 E O1	1.1438	Adder	1.35
926101	AC1-089 C O1 (Suspended)	40.2722	50/50	40.2722
926102	AC1-089 E O1 (Suspended)	65.7073	50/50	65.7073
932551	AC2-075 C	0.6339	Adder	0.75
932552	AC2-075 E	0.3193	Adder	0.38
936381	AD2-048 C	3.0978	Adder	3.64
936382	AD2-048 E	1.5456	Adder	1.82
939141	AE1-144 C O1	6.3821	Adder	7.51
939142	AE1-144 E O1	3.1672	Adder	3.73
940531	AE2-038 C O1	4.2574	Adder	5.01
940532	AE2-038 E O1	2.1088	Adder	2.48
941411	AE2-138 C	8.9441	Adder	10.52
941412	AE2-138 E	3.3081	Adder	3.89
941981	AE2-210 C O1	3.0819	Adder	3.63
941982	AE2-210 E O1	1.1593	Adder	1.36
943111	AE2-339 C	1.1511	Adder	1.35
943112	AE2-339 E	0.5669	Adder	0.67
944621	AF1-127 C O1	2.4848	Adder	2.92
944622	AF1-127 E O1	1.2239	Adder	1.44
945681	AF1-233 C	11.7219	Adder	13.79
945682	AF1-233 E	5.7909	Adder	6.81
945861	AF1-251 C	6.1721	Adder	7.26
945862	AF1-251 E	4.1147	Adder	4.84
945911	AF1-256 C	3.7320	Adder	4.39
945912	AF1-256 E	2.4880	Adder	2.93
958171	AF2-111 C	4.9735	Adder	11.04
958172	AF2-111 E	3.3157	Adder	7.36
959541	AF2-245 C	3.2133	Adder	7.13
959542	AF2-245 E	2.1422	Adder	4.76
960151	AF2-306	0.7520	Adder	1.67
960161	AF2-307 C	1.1453	Adder	2.54
960162	AF2-307 E	0.7635	Adder	1.69
960571	AF2-348 C	4.8924	Adder	10.86
960572	AF2-348 E	3.2616	Adder	7.24
WEC	WEC	0.0627	Confirmed LTF	0.0627
LGEE	LGEE	0.9242	Confirmed LTF	0.9242
CPL	CPL	0.1402	Confirmed LTF	0.1402

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-W2	CBM-W2	4.5045	Confirmed LTF	4.5045
NY	NY	0.0769	Confirmed LTF	0.0769
CBM-W1	CBM-W1	1.7639	Confirmed LTF	1.7639
TVA	TVA	1.0150	Confirmed LTF	1.0150
O-066	O-066	0.8669	Confirmed LTF	0.8669
CBM-S2	CBM-S2	1.8091	Confirmed LTF	1.8091
CBM-S1	CBM-S1	7.5913	Confirmed LTF	7.5913
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	1.9233	Confirmed LTF	1.9233
MEC	MEC	0.5291	Confirmed LTF	0.5291

10.6.14 Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
95823111	247034	05EMERSS	AEP	246946	05WLDCAT	AEP	1	DAY_P734541 34553	tower	185.0	121.28	124.17	DC	11.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251831	Z1-080 BAT	0.5184	Merchant Transmission	0.5184
918803	AA1-099 BAT	0.3456	Merchant Transmission	0.3456
925981	AC1-074 C O1	2.6689	Adder	3.14
925982	AC1-074 E O1	1.1438	Adder	1.35
932551	AC2-075 C	0.6339	Adder	0.75
932552	AC2-075 E	0.3193	Adder	0.38
936381	AD2-048 C	3.0978	Adder	3.64
936382	AD2-048 E	1.5456	Adder	1.82
939141	AE1-144 C O1	6.3821	Adder	7.51
939142	AE1-144 E O1	3.1672	Adder	3.73
940531	AE2-038 C O1	4.2574	Adder	5.01
940532	AE2-038 E O1	2.1088	Adder	2.48
941411	AE2-138 C	8.9441	Adder	10.52
941412	AE2-138 E	3.3081	Adder	3.89
941981	AE2-210 C O1	3.0819	Adder	3.63
941982	AE2-210 E O1	1.1593	Adder	1.36
943111	AE2-339 C	1.1511	Adder	1.35
943112	AE2-339 E	0.5669	Adder	0.67
944621	AF1-127 C O1	2.4848	Adder	2.92
944622	AF1-127 E O1	1.2239	Adder	1.44
945681	AF1-233 C	11.7219	Adder	13.79
945682	AF1-233 E	5.7909	Adder	6.81
945861	AF1-251 C	6.1721	Adder	7.26
945862	AF1-251 E	4.1147	Adder	4.84
945911	AF1-256 C	3.7320	Adder	4.39
945912	AF1-256 E	2.4880	Adder	2.93
958171	AF2-111 C	4.9735	Adder	11.04
958172	AF2-111 E	3.3157	Adder	7.36
959541	AF2-245 C	3.2133	Adder	7.13
959542	AF2-245 E	2.1422	Adder	4.76
960151	AF2-306	0.7520	Adder	1.67
960161	AF2-307 C	1.1453	Adder	2.54
960162	AF2-307 E	0.7635	Adder	1.69
960571	AF2-348 C	4.8924	Adder	10.86
960572	AF2-348 E	3.2616	Adder	7.24
WEC	WEC	0.0627	Confirmed LTF	0.0627
LGEE	LGEE	0.9242	Confirmed LTF	0.9242
CPL	CPL	0.1402	Confirmed LTF	0.1402
CBM-W2	CBM-W2	4.5045	Confirmed LTF	4.5045
NY	NY	0.0769	Confirmed LTF	0.0769
CBM-W1	CBM-W1	1.7639	Confirmed LTF	1.7639
TVA	TVA	1.0150	Confirmed LTF	1.0150

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	0.8669	Confirmed LTF	0.8669
CBM-S2	CBM-S2	1.8091	Confirmed LTF	1.8091
CBM-S1	CBM-S1	7.5913	Confirmed LTF	7.5913
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	1.9233	Confirmed LTF	1.9233
MEC	MEC	0.5291	Confirmed LTF	0.5291

10.6.15 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
100671471	250054	08LONGBR	DEO&K	250077	08MTZION	DEO&K	1	DAY_P734541 34553	tower	284.0	130.72	136.25	DC	15.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	6.3712	50/50	6.3712
342960	1SPURLK2G	10.0059	50/50	10.0059
342963	1SPURLK3G	5.2580	50/50	5.2580
342966	1SPURLK4G	5.2580	50/50	5.2580
925981	AC1-074 C O1	9.2590	50/50	9.2590
925982	AC1-074 E O1	3.9682	50/50	3.9682
932551	AC2-075 C	2.1990	50/50	2.1990
932552	AC2-075 E	1.1078	50/50	1.1078
936381	AD2-048 C	6.0757	50/50	6.0757
936382	AD2-048 E	3.0313	50/50	3.0313
936571	AD2-072 C O1	2.9492	Adder	3.47
936572	AD2-072 E O1	1.4460	Adder	1.7
939141	AE1-144 C O1	8.7939	50/50	8.7939
939142	AE1-144 E O1	4.3641	50/50	4.3641
940531	AE2-038 C O1	5.8663	50/50	5.8663
940532	AE2-038 E O1	2.9057	50/50	2.9057
941411	AE2-138 C	14.2422	Adder	16.76
941412	AE2-138 E	5.2677	Adder	6.2
941981	AE2-210 C O1	4.9075	Adder	5.77
941982	AE2-210 E O1	1.8459	Adder	2.17
942411	AE2-254 C O1	1.4107	Adder	1.66
942412	AE2-254 E O1	0.9404	Adder	1.11
942591	AE2-275 C O1	4.0281	Adder	4.74
942592	AE2-275 E O1	1.5151	Adder	1.78
942891	AE2-308 C O1	6.9293	Adder	8.15
942892	AE2-308 E O1	2.5197	Adder	2.96
943111	AE2-339 C	2.1010	Adder	2.47
943112	AE2-339 E	1.0348	Adder	1.22
944621	AF1-127 C O1	4.0548	Adder	4.77
944622	AF1-127 E O1	1.9972	Adder	2.35
945541	AF1-219 C O1	0.9336	Adder	1.1
945542	AF1-219 E O1	0.4393	Adder	0.52
945681	AF1-233 C	16.6052	50/50	16.6052
945682	AF1-233 E	8.2033	50/50	8.2033
945861	AF1-251 C	9.9432	Adder	11.7
945862	AF1-251 E	6.6288	Adder	7.8
945911	AF1-256 C	5.3198	50/50	5.3198
945912	AF1-256 E	3.5466	50/50	3.5466
946021	AF1-267 C	2.2204	Adder	2.61
946022	AF1-267 E	1.0202	Adder	1.2
958171	AF2-111 C	15.9840	50/50	15.9840
958172	AF2-111 E	10.6560	50/50	10.6560

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959541	AF2-245 C	9.4050	50/50	9.4050
959542	AF2-245 E	6.2700	50/50	6.2700
960151	AF2-306	0.9028	Adder	2.0
960161	AF2-307 C	1.3751	Adder	3.05
960162	AF2-307 E	0.9167	Adder	2.03
960571	AF2-348 C	15.7935	50/50	15.7935
960572	AF2-348 E	10.5290	50/50	10.5290
960641	AF2-355 C O1	4.1776	Adder	9.27
960642	AF2-355 E O1	3.7134	Adder	8.24
961281	AF2-419 C	0.3026	Adder	0.67
961282	AF2-419 E	0.2017	Adder	0.45
961291	AF2-420 C	0.3026	Adder	0.67
961292	AF2-420 E	0.2017	Adder	0.45
WEC	WEC	0.0362	Confirmed LTF	0.0362
LGEE	LGEE	1.7092	Confirmed LTF	1.7092
CPL	CPL	0.2831	Confirmed LTF	0.2831
CBM-W2	CBM-W2	6.3063	Confirmed LTF	6.3063
NY	NY	0.0658	Confirmed LTF	0.0658
CBM-W1	CBM-W1	0.7381	Confirmed LTF	0.7381
TVA	TVA	1.6226	Confirmed LTF	1.6226
O-066	O-066	0.6250	Confirmed LTF	0.6250
CBM-S2	CBM-S2	3.3408	Confirmed LTF	3.3408
CBM-S1	CBM-S1	12.7885	Confirmed LTF	12.7885
G-007	G-007	0.0957	Confirmed LTF	0.0957
MADISON	MADISON	3.7780	Confirmed LTF	3.7780
MEC	MEC	0.5752	Confirmed LTF	0.5752

10.6.16 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
100671472	250077	08MTZION	DEO&K	249991	08BUFTN1	DEO&K	1	DAY_P734541 34553	tower	298.0	120.29	125.55	DC	15.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	6.3712	50/50	6.3712
342960	1SPURLK2G	10.0059	50/50	10.0059
342963	1SPURLK3G	5.2580	50/50	5.2580
342966	1SPURLK4G	5.2580	50/50	5.2580
925981	AC1-074 C O1	9.2590	50/50	9.2590
925982	AC1-074 E O1	3.9682	50/50	3.9682
932551	AC2-075 C	2.1990	50/50	2.1990
932552	AC2-075 E	1.1078	50/50	1.1078
936381	AD2-048 C	6.0757	50/50	6.0757
936382	AD2-048 E	3.0313	50/50	3.0313
936571	AD2-072 C O1	2.9492	Adder	3.47
936572	AD2-072 E O1	1.4460	Adder	1.7
939141	AE1-144 C O1	8.7939	50/50	8.7939
939142	AE1-144 E O1	4.3641	50/50	4.3641
940531	AE2-038 C O1	5.8663	50/50	5.8663
940532	AE2-038 E O1	2.9057	50/50	2.9057
941411	AE2-138 C	14.2422	Adder	16.76
941412	AE2-138 E	5.2677	Adder	6.2
941981	AE2-210 C O1	4.9075	Adder	5.77
941982	AE2-210 E O1	1.8459	Adder	2.17
942411	AE2-254 C O1	1.4107	Adder	1.66
942412	AE2-254 E O1	0.9404	Adder	1.11
942591	AE2-275 C O1	4.0281	Adder	4.74
942592	AE2-275 E O1	1.5151	Adder	1.78
942891	AE2-308 C O1	6.9293	Adder	8.15
942892	AE2-308 E O1	2.5197	Adder	2.96
943111	AE2-339 C	2.1010	Adder	2.47
943112	AE2-339 E	1.0348	Adder	1.22
944621	AF1-127 C O1	4.0548	Adder	4.77
944622	AF1-127 E O1	1.9972	Adder	2.35
945541	AF1-219 C O1	0.9336	Adder	1.1
945542	AF1-219 E O1	0.4393	Adder	0.52
945681	AF1-233 C	16.6052	50/50	16.6052
945682	AF1-233 E	8.2033	50/50	8.2033
945861	AF1-251 C	9.9432	Adder	11.7
945862	AF1-251 E	6.6288	Adder	7.8
945911	AF1-256 C	5.3198	50/50	5.3198
945912	AF1-256 E	3.5466	50/50	3.5466
946021	AF1-267 C	2.2204	Adder	2.61
946022	AF1-267 E	1.0202	Adder	1.2
958171	AF2-111 C	15.9840	50/50	15.9840
958172	AF2-111 E	10.6560	50/50	10.6560

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959541	AF2-245 C	9.4050	50/50	9.4050
959542	AF2-245 E	6.2700	50/50	6.2700
960151	AF2-306	0.9028	Adder	2.0
960161	AF2-307 C	1.3751	Adder	3.05
960162	AF2-307 E	0.9167	Adder	2.03
960571	AF2-348 C	15.7935	50/50	15.7935
960572	AF2-348 E	10.5290	50/50	10.5290
960641	AF2-355 C O1	4.1776	Adder	9.27
960642	AF2-355 E O1	3.7134	Adder	8.24
961281	AF2-419 C	0.3026	Adder	0.67
961282	AF2-419 E	0.2017	Adder	0.45
961291	AF2-420 C	0.3026	Adder	0.67
961292	AF2-420 E	0.2017	Adder	0.45
WEC	WEC	0.0362	Confirmed LTF	0.0362
LGEE	LGEE	1.7092	Confirmed LTF	1.7092
CPL	CPL	0.2831	Confirmed LTF	0.2831
CBM-W2	CBM-W2	6.3063	Confirmed LTF	6.3063
NY	NY	0.0658	Confirmed LTF	0.0658
CBM-W1	CBM-W1	0.7381	Confirmed LTF	0.7381
TVA	TVA	1.6226	Confirmed LTF	1.6226
O-066	O-066	0.6250	Confirmed LTF	0.6250
CBM-S2	CBM-S2	3.3408	Confirmed LTF	3.3408
CBM-S1	CBM-S1	12.7885	Confirmed LTF	12.7885
G-007	G-007	0.0957	Confirmed LTF	0.0957
MADISON	MADISON	3.7780	Confirmed LTF	3.7780
MEC	MEC	0.5752	Confirmed LTF	0.5752

10.6.17 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
95394320	324267	4KENTON	LGEE	246800		AEP	1	DAY_P734541 34553	tower	185.0	125.55	128.44	DC	11.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251831	Z1-080 BAT	0.5184	Merchant Transmission	0.5184
918803	AA1-099 BAT	0.3456	Merchant Transmission	0.3456
925981	AC1-074 C O1	2.6689	Adder	3.14
925982	AC1-074 E O1	1.1438	Adder	1.35
932551	AC2-075 C	0.6339	Adder	0.75
932552	AC2-075 E	0.3193	Adder	0.38
936381	AD2-048 C	3.0978	Adder	3.64
936382	AD2-048 E	1.5456	Adder	1.82
939141	AE1-144 C O1	6.3821	Adder	7.51
939142	AE1-144 E O1	3.1672	Adder	3.73
940531	AE2-038 C O1	4.2574	Adder	5.01
940532	AE2-038 E O1	2.1088	Adder	2.48
941411	AE2-138 C	8.9441	Adder	10.52
941412	AE2-138 E	3.3081	Adder	3.89
941981	AE2-210 C O1	3.0819	Adder	3.63
941982	AE2-210 E O1	1.1593	Adder	1.36
943111	AE2-339 C	1.1511	Adder	1.35
943112	AE2-339 E	0.5669	Adder	0.67
944621	AF1-127 C O1	2.4848	Adder	2.92
944622	AF1-127 E O1	1.2239	Adder	1.44
945681	AF1-233 C	11.7219	Adder	13.79
945682	AF1-233 E	5.7909	Adder	6.81
945861	AF1-251 C	6.1721	Adder	7.26
945862	AF1-251 E	4.1147	Adder	4.84
945911	AF1-256 C	3.7320	Adder	4.39
945912	AF1-256 E	2.4880	Adder	2.93
958171	AF2-111 C	4.9735	Adder	11.04
958172	AF2-111 E	3.3157	Adder	7.36
959541	AF2-245 C	3.2133	Adder	7.13
959542	AF2-245 E	2.1422	Adder	4.76
960151	AF2-306	0.7520	Adder	1.67
960161	AF2-307 C	1.1453	Adder	2.54
960162	AF2-307 E	0.7635	Adder	1.69
960571	AF2-348 C	4.8924	Adder	10.86
960572	AF2-348 E	3.2616	Adder	7.24
WEC	WEC	0.0627	Confirmed LTF	0.0627
LGEE	LGEE	0.9242	Confirmed LTF	0.9242
CPL	CPL	0.1402	Confirmed LTF	0.1402
CBM-W2	CBM-W2	4.5045	Confirmed LTF	4.5045
NY	NY	0.0769	Confirmed LTF	0.0769
CBM-W1	CBM-W1	1.7639	Confirmed LTF	1.7639
TVA	TVA	1.0150	Confirmed LTF	1.0150

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	0.8669	Confirmed LTF	0.8669
CBM-S2	CBM-S2	1.8091	Confirmed LTF	1.8091
CBM-S1	CBM-S1	7.5913	Confirmed LTF	7.5913
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	1.9233	Confirmed LTF	1.9233
MEC	MEC	0.5291	Confirmed LTF	0.5291

10.6.18 Index 18

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
101840818	342091	2PLUMVILLE	EKPC	341923	2MURPHYSVIL	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	63.0	163.69	212.64	DC	30.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	23.9269	50/50	23.9269
939142	AE1-144 E O1	11.8739	50/50	11.8739
940531	AE2-038 C O1	15.9612	50/50	15.9612
940532	AE2-038 E O1	7.9060	50/50	7.9060
945681	AF1-233 C	35.1787	50/50	35.1787
945682	AF1-233 E	17.3791	50/50	17.3791
945911	AF1-256 C	11.2123	50/50	11.2123
945912	AF1-256 E	7.4749	50/50	7.4749
959541	AF2-245 C	18.5003	50/50	18.5003
959542	AF2-245 E	12.3336	50/50	12.3336
960151	AF2-306	1.1365	Adder	2.52
960161	AF2-307 C	1.7310	Adder	3.84
960162	AF2-307 E	1.1540	Adder	2.56
NEWTON	NEWTON	0.0505	Confirmed LTF	0.0505
CPLE	CPLE	0.0351	Confirmed LTF	0.0351
FARMERCITY	FARMERCITY	0.0014	Confirmed LTF	0.0014
G-007A	G-007A	0.0456	Confirmed LTF	0.0456
VFT	VFT	0.1226	Confirmed LTF	0.1226
TVA	TVA	0.0560	Confirmed LTF	0.0560
PRAIRIE	PRAIRIE	0.0672	Confirmed LTF	0.0672
EDWARDS	EDWARDS	0.0161	Confirmed LTF	0.0161
CBM-S2	CBM-S2	0.3295	Confirmed LTF	0.3295
CBM-S1	CBM-S1	0.0767	Confirmed LTF	0.0767
TILTON	TILTON	0.0378	Confirmed LTF	0.0378
MADISON	MADISON	0.2782	Confirmed LTF	0.2782
GIBSON	GIBSON	0.0399	Confirmed LTF	0.0399
BLUEG	BLUEG	0.1927	Confirmed LTF	0.1927
TRIMBLE	TRIMBLE	0.0646	Confirmed LTF	0.0646

10.6.19 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
100148796	342544	4AVON-R	EKPC	324275	4LOUDON AVE	LGEE	1	DAY_P734541 34553	tower	203.0	122.51	124.21	DC	7.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925981	AC1-074 C O1	4.4425	Adder	5.23
925982	AC1-074 E O1	1.9039	Adder	2.24
932551	AC2-075 C	1.0551	Adder	1.24
932552	AC2-075 E	0.5315	Adder	0.63
939141	AE1-144 C O1	3.5626	Adder	4.19
939142	AE1-144 E O1	1.7680	Adder	2.08
940531	AE2-038 C O1	2.3765	Adder	2.8
940532	AE2-038 E O1	1.1772	Adder	1.38
941411	AE2-138 C	14.5552	Adder	17.12
941412	AE2-138 E	5.3834	Adder	6.33
941981	AE2-210 C O1	5.0153	Adder	5.9
941982	AE2-210 E O1	1.8865	Adder	2.22
942891	AE2-308 C O1	5.6250	Adder	6.62
942892	AE2-308 E O1	2.0454	Adder	2.41
943111	AE2-339 C	4.7985	50/50	4.7985
943112	AE2-339 E	2.3635	50/50	2.3635
944621	AF1-127 C O1	5.7116	50/50	5.7116
944622	AF1-127 E O1	2.8132	50/50	2.8132
945681	AF1-233 C	6.8255	Adder	8.03
945682	AF1-233 E	3.3720	Adder	3.97
945861	AF1-251 C	10.9956	Adder	12.94
945862	AF1-251 E	7.3304	Adder	8.62
945911	AF1-256 C	2.1885	Adder	2.57
945912	AF1-256 E	1.4590	Adder	1.72
958171	AF2-111 C	4.7532	Adder	10.55
958172	AF2-111 E	3.1688	Adder	7.03
959541	AF2-245 C	2.0733	Adder	4.6
959542	AF2-245 E	1.3822	Adder	3.07
960571	AF2-348 C	4.8032	Adder	10.66
960572	AF2-348 E	3.2022	Adder	7.11
NEWTON	NEWTON	0.2740	Confirmed LTF	0.2740
FARMERCITY	FARMERCITY	0.0105	Confirmed LTF	0.0105
NY	NY	0.0216	Confirmed LTF	0.0216
PRAIRIE	PRAIRIE	0.5528	Confirmed LTF	0.5528
O-066	O-066	0.2352	Confirmed LTF	0.2352
EDWARDS	EDWARDS	0.0724	Confirmed LTF	0.0724
TILTON	TILTON	0.1638	Confirmed LTF	0.1638
G-007	G-007	0.0364	Confirmed LTF	0.0364
GIBSON	GIBSON	0.2157	Confirmed LTF	0.2157
BLUEG	BLUEG	1.2048	Confirmed LTF	1.2048
TRIMBLE	TRIMBLE	0.3901	Confirmed LTF	0.3901
CATAWBA	CATAWBA	0.0021	Confirmed LTF	0.0021

10.6.20 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
98809987	342559	4BOONE CO	EKPC	250054	08LONGBR	DEO&K	1	DAY_P734541 34553	tower	284.0	138.08	143.61	DC	15.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	6.3712	50/50	6.3712
342960	1SPURLK2G	10.0059	50/50	10.0059
342963	1SPURLK3G	5.2580	50/50	5.2580
342966	1SPURLK4G	5.2580	50/50	5.2580
925981	AC1-074 C O1	9.2590	50/50	9.2590
925982	AC1-074 E O1	3.9682	50/50	3.9682
932551	AC2-075 C	2.1990	50/50	2.1990
932552	AC2-075 E	1.1078	50/50	1.1078
936381	AD2-048 C	6.0757	50/50	6.0757
936382	AD2-048 E	3.0313	50/50	3.0313
936571	AD2-072 C O1	2.9492	Adder	3.47
936572	AD2-072 E O1	1.4460	Adder	1.7
939141	AE1-144 C O1	8.7939	50/50	8.7939
939142	AE1-144 E O1	4.3641	50/50	4.3641
940531	AE2-038 C O1	5.8663	50/50	5.8663
940532	AE2-038 E O1	2.9057	50/50	2.9057
941411	AE2-138 C	14.2422	Adder	16.76
941412	AE2-138 E	5.2677	Adder	6.2
941981	AE2-210 C O1	4.9075	Adder	5.77
941982	AE2-210 E O1	1.8459	Adder	2.17
942411	AE2-254 C O1	1.4107	Adder	1.66
942412	AE2-254 E O1	0.9404	Adder	1.11
942591	AE2-275 C O1	4.0281	Adder	4.74
942592	AE2-275 E O1	1.5151	Adder	1.78
942891	AE2-308 C O1	6.9293	Adder	8.15
942892	AE2-308 E O1	2.5197	Adder	2.96
943111	AE2-339 C	2.1010	Adder	2.47
943112	AE2-339 E	1.0348	Adder	1.22
944621	AF1-127 C O1	4.0548	Adder	4.77
944622	AF1-127 E O1	1.9972	Adder	2.35
945541	AF1-219 C O1	0.9336	Adder	1.1
945542	AF1-219 E O1	0.4393	Adder	0.52
945681	AF1-233 C	16.6052	50/50	16.6052
945682	AF1-233 E	8.2033	50/50	8.2033
945861	AF1-251 C	9.9432	Adder	11.7
945862	AF1-251 E	6.6288	Adder	7.8
945911	AF1-256 C	5.3198	50/50	5.3198
945912	AF1-256 E	3.5466	50/50	3.5466
946021	AF1-267 C	2.2204	Adder	2.61
946022	AF1-267 E	1.0202	Adder	1.2
958171	AF2-111 C	15.9840	50/50	15.9840
958172	AF2-111 E	10.6560	50/50	10.6560

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959541	AF2-245 C	9.4050	50/50	9.4050
959542	AF2-245 E	6.2700	50/50	6.2700
960151	AF2-306	0.9028	Adder	2.0
960161	AF2-307 C	1.3751	Adder	3.05
960162	AF2-307 E	0.9167	Adder	2.03
960571	AF2-348 C	15.7935	50/50	15.7935
960572	AF2-348 E	10.5290	50/50	10.5290
960641	AF2-355 C O1	4.1776	Adder	9.27
960642	AF2-355 E O1	3.7134	Adder	8.24
961281	AF2-419 C	0.3026	Adder	0.67
961282	AF2-419 E	0.2017	Adder	0.45
961291	AF2-420 C	0.3026	Adder	0.67
961292	AF2-420 E	0.2017	Adder	0.45
WEC	WEC	0.0362	Confirmed LTF	0.0362
LGEE	LGEE	1.7092	Confirmed LTF	1.7092
CPL	CPL	0.2831	Confirmed LTF	0.2831
CBM-W2	CBM-W2	6.3063	Confirmed LTF	6.3063
NY	NY	0.0658	Confirmed LTF	0.0658
CBM-W1	CBM-W1	0.7381	Confirmed LTF	0.7381
TVA	TVA	1.6226	Confirmed LTF	1.6226
O-066	O-066	0.6250	Confirmed LTF	0.6250
CBM-S2	CBM-S2	3.3408	Confirmed LTF	3.3408
CBM-S1	CBM-S1	12.7885	Confirmed LTF	12.7885
G-007	G-007	0.0957	Confirmed LTF	0.0957
MADISON	MADISON	3.7780	Confirmed LTF	3.7780
MEC	MEC	0.5752	Confirmed LTF	0.5752

10.6.21 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
101840917	342571	4CRANSTON	EKPC	342649	4ROWAN CO	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	255.0	105.72	136.29	DC	77.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	2.2900	Adder	2.69
936382	AD2-048 E	1.1426	Adder	1.34
939141	AE1-144 C O1	42.5958	50/50	42.5958
939142	AE1-144 E O1	21.1386	50/50	21.1386
940531	AE2-038 C O1	28.4149	50/50	28.4149
940532	AE2-038 E O1	14.0747	50/50	14.0747
945681	AF1-233 C	88.9248	50/50	88.9248
945682	AF1-233 E	43.9310	50/50	43.9310
945911	AF1-256 C	28.3426	50/50	28.3426
945912	AF1-256 E	18.8950	50/50	18.8950
959541	AF2-245 C	46.7652	50/50	46.7652
959542	AF2-245 E	31.1768	50/50	31.1768
960151	AF2-306	3.6044	50/50	3.6044
960161	AF2-307 C	5.4897	50/50	5.4897
960162	AF2-307 E	3.6598	50/50	3.6598
WEC	WEC	0.0132	Confirmed LTF	0.0132
LGEE	LGEE	0.0770	Confirmed LTF	0.0770
CBM-W2	CBM-W2	0.3440	Confirmed LTF	0.3440
NY	NY	0.0083	Confirmed LTF	0.0083
CBM-W1	CBM-W1	0.4629	Confirmed LTF	0.4629
TVA	TVA	0.0364	Confirmed LTF	0.0364
O-066	O-066	0.1142	Confirmed LTF	0.1142
CBM-S1	CBM-S1	0.3919	Confirmed LTF	0.3919
G-007	G-007	0.0177	Confirmed LTF	0.0177
MEC	MEC	0.0651	Confirmed LTF	0.0651
CATAWBA	CATAWBA	0.0056	Confirmed LTF	0.0056

10.6.22 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
101840915	342589	4GODDARD	EKPC	342571	4CRANSTON	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	255.0	105.8	136.36	DC	77.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	2.2900	Adder	2.69
936382	AD2-048 E	1.1426	Adder	1.34
939141	AE1-144 C O1	42.5958	50/50	42.5958
939142	AE1-144 E O1	21.1386	50/50	21.1386
940531	AE2-038 C O1	28.4149	50/50	28.4149
940532	AE2-038 E O1	14.0747	50/50	14.0747
945681	AF1-233 C	88.9248	50/50	88.9248
945682	AF1-233 E	43.9310	50/50	43.9310
945911	AF1-256 C	28.3426	50/50	28.3426
945912	AF1-256 E	18.8950	50/50	18.8950
959541	AF2-245 C	46.7652	50/50	46.7652
959542	AF2-245 E	31.1768	50/50	31.1768
960151	AF2-306	3.6044	50/50	3.6044
960161	AF2-307 C	5.4897	50/50	5.4897
960162	AF2-307 E	3.6598	50/50	3.6598
WEC	WEC	0.0132	Confirmed LTF	0.0132
LGEE	LGEE	0.0770	Confirmed LTF	0.0770
CBM-W2	CBM-W2	0.3440	Confirmed LTF	0.3440
NY	NY	0.0083	Confirmed LTF	0.0083
CBM-W1	CBM-W1	0.4629	Confirmed LTF	0.4629
TVA	TVA	0.0364	Confirmed LTF	0.0364
O-066	O-066	0.1142	Confirmed LTF	0.1142
CBM-S1	CBM-S1	0.3919	Confirmed LTF	0.3919
G-007	G-007	0.0177	Confirmed LTF	0.0177
MEC	MEC	0.0651	Confirmed LTF	0.0651
CATAWBA	CATAWBA	0.0056	Confirmed LTF	0.0056

10.6.23 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
100148743	342661	4SPUR-KENT-R	EKPC	324267	4KENTON	LGEE	1	DAY_P73454134553	tower	281.0	126.21	132.46	DC	17.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	8.0153	50/50	8.0153
342960	1SPURLK2G	11.6615	50/50	11.6615
342963	1SPURLK3G	6.1280	50/50	6.1280
342966	1SPURLK4G	6.1280	50/50	6.1280
925981	AC1-074 C O1	2.4457	Adder	2.88
925982	AC1-074 E O1	1.0482	Adder	1.23
932551	AC2-075 C	0.5809	Adder	0.68
932552	AC2-075 E	0.2926	Adder	0.34
939141	AE1-144 C O1	5.2634	Adder	6.19
939142	AE1-144 E O1	2.6120	Adder	3.07
940531	AE2-038 C O1	3.5111	Adder	4.13
940532	AE2-038 E O1	1.7392	Adder	2.05
941411	AE2-138 C	11.1511	Adder	13.12
941412	AE2-138 E	4.1244	Adder	4.85
941981	AE2-210 C O1	3.8424	Adder	4.52
941982	AE2-210 E O1	1.4453	Adder	1.7
943111	AE2-339 C	1.1399	Adder	1.34
943112	AE2-339 E	0.5614	Adder	0.66
944621	AF1-127 C O1	2.9892	Adder	3.52
944622	AF1-127 E O1	1.4723	Adder	1.73
945681	AF1-233 C	11.6079	Adder	13.66
945682	AF1-233 E	5.7346	Adder	6.75
945861	AF1-251 C	7.5679	Adder	8.9
945862	AF1-251 E	5.0453	Adder	5.94
945911	AF1-256 C	3.8156	Adder	4.49
945912	AF1-256 E	2.5437	Adder	2.99
958171	AF2-111 C	17.3205	50/50	17.3205
958172	AF2-111 E	11.5470	50/50	11.5470
959541	AF2-245 C	10.5360	50/50	10.5360
959542	AF2-245 E	7.0240	50/50	7.0240
960571	AF2-348 C	16.8690	50/50	16.8690
960572	AF2-348 E	11.2460	50/50	11.2460
WEC	WEC	0.0054	Confirmed LTF	0.0054
LGEE	LGEE	0.3235	Confirmed LTF	0.3235
CPL	CPL	0.0615	Confirmed LTF	0.0615
CBM-W2	CBM-W2	2.1376	Confirmed LTF	2.1376
NY	NY	0.0791	Confirmed LTF	0.0791
TVA	TVA	0.6090	Confirmed LTF	0.6090
O-066	O-066	0.9072	Confirmed LTF	0.9072
CBM-S2	CBM-S2	0.9421	Confirmed LTF	0.9421
CBM-S1	CBM-S1	3.9107	Confirmed LTF	3.9107
G-007	G-007	0.1404	Confirmed LTF	0.1404

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MADISON	MADISON	1.0806	Confirmed LTF	1.0806
MEC	MEC	0.1780	Confirmed LTF	0.1780

10.6.24 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
101842078	342664	4SPURLOCK	EKPC	342661	4SPUR-KENT-R	EKPC	1	DAY_P734541 34553	tower	291.0	121.98	128.01	DC	17.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	8.0153	50/50	8.0153
342960	1SPURLK2G	11.6615	50/50	11.6615
342963	1SPURLK3G	6.1280	50/50	6.1280
342966	1SPURLK4G	6.1280	50/50	6.1280
925981	AC1-074 C O1	2.4457	Adder	2.88
925982	AC1-074 E O1	1.0482	Adder	1.23
932551	AC2-075 C	0.5809	Adder	0.68
932552	AC2-075 E	0.2926	Adder	0.34
939141	AE1-144 C O1	5.2634	Adder	6.19
939142	AE1-144 E O1	2.6120	Adder	3.07
940531	AE2-038 C O1	3.5111	Adder	4.13
940532	AE2-038 E O1	1.7392	Adder	2.05
941411	AE2-138 C	11.1511	Adder	13.12
941412	AE2-138 E	4.1244	Adder	4.85
941981	AE2-210 C O1	3.8424	Adder	4.52
941982	AE2-210 E O1	1.4453	Adder	1.7
943111	AE2-339 C	1.1399	Adder	1.34
943112	AE2-339 E	0.5614	Adder	0.66
944621	AF1-127 C O1	2.9892	Adder	3.52
944622	AF1-127 E O1	1.4723	Adder	1.73
945681	AF1-233 C	11.6079	Adder	13.66
945682	AF1-233 E	5.7346	Adder	6.75
945861	AF1-251 C	7.5679	Adder	8.9
945862	AF1-251 E	5.0453	Adder	5.94
945911	AF1-256 C	3.8156	Adder	4.49
945912	AF1-256 E	2.5437	Adder	2.99
958171	AF2-111 C	17.3205	50/50	17.3205
958172	AF2-111 E	11.5470	50/50	11.5470
959541	AF2-245 C	10.5360	50/50	10.5360
959542	AF2-245 E	7.0240	50/50	7.0240
960571	AF2-348 C	16.8690	50/50	16.8690
960572	AF2-348 E	11.2460	50/50	11.2460
WEC	WEC	0.0054	Confirmed LTF	0.0054
LGEE	LGEE	0.3235	Confirmed LTF	0.3235
CPLE	CPLE	0.0615	Confirmed LTF	0.0615
CBM-W2	CBM-W2	2.1376	Confirmed LTF	2.1376
NY	NY	0.0791	Confirmed LTF	0.0791
TVA	TVA	0.6090	Confirmed LTF	0.6090
O-066	O-066	0.9072	Confirmed LTF	0.9072
CBM-S2	CBM-S2	0.9421	Confirmed LTF	0.9421
CBM-S1	CBM-S1	3.9107	Confirmed LTF	3.9107
G-007	G-007	0.1404	Confirmed LTF	0.1404

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MADISON	MADISON	1.0806	Confirmed LTF	1.0806
MEC	MEC	0.1780	Confirmed LTF	0.1780

10.6.25 Index 25

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
988099 93	34283 8	7SPURLO CK	EKPC	25307 7	09STUA RT	DAY	1	DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGRVZIMMER	tower	1532.0	136.56	140.55	DC	60.82

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251968	08ZIMRHP	48.5861	50/50	48.5861
251969	08ZIMRLP	26.6066	50/50	26.6066
251970	08MELDL1	2.4608	50/50	2.4608
251971	08MELDL2	2.4608	50/50	2.4608
251972	08MELDL3	2.4674	50/50	2.4674
342942	1JKCT 10G	3.6195	50/50	3.6195
342957	1SPURLK1G	24.9695	50/50	24.9695
342960	1SPURLK2G	47.5091	50/50	47.5091
342963	1SPURLK3G	24.9656	50/50	24.9656
342966	1SPURLK4G	24.9656	50/50	24.9656
925921	AC1-068 C	-3.5310	Adder	-4.15
925931	AC1-069 C	-3.5310	Adder	-4.15
925981	AC1-074 C O1	15.7242	50/50	15.7242
925982	AC1-074 E O1	6.7390	50/50	6.7390
926061	AC1-085 C	-25.3878	Adder	-29.87
926791	AC1-165 C	-3.4895	Adder	-4.11
926801	AC1-166 C	-3.4895	Adder	-4.11
926951	AC1-182	1.1568	50/50	1.1568
932551	AC2-075 C	3.7345	50/50	3.7345
932552	AC2-075 E	1.8813	50/50	1.8813
932661	AC2-088 C O1	-5.5654	Adder	-6.55
935031	AD1-136 C	-0.7826	Adder	-0.92
936381	AD2-048 C	10.8026	Adder	12.71
936382	AD2-048 E	5.3897	Adder	6.34
936571	AD2-072 C O1	8.5360	Adder	10.04
936572	AD2-072 E O1	4.1853	Adder	4.92
939131	AE1-143 C	6.3918	Adder	7.52
939132	AE1-143 E	3.1660	Adder	3.72
939141	AE1-144 C O1	32.8780	50/50	32.8780
939142	AE1-144 E O1	16.3160	50/50	16.3160
940531	AE2-038 C O1	21.9323	50/50	21.9323
940532	AE2-038 E O1	10.8637	50/50	10.8637
941411	AE2-138 C	63.1597	50/50	63.1597
941412	AE2-138 E	23.3605	50/50	23.3605
941981	AE2-210 C O1	21.7632	50/50	21.7632
941982	AE2-210 E O1	8.1861	50/50	8.1861
942411	AE2-254 C O1	4.2886	Adder	5.05
942412	AE2-254 E O1	2.8591	Adder	3.36
942591	AE2-275 C O1	13.4973	Adder	15.88
942592	AE2-275 E O1	5.0769	Adder	5.97
942891	AE2-308 C O1	22.6214	Adder	26.61

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942892	AE2-308 E O1	8.2260	Adder	9.68
943111	AE2-339 C	7.4483	50/50	7.4483
943112	AE2-339 E	3.6685	50/50	3.6685
943701	AF1-038 C	3.2099	Adder	3.78
943702	AF1-038 E	2.1400	Adder	2.52
943772	AF1-045 BAT	4.6834	Merchant Transmission	4.6834
943821	AF1-050 C	2.8525	Adder	3.36
943822	AF1-050 E	1.9017	Adder	2.24
944151	AF1-083 C O1	2.9977	Adder	3.53
944152	AF1-083 E O1	1.9985	Adder	2.35
944511	AF1-116 C	7.1684	Adder	8.43
944512	AF1-116 E	4.7789	Adder	5.62
944621	AF1-127 C O1	17.2956	50/50	17.2956
944622	AF1-127 E O1	8.5188	50/50	8.5188
945541	AF1-219 C O1	2.7718	Adder	3.26
945542	AF1-219 E O1	1.3044	Adder	1.53
945681	AF1-233 C	63.0397	50/50	63.0397
945682	AF1-233 E	31.1431	50/50	31.1431
945861	AF1-251 C	43.2920	50/50	43.2920
945862	AF1-251 E	28.8614	50/50	28.8614
945911	AF1-256 C	20.2286	50/50	20.2286
945912	AF1-256 E	13.4858	50/50	13.4858
946021	AF1-267 C	7.4386	Adder	8.75
946022	AF1-267 E	3.4177	Adder	4.02
957961	AF2-090 C	2.8982	Adder	6.43
957962	AF2-090 E	1.4334	Adder	3.18
958171	AF2-111 C	72.5985	50/50	72.5985
958172	AF2-111 E	48.3990	50/50	48.3990
959541	AF2-245 C	36.4922	50/50	36.4922
959542	AF2-245 E	24.3281	50/50	24.3281
959691	AF2-260 C O1	2.4086	Adder	5.35
959692	AF2-260 E O1	1.2043	Adder	2.67
960151	AF2-306	3.1761	Adder	7.05
960161	AF2-307 C	4.8374	Adder	10.74
960162	AF2-307 E	3.2250	Adder	7.16
960171	AF2-308	1.1243	Adder	2.5
960181	AF2-309 C	1.6864	Adder	3.74
960182	AF2-309 E	1.1243	Adder	2.5
960571	AF2-348 C	71.1180	50/50	71.1180
960572	AF2-348 E	47.4120	50/50	47.4120
960641	AF2-355 C O1	14.6899	Adder	32.61
960642	AF2-355 E O1	13.0577	Adder	28.98
961001	AF2-391 C O1	2.8917	Adder	6.42
961002	AF2-391 E O1	1.9278	Adder	4.28
961281	AF2-419 C	0.9087	Adder	2.02
961282	AF2-419 E	0.6058	Adder	1.34
961291	AF2-420 C	0.9087	Adder	2.02
961292	AF2-420 E	0.6058	Adder	1.34
WEC	WEC	0.3692	Confirmed LTF	0.3692
LGEE	LGEE	4.6598	Confirmed LTF	4.6598
CPL	CPL	0.4776	Confirmed LTF	0.4776
LGE-0012019	LGE-0012019	6.2975	LTF	6.2975

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-W2	CBM-W2	24.6437	Confirmed LTF	24.6437
NY	NY	0.7537	Confirmed LTF	0.7537
CBM-W1	CBM-W1	9.4951	Confirmed LTF	9.4951
TVA	TVA	5.2388	Confirmed LTF	5.2388
O-066	O-066	8.7562	Confirmed LTF	8.7562
CBM-S2	CBM-S2	7.5487	Confirmed LTF	7.5487
CBM-S1	CBM-S1	38.8938	Confirmed LTF	38.8938
G-007	G-007	1.3510	Confirmed LTF	1.3510
MADISON	MADISON	3.2639	Confirmed LTF	3.2639
MEC	MEC	2.9683	Confirmed LTF	2.9683

10.7 Queue Dependencies

The Queue Projects below are listed in one or more indices for the overloads identified in your report. These projects contribute to the loading of the overloaded facilities identified in your report. The percent overload of a facility and cost allocation you may have towards a particular reinforcement could vary depending on the action of these earlier projects. The status of each project at the time of the analysis is presented in the table. This list may change as earlier projects withdraw or modify their requests.

Queue Number	Project Name	Status
AA1-099	Clinton Co. 34.5kV	In Service
AB1-014	Hillcrest 138kV	Under Construction
AB1-169	Stuart 345kV	Engineering and Procurement
AC1-068	Atlanta 69kV I	Engineering and Procurement
AC1-069	Atlanta 69kV II	Engineering and Procurement
AC1-074	Jacksonville-Renaker 138kV I	Active
AC1-078	Beatty-London 138kV	Active
AC1-085	Stuart-Clinton 345kV	Engineering and Procurement
AC1-089	Hillsboro-Wildcat 138kV	Suspended
AC1-165	Atlanta 69kV III	Engineering and Procurement
AC1-166	Atlanta 69kV IV	Engineering and Procurement
AC1-182	W.H. Zimmer Station 345kV	In Service
AC1-212	Minster 69kV	Engineering and Procurement
AC2-055	Buckskin 69kV	Active
AC2-060	Buckskin 69kV	Active
AC2-061	Hillsboro-Clinton 138kV	Active
AC2-066	Hillcrest 138kV	Under Construction
AC2-068	Camden-Crystal II 69kV	Engineering and Procurement
AC2-075	Great Blue Heron Solar	Active
AC2-088	S. Bethel-Brown 69kV	Engineering and Procurement
AC2-111	College Corner 138kV	Active
AD1-073	Buckskin 69 kV	Active
AD1-081	Beatty-London 138 kV	Active
AD1-136	South Bethel-Brown 69 kV	Engineering and Procurement
AD1-140	Greene-Clark 138 kV	Active
AD2-031	Martinsville-Wilmington 69 kV	Active
AD2-048	Cynthia-Headquarters 69 kV	Active
AD2-072	Van Arsdell-Mercer Industrial 69kV	Active
AE1-007	Camden-Crystal III 69 kV	Active
AE1-040	Greenfield 69 kV	Active
AE1-120	Hillcrest 138 kV	Engineering and Procurement
AE1-143	Marion County 161 kV	Active
AE1-144	Goddard-Plumville 138 kV	Active
AE2-038	Goddard-Plumville 138 kV II	Active
AE2-138	Avon-North Clark 345 kV	Active
AE2-148	Beatty-Greene 345 kV	Active
AE2-206	East Sidney-Quincy 138 kV	Active
AE2-210	Avon-North Clark 345 kV	Active
AE2-217	East Springfield-London 138 kV	Active
AE2-218	Eldean 138 kV	Active

Queue Number	Project Name	Status
AE2-221	Clinton-Stuart 345 kV	Active
AE2-254	Garrard County-Tommy-Gooch 69 kV	Active
AE2-267	Woodsdale 345 kV	Active
AE2-275	JK Smith-Fawkes 138 kV	Active
AE2-278	Urbana 138 kV	Active
AE2-308	Three Forks-Dale 138 kV	Active
AE2-315	Yankee Tap 69 kV	Active
AE2-318	Ford-Cedarville 138 kV	Active
AE2-319	Atlanta 69kV I	Active
AE2-320	Atlanta 69 kV II	Active
AE2-339	Avon 138 kV	Active
AF1-038	Sewellton Jct-Webbs Crossroads 69 kV	Active
AF1-045	Cedarville-Ford 138 kV	Active
AF1-050	Summer Shade - Green County 161 kV	Active
AF1-053	Givens-Mechanicsburg 138 kV	Active
AF1-062	Jug Street 138 kV	Active
AF1-071	College Corner 138 kV	Active
AF1-078	East Sidney-Quincy 138 kV	Active
AF1-083	Green County-Saloma 161 kV	Active
AF1-116	Marion County 161 kV	Active
AF1-117	Atlanta-Stuart 345 kV	Active
AF1-127	Avon 345 kV	Active
AF1-159	Martinsville-Wilmington 69 kV	Active
AF1-219	Hunt Farm 69 kV	Active
AF1-221	College Corner-Drewersburg 138 kV	Active
AF1-228	Beatty-Greene 345 kV	Active
AF1-233	Flemingsburg 138 kV	Active
AF1-249	Nickel 12.47 kV	Active
AF1-251	Avon-North Clark 345 kV	Active
AF1-256	Flemingsburg-Spurlock 138 kV	Active
AF1-267	Union City Tap 138 kV	Active
AF1-275	Cole 345 kV	Active
AF1-282	Stuart-Clinton 345 kV	Active
AF1-283	Stuart-Clinton 345 kV	Active
AF1-315	Cedarville-Ford 138 kV	Active
AF2-011	Tait 69 kV	Active
AF2-012	Tait 69 kV	Active
AF2-033	Miami Fort 138 kV	Active
AF2-034	Kendall	Active
AF2-066	West Manchester 69 kV	Active
AF2-067	West Manchester-Crown 69 kV	Active
AF2-079	Greenville 138 kV	Active
AF2-090	Central Hardin 138 kV	Active
AF2-111	North Clark-Spurlock 345 kV	Active
AF2-123	Lafayette 69 kV	Active
AF2-198	Heath 69 kV	Active
AF2-210	Foster-Garver Road 345 kV	Active
AF2-211	College Corner 138 kV	Active
AF2-212	Shelby 138 kV	Active
AF2-218	Gettysburg 69 kV	Active
AF2-245	Spurlock-Flemingsburg 345 kV	Active
AF2-260	Stephensburg 69 kV	Active

Queue Number	Project Name	Status
AF2-263	Shelby 138 kV	Active
AF2-298	Crown-Brookville 69 kV	Active
AF2-306	Hope-Blevins Valley Tap 69 kV	Active
AF2-307	Hope-Blevins Valley Tap 69 kV	Active
AF2-308	Central Hardin-Stephensburg 69 kV	Active
AF2-309	Central Hardin-Stephensburg 69 kV	Active
AF2-348	North Clark-Spurlock 345 kV	Active
AF2-355	West Gerrard-J.K. Smith 345 nkV	Active
AF2-391	Central Hardin 69 kV	Active
AF2-419	Hunt Farm-Ballard 69 kV	Active
AF2-420	Hunt Farm-Ballard 69 kV	Active
AF2-440	Martinsville-Highland 69 kV	Active
V4-073	Yankee 12.5kV	In Service
Y1-054	Rochelle 138kV	In Service
Y1-063	Trenton 34.5kV	In Service
Z1-080	Clinton County 34.5kV	In Service

10.8 Contingency Descriptions – Primary POI

Contingency Name	Contingency Definition
DAY_P734569 34598 34524	CONTINGENCY 'DAY_P734569 34598 34524' OPEN BRANCH FROM BUS 249566 TO BUS 249578 CKT 1 / OPEN BRANCH FROM BUS 249566 TO BUS 253006 CKT 1 / 249566 08FOSTER 345 253006 09BATH 345 1 OPEN BRANCH FROM BUS 249566 TO BUS 253079 CKT 1 / 249566 08FOSTER 345 253079 09SUGRCK 345 1 END
DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGR VZIMMER	CONTINGENCY 'DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGRVZIMMER' OPEN BRANCH FROM BUS 249989 TO BUS 250080 CKT 1 / 249989 08BKJ246 138 250080 08NWTWN2 138 1 OPEN BRANCH FROM BUS 250079 TO BUS 250080 CKT Z1 / 250079 08NWTWN1 138 250080 08NWTWN2 138 Z1 OPEN BRANCH FROM BUS 250079 TO BUS 250092 CKT 1 / 250079 08NWTWN1 138 250092 08REDBK1 138 1 OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 END
EKPC_P2-3_SPUR N39-844-A	CONTINGENCY 'EKPC_P2-3_SPUR N39-844-A' /* SPURLOCK OPEN BRANCH FROM BUS 342664 TO BUS 342838 CKT 2 /* 342664 4SPURLOCK 138.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 959540 TO BUS 342664 CKT 1 /* 959540 AF2-245 TAP138.00 342664 4SPURLOCK 138.00 END
EKPC_P1-2_SPUR-GODD 138-B	CONTINGENCY 'EKPC_P1-2_SPUR-GODD 138-B' /* SPURLOCK - GODDARD OPEN BRANCH FROM BUS 959540 TO BUS 342664 CKT 1 /* 945910 AF1-256 TAP 138.00 342664 4SPURLOCK 138.00 END
EKPC_P1-2_SPUR-GODD 138-A	CONTINGENCY 'EKPC_P1-2_SPUR-GODD 138-A' /* SPURLOCK - GODDARD OPEN BRANCH FROM BUS 342583 TO BUS 945680 CKT 1 /* 342583 4FLEMINGSBRG138.00 945680 AF1-233 TAP 138.00 OPEN BRANCH FROM BUS 342583 TO BUS 342589 CKT 1 /* 342583 4FLEMINGSBRG138.00 342589 4GODDARD 138.00 END

Contingency Name	Contingency Definition
AEP_P4_#3195_05BEATTY 345_304E	CONTINGENCY 'AEP_P4_#3195_05BEATTY 345_304E' OPEN BRANCH FROM BUS 243453 TO BUS 243454 CKT 1 / 243453 05BEATTY 345 243454 05BIXBY 345 1 OPEN BRANCH FROM BUS 243453 TO BUS 243468 CKT 4 / 243453 05BEATTY 345 243468 05BEATTX 138 4 END
EKPC_P4-6_SPUR N39-92T	CONTINGENCY 'EKPC_P4-6_SPUR N39-92T' /* SPURLOCK OPEN BRANCH FROM BUS 342622 TO BUS 342664 CKT 1 /* 342622 4MAYSVIL I T138.00 342664 4SPURLOCK 138.00 OPEN BRANCH FROM BUS 342622 TO BUS 342625 CKT 1 /* 342622 4MAYSVIL I T138.00 342625 4MAYSVIL IND138.00 OPEN BRANCH FROM BUS 342622 TO BUS 342634 CKT 1 /* 342622 4MAYSVIL I T138.00 342634 4PLUMVILLE 138.00 OPEN BRANCH FROM BUS 959540 TO BUS 342664 CKT 1 /* 945910 AF1-256 TAP 138.00 342664 4SPURLOCK 138.00 END
DAY_P734541 34553	CONTINGENCY 'DAY_P734541 34553' OPEN BRANCH FROM BUS 249581 TO BUS 342838 CKT 1 /* 249581 08MELDAL 345.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* 253077 09STUART 345.00 342838 7SPURLOCK 345.00 END
AEP_P4_#10715_05COLE 345_C	CONTINGENCY 'AEP_P4_#10715_05COLE 345_C' OPEN BRANCH FROM BUS 244022 TO BUS 243457 CKT 1 / 244022 05COLE 345 243457 05HAYDEN 345 1 OPEN BRANCH FROM BUS 244022 TO BUS 244023 CKT 1 / 244022 05COLE 345 244023 05COLE 138 1 END
DEOK_P2-2_C1 SILVER GROVE 345 BUS	CONTINGENCY 'DEOK_P2-2_C1 SILVER GROVE 345 BUS' OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 END

Contingency Name	Contingency Definition
DEOK_P2-3_C2 1493_RED BANK	CONTINGENCY 'DEOK_P2-3_C2 1493_RED BANK' OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 OPEN BRANCH FROM BUS 249571 TO BUS 250092 CKT 1 / 249571 08REDBK1 345 250092 08REDBK1 138 1 END
AEP_P4_#8094_05BIXBY 345_C	CONTINGENCY 'AEP_P4_#8094_05BIXBY 345_C' OPEN BRANCH FROM BUS 243453 TO BUS 243454 CKT 1 / 243453 05BEATTY 345 243454 05BIXBY 345 1 OPEN BRANCH FROM BUS 941520 TO BUS 243454 CKT 1 / 941520 AE2-149 TAP 345 243454 05BIXBY 345 1 END
DEOK_P2-3_C2 816_SILVERGROVE	CONTINGENCY 'DEOK_P2-3_C2 816_SILVERGROVE' OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249988 TO BUS 250097 CKT 1 / 249988 08BKJ135 138 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 250042 TO BUS 250097 CKT 1 / 250042 08HANDS1 138 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 250052 TO BUS 250097 CKT 1 / 250052 08KYUNIV 138 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 250053 TO BUS 250097 CKT 1 / 250053 08LAFARG 138 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 END
DAY-P1-STU SPUR	CONTINGENCY 'DAY-P1-STU SPUR' DISCONNECT BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* STU SPUR END
EKPC_P4-2_SPUR N39-844	CONTINGENCY 'EKPC_P4-2_SPUR N39-844' /* SPURLOCK OPEN BRANCH FROM BUS 342664 TO BUS 342838 CKT 2 /* 342664 4SPURLOCK 138.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 959540 TO BUS 342664 CKT 1 /* 945910 AF1-256 TAP 138.00 342664 4SPURLOCK 138.00 END

Contingency Name	Contingency Definition
DAY_P4_L34553-1	CONTINGENCY 'DAY_P4_L34553-1' OPEN LINE FROM BUS 253077 TO BUS 342838 CKT 1 /* 09STUART 345 - 7SPURLK 345 OPEN LINE FROM BUS 253077 TO BUS 253076 CKT 1 /* 09STUART 345 - 09STUART 138 END
Base Case	
342583 4FLEMINGSBRG 138 945680 AF1-233 TAP 138 1	CONTINGENCY '342583 4FLEMINGSBRG 138 945680 AF1-233 TAP 138 1' OPEN BRANCH FROM BUS 342583 TO BUS 945680 CKT 1 END
DAY_P7_495	CONTINGENCY 'DAY_P7_495' OPEN BRANCH FROM BUS 249566 TO BUS 253006 CKT 1 / 249566 08FOSTER 345 253006 09BATH 345 1 OPEN BRANCH FROM BUS 253014 TO BUS 253027 CKT 1 / 253014 09CLINTO 345 253027 09GREENE 345 1 OPEN BRANCH FROM BUS 253014 TO BUS 253013 CKT 1 / 253014 09CLINTO 345 253013 09CLINTO 69.0 1 OPEN BRANCH FROM BUS 253014 TO BUS 253013 CKT 2 / 253014 09CLINTO 345 253013 09CLINTO 69.0 1 END
DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	CONTINGENCY 'DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*' OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 END
AEP_P1-2_#10137	CONTINGENCY 'AEP_P1-2_#10137' OPEN BRANCH FROM BUS 243453 TO BUS 244022 CKT 1 / 243453 05BEATTY 345 244022 05COLE 345 1 END
EKPC_P2-3_SPUR N39-1474	CONTINGENCY 'EKPC_P2-3_SPUR N39-1474' /* SPURLOCK OPEN BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* 253077 09STUART 345.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 342664 TO BUS 342838 CKT 2 /* 342664 4SPURLOCK 138.00 342838 7SPURLOCK 345.00 END

Contingency Name	Contingency Definition
EKPC_P4-2_SPUR N39-1474	CONTINGENCY 'EKPC_P4-2_SPUR N39-1474' /* SPURLOCK OPEN BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* 253077 09STUART 345.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 342664 TO BUS 342838 CKT 2 /* 342664 4SPURLOCK 138.00 342838 7SPURLOCK 345.00 END
AEP_P4_#3196_05BEATTY 345_302E	CONTINGENCY 'AEP_P4_#3196_05BEATTY 345_302E' OPEN BRANCH FROM BUS 243453 TO BUS 244022 CKT 1 / 243453 05BEATTY 345 244022 05COLE 345 1 OPEN BRANCH FROM BUS 243453 TO BUS 243468 CKT 4 / 243453 05BEATTY 345 243468 05BEATTX 138 4 END

11 Light Load Analysis

Light Load Studies (As applicable)

To be determined during later study phases.

12 Short Circuit Analysis – Primary POI

The following Breakers are overdutied:

To be determined during later study phases.

13 Stability and Reactive Power Assessment

(Summary of the VAR requirements based upon the results of the dynamic studies)

To be determined during later study phases.

14 Affected Systems

14.1 TVA

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

14.2 Duke Energy Progress

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

14.3 MISO

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

14.4 LG&E

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

15 Summer Peak – Load Flow Analysis – Secondary POI

The Queue Project AF2-245 was evaluated as a 132.1 MW (Capacity 79.2 MW) injection tapping the Spurlock to North Clark 345 kV line in the EKPC area. Project AF2-245 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-245 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

15.1 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
153471708	945910	AF1-256 TAP	138.0	EKPC	945680	AF1-233 TAP	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	single	255.0	77.41	108.47	DC	79.2
153471593	958170	AF2-111 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	EKPC_P1-2_GODD - ROW138	single	255.0	94.99	121.55	DC	67.72
153471594	958170	AF2-111 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	Base Case	single	229.0	85.46	113.94	DC	65.23

15.2 Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPAC T
98810068	253014	09CLINTO	345.0	DAY	253027	09GREENE	345.0	DAY	1	DAY_P734569 34598 34524	tower	1374.0	99.74	100.16	DC	12.72
98810061	253100	09ATLNTA	345.0	DAY	253110	09ADKINS	345.0	DAY	1	DAY_P7_495	tower	1195.0	99.78	100.92	DC	13.6
153212563	341131	2BLEVINS V T	69.0	EKPC	960150	AF2-306 TAP	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	66.0	92.63	115.06	DC	14.8
153212654	341623	2HILLSBORO	69.0	EKPC	342052	2PEASTICKS	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	90.0	85.7	102.15	DC	14.8
101840987	341923	2MURPHYS VIL	69.0	EKPC	342091	2PLUMVILL E	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	63.0	69.32	118.26	DC	30.83
153940597	342091	2PLUMVILL E	69.0	EKPC	341923	2MURPHYS VIL	69.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	63.0	93.56	100.48	DC	9.68
153940598	342091	2PLUMVILL E	69.0	EKPC	341923	2MURPHYS VIL	69.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	63.0	93.56	100.48	DC	9.68
153940515	342622	4MAYSVIL I T	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	291.0	90.75	111.57	DC	60.59
153940516	342622	4MAYSVIL I T	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	291.0	90.75	111.57	DC	60.59
153940510	342634	4PLUMVILL E	138.0	EKPC	342622	4MAYSVIL I T	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	291.0	93.56	114.39	DC	60.59
153940511	342634	4PLUMVILL E	138.0	EKPC	342622	4MAYSVIL I T	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	291.0	93.56	114.39	DC	60.59
153212707	342658	4SKAGGS	138.0	EKPC	342265	2SKAGGS	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	109.0	91.0	106.15	DC	16.51

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
153940501	939140	AE1-144 TAP	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	186.0	87.61	122.65	DC	65.17
153940502	939140	AE1-144 TAP	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	186.0	87.61	122.65	DC	65.17

15.3 Contribution to Previously Identified Overloads

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

ID	FROM BUS #	FROM BUS	kV	FROM BUS AREA	TO BUS #	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
95393640	243453	05BEATTY	345.0	AEP	243454	05BIXBY	345.0	AEP	1	AEP_P4_#3196_05BEATTY 345_302E	breaker	1203.0	126.35	126.9	DC	14.48
95393641	243453	05BEATTY	345.0	AEP	243454	05BIXBY	345.0	AEP	1	AEP_P4_#10715_05COLE 345_C	breaker	1203.0	125.57	126.1	DC	13.93
95393693	243453	05BEATTY	345.0	AEP	244022	05COLE	345.0	AEP	1	AEP_P4_#8094_05BIXBY 345_C	breaker	1203.0	111.46	111.92	DC	12.1
95393694	243453	05BEATTY	345.0	AEP	244022	05COLE	345.0	AEP	1	AEP_P4_#3195_05BEATTY 345_304E	breaker	1203.0	112.24	112.71	DC	12.3
95823103	246800		138.0	AEP	247034	05EMERS S	138.0	AEP	1	DAY_P734541 34553	tower	185.0	123.52	126.42	DC	11.89
95822239	246946	05WLDCA T	138.0	AEP	243019	05HILLSB	138.0	AEP	1	EKPC_P2-3_SPUR N39-1474	bus	185.0	125.96	127.8	DC	7.58
95822431	246946	05WLDCA T	138.0	AEP	243019	05HILLSB	138.0	AEP	1	DAY_P4_L34553-1	breaker	185.0	126.3	128.04	DC	7.17
95822432	246946	05WLDCA T	138.0	AEP	243019	05HILLSB	138.0	AEP	1	EKPC_P4-2_SPUR N39-1474	breaker	185.0	125.96	127.8	DC	7.58
95823067	246946	05WLDCA T	138.0	AEP	243019	05HILLSB	138.0	AEP	1	DAY_P734541 34553	tower	185.0	176.27	179.16	DC	11.89
95823111	247034	05EMERS S	138.0	AEP	246946	05WLDCA T	138.0	AEP	1	DAY_P734541 34553	tower	185.0	122.28	125.17	DC	11.89
100671471	250054	08LONGBR	138.0	DEO &K	250077	08MTZIO N	138.0	DEO &K	1	DAY_P734541 34553	tower	284.0	131.79	137.32	DC	15.67
100671472	250077	08MTZION	138.0	DEO &K	249991	08BUFTN 1	138.0	DEO &K	1	DAY_P734541 34553	tower	298.0	121.31	126.58	DC	15.67
95394320	324267	4KENTON	138.0	LGEE	246800		138.0	AEP	1	DAY_P734541 34553	tower	185.0	126.55	129.44	DC	11.89
100147828	341923	2MURPHY SVIL	69.0	EKPC	325019	2KENTON -6	69.0	LGEE	1	EKPC_P4-6_SPUR N39-92T	breaker	66.0	139.79	165.55	DC	17.0
101840818	342091	2PLUMVIL LE	69.0	EKPC	341923	2MURPHY SVIL	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	63.0	256.39	305.33	DC	30.83
100148796	342544	4AVON-R	138.0	EKPC	324275	4LOUDO N AVE	138.0	LGEE	1	DAY_P734541 34553	tower	203.0	121.83	123.53	DC	7.67
98809987	342559	4BOONE CO	138.0	EKPC	250054	08LONGB R	138.0	DEO &K	1	DAY_P734541 34553	tower	284.0	139.15	144.68	DC	15.67
101840917	342571	4CRANSTO N	138.0	EKPC	342649	4ROWAN CO	138.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	255.0	163.61	194.17	DC	77.94
101840918	342571	4CRANSTO N	138.0	EKPC	342649	4ROWAN CO	138.0	EKPC	1	EKPC_P4-2_SPUR N39-844	breaker	255.0	115.28	134.39	DC	48.73
153062503	342571	4CRANSTO N	138.0	EKPC	342649	4ROWAN CO	138.0	EKPC	1	EKPC_P2-3_SPUR N39-844	bus	255.0	115.28	134.39	DC	48.73
153940482	342571	4CRANSTO N	138.0	EKPC	342649	4ROWAN CO	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	255.0	114.91	133.92	DC	48.45
153940483	342571	4CRANSTO N	138.0	EKPC	342649	4ROWAN CO	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	255.0	114.91	133.92	DC	48.45

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
101841211	342583	4FLEMING SBRG	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	single	217.0	156.27	192.76	DC	79.2
101840915	342589	4GODDARD	138.0	EKPC	342571	4CRANSTON	138.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	255.0	163.69	194.25	DC	77.94
101840916	342589	4GODDARD	138.0	EKPC	342571	4CRANSTON	138.0	EKPC	1	EKPC_P4-2_SPUR N39-844	breaker	255.0	115.39	134.5	DC	48.73
101841029	342589	4GODDARD	138.0	EKPC	341536	2GODDARD	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	117.0	127.74	149.23	DC	25.15
112474963	342589	4GODDARD	138.0	EKPC	341536	2GODDARD	69.0	EKPC	1	EKPC_P4-2_SPUR N39-844	breaker	117.0	102.5	118.28	DC	18.46
153062498	342589	4GODDARD	138.0	EKPC	342571	4CRANSTON	138.0	EKPC	1	EKPC_P2-3_SPUR N39-844	bus	255.0	115.39	134.5	DC	48.73
153062544	342589	4GODDARD	138.0	EKPC	341536	2GODDARD	69.0	EKPC	1	EKPC_P2-3_SPUR N39-844	bus	117.0	102.5	118.28	DC	18.46
153940447	342589	4GODDARD	138.0	EKPC	939140	AE1-144 TAP	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	186.0	111.84	146.88	DC	65.17
153940448	342589	4GODDARD	138.0	EKPC	939140	AE1-144 TAP	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	186.0	111.84	146.88	DC	65.17
153940479	342589	4GODDARD	138.0	EKPC	342571	4CRANSTON	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	255.0	115.03	134.03	DC	48.45
153940480	342589	4GODDARD	138.0	EKPC	342571	4CRANSTON	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	255.0	115.03	134.03	DC	48.45
153940508	342589	4GODDARD	138.0	EKPC	341536	2GODDARD	69.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	117.0	102.44	118.15	DC	18.38
153940509	342589	4GODDARD	138.0	EKPC	341536	2GODDARD	69.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	117.0	102.44	118.15	DC	18.38
101841089	342634	4PLUMVILLE	138.0	EKPC	342091	2PLUMVILLE	69.0	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	152.0	120.64	139.66	DC	28.91
100147674	342649	4ROWAN CO	138.0	EKPC	324302	4RODBURN	138.0	LGEE	1	EKPC_P4-6_SPUR N39-92T	breaker	191.0	181.05	217.62	DC	69.85
100147675	342649	4ROWAN CO	138.0	EKPC	324302	4RODBURN	138.0	LGEE	1	EKPC_P4-2_SPUR N39-844	breaker	191.0	122.86	145.23	DC	42.73
154961387	342649	4ROWAN CO	138.0	EKPC	324302	4RODBURN	138.0	LGEE	1	EKPC_P2-3_SPUR N39-844	bus	191.0	122.86	145.23	DC	42.73
154962871	342649	4ROWAN CO	138.0	EKPC	324302	4RODBURN	138.0	LGEE	1	EKPC_P7-1_SPUR 345&138-A	tower	191.0	122.82	145.09	DC	42.54
154962872	342649	4ROWAN CO	138.0	EKPC	324302	4RODBURN	138.0	LGEE	1	EKPC_P7-1_SPUR 345&138-B	tower	191.0	122.82	145.09	DC	42.54
100148743	342661	4SPUR-KENT-R	138.0	EKPC	324267	4KENTON	138.0	LGEE	1	DAY_P734541 34553	tower	281.0	127.77	134.02	DC	17.56
101842078	342664	4SPURLOC K	138.0	EKPC	342661	4SPUR-KENT-R	138.0	EKPC	1	DAY_P734541 34553	tower	291.0	123.49	129.52	DC	17.56
98809215	342838	7SPURLOC K	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P2-2_C1 SILVER GROVE 345 BUS	bus	1532.0	136.16	140.16	DC	60.82
98809332	342838	7SPURLOC K	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P2-3_C2 816_SILVERGROVE	breaker	1532.0	136.34	140.34	DC	60.85
98809333	342838	7SPURLOC K	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P2-3_C2 1493_RED BANK	breaker	1532.0	136.23	140.23	DC	60.82
98809549	342838	7SPURLOC K	345.0	EKPC	253077	09STUART	345.0	DAY	1	Base Case	single	1240.0	129.37	132.1	DC	33.77
98809550	342838	7SPURLOC K	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	single	1532.0	122.77	125.16	DC	36.49
98809993	342838	7SPURLOC K	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGRVZIMMER	tower	1532.0	136.18	140.18	DC	60.82
112729697	939140	AE1-144 TAP	138.0	EKPC	342634	4PLUMVILLE	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	single	186.0	102.59	123.62	DC	39.11
153940398	939140	AE1-144 TAP	138.0	EKPC	342634	4PLUMVILLE	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	186.0	184.29	219.32	DC	65.17
153940399	939140	AE1-144 TAP	138.0	EKPC	342634	4PLUMVILLE	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	186.0	184.29	219.32	DC	65.17
153471591	958170	AF2-111 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-A	single	255.0	136.47	167.53	DC	79.2
153471592	958170	AF2-111 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	342583 4FLEMINGSBURG 138 945680 AF1-233 TAP 138 1	single	255.0	136.47	167.53	DC	79.2

15.4 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADI NG %	POST PROJE CT LOADI NG %	AC/D C	MW IMPA CT
95393935	243453	05BEATTY	345.0	AEP	243454	05BIXBY	345.0	AEP	1	AEP_P1-2_#10137	operation	1203.0	118.48	119.01	DC	13.93
95822670	246946	05WLDCAT	138.0	AEP	243019	05HILLSB	138.0	AEP	1	DAY-P1-STU SPUR	operation	185.0	125.8	127.55	DC	7.19
101841529	342571	4CRANSTON	138.0	EKPC	342649	4ROWAN CO	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	255.0	114.8	133.8	DC	48.44
101841210	342583	4FLEMINGSB RG	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	217.0	251.38	312.21	DC	132.0
101841213	342583	4FLEMINGSB RG	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	Base Case	operation	197.0	122.93	134.76	DC	23.29
101841528	342589	4GODDARD	138.0	EKPC	342571	4CRANSTON	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	255.0	114.92	133.91	DC	48.44
112730038	342589	4GODDARD	138.0	EKPC	341536	2GODDARD	69.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	117.0	102.2	117.91	DC	18.38
112730180	342589	4GODDARD	138.0	EKPC	939140	AE1-144 TAP	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	186.0	108.85	143.9	DC	65.18
153472039	342622	4MAYSVIL I T	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	291.0	87.66	108.49	DC	60.62
153472020	342634	4PLUMVILLE	138.0	EKPC	342622	4MAYSVIL I T	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	291.0	90.48	111.31	DC	60.62
100148253	342649	4ROWAN CO	138.0	EKPC	324302	4RODBURN	138.0	LGE	1	EKPC_P1-2_SPUR-GODD 138-B	operation	191.0	122.44	144.71	DC	42.53
98809546	342838	7SPURLOCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	Base Case	operation	1240.0	140.99	145.48	DC	56.28
98809547	342838	7SPURLOCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	operation	1532.0	136.13	140.13	DC	60.82
101841300	939140	AE1-144 TAP	138.0	EKPC	342634	4PLUMVILLE	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	186.0	181.48	216.52	DC	65.18
101841400	939140	AE1-144 TAP	138.0	EKPC	342589	4GODDARD	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	186.0	87.36	122.4	DC	65.18
101841249	945680	AF1-233 TAP	138.0	EKPC	342583	4FLEMINGSB RG	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	255.0	217.41	269.18	DC	132.0
101841251	945680	AF1-233 TAP	138.0	EKPC	342583	4FLEMINGSB RG	138.0	EKPC	1	Base Case	operation	229.0	109.64	119.81	DC	23.29

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECTIONS LOADING %	POST PROJECTIONS LOADING %	AC/DC	MW IMPACT
153471707	945910	AF1-256 TAP	138.0	EKPC	945680	AF1-233 TAP	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	255.0	129.18	180.94	DC	132.0
153471586	958170	AF2-111 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-A	operation	255.0	217.41	269.18	DC	132.0
153471587	958170	AF2-111 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	342583 4FLEMINGSB RG 138 945680 AF1-233 TAP 1381	operation	255.0	217.41	269.18	DC	132.0
153471589	958170	AF2-111 TAP	138.0	EKPC	342664	4SPURLOCK	138.0	EKPC	1	Base Case	operation	229.0	152.3	199.77	DC	108.71
153471836	958170	AF2-111 TAP	138.0	EKPC	945910	AF1-256 TAP	138.0	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	operation	255.0	97.96	149.73	DC	132.0

15.5 Flow Gate Details – Secondary POI

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

15.5.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153471708	945910	AF1-256 TAP	EKPC	945680	AF1-233 TAP	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	single	255.0	77.41	108.47	DC	79.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945911	AF1-256 C	48.0000	80/20	48.0000
958171	AF2-111 C O2	150.0000	80/20	150.0000
959541	AF2-245 C O2	79.2000	80/20	79.2000

15.5.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153471592	958170	AF2-111 TAP	EKPC	342664	4SPURLOCK	EKPC	1	342583 4FLEMINGSBRG 138 945680 AF1-233 TAP 138 1	single	255.0	136.47	167.53	DC	79.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945681	AF1-233 C	150.6000	80/20	150.6000
945911	AF1-256 C	48.0000	80/20	48.0000
958171	AF2-111 C O2	150.0000	80/20	150.0000
959541	AF2-245 C O2	79.2000	80/20	79.2000

15.5.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
98810068	253014	09CLINTO	DAY	253027	09GREENE	DAY	1	DAY_P734569 34598 34524	tower	1374.0	99.74	100.16	DC	12.72

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250166	HLCRST AB114	1.0066	50/50	1.0066
251830	BIOENGRY	0.0963	50/50	0.0963
342957	1SPURLK1G	5.1919	50/50	5.1919
342960	1SPURLK2G	9.7262	50/50	9.7262
342963	1SPURLK3G	5.1110	50/50	5.1110
342966	1SPURLK4G	5.1110	50/50	5.1110
923522	AB1-169 C OP	161.0510	50/50	161.0510
925981	AC1-074 C O1	2.9793	Adder	3.51
925982	AC1-074 E O1	1.2768	Adder	1.5
926061	AC1-085 C	59.0991	50/50	59.0991
926062	AC1-085 E	96.4249	50/50	96.4249
927181	AC1-212 C	-0.1250	Adder	-0.15
927183	AC1-212 BAT	1.5397	Merchant Transmission	1.5397
930062	AB1-014 E	9.5216	50/50	9.5216
932381	AC2-055 C	1.2076	Adder	1.42
932382	AC2-055 E	1.9703	Adder	2.32
932421	AC2-060 C	4.2818	Adder	5.04
932422	AC2-060 E	2.4085	Adder	2.83
932461	AC2-066 C	0.6040	50/50	0.6040
932462	AC2-066 E	5.7130	50/50	5.7130
932481	AC2-068 C	-2.6185	Adder	-3.08
932551	AC2-075 C	0.7076	Adder	0.83
932552	AC2-075 E	0.3565	Adder	0.42
932661	AC2-088 C O1	4.4655	50/50	4.4655
932662	AC2-088 E O1	3.6748	50/50	3.6748
934491	AD1-073 C	0.8831	Adder	1.04
934492	AD1-073 E	0.4549	Adder	0.54
935031	AD1-136 C	0.6280	50/50	0.6280
935032	AD1-136 E	0.5349	50/50	0.5349
936251	AD2-031 C O1	6.1756	50/50	6.1756
936252	AD2-031 E O1	10.0759	50/50	10.0759
936381	AD2-048 C	2.4313	Adder	2.86
936382	AD2-048 E	1.2131	Adder	1.43
938271	AE1-040 C O1	2.2237	Adder	2.62
938272	AE1-040 E O1	1.1189	Adder	1.32
938921	AE1-120	5.4058	50/50	5.4058
939141	AE1-144 C O1	5.9322	Adder	6.98
939142	AE1-144 E O1	2.9439	Adder	3.46
940531	AE2-038 C O1	3.9572	Adder	4.66
940532	AE2-038 E O1	1.9601	Adder	2.31
941411	AE2-138 C	11.4673	Adder	13.49
941412	AE2-138 E	4.2413	Adder	4.99

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941981	AE2-210 C O1	3.9513	Adder	4.65
941982	AE2-210 E O1	1.4863	Adder	1.75
942091	AE2-221 C	91.0890	50/50	91.0890
942092	AE2-221 E	60.7260	50/50	60.7260
942591	AE2-275 C O1	2.9996	Adder	3.53
942592	AE2-275 E O1	1.1283	Adder	1.33
942891	AE2-308 C O1	5.0331	Adder	5.92
942892	AE2-308 E O1	1.8302	Adder	2.15
943111	AE2-339 C	1.3864	Adder	1.63
943112	AE2-339 E	0.6828	Adder	0.8
943201	AE2-318 C	4.7889	Adder	5.63
943202	AE2-318 E	2.3375	Adder	2.75
943771	AF1-045	2.2306	Adder	2.62
943773	AF1-045 E	1.4894	Adder	1.75
943863	AF1-053 BAT	3.1392	Merchant Transmission	3.1392
944521	AF1-117 C	7.0298	Adder	8.27
944522	AF1-117 E	2.1655	Adder	2.55
944621	AF1-127 C O1	3.1528	Adder	3.71
944622	AF1-127 E O1	1.5528	Adder	1.83
944941	AF1-159	3.5753	50/50	3.5753
945681	AF1-233 C	11.3378	Adder	13.34
945682	AF1-233 E	5.6012	Adder	6.59
945861	AF1-251 C	7.8742	Adder	9.26
945862	AF1-251 E	5.2495	Adder	6.18
945911	AF1-256 C	3.6349	Adder	4.28
945912	AF1-256 E	2.4232	Adder	2.85
946021	AF1-267 C	1.6587	Adder	1.95
946022	AF1-267 E	0.7621	Adder	0.9
946171	AF1-282 C	23.3286	50/50	23.3286
946172	AF1-282 E	15.5524	50/50	15.5524
946181	AF1-283 C	30.3272	50/50	30.3272
946182	AF1-283 E	20.2181	50/50	20.2181
946511	AF1-315 C O1	2.6900	Adder	3.16
946512	AF1-315 E O1	1.7934	Adder	2.11
957393	AF2-033 BAT	2.5640	50/50	2.5640
958171	AF2-111 C O2	6.5095	Adder	14.45
958172	AF2-111 E O2	4.3397	Adder	9.63
959541	AF2-245 C O2	3.4370	Adder	7.63
959542	AF2-245 E O2	2.2913	Adder	5.09
960151	AF2-306	0.7058	Adder	1.57
960161	AF2-307 C	1.0750	Adder	2.39
960162	AF2-307 E	0.7167	Adder	1.59
960571	AF2-348 C	6.6217	Adder	14.7
960572	AF2-348 E	4.4144	Adder	9.8
960641	AF2-355 C O2	3.2610	Adder	7.24
960642	AF2-355 E O2	2.8987	Adder	6.43
WEC	WEC	0.0205	Confirmed LTF	0.0205
LGEE	LGEE	1.2990	Confirmed LTF	1.2990
CPL	CPL	0.3995	Confirmed LTF	0.3995
CBM-W2	CBM-W2	7.1335	Confirmed LTF	7.1335
NY	NY	0.1587	Confirmed LTF	0.1587
TVA	TVA	1.6576	Confirmed LTF	1.6576

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	1.6666	Confirmed LTF	1.6666
CBM-S2	CBM-S2	4.3812	Confirmed LTF	4.3812
CBM-S1	CBM-S1	11.8172	Confirmed LTF	11.8172
G-007	G-007	0.2548	Confirmed LTF	0.2548
MEC	MEC	0.5975	Confirmed LTF	0.5975

15.5.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
98810061	253100	09ATLNTA	DAY	253110	09ADKINS	DAY	1	DAY_P7_495	tower	1195.0	99.78	100.92	DC	13.6

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251830	BIOENGRY	0.0862	50/50	0.0862
342957	1SPURLK1G	5.5386	50/50	5.5386
342960	1SPURLK2G	10.2549	50/50	10.2549
342963	1SPURLK3G	5.3888	50/50	5.3888
342966	1SPURLK4G	5.3888	50/50	5.3888
923522	AB1-169 C OP	162.9870	50/50	162.9870
925921	AC1-068 C	18.8380	50/50	18.8380
925922	AC1-068 E	8.8096	50/50	8.8096
925931	AC1-069 C	18.8380	50/50	18.8380
925932	AC1-069 E	8.8096	50/50	8.8096
925981	AC1-074 C O1	3.4148	Adder	4.02
925982	AC1-074 E O1	1.4635	Adder	1.72
926061	AC1-085 C	22.5218	50/50	22.5218
926062	AC1-085 E	36.7462	50/50	36.7462
926791	AC1-165 C	18.6164	50/50	18.6164
926792	AC1-165 E	9.0312	50/50	9.0312
926801	AC1-166 C	18.6164	50/50	18.6164
926802	AC1-166 E	9.0312	50/50	9.0312
930062	AB1-014 E	5.9413	Adder	6.99
932381	AC2-055 C	1.8225	50/50	1.8225
932382	AC2-055 E	2.9736	50/50	2.9736
932421	AC2-060 C	6.4621	50/50	6.4621
932422	AC2-060 E	3.6349	50/50	3.6349
932462	AC2-066 E	3.5648	Adder	4.19
932551	AC2-075 C	0.8110	Adder	0.95
932552	AC2-075 E	0.4086	Adder	0.48
932661	AC2-088 C O1	3.9986	50/50	3.9986
932662	AC2-088 E O1	3.2905	50/50	3.2905
934491	AD1-073 C	1.3328	50/50	1.3328
934492	AD1-073 E	0.6866	50/50	0.6866
935031	AD1-136 C	0.5623	50/50	0.5623
935032	AD1-136 E	0.4790	50/50	0.4790
936251	AD2-031 C O1	1.4579	Adder	1.72
936252	AD2-031 E O1	2.3786	Adder	2.8
936381	AD2-048 C	2.7906	Adder	3.28
936382	AD2-048 E	1.3923	Adder	1.64
938271	AE1-040 C O1	4.1118	50/50	4.1118
938272	AE1-040 E O1	2.0689	50/50	2.0689
938921	AE1-120	3.3731	Adder	3.97
939141	AE1-144 C O1	6.3978	Adder	7.53
939142	AE1-144 E O1	3.1749	Adder	3.74
940531	AE2-038 C O1	4.2678	Adder	5.02
940532	AE2-038 E O1	2.1140	Adder	2.49

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941411	AE2-138 C	12.6789	Adder	14.92
941412	AE2-138 E	4.6895	Adder	5.52
941981	AE2-210 C O1	4.3688	Adder	5.14
941982	AE2-210 E O1	1.6433	Adder	1.93
942091	AE2-221 C	26.6706	50/50	26.6706
942092	AE2-221 E	17.7804	50/50	17.7804
942981	AE2-320 C O1	37.0666	50/50	37.0666
942982	AE2-320 E O1	18.3394	50/50	18.3394
943111	AE2-339 C	1.5736	Adder	1.85
943112	AE2-339 E	0.7751	Adder	0.91
943191	AE2-319 C O1	37.0666	50/50	37.0666
943192	AE2-319 E O1	18.3394	50/50	18.3394
943201	AE2-318 C	4.3845	Adder	5.16
943202	AE2-318 E	2.1401	Adder	2.52
943771	AF1-045	2.0422	Adder	2.4
943773	AF1-045 E	1.3636	Adder	1.6
944521	AF1-117 C	81.7770	50/50	81.7770
944522	AF1-117 E	25.1910	50/50	25.1910
944621	AF1-127 C O1	3.5008	Adder	4.12
944622	AF1-127 E O1	1.7243	Adder	2.03
944941	AF1-159	0.8440	Adder	0.99
945681	AF1-233 C	12.1994	Adder	14.35
945682	AF1-233 E	6.0268	Adder	7.09
945861	AF1-251 C	8.7247	Adder	10.26
945862	AF1-251 E	5.8164	Adder	6.84
945911	AF1-256 C	3.9095	Adder	4.6
945912	AF1-256 E	2.6063	Adder	3.07
946102	AF1-275 BAT	3.6640	Merchant Transmission	3.6640
946171	AF1-282 C	8.8902	50/50	8.8902
946172	AF1-282 E	5.9268	50/50	5.9268
946181	AF1-283 C	11.5573	50/50	11.5573
946182	AF1-283 E	7.7048	50/50	7.7048
946511	AF1-315 C O1	2.4140	Adder	2.84
946512	AF1-315 E O1	1.6094	Adder	1.89
958171	AF2-111 C O2	15.4560	50/50	15.4560
958172	AF2-111 E O2	10.3040	50/50	10.3040
959541	AF2-245 C O2	8.1608	50/50	8.1608
959542	AF2-245 E O2	5.4405	50/50	5.4405
960151	AF2-306	0.7830	Adder	1.74
960161	AF2-307 C	1.1926	Adder	2.65
960162	AF2-307 E	0.7951	Adder	1.76
960571	AF2-348 C	15.6705	50/50	15.6705
960572	AF2-348 E	10.4470	50/50	10.4470
WEC	WEC	0.2889	Confirmed LTF	0.2889
LGEE	LGEE	1.9779	Confirmed LTF	1.9779
CPL	CPL	0.3883	Confirmed LTF	0.3883
CBM-W2	CBM-W2	13.5135	Confirmed LTF	13.5135
NY	NY	0.3639	Confirmed LTF	0.3639
CBM-W1	CBM-W1	7.7187	Confirmed LTF	7.7187
TVA	TVA	2.3912	Confirmed LTF	2.3912
O-066	O-066	4.1866	Confirmed LTF	4.1866
CBM-S2	CBM-S2	4.8147	Confirmed LTF	4.8147

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S1	CBM-S1	17.3382	Confirmed LTF	17.3382
G-007	G-007	0.6448	Confirmed LTF	0.6448
MEC	MEC	1.8957	Confirmed LTF	1.8957

15.5.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153212563	341131	2BLEVINS V T	EKPC	960150	AF2-306 TAP	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	66.0	92.63	115.06	DC	14.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	8.5702	50/50	8.5702
939142	AE1-144 E O1	4.2530	50/50	4.2530
940531	AE2-038 C O1	5.7170	50/50	5.7170
940532	AE2-038 E O1	2.8318	50/50	2.8318
945681	AF1-233 C	16.8898	50/50	16.8898
945682	AF1-233 E	8.3440	50/50	8.3440
945911	AF1-256 C	5.3832	50/50	5.3832
945912	AF1-256 E	3.5888	50/50	3.5888
958171	AF2-111 C O2	16.8225	50/50	16.8225
958172	AF2-111 E O2	11.2150	50/50	11.2150
959541	AF2-245 C O2	8.8823	50/50	8.8823
959542	AF2-245 E O2	5.9215	50/50	5.9215
960152	AF2-306 BAT	7.9690	50/50	7.9690
NEWTON	NEWTON	0.0215	Confirmed LTF	0.0215
FARMERCITY	FARMERCITY	0.0016	Confirmed LTF	0.0016
G-007A	G-007A	0.0024	Confirmed LTF	0.0024
VFT	VFT	0.0064	Confirmed LTF	0.0064
CALDERWOOD	CALDERWOOD	0.0487	Confirmed LTF	0.0487
PRAIRIE	PRAIRIE	0.0904	Confirmed LTF	0.0904
CHEOAH	CHEOAH	0.0480	Confirmed LTF	0.0480
EDWARDS	EDWARDS	0.0028	Confirmed LTF	0.0028
TILTON	TILTON	0.0044	Confirmed LTF	0.0044
GIBSON	GIBSON	0.0137	Confirmed LTF	0.0137
BLUEG	BLUEG	0.0486	Confirmed LTF	0.0486
TRIMBLE	TRIMBLE	0.0122	Confirmed LTF	0.0122
CATAWBA	CATAWBA	0.0172	Confirmed LTF	0.0172

15.5.6 Index 6

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153212654	341623	2HILLSBORO	EKPC	342052	2PEASTICKS	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	90.0	85.7	102.15	DC	14.8

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	8.5702	50/50	8.5702
939142	AE1-144 E O1	4.2530	50/50	4.2530
940531	AE2-038 C O1	5.7170	50/50	5.7170
940532	AE2-038 E O1	2.8318	50/50	2.8318
945681	AF1-233 C	16.8898	50/50	16.8898
945682	AF1-233 E	8.3440	50/50	8.3440
945911	AF1-256 C	5.3832	50/50	5.3832
945912	AF1-256 E	3.5888	50/50	3.5888
958171	AF2-111 C O2	16.8225	50/50	16.8225
958172	AF2-111 E O2	11.2150	50/50	11.2150
959541	AF2-245 C O2	8.8823	50/50	8.8823
959542	AF2-245 E O2	5.9215	50/50	5.9215
960152	AF2-306 BAT	7.9690	50/50	7.9690
NEWTON	NEWTON	0.0215	Confirmed LTF	0.0215
FARMERCITY	FARMERCITY	0.0016	Confirmed LTF	0.0016
G-007A	G-007A	0.0024	Confirmed LTF	0.0024
VFT	VFT	0.0064	Confirmed LTF	0.0064
CALDERWOOD	CALDERWOOD	0.0487	Confirmed LTF	0.0487
PRAIRIE	PRAIRIE	0.0904	Confirmed LTF	0.0904
CHEOAH	CHEOAH	0.0480	Confirmed LTF	0.0480
EDWARDS	EDWARDS	0.0028	Confirmed LTF	0.0028
TILTON	TILTON	0.0044	Confirmed LTF	0.0044
GIBSON	GIBSON	0.0137	Confirmed LTF	0.0137
BLUEG	BLUEG	0.0486	Confirmed LTF	0.0486
TRIMBLE	TRIMBLE	0.0122	Confirmed LTF	0.0122
CATAWBA	CATAWBA	0.0172	Confirmed LTF	0.0172

15.5.7 Index 7

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
101840987	341923	2MURPHYSVIL	EKPC	342091	2PLUMVILLE	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	63.0	69.32	118.26	DC	30.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	3.1462	Adder	3.7
936382	AD2-048 E	1.5697	Adder	1.85
945683	AF1-233 BAT	8.7596	50/50	8.7596
959543	AF2-245 BAT	30.8339	50/50	30.8339
960152	AF2-306 BAT	1.3371	Merchant Transmission	1.3371
WEC	WEC	0.0142	Confirmed LTF	0.0142
LGEE	LGEE	0.0719	Confirmed LTF	0.0719
CALDERWOOD	CALDERWOOD	0.0358	Confirmed LTF	0.0358
CBM-W2	CBM-W2	0.0983	Confirmed LTF	0.0983
NY	NY	0.0083	Confirmed LTF	0.0083
CBM-W1	CBM-W1	0.5129	Confirmed LTF	0.5129
O-066	O-066	0.1277	Confirmed LTF	0.1277
CHEOAH	CHEOAH	0.0360	Confirmed LTF	0.0360
G-007	G-007	0.0198	Confirmed LTF	0.0198
MEC	MEC	0.0493	Confirmed LTF	0.0493
CATAWBA	CATAWBA	0.0207	Confirmed LTF	0.0207

15.5.8 Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
101840818	342091	2PLUMVILLE	EKPC	341923	2MURPHYSVIL	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	63.0	256.39	305.33	DC	30.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	23.9269	50/50	23.9269
939142	AE1-144 E O1	11.8739	50/50	11.8739
940531	AE2-038 C O1	15.9612	50/50	15.9612
940532	AE2-038 E O1	7.9060	50/50	7.9060
945681	AF1-233 C	35.1787	50/50	35.1787
945682	AF1-233 E	17.3791	50/50	17.3791
945911	AF1-256 C	11.2123	50/50	11.2123
945912	AF1-256 E	7.4749	50/50	7.4749
958171	AF2-111 C O2	35.0385	50/50	35.0385
958172	AF2-111 E O2	23.3590	50/50	23.3590
959541	AF2-245 C O2	18.5003	50/50	18.5003
959542	AF2-245 E O2	12.3336	50/50	12.3336
960151	AF2-306	1.1365	Adder	2.52
960161	AF2-307 C	1.7310	Adder	3.84
960162	AF2-307 E	1.1540	Adder	2.56
NEWTON	NEWTON	0.0505	Confirmed LTF	0.0505
CPLE	CPLE	0.0351	Confirmed LTF	0.0351
FARMERCITY	FARMERCITY	0.0014	Confirmed LTF	0.0014
G-007A	G-007A	0.0456	Confirmed LTF	0.0456
VFT	VFT	0.1226	Confirmed LTF	0.1226
TVA	TVA	0.0560	Confirmed LTF	0.0560
PRAIRIE	PRAIRIE	0.0672	Confirmed LTF	0.0672
EDWARDS	EDWARDS	0.0161	Confirmed LTF	0.0161
CBM-S2	CBM-S2	0.3295	Confirmed LTF	0.3295
CBM-S1	CBM-S1	0.0767	Confirmed LTF	0.0767
TILTON	TILTON	0.0378	Confirmed LTF	0.0378
MADISON	MADISON	0.2782	Confirmed LTF	0.2782
GIBSON	GIBSON	0.0399	Confirmed LTF	0.0399
BLUEG	BLUEG	0.1927	Confirmed LTF	0.1927
TRIMBLE	TRIMBLE	0.0646	Confirmed LTF	0.0646

15.5.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153940516	342622	4MAYSVIL IT	EKPC	342664	4SPURLOCK	EKPC	1	EKPC_P7- 1_SPUR 345&138- A	tower	291.0	90.75	111.57	DC	60.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	3.8603	Adder	4.54
936382	AD2-048 E	1.9260	Adder	2.27
939141	AE1-144 C O1	46.9892	50/50	46.9892
939142	AE1-144 E O1	23.3188	50/50	23.3188
940531	AE2-038 C O1	31.3457	50/50	31.3457
940532	AE2-038 E O1	15.5263	50/50	15.5263
945681	AF1-233 C	69.1314	50/50	69.1314
945682	AF1-233 E	34.1526	50/50	34.1526
945911	AF1-256 C	22.0339	50/50	22.0339
945912	AF1-256 E	14.6893	50/50	14.6893
958171	AF2-111 C O2	68.8560	50/50	68.8560
958172	AF2-111 E O2	45.9040	50/50	45.9040
959541	AF2-245 C O2	36.3560	50/50	36.3560
959542	AF2-245 E O2	24.2373	50/50	24.2373
960151	AF2-306	5.1737	50/50	5.1737
960161	AF2-307 C	7.8800	50/50	7.8800
960162	AF2-307 E	5.2533	50/50	5.2533
WEC	WEC	0.0280	Confirmed LTF	0.0280
LGEE	LGEE	0.5768	Confirmed LTF	0.5768
CPLE	CPLE	0.2348	Confirmed LTF	0.2348
G-007A	G-007A	0.0815	Confirmed LTF	0.0815
VFT	VFT	0.2193	Confirmed LTF	0.2193
CBM-W2	CBM-W2	3.4889	Confirmed LTF	3.4889
CBM-W1	CBM-W1	0.7506	Confirmed LTF	0.7506
TVA	TVA	0.9548	Confirmed LTF	0.9548
CBM-S2	CBM-S2	2.5085	Confirmed LTF	2.5085
CBM-S1	CBM-S1	6.3304	Confirmed LTF	6.3304
MADISON	MADISON	2.1148	Confirmed LTF	2.1148
MEC	MEC	0.3512	Confirmed LTF	0.3512

15.5.10 Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153940511	342634	4PLUMVILLE	EKPC	342622	4MAYSVIL IT	EKPC	1	EKPC_P7- 1_SPUR 345&138- A	tower	291.0	93.56	114.39	DC	60.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	3.8603	Adder	4.54
936382	AD2-048 E	1.9260	Adder	2.27
939141	AE1-144 C O1	46.9892	50/50	46.9892
939142	AE1-144 E O1	23.3188	50/50	23.3188
940531	AE2-038 C O1	31.3457	50/50	31.3457
940532	AE2-038 E O1	15.5263	50/50	15.5263
945681	AF1-233 C	69.1314	50/50	69.1314
945682	AF1-233 E	34.1526	50/50	34.1526
945911	AF1-256 C	22.0339	50/50	22.0339
945912	AF1-256 E	14.6893	50/50	14.6893
958171	AF2-111 C O2	68.8560	50/50	68.8560
958172	AF2-111 E O2	45.9040	50/50	45.9040
959541	AF2-245 C O2	36.3560	50/50	36.3560
959542	AF2-245 E O2	24.2373	50/50	24.2373
960151	AF2-306	5.1737	50/50	5.1737
960161	AF2-307 C	7.8800	50/50	7.8800
960162	AF2-307 E	5.2533	50/50	5.2533
WEC	WEC	0.0280	Confirmed LTF	0.0280
LGEE	LGEE	0.5768	Confirmed LTF	0.5768
CPL	CPL	0.2348	Confirmed LTF	0.2348
G-007A	G-007A	0.0815	Confirmed LTF	0.0815
VFT	VFT	0.2193	Confirmed LTF	0.2193
CBM-W2	CBM-W2	3.4889	Confirmed LTF	3.4889
CBM-W1	CBM-W1	0.7506	Confirmed LTF	0.7506
TVA	TVA	0.9548	Confirmed LTF	0.9548
CBM-S2	CBM-S2	2.5085	Confirmed LTF	2.5085
CBM-S1	CBM-S1	6.3304	Confirmed LTF	6.3304
MADISON	MADISON	2.1148	Confirmed LTF	2.1148
MEC	MEC	0.3512	Confirmed LTF	0.3512

15.5.11 Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153212707	342658	4SKAGGS	EKPC	342265	2SKAGGS	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	109.0	91.0	106.15	DC	16.51

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	9.3024	50/50	9.3024
939142	AE1-144 E O1	4.6164	50/50	4.6164
940531	AE2-038 C O1	6.2055	50/50	6.2055
940532	AE2-038 E O1	3.0737	50/50	3.0737
945681	AF1-233 C	18.8401	50/50	18.8401
945682	AF1-233 E	9.3074	50/50	9.3074
945911	AF1-256 C	6.0048	50/50	6.0048
945912	AF1-256 E	4.0032	50/50	4.0032
958171	AF2-111 C O2	18.7650	50/50	18.7650
958172	AF2-111 E O2	12.5100	50/50	12.5100
959541	AF2-245 C O2	9.9079	50/50	9.9079
959542	AF2-245 E O2	6.6053	50/50	6.6053
WEC	WEC	0.0447	Confirmed LTF	0.0447
LGEE	LGEE	0.2761	Confirmed LTF	0.2761
CALDERWOOD	CALDERWOOD	0.0144	Confirmed LTF	0.0144
CBM-W2	CBM-W2	1.0237	Confirmed LTF	1.0237
NY	NY	0.0288	Confirmed LTF	0.0288
CBM-W1	CBM-W1	1.5888	Confirmed LTF	1.5888
TVA	TVA	0.0672	Confirmed LTF	0.0672
O-066	O-066	0.3965	Confirmed LTF	0.3965
CHEOAH	CHEOAH	0.0155	Confirmed LTF	0.0155
CBM-S1	CBM-S1	1.0991	Confirmed LTF	1.0991
G-007	G-007	0.0614	Confirmed LTF	0.0614
MEC	MEC	0.2113	Confirmed LTF	0.2113
CATAWBA	CATAWBA	0.0319	Confirmed LTF	0.0319

15.5.12 Index 12

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153940502	939140	AE1-144 TAP	EKPC	342589	4GODDARD	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	186.0	87.61	122.65	DC	65.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	26.1268	50/50	26.1268
939142	AE1-144 E O1	12.9656	50/50	12.9656
940531	AE2-038 C O1	17.4287	50/50	17.4287
940532	AE2-038 E O1	8.6329	50/50	8.6329
945683	AF1-233 BAT	18.5130	50/50	18.5130
959543	AF2-245 BAT	65.1658	50/50	65.1658
960152	AF2-306 BAT	4.3891	50/50	4.3891
NEWTON	NEWTON	0.1171	Confirmed LTF	0.1171
FARMERCITY	FARMERCITY	0.0082	Confirmed LTF	0.0082
CALDERWOOD	CALDERWOOD	0.2565	Confirmed LTF	0.2565
NY	NY	0.0133	Confirmed LTF	0.0133
PRAIRIE	PRAIRIE	0.4882	Confirmed LTF	0.4882
O-066	O-066	0.2419	Confirmed LTF	0.2419
CHEOAH	CHEOAH	0.2548	Confirmed LTF	0.2548
EDWARDS	EDWARDS	0.0112	Confirmed LTF	0.0112
TILTON	TILTON	0.0195	Confirmed LTF	0.0195
G-007	G-007	0.0385	Confirmed LTF	0.0385
GIBSON	GIBSON	0.0895	Confirmed LTF	0.0895
BLUEG	BLUEG	0.5017	Confirmed LTF	0.5017
TRIMBLE	TRIMBLE	0.1425	Confirmed LTF	0.1425
CATAWBA	CATAWBA	0.1103	Confirmed LTF	0.1103

15.5.13 Index 13

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
9539364 1	24345 3	05BEATT Y	AEP	24345 4	05BIXB Y	AEP	1	AEP_P4_#10715_05COL E 345_C	breaker	1203. 0	125.57	126.1	DC	13.93

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250164	08BKJDB1	0.1416	Adder	0.17
250165	08BKJDB2	0.1416	Adder	0.17
251827	WILLYESP	0.4544	Adder	0.53
251828	CLNTESP1	0.4610	Adder	0.54
251829	CLNTESP2	0.3073	Adder	0.36
253110	09ADKINS	35.6143	50/50	35.6143
904722	V4-073 E	0.1943	Adder	0.23
913222	Y1-054 E	1.4812	Adder	1.74
918802	AA1-099 E	0.3073	Adder	0.36
923522	AB1-169 C OP	123.9529	Adder	145.83
925921	AC1-068 C	11.9306	50/50	11.9306
925922	AC1-068 E	5.5793	50/50	5.5793
925931	AC1-069 C	11.9306	50/50	11.9306
925932	AC1-069 E	5.5793	50/50	5.5793
925981	AC1-074 C O1	3.9508	Adder	4.65
925982	AC1-074 E O1	1.6932	Adder	1.99
926011	AC1-078 C O1	11.5315	50/50	11.5315
926012	AC1-078 E O1	19.2192	50/50	19.2192
926061	AC1-085 C	23.0888	50/50	23.0888
926062	AC1-085 E	37.6712	50/50	37.6712
926101	AC1-089 C O1 (Suspended)	4.0911	Adder	4.81
926102	AC1-089 E O1 (Suspended)	6.6750	Adder	7.85
926791	AC1-165 C	11.7902	50/50	11.7902
926792	AC1-165 E	5.7197	50/50	5.7197
926801	AC1-166 C	11.7902	50/50	11.7902
926802	AC1-166 E	5.7197	50/50	5.7197
930062	AB1-014 E	7.7700	Adder	9.14
932381	AC2-055 C	1.8060	Adder	2.12
932382	AC2-055 E	2.9466	Adder	3.47
932421	AC2-060 C	6.4034	Adder	7.53
932422	AC2-060 E	3.6019	Adder	4.24
932431	AC2-061 C	4.1617	Adder	4.9
932432	AC2-061 E	4.2190	Adder	4.96
932462	AC2-066 E	4.6620	Adder	5.48
932481	AC2-068 C	3.0082	Adder	3.54
932482	AC2-068 E	4.9267	Adder	5.8
932551	AC2-075 C	0.9383	Adder	1.1
932552	AC2-075 E	0.4727	Adder	0.56
932661	AC2-088 C O1	3.9008	Adder	4.59
932662	AC2-088 E O1	3.2100	Adder	3.78

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934491	AD1-073 C	1.3207	Adder	1.55
934492	AD1-073 E	0.6804	Adder	0.8
934561	AD1-081 C	2.3063	50/50	2.3063
934562	AD1-081 E	1.1881	50/50	1.1881
935031	AD1-136 C	0.5486	Adder	0.65
935032	AD1-136 E	0.4673	Adder	0.55
935041	AD1-140 C O1	11.5761	Adder	13.62
935042	AD1-140 E O1	9.5702	Adder	11.26
936251	AD2-031 C O1	2.3259	Adder	2.74
936252	AD2-031 E O1	3.7949	Adder	4.46
936381	AD2-048 C	3.2506	Adder	3.82
936382	AD2-048 E	1.6218	Adder	1.91
938051	AE1-007 C	0.8627	Adder	1.01
938052	AE1-007 E	1.4076	Adder	1.66
938271	AE1-040 C O1	3.9390	Adder	4.63
938272	AE1-040 E O1	1.9820	Adder	2.33
938921	AE1-120	4.4113	Adder	5.19
939141	AE1-144 C O1	6.6759	Adder	7.85
939142	AE1-144 E O1	3.3130	Adder	3.9
940531	AE2-038 C O1	4.4534	Adder	5.24
940532	AE2-038 E O1	2.2059	Adder	2.6
941411	AE2-138 C	13.7034	Adder	16.12
941412	AE2-138 E	5.0684	Adder	5.96
941511	AE2-148 C	176.5482	50/50	176.5482
941512	AE2-148 E	79.8533	50/50	79.8533
941981	AE2-210 C O1	4.7218	Adder	5.56
941982	AE2-210 E O1	1.7761	Adder	2.09
942021	AE2-214 C	61.3896	50/50	61.3896
942022	AE2-214 E	40.9264	50/50	40.9264
942051	AE2-217 C	11.5218	Adder	13.56
942052	AE2-217 E	7.6812	Adder	9.04
942061	AE2-218 C	10.3282	Adder	12.15
942062	AE2-218 E	7.0154	Adder	8.25
942091	AE2-221 C	29.0250	50/50	29.0250
942092	AE2-221 E	19.3500	50/50	19.3500
942521	AE2-267 C O1	2.6220	Adder	3.08
942522	AE2-267 E O1	1.6207	Adder	1.91
942621	AE2-278 C	7.2621	Adder	8.54
942622	AE2-278 E	4.8441	Adder	5.7
942951	AE2-315	2.9457	Adder	3.47
942981	AE2-320 C O1	23.4752	50/50	23.4752
942982	AE2-320 E O1	11.6148	50/50	11.6148
943111	AE2-339 C	1.7787	Adder	2.09
943112	AE2-339 E	0.8761	Adder	1.03
943191	AE2-319 C O1	23.4752	50/50	23.4752
943192	AE2-319 E O1	11.6148	50/50	11.6148
943201	AE2-318 C	6.3843	Adder	7.51
943202	AE2-318 E	3.1161	Adder	3.67
943771	AF1-045	2.9736	Adder	3.5
943773	AF1-045 E	1.9856	Adder	2.34
943943	AF1-062 BAT	20.0600	Merchant Transmission	20.0600
944521	AF1-117 C	50.0090	50/50	50.0090

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944522	AF1-117 E	15.4050	50/50	15.4050
944621	AF1-127 C O1	3.8120	Adder	4.48
944622	AF1-127 E O1	1.8776	Adder	2.21
944941	AF1-159	1.3466	Adder	1.58
945631	AF1-228 C	43.6402	50/50	43.6402
945632	AF1-228 E	29.0935	50/50	29.0935
945681	AF1-233 C	12.6640	Adder	14.9
945682	AF1-233 E	6.2563	Adder	7.36
945841	AF1-249 C	1.1708	Adder	1.38
945842	AF1-249 E	0.4349	Adder	0.51
945861	AF1-251 C	9.4629	Adder	11.13
945862	AF1-251 E	6.3086	Adder	7.42
945911	AF1-256 C	4.0543	Adder	4.77
945912	AF1-256 E	2.7029	Adder	3.18
946101	AF1-275	25.5790	50/50	25.5790
946171	AF1-282 C	9.1140	50/50	9.1140
946172	AF1-282 E	6.0760	50/50	6.0760
946181	AF1-283 C	11.8482	50/50	11.8482
946182	AF1-283 E	7.8988	50/50	7.8988
946511	AF1-315 C O1	3.4434	Adder	4.05
946512	AF1-315 E O1	2.2956	Adder	2.7
957171	AF2-011 O2	1.2957	Adder	2.88
957181	AF2-012 O2	6.7378	Adder	14.96
957391	AF2-033 C	0.4705	Adder	1.04
957392	AF2-033 E	0.7058	Adder	1.57
957401	AF2-034 C	0.3961	Adder	0.88
957402	AF2-034 E	0.3375	Adder	0.75
957721	AF2-066 C O2	2.7467	Adder	6.1
957722	AF2-066 E O2	1.8311	Adder	4.06
957731	AF2-067 C O2	1.3519	Adder	3.0
957732	AF2-067 E O2	0.9013	Adder	2.0
957851	AF2-079 C O2	5.2427	Adder	11.64
957852	AF2-079 E O2	3.4951	Adder	7.76
958171	AF2-111 C O2	7.1332	Adder	15.83
958172	AF2-111 E O2	4.7555	Adder	10.56
958291	AF2-123 C O2	0.8588	Adder	1.91
958292	AF2-123 E O2	1.1840	Adder	2.63
959073	AF2-198 BAT	1.1214	Merchant Transmission	1.1214
959191	AF2-210 C	5.8320	Adder	12.95
959192	AF2-210 E	3.8880	Adder	8.63
959211	AF2-212 C O2	3.2744	Adder	7.27
959212	AF2-212 E O2	2.1829	Adder	4.85
959271	AF2-218 C O2	1.5060	Adder	3.34
959272	AF2-218 E O2	1.0043	Adder	2.23
959541	AF2-245 C O2	3.7663	Adder	8.36
959542	AF2-245 E O2	2.5109	Adder	5.57
959721	AF2-263 C	2.1390	Adder	4.75
959722	AF2-263 E	1.4260	Adder	3.17
960071	AF2-298 C O2	1.8466	Adder	4.1
960072	AF2-298 E O2	1.2352	Adder	2.74
960571	AF2-348 C	7.1467	Adder	15.86
960572	AF2-348 E	4.7645	Adder	10.58

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960801	AF2-371 C	1.7864	Adder	3.97
960802	AF2-371 E	1.1910	Adder	2.64
961491	AF2-440 C O2	0.9823	Adder	2.18
961492	AF2-440 E O2	0.9823	Adder	2.18
WEC	WEC	0.7264	Confirmed LTF	0.7264
LGEE	LGEE	3.1229	Confirmed LTF	3.1229
CPL	CPL	0.2269	Confirmed LTF	0.2269
CBM-W2	CBM-W2	23.5463	Confirmed LTF	23.5463
NY	NY	0.9069	Confirmed LTF	0.9069
CBM-W1	CBM-W1	22.5555	Confirmed LTF	22.5555
TVA	TVA	3.4328	Confirmed LTF	3.4328
O-066	O-066	10.7520	Confirmed LTF	10.7520
CBM-S2	CBM-S2	4.3986	Confirmed LTF	4.3986
CBM-S1	CBM-S1	25.6708	Confirmed LTF	25.6708
G-007	G-007	1.6588	Confirmed LTF	1.6588
MEC	MEC	3.9820	Confirmed LTF	3.9820

15.5.14 Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPAC T
95393694	243453	05BEATTY	AEP	244022	05COL E	AEP	1	AEP_P4_#3195_05BEATTY 345_304E	breaker	1203.0	112.24	112.71	DC	12.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
247964	Y1-063 BAT	0.3052	Merchant Transmission	0.3052
250164	08BKJDB1	0.1226	Adder	0.14
250165	08BKJDB2	0.1226	Adder	0.14
251827	WILLYESP	0.3878	Adder	0.46
251828	CLNTESP1	0.4057	Adder	0.48
251829	CLNTESP2	0.2704	Adder	0.32
253110	09ADKINS	31.2953	50/50	31.2953
253261	09MON D	0.2539	50/50	0.2539
904722	V4-073 E	0.1614	Adder	0.19
913222	Y1-054 E	1.2706	Adder	1.49
918802	AA1-099 E	0.2704	Adder	0.32
923522	AB1-169 C OP	110.0869	Adder	129.51
925921	AC1-068 C	10.4948	50/50	10.4948
925922	AC1-068 E	4.9079	50/50	4.9079
925931	AC1-069 C	10.4948	50/50	10.4948
925932	AC1-069 E	4.9079	50/50	4.9079
925981	AC1-074 C O1	3.4524	Adder	4.06
925982	AC1-074 E O1	1.4796	Adder	1.74
926011	AC1-078 C O1	4.7724	Adder	5.61
926012	AC1-078 E O1	7.9540	Adder	9.36
926061	AC1-085 C	20.0503	50/50	20.0503
926062	AC1-085 E	32.7137	50/50	32.7137
926101	AC1-089 C O1 (Suspended)	3.6749	Adder	4.32
926102	AC1-089 E O1 (Suspended)	5.9959	Adder	7.05
926791	AC1-165 C	10.3713	50/50	10.3713
926792	AC1-165 E	5.0313	50/50	5.0313
926801	AC1-166 C	10.3713	50/50	10.3713
926802	AC1-166 E	5.0313	50/50	5.0313
930062	AB1-014 E	6.7785	Adder	7.97
932381	AC2-055 C	1.7406	Adder	2.05
932382	AC2-055 E	2.8399	Adder	3.34
932421	AC2-060 C	6.1717	Adder	7.26
932422	AC2-060 E	3.4716	Adder	4.08
932431	AC2-061 C	3.7370	Adder	4.4
932432	AC2-061 E	3.7884	Adder	4.46
932462	AC2-066 E	4.0671	Adder	4.78
932481	AC2-068 C	2.4618	Adder	2.9
932482	AC2-068 E	4.0317	Adder	4.74
932551	AC2-075 C	0.8200	Adder	0.96
932552	AC2-075 E	0.4131	Adder	0.49

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
932661	AC2-088 C O1	3.4275	Adder	4.03
932662	AC2-088 E O1	2.8206	Adder	3.32
932841	AC2-111 C O1	1.6279	Adder	1.92
932842	AC2-111 E O1	2.6561	Adder	3.12
934491	AD1-073 C	1.2729	Adder	1.5
934492	AD1-073 E	0.6557	Adder	0.77
934561	AD1-081 C	0.9545	Adder	1.12
934562	AD1-081 E	0.4917	Adder	0.58
935031	AD1-136 C	0.4820	Adder	0.57
935032	AD1-136 E	0.4106	Adder	0.48
935041	AD1-140 C O1	8.4174	Adder	9.9
935042	AD1-140 E O1	6.9589	Adder	8.19
936251	AD2-031 C O1	2.3927	50/50	2.3927
936252	AD2-031 E O1	3.9038	50/50	3.9038
936381	AD2-048 C	2.8441	Adder	3.35
936382	AD2-048 E	1.4190	Adder	1.67
938051	AE1-007 C	0.7060	Adder	0.83
938052	AE1-007 E	1.1519	Adder	1.36
938271	AE1-040 C O1	4.3159	50/50	4.3159
938272	AE1-040 E O1	2.1716	50/50	2.1716
938921	AE1-120	3.8485	Adder	4.53
939141	AE1-144 C O1	5.8953	Adder	6.94
939142	AE1-144 E O1	2.9256	Adder	3.44
940531	AE2-038 C O1	3.9327	Adder	4.63
940532	AE2-038 E O1	1.9480	Adder	2.29
941411	AE2-138 C	12.0013	Adder	14.12
941412	AE2-138 E	4.4389	Adder	5.22
941511	AE2-148 C	154.5298	50/50	154.5298
941512	AE2-148 E	69.8943	50/50	69.8943
941981	AE2-210 C O1	4.1353	Adder	4.87
941982	AE2-210 E O1	1.5555	Adder	1.83
942061	AE2-218 C	8.0099	Adder	9.42
942062	AE2-218 E	5.4407	Adder	6.4
942091	AE2-221 C	24.9786	50/50	24.9786
942092	AE2-221 E	16.6524	50/50	16.6524
942521	AE2-267 C O1	2.2359	Adder	2.63
942522	AE2-267 E O1	1.3821	Adder	1.63
942951	AE2-315	2.4471	Adder	2.88
942981	AE2-320 C O1	20.6500	50/50	20.6500
942982	AE2-320 E O1	10.2170	50/50	10.2170
943111	AE2-339 C	1.5527	Adder	1.83
943112	AE2-339 E	0.7648	Adder	0.9
943191	AE2-319 C O1	20.6500	50/50	20.6500
943192	AE2-319 E O1	10.2170	50/50	10.2170
943201	AE2-318 C	5.5475	Adder	6.53
943202	AE2-318 E	2.7077	Adder	3.19
943771	AF1-045	2.5839	Adder	3.04
943773	AF1-045 E	1.7253	Adder	2.03
944031	AF1-071 C	0.4070	Adder	0.48
944032	AF1-071 E	0.6640	Adder	0.78
944521	AF1-117 C	44.0077	50/50	44.0077
944522	AF1-117 E	13.5563	50/50	13.5563

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944621	AF1-127 C O1	3.3373	Adder	3.93
944622	AF1-127 E O1	1.6437	Adder	1.93
944941	AF1-159	1.3852	50/50	1.3852
945631	AF1-228 C	38.2453	50/50	38.2453
945632	AF1-228 E	25.4969	50/50	25.4969
945681	AF1-233 C	11.1855	Adder	13.16
945682	AF1-233 E	5.5259	Adder	6.5
945841	AF1-249 C	1.0038	Adder	1.18
945842	AF1-249 E	0.3728	Adder	0.44
945861	AF1-251 C	8.2860	Adder	9.75
945862	AF1-251 E	5.5240	Adder	6.5
945911	AF1-256 C	3.5810	Adder	4.21
945912	AF1-256 E	2.3873	Adder	2.81
946102	AF1-275 BAT	18.6570	50/50	18.6570
946171	AF1-282 C	7.9146	50/50	7.9146
946172	AF1-282 E	5.2764	50/50	5.2764
946181	AF1-283 C	10.2890	50/50	10.2890
946182	AF1-283 E	6.8593	50/50	6.8593
946511	AF1-315 C O1	2.9945	Adder	3.52
946512	AF1-315 E O1	1.9963	Adder	2.35
957171	AF2-011 O2	1.0646	Adder	2.36
957181	AF2-012 O2	5.5360	Adder	12.29
957391	AF2-033 C	0.3768	Adder	0.84
957392	AF2-033 E	0.5651	Adder	1.25
957401	AF2-034 C	0.3359	Adder	0.75
957402	AF2-034 E	0.2861	Adder	0.64
957721	AF2-066 C O2	2.2184	Adder	4.92
957722	AF2-066 E O2	1.4789	Adder	3.28
957731	AF2-067 C O2	1.0886	Adder	2.42
957732	AF2-067 E O2	0.7257	Adder	1.61
957851	AF2-079 C O2	4.1518	Adder	9.22
957852	AF2-079 E O2	2.7678	Adder	6.14
958171	AF2-111 C O2	6.2953	Adder	13.97
958172	AF2-111 E O2	4.1969	Adder	9.32
959191	AF2-210 C	4.9887	Adder	11.07
959192	AF2-210 E	3.3258	Adder	7.38
959201	AF2-211 C	1.7029	Adder	3.78
959202	AF2-211 E	1.1353	Adder	2.52
959271	AF2-218 C O2	1.1757	Adder	2.61
959272	AF2-218 E O2	0.7841	Adder	1.74
959541	AF2-245 C O2	3.3239	Adder	7.38
959542	AF2-245 E O2	2.2159	Adder	4.92
960071	AF2-298 C O2	1.5136	Adder	3.36
960072	AF2-298 E O2	1.0125	Adder	2.25
960151	AF2-306	0.7563	Adder	1.68
960161	AF2-307 C	1.1519	Adder	2.56
960162	AF2-307 E	0.7679	Adder	1.7
960571	AF2-348 C	6.2960	Adder	13.98
960572	AF2-348 E	4.1973	Adder	9.32
961491	AF2-440 C O2	0.8776	Adder	1.95
961492	AF2-440 E O2	0.8776	Adder	1.95
WEC	WEC	0.4237	Confirmed LTF	0.4237

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
LGEE	LGEE	2.6306	Confirmed LTF	2.6306
CPL	CPL	0.2739	Confirmed LTF	0.2739
CBM-W2	CBM-W2	18.1490	Confirmed LTF	18.1490
NY	NY	0.6890	Confirmed LTF	0.6890
CBM-W1	CBM-W1	11.8845	Confirmed LTF	11.8845
TVA	TVA	2.8350	Confirmed LTF	2.8350
O-066	O-066	8.1514	Confirmed LTF	8.1514
CBM-S2	CBM-S2	4.3350	Confirmed LTF	4.3350
CBM-S1	CBM-S1	21.3426	Confirmed LTF	21.3426
G-007	G-007	1.2574	Confirmed LTF	1.2574
MEC	MEC	2.6457	Confirmed LTF	2.6457

15.5.15 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
95823103	246800		AEP	247034	05EMERSS	AEP	1	DAY_P734541 34553	tower	185.0	123.52	126.42	DC	11.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251831	Z1-080 BAT	0.5184	Merchant Transmission	0.5184
918803	AA1-099 BAT	0.3456	Merchant Transmission	0.3456
925981	AC1-074 C O1	2.6689	Adder	3.14
925982	AC1-074 E O1	1.1438	Adder	1.35
932551	AC2-075 C	0.6339	Adder	0.75
932552	AC2-075 E	0.3193	Adder	0.38
936381	AD2-048 C	3.0978	Adder	3.64
936382	AD2-048 E	1.5456	Adder	1.82
939141	AE1-144 C O1	6.3821	Adder	7.51
939142	AE1-144 E O1	3.1672	Adder	3.73
940531	AE2-038 C O1	4.2574	Adder	5.01
940532	AE2-038 E O1	2.1088	Adder	2.48
941411	AE2-138 C	8.9441	Adder	10.52
941412	AE2-138 E	3.3081	Adder	3.89
941981	AE2-210 C O1	3.0819	Adder	3.63
941982	AE2-210 E O1	1.1593	Adder	1.36
943111	AE2-339 C	1.1511	Adder	1.35
943112	AE2-339 E	0.5669	Adder	0.67
944621	AF1-127 C O1	2.4848	Adder	2.92
944622	AF1-127 E O1	1.2239	Adder	1.44
945681	AF1-233 C	11.7219	Adder	13.79
945682	AF1-233 E	5.7909	Adder	6.81
945861	AF1-251 C	6.1721	Adder	7.26
945862	AF1-251 E	4.1147	Adder	4.84
945911	AF1-256 C	3.7320	Adder	4.39
945912	AF1-256 E	2.4880	Adder	2.93
958171	AF2-111 C O2	6.0858	Adder	13.51
958172	AF2-111 E O2	4.0572	Adder	9.01
959541	AF2-245 C O2	3.2133	Adder	7.13
959542	AF2-245 E O2	2.1422	Adder	4.76
960151	AF2-306	0.7520	Adder	1.67
960161	AF2-307 C	1.1453	Adder	2.54
960162	AF2-307 E	0.7635	Adder	1.69
960571	AF2-348 C	4.8924	Adder	10.86
960572	AF2-348 E	3.2616	Adder	7.24
WEC	WEC	0.0627	Confirmed LTF	0.0627
LGEE	LGEE	0.9242	Confirmed LTF	0.9242
CPL	CPL	0.1402	Confirmed LTF	0.1402
CBM-W2	CBM-W2	4.5045	Confirmed LTF	4.5045
NY	NY	0.0769	Confirmed LTF	0.0769
CBM-W1	CBM-W1	1.7639	Confirmed LTF	1.7639
TVA	TVA	1.0150	Confirmed LTF	1.0150
O-066	O-066	0.8669	Confirmed LTF	0.8669
CBM-S2	CBM-S2	1.8091	Confirmed LTF	1.8091

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-S1	CBM-S1	7.5913	Confirmed LTF	7.5913
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	1.9233	Confirmed LTF	1.9233
MEC	MEC	0.5291	Confirmed LTF	0.5291

15.5.16 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
95823067	246946	05WLDCAT	AEP	243019	05HILLSB	AEP	1	DAY_P73454134553	tower	185.0	176.27	179.16	DC	11.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251831	Z1-080 BAT	0.5184	Merchant Transmission	0.5184
918803	AA1-099 BAT	0.3456	Merchant Transmission	0.3456
925981	AC1-074 C O1	2.6689	Adder	3.14
925982	AC1-074 E O1	1.1438	Adder	1.35
926101	AC1-089 C O1 (Suspended)	40.2722	50/50	40.2722
926102	AC1-089 E O1 (Suspended)	65.7073	50/50	65.7073
932551	AC2-075 C	0.6339	Adder	0.75
932552	AC2-075 E	0.3193	Adder	0.38
936381	AD2-048 C	3.0978	Adder	3.64
936382	AD2-048 E	1.5456	Adder	1.82
939141	AE1-144 C O1	6.3821	Adder	7.51
939142	AE1-144 E O1	3.1672	Adder	3.73
940531	AE2-038 C O1	4.2574	Adder	5.01
940532	AE2-038 E O1	2.1088	Adder	2.48
941411	AE2-138 C	8.9441	Adder	10.52
941412	AE2-138 E	3.3081	Adder	3.89
941981	AE2-210 C O1	3.0819	Adder	3.63
941982	AE2-210 E O1	1.1593	Adder	1.36
943111	AE2-339 C	1.1511	Adder	1.35
943112	AE2-339 E	0.5669	Adder	0.67
944621	AF1-127 C O1	2.4848	Adder	2.92
944622	AF1-127 E O1	1.2239	Adder	1.44
945681	AF1-233 C	11.7219	Adder	13.79
945682	AF1-233 E	5.7909	Adder	6.81
945861	AF1-251 C	6.1721	Adder	7.26
945862	AF1-251 E	4.1147	Adder	4.84
945911	AF1-256 C	3.7320	Adder	4.39
945912	AF1-256 E	2.4880	Adder	2.93
958171	AF2-111 C O2	6.0858	Adder	13.51
958172	AF2-111 E O2	4.0572	Adder	9.01
959541	AF2-245 C O2	3.2133	Adder	7.13
959542	AF2-245 E O2	2.1422	Adder	4.76
960151	AF2-306	0.7520	Adder	1.67
960161	AF2-307 C	1.1453	Adder	2.54
960162	AF2-307 E	0.7635	Adder	1.69
960571	AF2-348 C	4.8924	Adder	10.86
960572	AF2-348 E	3.2616	Adder	7.24
WEC	WEC	0.0627	Confirmed LTF	0.0627
LGEE	LGEE	0.9242	Confirmed LTF	0.9242
CPL	CPL	0.1402	Confirmed LTF	0.1402

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-W2	CBM-W2	4.5045	Confirmed LTF	4.5045
NY	NY	0.0769	Confirmed LTF	0.0769
CBM-W1	CBM-W1	1.7639	Confirmed LTF	1.7639
TVA	TVA	1.0150	Confirmed LTF	1.0150
O-066	O-066	0.8669	Confirmed LTF	0.8669
CBM-S2	CBM-S2	1.8091	Confirmed LTF	1.8091
CBM-S1	CBM-S1	7.5913	Confirmed LTF	7.5913
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	1.9233	Confirmed LTF	1.9233
MEC	MEC	0.5291	Confirmed LTF	0.5291

15.5.17 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
95823111	247034	05EMERSS	AEP	246946	05WLDCAT	AEP	1	DAY_P734541 34553	tower	185.0	122.28	125.17	DC	11.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251831	Z1-080 BAT	0.5184	Merchant Transmission	0.5184
918803	AA1-099 BAT	0.3456	Merchant Transmission	0.3456
925981	AC1-074 C O1	2.6689	Adder	3.14
925982	AC1-074 E O1	1.1438	Adder	1.35
932551	AC2-075 C	0.6339	Adder	0.75
932552	AC2-075 E	0.3193	Adder	0.38
936381	AD2-048 C	3.0978	Adder	3.64
936382	AD2-048 E	1.5456	Adder	1.82
939141	AE1-144 C O1	6.3821	Adder	7.51
939142	AE1-144 E O1	3.1672	Adder	3.73
940531	AE2-038 C O1	4.2574	Adder	5.01
940532	AE2-038 E O1	2.1088	Adder	2.48
941411	AE2-138 C	8.9441	Adder	10.52
941412	AE2-138 E	3.3081	Adder	3.89
941981	AE2-210 C O1	3.0819	Adder	3.63
941982	AE2-210 E O1	1.1593	Adder	1.36
943111	AE2-339 C	1.1511	Adder	1.35
943112	AE2-339 E	0.5669	Adder	0.67
944621	AF1-127 C O1	2.4848	Adder	2.92
944622	AF1-127 E O1	1.2239	Adder	1.44
945681	AF1-233 C	11.7219	Adder	13.79
945682	AF1-233 E	5.7909	Adder	6.81
945861	AF1-251 C	6.1721	Adder	7.26
945862	AF1-251 E	4.1147	Adder	4.84
945911	AF1-256 C	3.7320	Adder	4.39
945912	AF1-256 E	2.4880	Adder	2.93
958171	AF2-111 C O2	6.0858	Adder	13.51
958172	AF2-111 E O2	4.0572	Adder	9.01
959541	AF2-245 C O2	3.2133	Adder	7.13
959542	AF2-245 E O2	2.1422	Adder	4.76
960151	AF2-306	0.7520	Adder	1.67
960161	AF2-307 C	1.1453	Adder	2.54
960162	AF2-307 E	0.7635	Adder	1.69
960571	AF2-348 C	4.8924	Adder	10.86
960572	AF2-348 E	3.2616	Adder	7.24
WEC	WEC	0.0627	Confirmed LTF	0.0627
LGEE	LGEE	0.9242	Confirmed LTF	0.9242
CPL	CPL	0.1402	Confirmed LTF	0.1402
CBM-W2	CBM-W2	4.5045	Confirmed LTF	4.5045
NY	NY	0.0769	Confirmed LTF	0.0769
CBM-W1	CBM-W1	1.7639	Confirmed LTF	1.7639
TVA	TVA	1.0150	Confirmed LTF	1.0150

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	0.8669	Confirmed LTF	0.8669
CBM-S2	CBM-S2	1.8091	Confirmed LTF	1.8091
CBM-S1	CBM-S1	7.5913	Confirmed LTF	7.5913
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	1.9233	Confirmed LTF	1.9233
MEC	MEC	0.5291	Confirmed LTF	0.5291

15.5.18 Index 18

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
100671471	250054	08LONGBR	DEO&K	250077	08MTZION	DEO&K	1	DAY_P734541 34553	tower	284.0	131.79	137.32	DC	15.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	6.3712	50/50	6.3712
342960	1SPURLK2G	10.0059	50/50	10.0059
342963	1SPURLK3G	5.2580	50/50	5.2580
342966	1SPURLK4G	5.2580	50/50	5.2580
925981	AC1-074 C O1	9.2590	50/50	9.2590
925982	AC1-074 E O1	3.9682	50/50	3.9682
932551	AC2-075 C	2.1990	50/50	2.1990
932552	AC2-075 E	1.1078	50/50	1.1078
936381	AD2-048 C	6.0757	50/50	6.0757
936382	AD2-048 E	3.0313	50/50	3.0313
936571	AD2-072 C O1	2.9492	Adder	3.47
936572	AD2-072 E O1	1.4460	Adder	1.7
939141	AE1-144 C O1	8.7939	50/50	8.7939
939142	AE1-144 E O1	4.3641	50/50	4.3641
940531	AE2-038 C O1	5.8663	50/50	5.8663
940532	AE2-038 E O1	2.9057	50/50	2.9057
941411	AE2-138 C	14.2422	Adder	16.76
941412	AE2-138 E	5.2677	Adder	6.2
941981	AE2-210 C O1	4.9075	Adder	5.77
941982	AE2-210 E O1	1.8459	Adder	2.17
942411	AE2-254 C O1	1.4107	Adder	1.66
942412	AE2-254 E O1	0.9404	Adder	1.11
942591	AE2-275 C O1	4.0281	Adder	4.74
942592	AE2-275 E O1	1.5151	Adder	1.78
942891	AE2-308 C O1	6.9293	Adder	8.15
942892	AE2-308 E O1	2.5197	Adder	2.96
943111	AE2-339 C	2.1010	Adder	2.47
943112	AE2-339 E	1.0348	Adder	1.22
944621	AF1-127 C O1	4.0548	Adder	4.77
944622	AF1-127 E O1	1.9972	Adder	2.35
945541	AF1-219 C O1	0.9336	Adder	1.1
945542	AF1-219 E O1	0.4393	Adder	0.52
945681	AF1-233 C	16.6052	50/50	16.6052
945682	AF1-233 E	8.2033	50/50	8.2033
945861	AF1-251 C	9.9432	Adder	11.7
945862	AF1-251 E	6.6288	Adder	7.8
945911	AF1-256 C	5.3198	50/50	5.3198
945912	AF1-256 E	3.5466	50/50	3.5466
946021	AF1-267 C	2.2204	Adder	2.61
946022	AF1-267 E	1.0202	Adder	1.2
958171	AF2-111 C O2	17.8110	50/50	17.8110
958172	AF2-111 E O2	11.8740	50/50	11.8740

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959541	AF2-245 C O2	9.4042	50/50	9.4042
959542	AF2-245 E O2	6.2695	50/50	6.2695
960151	AF2-306	0.9028	Adder	2.0
960161	AF2-307 C	1.3751	Adder	3.05
960162	AF2-307 E	0.9167	Adder	2.03
960571	AF2-348 C	15.7935	50/50	15.7935
960572	AF2-348 E	10.5290	50/50	10.5290
960641	AF2-355 C O2	4.4822	Adder	9.95
960642	AF2-355 E O2	3.9842	Adder	8.84
961281	AF2-419 C	0.3026	Adder	0.67
961282	AF2-419 E	0.2017	Adder	0.45
961291	AF2-420 C	0.3026	Adder	0.67
961292	AF2-420 E	0.2017	Adder	0.45
WEC	WEC	0.0362	Confirmed LTF	0.0362
LGEE	LGEE	1.7092	Confirmed LTF	1.7092
CPL	CPL	0.2831	Confirmed LTF	0.2831
CBM-W2	CBM-W2	6.3063	Confirmed LTF	6.3063
NY	NY	0.0658	Confirmed LTF	0.0658
CBM-W1	CBM-W1	0.7381	Confirmed LTF	0.7381
TVA	TVA	1.6226	Confirmed LTF	1.6226
O-066	O-066	0.6250	Confirmed LTF	0.6250
CBM-S2	CBM-S2	3.3408	Confirmed LTF	3.3408
CBM-S1	CBM-S1	12.7885	Confirmed LTF	12.7885
G-007	G-007	0.0957	Confirmed LTF	0.0957
MADISON	MADISON	3.7780	Confirmed LTF	3.7780
MEC	MEC	0.5752	Confirmed LTF	0.5752

15.5.19 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
100671472	250077	08MTZION	DEO&K	249991	08BUFTN1	DEO&K	1	DAY_P734541 34553	tower	298.0	121.31	126.58	DC	15.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	6.3712	50/50	6.3712
342960	1SPURLK2G	10.0059	50/50	10.0059
342963	1SPURLK3G	5.2580	50/50	5.2580
342966	1SPURLK4G	5.2580	50/50	5.2580
925981	AC1-074 C O1	9.2590	50/50	9.2590
925982	AC1-074 E O1	3.9682	50/50	3.9682
932551	AC2-075 C	2.1990	50/50	2.1990
932552	AC2-075 E	1.1078	50/50	1.1078
936381	AD2-048 C	6.0757	50/50	6.0757
936382	AD2-048 E	3.0313	50/50	3.0313
936571	AD2-072 C O1	2.9492	Adder	3.47
936572	AD2-072 E O1	1.4460	Adder	1.7
939141	AE1-144 C O1	8.7939	50/50	8.7939
939142	AE1-144 E O1	4.3641	50/50	4.3641
940531	AE2-038 C O1	5.8663	50/50	5.8663
940532	AE2-038 E O1	2.9057	50/50	2.9057
941411	AE2-138 C	14.2422	Adder	16.76
941412	AE2-138 E	5.2677	Adder	6.2
941981	AE2-210 C O1	4.9075	Adder	5.77
941982	AE2-210 E O1	1.8459	Adder	2.17
942411	AE2-254 C O1	1.4107	Adder	1.66
942412	AE2-254 E O1	0.9404	Adder	1.11
942591	AE2-275 C O1	4.0281	Adder	4.74
942592	AE2-275 E O1	1.5151	Adder	1.78
942891	AE2-308 C O1	6.9293	Adder	8.15
942892	AE2-308 E O1	2.5197	Adder	2.96
943111	AE2-339 C	2.1010	Adder	2.47
943112	AE2-339 E	1.0348	Adder	1.22
944621	AF1-127 C O1	4.0548	Adder	4.77
944622	AF1-127 E O1	1.9972	Adder	2.35
945541	AF1-219 C O1	0.9336	Adder	1.1
945542	AF1-219 E O1	0.4393	Adder	0.52
945681	AF1-233 C	16.6052	50/50	16.6052
945682	AF1-233 E	8.2033	50/50	8.2033
945861	AF1-251 C	9.9432	Adder	11.7
945862	AF1-251 E	6.6288	Adder	7.8
945911	AF1-256 C	5.3198	50/50	5.3198
945912	AF1-256 E	3.5466	50/50	3.5466
946021	AF1-267 C	2.2204	Adder	2.61
946022	AF1-267 E	1.0202	Adder	1.2
958171	AF2-111 C O2	17.8110	50/50	17.8110
958172	AF2-111 E O2	11.8740	50/50	11.8740

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959541	AF2-245 C O2	9.4042	50/50	9.4042
959542	AF2-245 E O2	6.2695	50/50	6.2695
960151	AF2-306	0.9028	Adder	2.0
960161	AF2-307 C	1.3751	Adder	3.05
960162	AF2-307 E	0.9167	Adder	2.03
960571	AF2-348 C	15.7935	50/50	15.7935
960572	AF2-348 E	10.5290	50/50	10.5290
960641	AF2-355 C O2	4.4822	Adder	9.95
960642	AF2-355 E O2	3.9842	Adder	8.84
961281	AF2-419 C	0.3026	Adder	0.67
961282	AF2-419 E	0.2017	Adder	0.45
961291	AF2-420 C	0.3026	Adder	0.67
961292	AF2-420 E	0.2017	Adder	0.45
WEC	WEC	0.0362	Confirmed LTF	0.0362
LGEE	LGEE	1.7092	Confirmed LTF	1.7092
CPL	CPL	0.2831	Confirmed LTF	0.2831
CBM-W2	CBM-W2	6.3063	Confirmed LTF	6.3063
NY	NY	0.0658	Confirmed LTF	0.0658
CBM-W1	CBM-W1	0.7381	Confirmed LTF	0.7381
TVA	TVA	1.6226	Confirmed LTF	1.6226
O-066	O-066	0.6250	Confirmed LTF	0.6250
CBM-S2	CBM-S2	3.3408	Confirmed LTF	3.3408
CBM-S1	CBM-S1	12.7885	Confirmed LTF	12.7885
G-007	G-007	0.0957	Confirmed LTF	0.0957
MADISON	MADISON	3.7780	Confirmed LTF	3.7780
MEC	MEC	0.5752	Confirmed LTF	0.5752

15.5.20 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
95394320	324267	4KENTON	LGEE	246800		AEP	1	DAY_P734541 34553	tower	185.0	126.55	129.44	DC	11.89

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251831	Z1-080 BAT	0.5184	Merchant Transmission	0.5184
918803	AA1-099 BAT	0.3456	Merchant Transmission	0.3456
925981	AC1-074 C O1	2.6689	Adder	3.14
925982	AC1-074 E O1	1.1438	Adder	1.35
932551	AC2-075 C	0.6339	Adder	0.75
932552	AC2-075 E	0.3193	Adder	0.38
936381	AD2-048 C	3.0978	Adder	3.64
936382	AD2-048 E	1.5456	Adder	1.82
939141	AE1-144 C O1	6.3821	Adder	7.51
939142	AE1-144 E O1	3.1672	Adder	3.73
940531	AE2-038 C O1	4.2574	Adder	5.01
940532	AE2-038 E O1	2.1088	Adder	2.48
941411	AE2-138 C	8.9441	Adder	10.52
941412	AE2-138 E	3.3081	Adder	3.89
941981	AE2-210 C O1	3.0819	Adder	3.63
941982	AE2-210 E O1	1.1593	Adder	1.36
943111	AE2-339 C	1.1511	Adder	1.35
943112	AE2-339 E	0.5669	Adder	0.67
944621	AF1-127 C O1	2.4848	Adder	2.92
944622	AF1-127 E O1	1.2239	Adder	1.44
945681	AF1-233 C	11.7219	Adder	13.79
945682	AF1-233 E	5.7909	Adder	6.81
945861	AF1-251 C	6.1721	Adder	7.26
945862	AF1-251 E	4.1147	Adder	4.84
945911	AF1-256 C	3.7320	Adder	4.39
945912	AF1-256 E	2.4880	Adder	2.93
958171	AF2-111 C O2	6.0858	Adder	13.51
958172	AF2-111 E O2	4.0572	Adder	9.01
959541	AF2-245 C O2	3.2133	Adder	7.13
959542	AF2-245 E O2	2.1422	Adder	4.76
960151	AF2-306	0.7520	Adder	1.67
960161	AF2-307 C	1.1453	Adder	2.54
960162	AF2-307 E	0.7635	Adder	1.69
960571	AF2-348 C	4.8924	Adder	10.86
960572	AF2-348 E	3.2616	Adder	7.24
WEC	WEC	0.0627	Confirmed LTF	0.0627
LGEE	LGEE	0.9242	Confirmed LTF	0.9242
CPL	CPL	0.1402	Confirmed LTF	0.1402
CBM-W2	CBM-W2	4.5045	Confirmed LTF	4.5045
NY	NY	0.0769	Confirmed LTF	0.0769
CBM-W1	CBM-W1	1.7639	Confirmed LTF	1.7639
TVA	TVA	1.0150	Confirmed LTF	1.0150

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
O-066	O-066	0.8669	Confirmed LTF	0.8669
CBM-S2	CBM-S2	1.8091	Confirmed LTF	1.8091
CBM-S1	CBM-S1	7.5913	Confirmed LTF	7.5913
G-007	G-007	0.1342	Confirmed LTF	0.1342
MADISON	MADISON	1.9233	Confirmed LTF	1.9233
MEC	MEC	0.5291	Confirmed LTF	0.5291

15.5.21 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
100147828	341923	2MURPHYSVIL	EKPC	325019	2KENTON-6	LGEE	1	EKPC_P4-6_SPUR N39-92T	breaker	66.0	139.79	165.55	DC	17.0

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	6.0472	50/50	6.0472
936382	AD2-048 E	3.0171	50/50	3.0171
939141	AE1-144 C O1	13.5851	50/50	13.5851
939142	AE1-144 E O1	6.7417	50/50	6.7417
940531	AE2-038 C O1	9.0624	50/50	9.0624
940532	AE2-038 E O1	4.4888	50/50	4.4888
945681	AF1-233 C	19.4003	50/50	19.4003
945682	AF1-233 E	9.5842	50/50	9.5842
945911	AF1-256 C	6.1834	50/50	6.1834
945912	AF1-256 E	4.1222	50/50	4.1222
958171	AF2-111 C O2	19.3230	50/50	19.3230
958172	AF2-111 E O2	12.8820	50/50	12.8820
959541	AF2-245 C O2	10.2025	50/50	10.2025
959542	AF2-245 E O2	6.8017	50/50	6.8017
960151	AF2-306	0.6947	Adder	1.54
960161	AF2-307 C	1.0581	Adder	2.35
960162	AF2-307 E	0.7054	Adder	1.57
WEC	WEC	0.0044	Confirmed LTF	0.0044
LGEE	LGEE	0.1198	Confirmed LTF	0.1198
CPL	CPL	0.0556	Confirmed LTF	0.0556
G-007A	G-007A	0.0072	Confirmed LTF	0.0072
VFT	VFT	0.0193	Confirmed LTF	0.0193
CBM-W2	CBM-W2	0.8354	Confirmed LTF	0.8354
NY	NY	0.0006	Confirmed LTF	0.0006
CBM-W1	CBM-W1	0.1001	Confirmed LTF	0.1001
TVA	TVA	0.2450	Confirmed LTF	0.2450
CBM-S2	CBM-S2	0.6127	Confirmed LTF	0.6127
CBM-S1	CBM-S1	1.5506	Confirmed LTF	1.5506
MADISON	MADISON	0.4939	Confirmed LTF	0.4939
MEC	MEC	0.0779	Confirmed LTF	0.0779

15.5.22 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
100148796	342544	4AVON-R	EKPC	324275	4LOUDON AVE	LGEE	1	DAY_P734541 34553	tower	203.0	121.83	123.53	DC	7.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
925981	AC1-074 C O1	4.4425	Adder	5.23
925982	AC1-074 E O1	1.9039	Adder	2.24
932551	AC2-075 C	1.0551	Adder	1.24
932552	AC2-075 E	0.5315	Adder	0.63
939141	AE1-144 C O1	3.5626	Adder	4.19
939142	AE1-144 E O1	1.7680	Adder	2.08
940531	AE2-038 C O1	2.3765	Adder	2.8
940532	AE2-038 E O1	1.1772	Adder	1.38
941411	AE2-138 C	14.5552	Adder	17.12
941412	AE2-138 E	5.3834	Adder	6.33
941981	AE2-210 C O1	5.0153	Adder	5.9
941982	AE2-210 E O1	1.8865	Adder	2.22
942891	AE2-308 C O1	5.6250	Adder	6.62
942892	AE2-308 E O1	2.0454	Adder	2.41
943111	AE2-339 C	4.7985	50/50	4.7985
943112	AE2-339 E	2.3635	50/50	2.3635
944621	AF1-127 C O1	5.7116	50/50	5.7116
944622	AF1-127 E O1	2.8132	50/50	2.8132
945681	AF1-233 C	6.8255	Adder	8.03
945682	AF1-233 E	3.3720	Adder	3.97
945861	AF1-251 C	10.9956	Adder	12.94
945862	AF1-251 E	7.3304	Adder	8.62
945911	AF1-256 C	2.1885	Adder	2.57
945912	AF1-256 E	1.4590	Adder	1.72
958171	AF2-111 C O2	3.9268	Adder	8.72
958172	AF2-111 E O2	2.6179	Adder	5.81
959541	AF2-245 C O2	2.0733	Adder	4.6
959542	AF2-245 E O2	1.3822	Adder	3.07
960571	AF2-348 C	4.8032	Adder	10.66
960572	AF2-348 E	3.2022	Adder	7.11
960641	AF2-355 C O2	3.5146	Adder	7.8
960642	AF2-355 E O2	3.1241	Adder	6.93
NEWTON	NEWTON	0.2740	Confirmed LTF	0.2740
FARMERCITY	FARMERCITY	0.0105	Confirmed LTF	0.0105
NY	NY	0.0216	Confirmed LTF	0.0216
PRAIRIE	PRAIRIE	0.5528	Confirmed LTF	0.5528
O-066	O-066	0.2352	Confirmed LTF	0.2352
EDWARDS	EDWARDS	0.0724	Confirmed LTF	0.0724
TILTON	TILTON	0.1638	Confirmed LTF	0.1638
G-007	G-007	0.0364	Confirmed LTF	0.0364
GIBSON	GIBSON	0.2157	Confirmed LTF	0.2157
BLUEG	BLUEG	1.2048	Confirmed LTF	1.2048

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
TRIMBLE	TRIMBLE	0.3901	Confirmed LTF	0.3901
CATAWBA	CATAWBA	0.0021	Confirmed LTF	0.0021

15.5.23 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
98809987	342559	4BOONE CO	EKPC	250054	08LONGBR	DEO&K	1	DAY_P734541 34553	tower	284.0	139.15	144.68	DC	15.67

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	6.3712	50/50	6.3712
342960	1SPURLK2G	10.0059	50/50	10.0059
342963	1SPURLK3G	5.2580	50/50	5.2580
342966	1SPURLK4G	5.2580	50/50	5.2580
925981	AC1-074 C O1	9.2590	50/50	9.2590
925982	AC1-074 E O1	3.9682	50/50	3.9682
932551	AC2-075 C	2.1990	50/50	2.1990
932552	AC2-075 E	1.1078	50/50	1.1078
936381	AD2-048 C	6.0757	50/50	6.0757
936382	AD2-048 E	3.0313	50/50	3.0313
936571	AD2-072 C O1	2.9492	Adder	3.47
936572	AD2-072 E O1	1.4460	Adder	1.7
939141	AE1-144 C O1	8.7939	50/50	8.7939
939142	AE1-144 E O1	4.3641	50/50	4.3641
940531	AE2-038 C O1	5.8663	50/50	5.8663
940532	AE2-038 E O1	2.9057	50/50	2.9057
941411	AE2-138 C	14.2422	Adder	16.76
941412	AE2-138 E	5.2677	Adder	6.2
941981	AE2-210 C O1	4.9075	Adder	5.77
941982	AE2-210 E O1	1.8459	Adder	2.17
942411	AE2-254 C O1	1.4107	Adder	1.66
942412	AE2-254 E O1	0.9404	Adder	1.11
942591	AE2-275 C O1	4.0281	Adder	4.74
942592	AE2-275 E O1	1.5151	Adder	1.78
942891	AE2-308 C O1	6.9293	Adder	8.15
942892	AE2-308 E O1	2.5197	Adder	2.96
943111	AE2-339 C	2.1010	Adder	2.47
943112	AE2-339 E	1.0348	Adder	1.22
944621	AF1-127 C O1	4.0548	Adder	4.77
944622	AF1-127 E O1	1.9972	Adder	2.35
945541	AF1-219 C O1	0.9336	Adder	1.1
945542	AF1-219 E O1	0.4393	Adder	0.52
945681	AF1-233 C	16.6052	50/50	16.6052
945682	AF1-233 E	8.2033	50/50	8.2033
945861	AF1-251 C	9.9432	Adder	11.7
945862	AF1-251 E	6.6288	Adder	7.8
945911	AF1-256 C	5.3198	50/50	5.3198
945912	AF1-256 E	3.5466	50/50	3.5466
946021	AF1-267 C	2.2204	Adder	2.61
946022	AF1-267 E	1.0202	Adder	1.2
958171	AF2-111 C O2	17.8110	50/50	17.8110
958172	AF2-111 E O2	11.8740	50/50	11.8740

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
959541	AF2-245 C O2	9.4042	50/50	9.4042
959542	AF2-245 E O2	6.2695	50/50	6.2695
960151	AF2-306	0.9028	Adder	2.0
960161	AF2-307 C	1.3751	Adder	3.05
960162	AF2-307 E	0.9167	Adder	2.03
960571	AF2-348 C	15.7935	50/50	15.7935
960572	AF2-348 E	10.5290	50/50	10.5290
960641	AF2-355 C O2	4.4822	Adder	9.95
960642	AF2-355 E O2	3.9842	Adder	8.84
961281	AF2-419 C	0.3026	Adder	0.67
961282	AF2-419 E	0.2017	Adder	0.45
961291	AF2-420 C	0.3026	Adder	0.67
961292	AF2-420 E	0.2017	Adder	0.45
WEC	WEC	0.0362	Confirmed LTF	0.0362
LGEE	LGEE	1.7092	Confirmed LTF	1.7092
CPL	CPL	0.2831	Confirmed LTF	0.2831
CBM-W2	CBM-W2	6.3063	Confirmed LTF	6.3063
NY	NY	0.0658	Confirmed LTF	0.0658
CBM-W1	CBM-W1	0.7381	Confirmed LTF	0.7381
TVA	TVA	1.6226	Confirmed LTF	1.6226
O-066	O-066	0.6250	Confirmed LTF	0.6250
CBM-S2	CBM-S2	3.3408	Confirmed LTF	3.3408
CBM-S1	CBM-S1	12.7885	Confirmed LTF	12.7885
G-007	G-007	0.0957	Confirmed LTF	0.0957
MADISON	MADISON	3.7780	Confirmed LTF	3.7780
MEC	MEC	0.5752	Confirmed LTF	0.5752

15.5.24 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
101840917	342571	4CRANSTON	EKPC	342649	4ROWAN CO	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	255.0	163.61	194.17	DC	77.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	2.2900	Adder	2.69
936382	AD2-048 E	1.1426	Adder	1.34
939141	AE1-144 C O1	42.5958	50/50	42.5958
939142	AE1-144 E O1	21.1386	50/50	21.1386
940531	AE2-038 C O1	28.4149	50/50	28.4149
940532	AE2-038 E O1	14.0747	50/50	14.0747
945681	AF1-233 C	88.9248	50/50	88.9248
945682	AF1-233 E	43.9310	50/50	43.9310
945911	AF1-256 C	28.3426	50/50	28.3426
945912	AF1-256 E	18.8950	50/50	18.8950
958171	AF2-111 C O2	88.5705	50/50	88.5705
958172	AF2-111 E O2	59.0470	50/50	59.0470
959541	AF2-245 C O2	46.7652	50/50	46.7652
959542	AF2-245 E O2	31.1768	50/50	31.1768
960151	AF2-306	3.6044	50/50	3.6044
960161	AF2-307 C	5.4897	50/50	5.4897
960162	AF2-307 E	3.6598	50/50	3.6598
WEC	WEC	0.0132	Confirmed LTF	0.0132
LGEE	LGEE	0.0770	Confirmed LTF	0.0770
CBM-W2	CBM-W2	0.3440	Confirmed LTF	0.3440
NY	NY	0.0083	Confirmed LTF	0.0083
CBM-W1	CBM-W1	0.4629	Confirmed LTF	0.4629
TVA	TVA	0.0364	Confirmed LTF	0.0364
O-066	O-066	0.1142	Confirmed LTF	0.1142
CBM-S1	CBM-S1	0.3919	Confirmed LTF	0.3919
G-007	G-007	0.0177	Confirmed LTF	0.0177
MEC	MEC	0.0651	Confirmed LTF	0.0651
CATAWBA	CATAWBA	0.0056	Confirmed LTF	0.0056

15.5.25 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
101841211	342583	4FLEMINGSBRG	EKPC	342589	4GODDARD	EKPC	1	EKPC_P1-2_SPUR-GODD 138-B	single	217.0	156.27	192.76	DC	79.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945681	AF1-233 C	150.6000	80/20	150.6000
945911	AF1-256 C	48.0000	80/20	48.0000
958171	AF2-111 C O2	150.0000	80/20	150.0000
959541	AF2-245 C O2	79.2000	80/20	79.2000

15.5.26 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
101840915	342589	4GODDARD	EKPC	342571	4CRANSTON	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	255.0	163.69	194.25	DC	77.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936381	AD2-048 C	2.2900	Adder	2.69
936382	AD2-048 E	1.1426	Adder	1.34
939141	AE1-144 C O1	42.5958	50/50	42.5958
939142	AE1-144 E O1	21.1386	50/50	21.1386
940531	AE2-038 C O1	28.4149	50/50	28.4149
940532	AE2-038 E O1	14.0747	50/50	14.0747
945681	AF1-233 C	88.9248	50/50	88.9248
945682	AF1-233 E	43.9310	50/50	43.9310
945911	AF1-256 C	28.3426	50/50	28.3426
945912	AF1-256 E	18.8950	50/50	18.8950
958171	AF2-111 C O2	88.5705	50/50	88.5705
958172	AF2-111 E O2	59.0470	50/50	59.0470
959541	AF2-245 C O2	46.7652	50/50	46.7652
959542	AF2-245 E O2	31.1768	50/50	31.1768
960151	AF2-306	3.6044	50/50	3.6044
960161	AF2-307 C	5.4897	50/50	5.4897
960162	AF2-307 E	3.6598	50/50	3.6598
WEC	WEC	0.0132	Confirmed LTF	0.0132
LGEE	LGEE	0.0770	Confirmed LTF	0.0770
CBM-W2	CBM-W2	0.3440	Confirmed LTF	0.3440
NY	NY	0.0083	Confirmed LTF	0.0083
CBM-W1	CBM-W1	0.4629	Confirmed LTF	0.4629
TVA	TVA	0.0364	Confirmed LTF	0.0364
O-066	O-066	0.1142	Confirmed LTF	0.1142
CBM-S1	CBM-S1	0.3919	Confirmed LTF	0.3919
G-007	G-007	0.0177	Confirmed LTF	0.0177
MEC	MEC	0.0651	Confirmed LTF	0.0651
CATAWBA	CATAWBA	0.0056	Confirmed LTF	0.0056

15.5.27 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
101841029	342589	4GODDARD	EKPC	341536	2GODDARD	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	117.0	127.74	149.23	DC	25.15

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	11.6362	50/50	11.6362
939142	AE1-144 E O1	5.7746	50/50	5.7746
940531	AE2-038 C O1	7.7623	50/50	7.7623
940532	AE2-038 E O1	3.8449	50/50	3.8449
945681	AF1-233 C	28.6893	50/50	28.6893
945682	AF1-233 E	14.1732	50/50	14.1732
945911	AF1-256 C	9.1440	50/50	9.1440
945912	AF1-256 E	6.0960	50/50	6.0960
958171	AF2-111 C O2	28.5750	50/50	28.5750
958172	AF2-111 E O2	19.0500	50/50	19.0500
959541	AF2-245 C O2	15.0876	50/50	15.0876
959542	AF2-245 E O2	10.0584	50/50	10.0584
960152	AF2-306 BAT	4.8841	50/50	4.8841
NEWTON	NEWTON	0.0140	Confirmed LTF	0.0140
FARMERCITY	FARMERCITY	0.0010	Confirmed LTF	0.0010
G-007A	G-007A	0.0024	Confirmed LTF	0.0024
VFT	VFT	0.0064	Confirmed LTF	0.0064
CALDERWOOD	CALDERWOOD	0.0293	Confirmed LTF	0.0293
PRAIRIE	PRAIRIE	0.0568	Confirmed LTF	0.0568
CHEOAH	CHEOAH	0.0290	Confirmed LTF	0.0290
EDWARDS	EDWARDS	0.0021	Confirmed LTF	0.0021
TILTON	TILTON	0.0038	Confirmed LTF	0.0038
GIBSON	GIBSON	0.0093	Confirmed LTF	0.0093
BLUEG	BLUEG	0.0347	Confirmed LTF	0.0347
TRIMBLE	TRIMBLE	0.0089	Confirmed LTF	0.0089
CATAWBA	CATAWBA	0.0101	Confirmed LTF	0.0101

15.5.28 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
153940448	342589	4GODDARD	EKPC	939140	AE1-144 TAP	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	186.0	111.84	146.88	DC	65.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945681	AF1-233 C	74.3482	50/50	74.3482
945682	AF1-233 E	36.7298	50/50	36.7298
945911	AF1-256 C	23.6966	50/50	23.6966
945912	AF1-256 E	15.7978	50/50	15.7978
958171	AF2-111 C O2	74.0520	50/50	74.0520
958172	AF2-111 E O2	49.3680	50/50	49.3680
959541	AF2-245 C O2	39.0995	50/50	39.0995
959542	AF2-245 E O2	26.0663	50/50	26.0663
960151	AF2-306	4.3891	50/50	4.3891
960161	AF2-307 C	6.6849	50/50	6.6849
960162	AF2-307 E	4.4566	50/50	4.4566
WEC	WEC	0.0066	Confirmed LTF	0.0066
LGEE	LGEE	0.3007	Confirmed LTF	0.3007
CPL	CPL	0.1720	Confirmed LTF	0.1720
G-007A	G-007A	0.0887	Confirmed LTF	0.0887
VFT	VFT	0.2322	Confirmed LTF	0.2322
CBM-W2	CBM-W2	2.0721	Confirmed LTF	2.0721
CBM-W1	CBM-W1	0.0751	Confirmed LTF	0.0751
TVA	TVA	0.6300	Confirmed LTF	0.6300
CBM-S2	CBM-S2	1.8034	Confirmed LTF	1.8034
CBM-S1	CBM-S1	3.9618	Confirmed LTF	3.9618
MADISON	MADISON	1.5160	Confirmed LTF	1.5160
MEC	MEC	0.1780	Confirmed LTF	0.1780

15.5.29 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
101841089	342634	4PLUMVILLE	EKPC	342091	2PLUMVILLE	EKPC	1	EKPC_P4-6_SPUR N39-92T	breaker	152.0	120.64	139.66	DC	28.91

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	25.9680	50/50	25.9680
939142	AE1-144 E O1	12.8868	50/50	12.8868
940531	AE2-038 C O1	17.3228	50/50	17.3228
940532	AE2-038 E O1	8.5804	50/50	8.5804
945681	AF1-233 C	32.9859	50/50	32.9859
945682	AF1-233 E	16.2958	50/50	16.2958
945911	AF1-256 C	10.5134	50/50	10.5134
945912	AF1-256 E	7.0090	50/50	7.0090
958171	AF2-111 C O2	32.8545	50/50	32.8545
958172	AF2-111 E O2	21.9030	50/50	21.9030
959541	AF2-245 C O2	17.3472	50/50	17.3472
959542	AF2-245 E O2	11.5648	50/50	11.5648
NEWTON	NEWTON	0.0441	Confirmed LTF	0.0441
CPLE	CPLE	0.0265	Confirmed LTF	0.0265
FARMERCITY	FARMERCITY	0.0013	Confirmed LTF	0.0013
G-007A	G-007A	0.0360	Confirmed LTF	0.0360
VFT	VFT	0.0968	Confirmed LTF	0.0968
TVA	TVA	0.0336	Confirmed LTF	0.0336
PRAIRIE	PRAIRIE	0.0646	Confirmed LTF	0.0646
EDWARDS	EDWARDS	0.0133	Confirmed LTF	0.0133
CBM-S2	CBM-S2	0.2428	Confirmed LTF	0.2428
TILTON	TILTON	0.0315	Confirmed LTF	0.0315
MADISON	MADISON	0.2117	Confirmed LTF	0.2117
GIBSON	GIBSON	0.0339	Confirmed LTF	0.0339
BLUEG	BLUEG	0.1614	Confirmed LTF	0.1614
TRIMBLE	TRIMBLE	0.0540	Confirmed LTF	0.0540

15.5.30 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
100147674	342649	4ROWAN CO	EKPC	324302	4RODBURN	LGEE	1	EKPC_P4-6_SPUR N39-92T	breaker	191.0	181.05	217.62	DC	69.85

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	38.4006	50/50	38.4006
939142	AE1-144 E O1	19.0566	50/50	19.0566
940531	AE2-038 C O1	25.6163	50/50	25.6163
940532	AE2-038 E O1	12.6885	50/50	12.6885
945681	AF1-233 C	79.6915	50/50	79.6915
945682	AF1-233 E	39.3695	50/50	39.3695
945911	AF1-256 C	25.3997	50/50	25.3997
945912	AF1-256 E	16.9331	50/50	16.9331
958171	AF2-111 C O2	79.3740	50/50	79.3740
958172	AF2-111 E O2	52.9160	50/50	52.9160
959541	AF2-245 C O2	41.9095	50/50	41.9095
959542	AF2-245 E O2	27.9396	50/50	27.9396
960151	AF2-306	5.0099	50/50	5.0099
960161	AF2-307 C	7.6305	50/50	7.6305
960162	AF2-307 E	5.0870	50/50	5.0870
NEWTON	NEWTON	0.1160	Confirmed LTF	0.1160
CPLE	CPLE	0.0509	Confirmed LTF	0.0509
FARMERCITY	FARMERCITY	0.0042	Confirmed LTF	0.0042
G-007A	G-007A	0.0911	Confirmed LTF	0.0911
VFT	VFT	0.2451	Confirmed LTF	0.2451
PRAIRIE	PRAIRIE	0.2170	Confirmed LTF	0.2170
EDWARDS	EDWARDS	0.0329	Confirmed LTF	0.0329
CBM-S2	CBM-S2	0.4335	Confirmed LTF	0.4335
TILTON	TILTON	0.0750	Confirmed LTF	0.0750
MADISON	MADISON	0.3488	Confirmed LTF	0.3488
GIBSON	GIBSON	0.0923	Confirmed LTF	0.0923
BLUEG	BLUEG	0.4184	Confirmed LTF	0.4184
TRIMBLE	TRIMBLE	0.1336	Confirmed LTF	0.1336

15.5.31 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
100148743	342661	4SPUR-KENT-R	EKPC	324267	4KENTON	LGEE	1	DAY_P73454134553	tower	281.0	127.77	134.02	DC	17.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	8.0153	50/50	8.0153
342960	1SPURLK2G	11.6615	50/50	11.6615
342963	1SPURLK3G	6.1280	50/50	6.1280
342966	1SPURLK4G	6.1280	50/50	6.1280
925981	AC1-074 C O1	2.4457	Adder	2.88
925982	AC1-074 E O1	1.0482	Adder	1.23
932551	AC2-075 C	0.5809	Adder	0.68
932552	AC2-075 E	0.2926	Adder	0.34
939141	AE1-144 C O1	5.2634	Adder	6.19
939142	AE1-144 E O1	2.6120	Adder	3.07
940531	AE2-038 C O1	3.5111	Adder	4.13
940532	AE2-038 E O1	1.7392	Adder	2.05
941411	AE2-138 C	11.1511	Adder	13.12
941412	AE2-138 E	4.1244	Adder	4.85
941981	AE2-210 C O1	3.8424	Adder	4.52
941982	AE2-210 E O1	1.4453	Adder	1.7
943111	AE2-339 C	1.1399	Adder	1.34
943112	AE2-339 E	0.5614	Adder	0.66
944621	AF1-127 C O1	2.9892	Adder	3.52
944622	AF1-127 E O1	1.4723	Adder	1.73
945681	AF1-233 C	11.6079	Adder	13.66
945682	AF1-233 E	5.7346	Adder	6.75
945861	AF1-251 C	7.5679	Adder	8.9
945862	AF1-251 E	5.0453	Adder	5.94
945911	AF1-256 C	3.8156	Adder	4.49
945912	AF1-256 E	2.5437	Adder	2.99
958171	AF2-111 C O2	19.9545	50/50	19.9545
958172	AF2-111 E O2	13.3030	50/50	13.3030
959541	AF2-245 C O2	10.5360	50/50	10.5360
959542	AF2-245 E O2	7.0240	50/50	7.0240
960571	AF2-348 C	16.8690	50/50	16.8690
960572	AF2-348 E	11.2460	50/50	11.2460
WEC	WEC	0.0054	Confirmed LTF	0.0054
LGEE	LGEE	0.3235	Confirmed LTF	0.3235
CPL	CPL	0.0615	Confirmed LTF	0.0615
CBM-W2	CBM-W2	2.1376	Confirmed LTF	2.1376
NY	NY	0.0791	Confirmed LTF	0.0791
TVA	TVA	0.6090	Confirmed LTF	0.6090
O-066	O-066	0.9072	Confirmed LTF	0.9072
CBM-S2	CBM-S2	0.9421	Confirmed LTF	0.9421
CBM-S1	CBM-S1	3.9107	Confirmed LTF	3.9107
G-007	G-007	0.1404	Confirmed LTF	0.1404

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MADISON	MADISON	1.0806	Confirmed LTF	1.0806
MEC	MEC	0.1780	Confirmed LTF	0.1780

15.5.32 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
101842078	342664	4SPURLOCK	EKPC	342661	4SPUR-KENT-R	EKPC	1	DAY_P734541 34553	tower	291.0	123.49	129.52	DC	17.56

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342957	1SPURLK1G	8.0153	50/50	8.0153
342960	1SPURLK2G	11.6615	50/50	11.6615
342963	1SPURLK3G	6.1280	50/50	6.1280
342966	1SPURLK4G	6.1280	50/50	6.1280
925981	AC1-074 C O1	2.4457	Adder	2.88
925982	AC1-074 E O1	1.0482	Adder	1.23
932551	AC2-075 C	0.5809	Adder	0.68
932552	AC2-075 E	0.2926	Adder	0.34
939141	AE1-144 C O1	5.2634	Adder	6.19
939142	AE1-144 E O1	2.6120	Adder	3.07
940531	AE2-038 C O1	3.5111	Adder	4.13
940532	AE2-038 E O1	1.7392	Adder	2.05
941411	AE2-138 C	11.1511	Adder	13.12
941412	AE2-138 E	4.1244	Adder	4.85
941981	AE2-210 C O1	3.8424	Adder	4.52
941982	AE2-210 E O1	1.4453	Adder	1.7
943111	AE2-339 C	1.1399	Adder	1.34
943112	AE2-339 E	0.5614	Adder	0.66
944621	AF1-127 C O1	2.9892	Adder	3.52
944622	AF1-127 E O1	1.4723	Adder	1.73
945681	AF1-233 C	11.6079	Adder	13.66
945682	AF1-233 E	5.7346	Adder	6.75
945861	AF1-251 C	7.5679	Adder	8.9
945862	AF1-251 E	5.0453	Adder	5.94
945911	AF1-256 C	3.8156	Adder	4.49
945912	AF1-256 E	2.5437	Adder	2.99
958171	AF2-111 C O2	19.9545	50/50	19.9545
958172	AF2-111 E O2	13.3030	50/50	13.3030
959541	AF2-245 C O2	10.5360	50/50	10.5360
959542	AF2-245 E O2	7.0240	50/50	7.0240
960571	AF2-348 C	16.8690	50/50	16.8690
960572	AF2-348 E	11.2460	50/50	11.2460
WEC	WEC	0.0054	Confirmed LTF	0.0054
LGEE	LGEE	0.3235	Confirmed LTF	0.3235
CPLE	CPLE	0.0615	Confirmed LTF	0.0615
CBM-W2	CBM-W2	2.1376	Confirmed LTF	2.1376
NY	NY	0.0791	Confirmed LTF	0.0791
TVA	TVA	0.6090	Confirmed LTF	0.6090
O-066	O-066	0.9072	Confirmed LTF	0.9072
CBM-S2	CBM-S2	0.9421	Confirmed LTF	0.9421
CBM-S1	CBM-S1	3.9107	Confirmed LTF	3.9107
G-007	G-007	0.1404	Confirmed LTF	0.1404

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
MADISON	MADISON	1.0806	Confirmed LTF	1.0806
MEC	MEC	0.1780	Confirmed LTF	0.1780

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE CT LOADIN G %	POST PROJE CT LOADIN G %	AC/D C	MW IMPAC T
988099 93	34283 8	7SPURLO CK	EKPC	25307 7	09STUA RT	DAY	1	DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGRVZIMMER	tower	1532.0	136.18	140.18	DC	60.82

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251968	08ZIMRHP	48.5846	50/50	48.5846
251969	08ZIMRLP	26.6058	50/50	26.6058
251970	08MELDL1	2.4608	50/50	2.4608
251971	08MELDL2	2.4608	50/50	2.4608
251972	08MELDL3	2.4674	50/50	2.4674
342942	1JKCT 10G	3.6195	50/50	3.6195
342957	1SPURLK1G	24.9695	50/50	24.9695
342960	1SPURLK2G	47.5091	50/50	47.5091
342963	1SPURLK3G	24.9656	50/50	24.9656
342966	1SPURLK4G	24.9656	50/50	24.9656
925921	AC1-068 C	-3.5310	Adder	-4.15
925931	AC1-069 C	-3.5310	Adder	-4.15
925981	AC1-074 C O1	15.7242	50/50	15.7242
925982	AC1-074 E O1	6.7390	50/50	6.7390
926061	AC1-085 C	-25.3878	Adder	-29.87
926791	AC1-165 C	-3.4895	Adder	-4.11
926801	AC1-166 C	-3.4895	Adder	-4.11
926951	AC1-182	1.1568	50/50	1.1568
932551	AC2-075 C	3.7345	50/50	3.7345
932552	AC2-075 E	1.8813	50/50	1.8813
932661	AC2-088 C O1	-5.5654	Adder	-6.55
935031	AD1-136 C	-0.7826	Adder	-0.92
936381	AD2-048 C	10.8026	Adder	12.71
936382	AD2-048 E	5.3897	Adder	6.34
936571	AD2-072 C O1	8.5360	Adder	10.04
936572	AD2-072 E O1	4.1853	Adder	4.92
939131	AE1-143 C	6.3918	Adder	7.52
939132	AE1-143 E	3.1660	Adder	3.72
939141	AE1-144 C O1	32.8780	50/50	32.8780
939142	AE1-144 E O1	16.3160	50/50	16.3160
940531	AE2-038 C O1	21.9323	50/50	21.9323
940532	AE2-038 E O1	10.8637	50/50	10.8637
941411	AE2-138 C	63.1597	50/50	63.1597
941412	AE2-138 E	23.3605	50/50	23.3605
941981	AE2-210 C O1	21.7632	50/50	21.7632
941982	AE2-210 E O1	8.1861	50/50	8.1861
942411	AE2-254 C O1	4.2886	Adder	5.05
942412	AE2-254 E O1	2.8591	Adder	3.36
942591	AE2-275 C O1	13.4973	Adder	15.88
942592	AE2-275 E O1	5.0769	Adder	5.97
942891	AE2-308 C O1	22.6214	Adder	26.61

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942892	AE2-308 E O1	8.2260	Adder	9.68
943111	AE2-339 C	7.4483	50/50	7.4483
943112	AE2-339 E	3.6685	50/50	3.6685
943701	AF1-038 C	3.2099	Adder	3.78
943702	AF1-038 E	2.1400	Adder	2.52
943772	AF1-045 BAT	4.6834	Merchant Transmission	4.6834
943821	AF1-050 C	2.8525	Adder	3.36
943822	AF1-050 E	1.9017	Adder	2.24
944151	AF1-083 C O1	2.9977	Adder	3.53
944152	AF1-083 E O1	1.9985	Adder	2.35
944511	AF1-116 C	7.1684	Adder	8.43
944512	AF1-116 E	4.7789	Adder	5.62
944621	AF1-127 C O1	17.2956	50/50	17.2956
944622	AF1-127 E O1	8.5188	50/50	8.5188
945541	AF1-219 C O1	2.7718	Adder	3.26
945542	AF1-219 E O1	1.3044	Adder	1.53
945681	AF1-233 C	63.0397	50/50	63.0397
945682	AF1-233 E	31.1431	50/50	31.1431
945861	AF1-251 C	43.2920	50/50	43.2920
945862	AF1-251 E	28.8614	50/50	28.8614
945911	AF1-256 C	20.2286	50/50	20.2286
945912	AF1-256 E	13.4858	50/50	13.4858
946021	AF1-267 C	7.4389	Adder	8.75
946022	AF1-267 E	3.4179	Adder	4.02
957961	AF2-090 C	2.8982	Adder	6.43
957962	AF2-090 E	1.4334	Adder	3.18
958171	AF2-111 C O2	69.1140	50/50	69.1140
958172	AF2-111 E O2	46.0760	50/50	46.0760
959541	AF2-245 C O2	36.4922	50/50	36.4922
959542	AF2-245 E O2	24.3281	50/50	24.3281
959691	AF2-260 C O2	2.4092	Adder	5.35
959692	AF2-260 E O2	1.2046	Adder	2.67
960151	AF2-306	3.1761	Adder	7.05
960161	AF2-307 C	4.8374	Adder	10.74
960162	AF2-307 E	3.2250	Adder	7.16
960171	AF2-308	1.1243	Adder	2.5
960181	AF2-309 C	1.6864	Adder	3.74
960182	AF2-309 E	1.1243	Adder	2.5
960571	AF2-348 C	71.1195	50/50	71.1195
960572	AF2-348 E	47.4130	50/50	47.4130
960641	AF2-355 C O2	14.6473	Adder	32.51
960642	AF2-355 E O2	13.0198	Adder	28.9
960741	AF2-365 C O2	1.2116	Adder	2.69
960742	AF2-365 E O2	0.8077	Adder	1.79
961001	AF2-391 C O2	2.8913	Adder	6.42
961002	AF2-391 E O2	1.9276	Adder	4.28
961281	AF2-419 C	0.9087	Adder	2.02
961282	AF2-419 E	0.6058	Adder	1.34
961291	AF2-420 C	0.9087	Adder	2.02
961292	AF2-420 E	0.6058	Adder	1.34
WEC	WEC	0.3692	Confirmed LTF	0.3692
LGEE	LGEE	4.6598	Confirmed LTF	4.6598

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CPLE	CPLE	0.4776	Confirmed LTF	0.4776
LGE-0012019	LGE-0012019	6.2975	LTF	6.2975
CBM-W2	CBM-W2	24.6437	Confirmed LTF	24.6437
NY	NY	0.7537	Confirmed LTF	0.7537
CBM-W1	CBM-W1	9.4951	Confirmed LTF	9.4951
TVA	TVA	5.2388	Confirmed LTF	5.2388
O-066	O-066	8.7562	Confirmed LTF	8.7562
CBM-S2	CBM-S2	7.5487	Confirmed LTF	7.5487
CBM-S1	CBM-S1	38.8938	Confirmed LTF	38.8938
G-007	G-007	1.3510	Confirmed LTF	1.3510
MADISON	MADISON	3.2639	Confirmed LTF	3.2639
MEC	MEC	2.9683	Confirmed LTF	2.9683

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
153940399	939140	AE1-144 TAP	EKPC	342634	4PLUMVILLE	EKPC	1	EKPC_P7-1_SPUR 345&138-B	tower	186.0	184.29	219.32	DC	65.17

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939141	AE1-144 C O1	54.0732	50/50	54.0732
939142	AE1-144 E O1	26.8344	50/50	26.8344
940531	AE2-038 C O1	36.0713	50/50	36.0713
940532	AE2-038 E O1	17.8671	50/50	17.8671
945681	AF1-233 C	74.3482	50/50	74.3482
945682	AF1-233 E	36.7298	50/50	36.7298
945911	AF1-256 C	23.6966	50/50	23.6966
945912	AF1-256 E	15.7978	50/50	15.7978
958171	AF2-111 C O2	74.0520	50/50	74.0520
958172	AF2-111 E O2	49.3680	50/50	49.3680
959541	AF2-245 C O2	39.0995	50/50	39.0995
959542	AF2-245 E O2	26.0663	50/50	26.0663
960151	AF2-306	4.3891	50/50	4.3891
960161	AF2-307 C	6.6849	50/50	6.6849
960162	AF2-307 E	4.4566	50/50	4.4566
WEC	WEC	0.0066	Confirmed LTF	0.0066
LGEE	LGEE	0.3007	Confirmed LTF	0.3007
CPL	CPL	0.1720	Confirmed LTF	0.1720
G-007A	G-007A	0.0887	Confirmed LTF	0.0887
VFT	VFT	0.2322	Confirmed LTF	0.2322
CBM-W2	CBM-W2	2.0721	Confirmed LTF	2.0721
CBM-W1	CBM-W1	0.0751	Confirmed LTF	0.0751
TVA	TVA	0.6300	Confirmed LTF	0.6300
CBM-S2	CBM-S2	1.8034	Confirmed LTF	1.8034
CBM-S1	CBM-S1	3.9618	Confirmed LTF	3.9618
MADISON	MADISON	1.5160	Confirmed LTF	1.5160
MEC	MEC	0.1780	Confirmed LTF	0.1780

15.6 Contingency Descriptions – Secondary POI

Contingency Name	Contingency Definition
DAY_P734569 34598 34524	CONTINGENCY 'DAY_P734569 34598 34524' OPEN BRANCH FROM BUS 249566 TO BUS 249578 CKT 1 / OPEN BRANCH FROM BUS 249566 TO BUS 253006 CKT 1 / 249566 08FOSTER 345 253006 09BATH 345 1 OPEN BRANCH FROM BUS 249566 TO BUS 253079 CKT 1 / 249566 08FOSTER 345 253079 09SUGRCK 345 1 END
DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGR VZIMMER	CONTINGENCY 'DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGRVZIMMER' OPEN BRANCH FROM BUS 249989 TO BUS 250080 CKT 1 / 249989 08BKJ246 138 250080 08NWTWN2 138 1 OPEN BRANCH FROM BUS 250079 TO BUS 250080 CKT Z1 / 250079 08NWTWN1 138 250080 08NWTWN2 138 Z1 OPEN BRANCH FROM BUS 250079 TO BUS 250092 CKT 1 / 250079 08NWTWN1 138 250092 08REDBK1 138 1 OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 END
EKPC_P1-2_SPUR-GODD 138-B	CONTINGENCY 'EKPC_P1-2_SPUR-GODD 138-B' /* SPURLOCK - GODDARD OPEN BRANCH FROM BUS 958170 TO BUS 342664 CKT 1 /* 958170 AF2-111 TAP 138.00 342664 4SPURLOCK 138.00 END
EKPC_P1-2_SPUR-GODD 138-A	CONTINGENCY 'EKPC_P1-2_SPUR-GODD 138-A' /* SPURLOCK - GODDARD OPEN BRANCH FROM BUS 342583 TO BUS 945680 CKT 1 /* 342583 4FLEMINGSBRG138.00 945680 AF1-233 TAP 138.00 OPEN BRANCH FROM BUS 342583 TO BUS 342589 CKT 1 /* 342583 4FLEMINGSBRG138.00 342589 4GODDARD 138.00 END
AEP_P4_#3195_05BEATTY 345_304E	CONTINGENCY 'AEP_P4_#3195_05BEATTY 345_304E' OPEN BRANCH FROM BUS 243453 TO BUS 243454 CKT 1 / 243453 05BEATTY 345 243454 05BIXBY 345 1 OPEN BRANCH FROM BUS 243453 TO BUS 243468 CKT 4 / 243453 05BEATTY 345 243468 05BEATTX 138 4 END

Contingency Name	Contingency Definition
EKPC_P4-6_SPUR N39-92T	CONTINGENCY 'EKPC_P4-6_SPUR N39-92T' /* SPURLOCK OPEN BRANCH FROM BUS 342622 TO BUS 342664 CKT 1 /* 342622 4MAYSVIL I T138.00 342664 4SPURLOCK 138.00 OPEN BRANCH FROM BUS 342622 TO BUS 342625 CKT 1 /* 342622 4MAYSVIL I T138.00 342625 4MAYSVIL IND138.00 OPEN BRANCH FROM BUS 342622 TO BUS 342634 CKT 1 /* 342622 4MAYSVIL I T138.00 342634 4PLUMVILLE 138.00 OPEN BRANCH FROM BUS 958170 TO BUS 342664 CKT 1 /* 958170 AF2-111 TAP 138.00 342664 4SPURLOCK 138.00 END
EKPC_P2-3_SPUR N39-844	CONTINGENCY 'EKPC_P2-3_SPUR N39-844' /* SPURLOCK OPEN BRANCH FROM BUS 342664 TO BUS 342838 CKT 2 /* 342664 4SPURLOCK 138.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 958170 TO BUS 342664 CKT 1 /* 958170 AF2-111 TAP 138.00 342664 4SPURLOCK 138.00 END
DAY_P734541 34553	CONTINGENCY 'DAY_P734541 34553' OPEN BRANCH FROM BUS 249581 TO BUS 342838 CKT 1 /* 249581 08MELDAL 345.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* 253077 09STUART 345.00 342838 7SPURLOCK 345.00 END
AEP_P4_#10715_05COLE 345_C	CONTINGENCY 'AEP_P4_#10715_05COLE 345_C' OPEN BRANCH FROM BUS 244022 TO BUS 243457 CKT 1 / 244022 05COLE 345 243457 05HAYDEN 345 1 OPEN BRANCH FROM BUS 244022 TO BUS 244023 CKT 1 / 244022 05COLE 345 244023 05COLE 138 1 END
EKPC_P1-2_GODD - ROW138	CONTINGENCY 'EKPC_P1-2_GODD - ROW138' /* GODDARD - ROWAN OPEN BRANCH FROM BUS 342589 TO BUS 342571 CKT 1 /* 342589 4GODDARD 138.00 342571 4CRANSTON 138.00 OPEN BRANCH FROM BUS 342571 TO BUS 342649 CKT 1 /* 342571 4CRANSTON 138.00 342649 4ROWAN CO 138.00 END
DEOK_P2-2_C1 SILVER GROVE 345 BUS	CONTINGENCY 'DEOK_P2-2_C1 SILVER GROVE 345 BUS' OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 END

Contingency Name	Contingency Definition
DEOK_P2-3_C2 1493_RED BANK	CONTINGENCY 'DEOK_P2-3_C2 1493_RED BANK' OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 OPEN BRANCH FROM BUS 249571 TO BUS 250092 CKT 1 / 249571 08REDBK1 345 250092 08REDBK1 138 1 END
AEP_P4_#8094_05BIXBY 345_C	CONTINGENCY 'AEP_P4_#8094_05BIXBY 345_C' OPEN BRANCH FROM BUS 243453 TO BUS 243454 CKT 1 / 243453 05BEATTY 345 243454 05BIXBY 345 1 OPEN BRANCH FROM BUS 941520 TO BUS 243454 CKT 1 / 941520 AE2-149 TAP 345 243454 05BIXBY 345 1 END
DEOK_P2-3_C2 816_SILVERGROVE	CONTINGENCY 'DEOK_P2-3_C2 816_SILVERGROVE' OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249988 TO BUS 250097 CKT 1 / 249988 08BKJ135 138 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 250042 TO BUS 250097 CKT 1 / 250042 08HANDS1 138 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 250052 TO BUS 250097 CKT 1 / 250052 08KYUNIV 138 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 250053 TO BUS 250097 CKT 1 / 250053 08LAFARG 138 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 END
DAY-P1-STU SPUR	CONTINGENCY 'DAY-P1-STU SPUR' DISCONNECT BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* STU SPUR END
EKPC_P4-2_SPUR N39-844	CONTINGENCY 'EKPC_P4-2_SPUR N39-844' /* SPURLOCK OPEN BRANCH FROM BUS 342664 TO BUS 342838 CKT 2 /* 342664 4SPURLOCK 138.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 958170 TO BUS 342664 CKT 1 /* 958170 AF2-111 TAP 138.00 342664 4SPURLOCK 138.00 END

Contingency Name	Contingency Definition
DAY_P4_L34553-1	CONTINGENCY 'DAY_P4_L34553-1' OPEN LINE FROM BUS 253077 TO BUS 342838 CKT 1 /* 09STUART 345 - 7SPURLK 345 OPEN LINE FROM BUS 253077 TO BUS 253076 CKT 1 /* 09STUART 345 - 09STUART 138 END
Base Case	
342583 4FLEMINGSBRG 138 945680 AF1-233 TAP 138 1	CONTINGENCY '342583 4FLEMINGSBRG 138 945680 AF1-233 TAP 138 1' OPEN BRANCH FROM BUS 342583 TO BUS 945680 CKT 1 END
DAY_P7_495	CONTINGENCY 'DAY_P7_495' OPEN BRANCH FROM BUS 249566 TO BUS 253006 CKT 1 / 249566 08FOSTER 345 253006 09BATH 345 1 OPEN BRANCH FROM BUS 253014 TO BUS 253027 CKT 1 / 253014 09CLINTO 345 253027 09GREENE 345 1 OPEN BRANCH FROM BUS 253014 TO BUS 253013 CKT 1 / 253014 09CLINTO 345 253013 09CLINTO 69.0 1 OPEN BRANCH FROM BUS 253014 TO BUS 253013 CKT 2 / 253014 09CLINTO 345 253013 09CLINTO 69.0 1 END
DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	CONTINGENCY 'DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*' OPEN BRANCH FROM BUS 249573 TO BUS 250097 CKT 1 / 249573 08SGROVE 345 250097 08SGROVE 138 1 OPEN BRANCH FROM BUS 249571 TO BUS 249573 CKT 1 / 249571 08REDBK1 345 249573 08SGROVE 345 1 OPEN BRANCH FROM BUS 249573 TO BUS 249577 CKT 1 / 249573 08SGROVE 345 249577 08ZIMER 345 1 END
AEP_P1-2_#10137	CONTINGENCY 'AEP_P1-2_#10137' OPEN BRANCH FROM BUS 243453 TO BUS 244022 CKT 1 / 243453 05BEATTY 345 244022 05COLE 345 1 END
EKPC_P2-3_SPUR N39-1474	CONTINGENCY 'EKPC_P2-3_SPUR N39-1474' /* SPURLOCK OPEN BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* 253077 09STUART 345.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 342664 TO BUS 342838 CKT 2 /* 342664 4SPURLOCK 138.00 342838 7SPURLOCK 345.00 END

Contingency Name	Contingency Definition
EKPC_P4-2_SPUR N39-1474	CONTINGENCY 'EKPC_P4-2_SPUR N39-1474' /* SPURLOCK OPEN BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* 253077 09STUART 345.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 342664 TO BUS 342838 CKT 2 /* 342664 4SPURLOCK 138.00 342838 7SPURLOCK 345.00 END
EKPC_P7-1_SPUR 345&138-A	CONTINGENCY 'EKPC_P7-1_SPUR 345&138-A' /* SPURLOCK - N CLARK 345 & SPURLOCK - GODDARD 138 OPEN BRANCH FROM BUS 960570 TO BUS 342838 CKT 1 /* 960570 AF2-348 TAP 345.00 342838 7SPURLOCK 345.00 OPEN BRANCH FROM BUS 958170 TO BUS 342664 CKT 1 /* 958170 AF2-111 TAP 138.00 342664 4SPURLOCK 138.00 END
AEP_P4_#3196_05BEATTY 345_302E	CONTINGENCY 'AEP_P4_#3196_05BEATTY 345_302E' OPEN BRANCH FROM BUS 243453 TO BUS 244022 CKT 1 / 243453 05BEATTY 345 244022 05COLE 345 1 OPEN BRANCH FROM BUS 243453 TO BUS 243468 CKT 4 / 243453 05BEATTY 345 243468 05BEATTX 138 4 END
EKPC_P7-1_SPUR 345&138-B	CONTINGENCY 'EKPC_P7-1_SPUR 345&138-B' /* SPURLOCK - N CLARK 345 & SPURLOCK - GODDARD 138 OPEN BRANCH FROM BUS 342835 TO BUS 960570 CKT 1 /* 342835 7N CLARK 345.00 960570 AF2-348 TAP 345.00 OPEN BRANCH FROM BUS 958170 TO BUS 342664 CKT 1 /* 958170 AF2-111 TAP 138.00 342664 4SPURLOCK 138.00 END

16 Light Load Analysis – Secondary POI

Light Load Studies (As applicable)

To be determined during later study phases.

17 Short Circuit Analysis – Secondary POI

The following Breakers are overdutied:

To be determined during later study phases.

18 Stability and Reactive Power Assessment – Secondary POI

(Summary of the VAR requirements based upon the results of the dynamic studies)

To be determined during later study phases.

19 Affected Systems – Secondary POI

19.1 TVA

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

19.2 Duke Energy Progress

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

19.3 MISO

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

19.4 LG&E

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