



**Generation Interconnection
Feasibility Study Report
for
Queue Project AF2-355
WEST GERRARD-J.K. SMITH 345 NKV
135 MW Capacity / 225 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.

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

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

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

3 General

The Interconnection Customer (IC), has proposed a Solar generating facility located in Madison County, Kentucky. The installed facilities will have a total capability of 225 MW with 135 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is July 01, 2022. This study does not imply a TO commitment to this in-service date.

Queue Number	AF2-355
Project Name	WEST GERRARD-J.K. SMITH 345 NKV
State	Kentucky
County	Madison
Transmission Owner	EKPC
MFO	225
MWE	225
MWC	135
Fuel	Solar
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

AF2-355 will interconnect with the EKPC transmission system along one of the following Points of Interconnection:

Primary POI: West Gerrard to J.K. Smith 345 kV line

Secondary POI: Fawkes to Three Forks 138 kV line

5 Cost Summary

The AF2-355 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$9,285,000
Total System Network Upgrade Costs	\$77,226,155
Total Costs	\$86,511,155

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

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.

	Total Cost
Install necessary equipment (a 345 kV isolation switch structure and associated switch, plus interconnection metering, fiber-optic connection and telecommunications equipment, circuit breaker and associated switches, and relay panels) at the new Madison County substation to accept the IC generator lead line/bus (Estimated time to implement is 24 months)	\$920,000
Total Attachment Facility Costs	\$920,000

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 345 kV switching station ("Madison County") to facilitate connection of the IC solar generation project to the existing JK Smith-West Garrard 345 kV line (Estimated time to implement is 24 months)	\$7,450,000
Total Direct Connection Facility Costs	\$7,450,000

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 JK Smith-West Garrard 345 kV line into the new Madison County switching station (Estimated time to implement is 24 months)	\$465,000
Modify relays and/or settings at JK Smith substation for the existing line to the new Madison County switching station (Estimated time to implement is 9 months)	\$95,000
Modify relays and/or settings at West Garrard substation for the existing line to the new Madison County switching station (Estimated time to implement is 9 months)	\$95,000
Install fiber-optic connections from the JK Smith-West Garrard OPGW into the new Madison County switching station (Estimated time to implement is 6 months)	\$260,000
Total Non-Direct Connection Facility Costs	\$915,000

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 AF2-355 was evaluated as a 225.0 MW (Capacity 135.0 MW) injection tapping the West Gerrard to J.K. Smith 345 kV line in the EKPC area. Project AF2-355 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-355 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)

None

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	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
100298267	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P4-2_FAWKE S S62-824	breaker	306.0	98.78	100.58	DC	12.17
100298268	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P4-2_FAWKE S S62-804	breaker	306.0	98.81	100.61	DC	12.17

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	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
95497314	243454	05BIXBY	345.0	AEP	243459	05KIRK	345.0	AEP	1	AEP_P4_#3196_05BEATTY 345_302E	breaker	1409.0	104.62	105.14	DC	16.07
98902253	249581	08MELD AL	345.0	DEO &K	249577	08ZIME R	345.0	DEO &K	1	EKPC_P2-3_SPUR N39-1474	bus	1509.0	100.5	101.92	DC	48.22
98902431	249581	08MELD AL	345.0	DEO &K	249577	08ZIME R	345.0	DEO &K	1	DAY_P4_L34553-1	breaker	1509.0	100.51	101.92	DC	48.1
98902432	249581	08MELD AL	345.0	DEO &K	249577	08ZIME R	345.0	DEO &K	1	EKPC_P4-2_SPUR N39-1474	breaker	1509.0	100.5	101.92	DC	48.22
100782127	250054	08LONG BR	138.0	DEO &K	250077	08MTZI ON	138.0	DEO &K	1	DAY_P734541 34553	tower	284.0	146.66	149.11	DC	15.46
100782128	250077	08MTZI ON	138.0	DEO &K	249991	08BUFT N1	138.0	DEO &K	1	DAY_P734541 34553	tower	298.0	135.47	137.81	DC	15.46
98902424	253100	09ATLNTA	345.0	DAY	253110	09ADKI NS	345.0	DAY	1	AEP_P4_#6774_05MARQUI 345_D	breaker	1195.0	101.53	102.11	DC	15.44
98902582	324010	7TRIMB L REAC	345.0	LGEE	248000	06CLIFT Y	345.0	OVE C	1	AEP_P1-2_#363	single	1451.0	128.48	129.52	DC	15.12
98902583	324010	7TRIMB L REAC	345.0	LGEE	248000	06CLIFT Y	345.0	OVE C	1	AEP_P1-2_#10136	single	1451.0	122.9	123.94	DC	15.18
98902586	324010	7TRIMB L REAC	345.0	LGEE	248000	06CLIFT Y	345.0	OVE C	1	Base Case	single	1134.0	112.27	113.61	DC	15.22
98902963	342559	4BOON E CO	138.0	EKPC	250054	08LON GBR	138.0	DEO &K	1	DAY_P734541 34553	tower	284.0	154.02	156.47	DC	15.46
98902191	342838	7SPURL OCK	345.0	EKPC	253077	09STUA RT	345.0	DAY	1	DEOK_P2-2_C1 SILVER GROVE 345 BUS	bus	1532.0	149.56	151.16	DC	54.34
98902308	342838	7SPURL OCK	345.0	EKPC	253077	09STUA RT	345.0	DAY	1	DEOK_P2-3_C2 816_SILVERGROVE	breaker	1532.0	149.74	151.35	DC	54.39
98902309	342838	7SPURL OCK	345.0	EKPC	253077	09STUA RT	345.0	DAY	1	DEOK_P2-3_C2 1493_RED BANK	breaker	1532.0	149.62	151.23	DC	54.34
98902408	342838	7SPURL OCK	345.0	EKPC	249581	08MEL DAL	345.0	DEO &K	1	DAY_P4_L34553-1	breaker	1421.0	101.7	103.23	DC	48.23
98902525	342838	7SPURL OCK	345.0	EKPC	253077	09STUA RT	345.0	DAY	1	Base Case	single	1240.0	139.44	141.92	DC	30.63
98902526	342838	7SPURL OCK	345.0	EKPC	253077	09STUA RT	345.0	DAY	1	DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	single	1532.0	131.56	133.69	DC	32.6

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
98902969	342838	7SPURLOCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSIL GRVZIMMER	tower	1532.0	149.57	151.18	DC	54.35
100297936	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P2-4_JKSM E63-91T-A	bus	306.0	106.55	108.71	DC	14.59
100297937	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P2-4_JKSM E63-91T-B	bus	306.0	101.75	103.92	DC	14.59
100298266	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P4-6_JKSM E63-91T	breaker	306.0	101.75	103.92	DC	14.59

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 DC	MW IMPACT
95497602	243454	05BIXBY	345.0	AEP	243459	05KIRK	345.0	AEP	1	AEP_P1-2_#10137	operation	1409.0	100.91	101.41	DC	15.75
98902684	249581	08MELDA L	345.0	DEO&K	249577	08ZIMER	345.0	DEO&K	1	DAY-P1-STU SPUR	operation	1509.0	100.5	101.92	DC	48.1
98902579	324010	7TRIMBL REAC	345.0	LGEE	248000	06CLIFTY	345.0	OVEC	1	AEP_P1-2_#363	operation	1451.0	131.9	133.64	DC	25.2
98902585	324010	7TRIMBL REAC	345.0	LGEE	248000	06CLIFTY	345.0	OVEC	1	Base Case	operation	1134.0	118.59	120.83	DC	25.36
98902522	342838	7SPURLOCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	Base Case	operation	1240.0	157.08	158.91	DC	51.05
98902523	342838	7SPURLOCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	operation	1532.0	149.52	151.12	DC	54.34
98902670	342838	7SPURLOCK	345.0	EKPC	249581	08MELDA L	345.0	DEO&K	1	DAY-P1-STU SPUR	operation	1421.0	101.69	103.22	DC	48.23
100298662	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P1-2_FAWK 138 TIE	operation	306.0	98.71	100.52	DC	12.17
100298649	958170	AF2-111 TAP	345.0	EKPC	342838	7SPURLOCK	345.0	EKPC	1	EKPC_P1-3_AVON 345/138	operation	1151.0	96.8	103.07	DC	72.14
100298654	958170	AF2-111 TAP	345.0	EKPC	342838	7SPURLOCK	345.0	EKPC	1	Base Case	operation	1056.0	97.14	100.08	DC	68.88

10.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
98902963	8	4BOONE CO 138.0 kV - 08LONGBR 138.0 kV Ckt 1	EKPC: r0052 (1429) : 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 (1476) : 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 (1496) : 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 (1497) : 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 (1498) : 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 EKPC-r0094d (1499) : Change the current transformer setting at Boone County substation associated with circuit breaker N15-814 from 1200A to 1600A. Project Type : FAC Cost : \$0 Time Estimate : 6.0 Months EKPC-r0094e (1500) : Change the Zone 3 relay setting at Boone County substation associated with the line protection to at least 456 MVA LTE rating. Project Type : FAC Cost : \$0 Time Estimate : 6.0 Months EKPC-r0094f (1501) : Upgrade the limiting relay at Boone County substation Project Type : FAC Cost : \$50,000 Time Estimate : 9.0 Months EKPC-r0094g (1502) : Replace the 1600A circuit breaker N15-814 at Boone County substation with a 2000A circuit breaker Project Type : FAC Cost : \$180,000 Time Estimate : 9.0 Months	\$3,245,000

ID	Idx	Facility	Upgrade Description	Cost
95497314	2	05BIXBY 345.0 kV - 05KIRK 345.0 kV Ckt 1	<u>AEP:</u> AEPO0038d (493) : Sag Study will be required on 37.9 miles of line between Bixby and Kirk. The cost is expected to be 151,600. New Ratings after sag study : S/N: 1409MVA S/E: 1887 MVA. Rebuild/Reconductor, cost : \$ 75.8 million Project Type : FAC Cost : \$151,600 Time Estimate : Sag Study : 6 - 12 Months AEPO0038e (494) : An engineering study will need to be conducted to determine if the Kirk Compliance Thermal limits 2396 Amps settings can be adjusted to mitigate the overload, Estimated Cost \$25,000. New relay packages will be required if the settings cannot be adjusted. Estimated Cost: \$600,000. Project Type : FAC Cost : \$25,000 Time Estimate : 12-18 Months s1510.1 (536): PJM solution at Kirk, Install 4-345kV 3,000A CBs & end bus and complete the 345kV breaker and a half configuration. Replace 345/138kV XF with 675 MVA unit. Connect in different 345kV bay and on new 138kV string before removing old unit. SN: 870 SE: 1017) and are necessary. Project Type : FAC Cost : \$0 Time Estimate : Months s1510.2 (537): PJM solution at Bixby, replace Kirk 345kV line risers and line switch and upgrade relaying. SN: 1409, SE: 1409 Project Type : FAC Cost : \$0 Time Estimate : Months	\$176,600
100297936,100297937,100298268,100298267,100298266	1	AF1-267 TAP 138.0 kV - 4LAKE REBA T 138.0 kV Ckt 1	NonPJMArea (1634) : 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
98902253,98902432,98902431	3	08MELDAL 345.0 kV - 08ZIMER 345.0 kV Ckt 1	<u>DEO&K:</u> n34576 (1013) : Rebuild the line Project Type : FAC Cost : \$15,934,149 Time Estimate : 24.0 Months	\$15,934,149
100782128	5	08MTZION 138.0 kV - 08BUFTN1 138.0 kV Ckt 1	<u>DEO&K:</u> n6785c (1015) : Rebuild the line, replace switch at Mt. Zion, replace bus conductor at Buffington Project Type : FAC Cost : \$5,472,876 Time Estimate : 30.0 Months	\$5,472,876

ID	Idx	Facility	Upgrade Description	Cost
98902424	6	09ATLNTA 345.0 kV - 09ADKINS 345.0 kV Ckt 1	<u>DAYTON:</u> r190011 (986) : Replace metering equipment to increase thermal line rating Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months	\$100,000
98902583,9890 2582,98902586	7	7TRIMBL REAC 345.0 kV - 06CLIFTY 345.0 kV Ckt 1	NonPJMArea (1634): 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
100782127	4	08LONGBR 138.0 kV - 08MTZION 138.0 kV Ckt 1	<u>DEO&K:</u> n30581 (1006) : Rebuild the line Project Type : FAC Cost : \$3,047,530 Time Estimate : 30.0 Months	\$3,047,530

ID	Idx	Facility	Upgrade Description	Cost
98902309,98902191,98902969,98902525,98902308,98902526	9	7SPURLOCK 345.0 kV - 09STUART 345.0 kV Ckt 1	<u>DAY:</u> DAYr190039 (963) : Reconductor Stuart-Spurlock line with twin bundle 1033 Curlew ACCR conductor Project Type : FAC Cost : \$17,000,000 Time Estimate : 18.0 Months DAYr190040 (964) : Replace Stuart substation riser conductor with 2500AAC (parallel) Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months DAYr190041 (965) : Reconductor Stuart substation conductor with twin bundle 1033 Curlew ACCR conductor Project Type : FAC Cost : \$250,000 Time Estimate : 12.0 Months r190002 (979) : Replace substation riser conductor with 2500AAC (parallel) Project Type : FAC Cost : \$100,000 Time Estimate : 12.0 Months DAYr20011 (999) : Replace wave trap on Stuart-Spurlock line Project Type : FAC Cost : \$300,000 Time Estimate : 18.0 Months <u>EKPC:</u> r0042 (1419) : 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 r0005 (1471): No Violation. EKPC emergency rating 1792 MVA. Project Type : FAC Cost : \$0 Time Estimate : N/A Months	\$47,750,000
98902408	10	7SPURLOCK 345.0 kV - 08MELDAL 345.0 kV Ckt 1	<u>EKPC:</u> EKPC-r0101 (1520) : Increase the maximum operating temperature of the 954 MCM ACSR conductor in the Spurlock-Mehldahl Dam 345 kV line section to 275 degrees F 3.81 miles) Project Type : FAC Cost : \$1,500,000 Time Estimate : 24.0 Months	\$1,500,000
			TOTAL COST	\$77,226,155

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
100297936	946020	AF1-267 TAP	EKPC	324276	4LAKE REBA T	LGEE	1	EKPC_P2-4_JKSM E63-91T-A	bus	306.0	106.55	108.71	DC	14.59

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342918	1JKCT 1G	3.1780	50/50	3.1780
342921	1JKCT 2G	2.3051	50/50	2.3051
342924	1JKCT 3G	3.1780	50/50	3.1780
342927	1JKCT 4G	2.1090	50/50	2.1090
342930	1JKCT 5G	2.0975	50/50	2.0975
342933	1JKCT 6G	2.1090	50/50	2.1090
342936	1JKCT 7G	2.1090	50/50	2.1090
942591	AE2-275 C O1	10.9538	50/50	10.9538
942592	AE2-275 E O1	4.1203	50/50	4.1203
942893	AE2-308 BAT	9.1060	50/50	9.1060
946021	AF1-267 C	22.3943	50/50	22.3943
946022	AF1-267 E	10.2893	50/50	10.2893
960641	AF2-355 C O1	3.9428	Adder	8.75
960642	AF2-355 E O1	2.6285	Adder	5.83
NEWTON	NEWTON	0.1526	Confirmed LTF	0.1526
FARMERCITY	FARMERCITY	0.0099	Confirmed LTF	0.0099
CALDERWOOD	CALDERWOOD	0.2028	Confirmed LTF	0.2028
NY	NY	0.0393	Confirmed LTF	0.0393
PRAIRIE	PRAIRIE	0.5218	Confirmed LTF	0.5218
O-066	O-066	0.5040	Confirmed LTF	0.5040
CHEOAH	CHEOAH	0.2012	Confirmed LTF	0.2012
EDWARDS	EDWARDS	0.0339	Confirmed LTF	0.0339
TILTON	TILTON	0.0573	Confirmed LTF	0.0573
G-007	G-007	0.0790	Confirmed LTF	0.0790
GIBSON	GIBSON	0.0770	Confirmed LTF	0.0770
BLUEG	BLUEG	0.3489	Confirmed LTF	0.3489
TRIMBLE	TRIMBLE	0.1063	Confirmed LTF	0.1063
CATAWBA	CATAWBA	0.0882	Confirmed LTF	0.0882

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
95497314	243454	05BIXBY	AEP	243459	05KIRK	AEP	1	AEP_P4_#3196_05BEATTY 345_302E	breaker	1409.0	104.62	105.14	DC	16.07

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250164	08BKJDB1	0.1408	Adder	0.17
250165	08BKJDB2	0.1408	Adder	0.17
251827	WILLYESP	0.4289	Adder	0.5
251828	CLNTESP1	0.4910	Adder	0.58
251829	CLNTESP2	0.3274	Adder	0.39
253110	09ADKINS	25.9041	50/50	25.9041
904722	V4-073 E	0.1570	Adder	0.18
913222	Y1-054 E	1.4236	Adder	1.67
918802	AA1-099 E	0.3274	Adder	0.39
923522	AB1-169 C OP	139.5900	50/50	139.5900
924351	AB2-083 C O1	4.8329	50/50	4.8329
924352	AB2-083 E O1	2.2743	50/50	2.2743
924371	AB2-085 C O1	5.1696	Adder	6.08
924372	AB2-085 E O1	2.4328	Adder	2.86
925341	AC1-001 C O1	9.6658	50/50	9.6658
925342	AC1-001 E O1	4.5486	50/50	4.5486
925921	AC1-068 C	9.0369	50/50	9.0369
925922	AC1-068 E	4.2261	50/50	4.2261
925931	AC1-069 C	9.0369	50/50	9.0369
925932	AC1-069 E	4.2261	50/50	4.2261
925981	AC1-074 C O1	3.9360	Adder	4.63
925982	AC1-074 E O1	1.6869	Adder	1.98
926011	AC1-078 C O1	6.5766	Adder	7.74
926012	AC1-078 E O1	10.9610	Adder	12.9
926061	AC1-085 C	20.2692	50/50	20.2692
926062	AC1-085 E	33.0708	50/50	33.0708
926101	AC1-089 C O1 (Suspended)	4.7316	Adder	5.57
926102	AC1-089 E O1 (Suspended)	7.7200	Adder	9.08
926791	AC1-165 C	8.9305	50/50	8.9305
926792	AC1-165 E	4.3324	50/50	4.3324
926801	AC1-166 C	8.9305	50/50	8.9305
926802	AC1-166 E	4.3324	50/50	4.3324
927061	AC1-194 C O1	2.8085	Adder	3.3
927062	AC1-194 E O1	4.5823	Adder	5.39
930062	AB1-014 E	7.2779	Adder	8.56
932201	AC2-029 C	4.9625	50/50	4.9625
932202	AC2-029 E	8.0967	50/50	8.0967
932381	AC2-055 C	3.1941	50/50	3.1941
932382	AC2-055 E	5.2115	50/50	5.2115
932411	AC2-059 C	13.0575	50/50	13.0575

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
932412	AC2-059 E	13.4753	50/50	13.4753
932421	AC2-060 C	11.3254	50/50	11.3254
932422	AC2-060 E	6.3706	50/50	6.3706
932431	AC2-061 C	4.8644	Adder	5.72
932432	AC2-061 E	4.9314	Adder	5.8
932462	AC2-066 E	4.3667	Adder	5.14
932481	AC2-068 C	2.4199	Adder	2.85
932482	AC2-068 E	3.9631	Adder	4.66
932551	AC2-075 C	0.9348	Adder	1.1
932552	AC2-075 E	0.4709	Adder	0.55
932661	AC2-088 C O1	3.7291	Adder	4.39
932662	AC2-088 E O1	3.0688	Adder	3.61
934481	AD1-072 C	2.8685	50/50	2.8685
934482	AD1-072 E	1.3099	50/50	1.3099
934491	AD1-073 C	2.3359	50/50	2.3359
934492	AD1-073 E	1.2033	50/50	1.2033
934561	AD1-081 C	1.3153	Adder	1.55
934562	AD1-081 E	0.6776	Adder	0.8
935031	AD1-136 C	0.5244	Adder	0.62
935032	AD1-136 E	0.4467	Adder	0.53
935041	AD1-140 C O1	8.4500	Adder	9.94
935042	AD1-140 E O1	6.9858	Adder	8.22
936111	AD2-016 C	13.0575	50/50	13.0575
936112	AD2-016 E	13.4753	50/50	13.4753
936251	AD2-031 C O1	2.5920	50/50	2.5920
936252	AD2-031 E O1	4.2290	50/50	4.2290
936381	AD2-048 C	3.2653	Adder	3.84
936382	AD2-048 E	1.6292	Adder	1.92
937231	AD2-162 C	14.9126	50/50	14.9126
937232	AD2-162 E	7.3118	50/50	7.3118
938051	AE1-007 C	0.6940	Adder	0.82
938052	AE1-007 E	1.1323	Adder	1.33
938271	AE1-040 C O1	5.7901	50/50	5.7901
938272	AE1-040 E O1	2.9134	50/50	2.9134
938711	AE1-093	2.4833	Adder	2.92
938921	AE1-120	4.1320	Adder	4.86
939141	AE1-144 C O1	6.6200	Adder	7.79
939142	AE1-144 E O1	3.2852	Adder	3.86
940531	AE2-038 C O1	4.4161	Adder	5.2
940532	AE2-038 E O1	2.1874	Adder	2.57
941411	AE2-138 C	13.5775	Adder	15.97
941412	AE2-138 E	5.0218	Adder	5.91
941511	AE2-148 C	126.2540	50/50	126.2540
941512	AE2-148 E	57.1051	50/50	57.1051
941521	AE2-149 C	100.9730	50/50	100.9730
941522	AE2-149 E	37.6310	50/50	37.6310
941981	AE2-210 C O1	4.6785	Adder	5.5
941982	AE2-210 E O1	1.7598	Adder	2.07
942051	AE2-217 C	7.0704	Adder	8.32
942052	AE2-217 E	4.7136	Adder	5.55
942061	AE2-218 C	7.8720	Adder	9.26
942062	AE2-218 E	5.3470	Adder	6.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942091	AE2-221 C	24.5628	50/50	24.5628
942092	AE2-221 E	16.3752	50/50	16.3752
942521	AE2-267 C O1	2.4053	Adder	2.83
942522	AE2-267 E O1	1.4868	Adder	1.75
942591	AE2-275 C O1	3.9980	Adder	4.7
942592	AE2-275 E O1	1.5038	Adder	1.77
942831	AE2-302 C O1	2.7320	Adder	3.21
942832	AE2-302 E O1	1.8213	Adder	2.14
942891	AE2-308 C O1	6.7367	Adder	7.93
942892	AE2-308 E O1	2.4497	Adder	2.88
942951	AE2-315	2.3810	Adder	2.8
942981	AE2-320 C O1	17.7814	50/50	17.7814
942982	AE2-320 E O1	8.7976	50/50	8.7976
943111	AE2-339 C	1.7793	Adder	2.09
943112	AE2-339 E	0.8764	Adder	1.03
943191	AE2-319 C O1	17.7814	50/50	17.7814
943192	AE2-319 E O1	8.7976	50/50	8.7976
943201	AE2-318 C	5.9987	Adder	7.06
943202	AE2-318 E	2.9280	Adder	3.44
943771	AF1-045	2.7941	Adder	3.29
943773	AF1-045 E	1.8657	Adder	2.19
943943	AF1-062 BAT	43.1660	50/50	43.1660
944521	AF1-117 C	37.9574	50/50	37.9574
944522	AF1-117 E	11.6926	50/50	11.6926
944621	AF1-127 C O1	3.7838	Adder	4.45
944622	AF1-127 E O1	1.8636	Adder	2.19
944941	AF1-159	1.5006	50/50	1.5006
945631	AF1-228 C	31.0973	50/50	31.0973
945632	AF1-228 E	20.7316	50/50	20.7316
945681	AF1-233 C	12.5360	Adder	14.75
945682	AF1-233 E	6.1931	Adder	7.29
945841	AF1-249 C	1.0988	Adder	1.29
945842	AF1-249 E	0.4081	Adder	0.48
945861	AF1-251 C	9.3833	Adder	11.04
945862	AF1-251 E	6.2555	Adder	7.36
945911	AF1-256 C	4.0102	Adder	4.72
945912	AF1-256 E	2.6735	Adder	3.15
946021	AF1-267 C	2.2226	Adder	2.61
946022	AF1-267 E	1.0212	Adder	1.2
946171	AF1-282 C	8.0010	50/50	8.0010
946172	AF1-282 E	5.3340	50/50	5.3340
946181	AF1-283 C	10.4013	50/50	10.4013
946182	AF1-283 E	6.9342	50/50	6.9342
946511	AF1-315 C O1	3.2375	Adder	3.81
946512	AF1-315 E O1	2.1583	Adder	2.54
957171	AF2-011 O1	1.0341	Adder	2.3
957181	AF2-012 O1	5.3772	Adder	11.94
957391	AF2-033 C	0.3651	Adder	0.81
957392	AF2-033 E	0.5476	Adder	1.22
957721	AF2-066 C O1	2.1408	Adder	4.75
957722	AF2-066 E O1	1.4272	Adder	3.17
957731	AF2-067 C O1	1.0898	Adder	2.42

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957732	AF2-067 E O1	0.7266	Adder	1.61
957851	AF2-079 C O1	4.0599	Adder	9.01
957852	AF2-079 E O1	2.7066	Adder	6.01
958171	AF2-111 C	7.0224	Adder	15.59
958172	AF2-111 E	4.6816	Adder	10.39
958291	AF2-123 C O1	0.7750	Adder	1.72
958292	AF2-123 E O1	1.0684	Adder	2.37
959073	AF2-198 BAT	3.6122	50/50	3.6122
959191	AF2-210 C	5.2854	Adder	11.73
959192	AF2-210 E	3.5236	Adder	7.82
959271	AF2-218 C O1	1.1631	Adder	2.58
959272	AF2-218 E O1	0.7757	Adder	1.72
959541	AF2-245 C	3.6839	Adder	8.18
959542	AF2-245 E	2.4559	Adder	5.45
960071	AF2-298 C O1	1.4618	Adder	3.24
960072	AF2-298 E O1	0.9778	Adder	2.17
960151	AF2-306	0.8868	Adder	1.97
960161	AF2-307 C	1.3507	Adder	3.0
960162	AF2-307 E	0.9004	Adder	2.0
960571	AF2-348 C	6.9345	Adder	15.39
960572	AF2-348 E	4.6230	Adder	10.26
960641	AF2-355 C O1	4.3430	Adder	9.64
960642	AF2-355 E O1	2.8953	Adder	6.43
960801	AF2-371 C	7.2894	50/50	7.2894
960802	AF2-371 E	4.8596	50/50	4.8596
961491	AF2-440 C	3.3098	50/50	3.3098
961492	AF2-440 E	3.3098	50/50	3.3098
WEC	WEC	0.6029	Confirmed LTF	0.6029
LGEE	LGEE	3.2016	Confirmed LTF	3.2016
CPL	CPL	0.6562	Confirmed LTF	0.6562
CBM-W2	CBM-W2	24.6191	Confirmed LTF	24.6191
NY	NY	0.8964	Confirmed LTF	0.8964
CBM-W1	CBM-W1	19.9910	Confirmed LTF	19.9910
TVA	TVA	4.0362	Confirmed LTF	4.0362
O-066	O-066	10.6243	Confirmed LTF	10.6243
CBM-S2	CBM-S2	8.3810	Confirmed LTF	8.3810
CBM-S1	CBM-S1	28.8828	Confirmed LTF	28.8828
G-007	G-007	1.6370	Confirmed LTF	1.6370
MEC	MEC	3.6944	Confirmed LTF	3.6944

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
98902432	249581	08MELDAL	DEO&K	249577	08ZIMER	DEO&K	1	EKPC_P4-2_SPUR N39-1474	breaker	1509.0	100.5	101.92	DC	48.22

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251970	08MELDL1	4.5429	50/50	4.5429
251971	08MELDL2	4.5429	50/50	4.5429
251972	08MELDL3	4.5551	50/50	4.5551
342939	1JKCT 9G	3.2547	50/50	3.2547
342942	1JKCT 10G	3.2547	50/50	3.2547
342957	1SPURLK1G	22.5275	50/50	22.5275
342960	1SPURLK2G	44.8392	50/50	44.8392
342963	1SPURLK3G	23.5625	50/50	23.5625
342966	1SPURLK4G	23.5625	50/50	23.5625
925981	AC1-074 C O1	13.5514	50/50	13.5514
925982	AC1-074 E O1	5.8078	50/50	5.8078
932551	AC2-075 C	3.2185	50/50	3.2185
932552	AC2-075 E	1.6213	50/50	1.6213
936381	AD2-048 C	10.9656	50/50	10.9656
936382	AD2-048 E	5.4711	50/50	5.4711
936571	AD2-072 C O1	6.9837	Adder	8.22
936572	AD2-072 E O1	3.4242	Adder	4.03
939131	AE1-143 C	5.1323	Adder	6.04
939132	AE1-143 E	2.5422	Adder	2.99
939141	AE1-144 C O1	29.5802	50/50	29.5802
939142	AE1-144 E O1	14.6794	50/50	14.6794
940531	AE2-038 C O1	19.7324	50/50	19.7324
940532	AE2-038 E O1	9.7740	50/50	9.7740
941411	AE2-138 C	57.6442	50/50	57.6442
941412	AE2-138 E	21.3204	50/50	21.3204
941981	AE2-210 C O1	19.8626	50/50	19.8626
941982	AE2-210 E O1	7.4713	50/50	7.4713
942411	AE2-254 C O1	3.6248	Adder	4.26
942412	AE2-254 E O1	2.4165	Adder	2.84
942591	AE2-275 C O1	11.9674	Adder	14.08
942592	AE2-275 E O1	4.5015	Adder	5.3
942891	AE2-308 C O1	20.0137	Adder	23.55
942892	AE2-308 E O1	7.2777	Adder	8.56
943111	AE2-339 C	6.6303	50/50	6.6303
943112	AE2-339 E	3.2657	50/50	3.2657
944511	AF1-116 C	5.7559	Adder	6.77
944512	AF1-116 E	3.8372	Adder	4.51
944621	AF1-127 C O1	15.7241	50/50	15.7241
944622	AF1-127 E O1	7.7447	50/50	7.7447
945541	AF1-219 C O1	2.2844	Adder	2.69
945542	AF1-219 E O1	1.0750	Adder	1.26

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945681	AF1-233 C	56.7777	50/50	56.7777
945682	AF1-233 E	28.0495	50/50	28.0495
945861	AF1-251 C	39.4390	50/50	39.4390
945862	AF1-251 E	26.2926	50/50	26.2926
945911	AF1-256 C	18.2208	50/50	18.2208
945912	AF1-256 E	12.1472	50/50	12.1472
946021	AF1-267 C	6.5944	Adder	7.76
946022	AF1-267 E	3.0299	Adder	3.56
958171	AF2-111 C	68.1060	50/50	68.1060
958172	AF2-111 E	45.4040	50/50	45.4040
959541	AF2-245 C	32.9060	50/50	32.9060
959542	AF2-245 E	21.9373	50/50	21.9373
960151	AF2-306	6.3263	50/50	6.3263
960161	AF2-307 C	9.6355	50/50	9.6355
960162	AF2-307 E	6.4236	50/50	6.4236
960571	AF2-348 C	66.6360	50/50	66.6360
960572	AF2-348 E	44.4240	50/50	44.4240
960641	AF2-355 C O1	13.0338	Adder	28.93
960642	AF2-355 E O1	8.6892	Adder	19.29
961281	AF2-419 C	0.7569	Adder	1.68
961282	AF2-419 E	0.5046	Adder	1.12
961291	AF2-420 C	0.7569	Adder	1.68
961292	AF2-420 E	0.5046	Adder	1.12
LGEE	LGEE	2.8114	Confirmed LTF	2.8114
CPL	CPL	0.7759	Confirmed LTF	0.7759
LGE-0012019	LGE-0012019	7.0279	LTF	7.0279
CBM-W2	CBM-W2	12.7764	Confirmed LTF	12.7764
NY	NY	0.1471	Confirmed LTF	0.1471
TVA	TVA	3.9550	Confirmed LTF	3.9550
O-066	O-066	1.3574	Confirmed LTF	1.3574
CBM-S2	CBM-S2	8.9359	Confirmed LTF	8.9359
CBM-S1	CBM-S1	27.4003	Confirmed LTF	27.4003
G-007	G-007	0.2070	Confirmed LTF	0.2070
MADISON	MADISON	12.6766	Confirmed LTF	12.6766
MEC	MEC	0.8962	Confirmed LTF	0.8962

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
100782127	250054	08LONGBR	DEO&K	250077	08MTZION	DEO&K	1	DAY_P734541 34553	tower	284.0	146.66	149.11	DC	15.46

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	2.7850	Adder	6.18
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

10.6.5 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
100782128	250077	08MTZION	DEO&K	249991	08BUFTN1	DEO&K	1	DAY_P734541 34553	tower	298.0	135.47	137.81	DC	15.46

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	2.7850	Adder	6.18
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

10.6.6 Index 6

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
98902424	253100	09ATLNTA	DAY	253110	09ADKINS	DAY	1	AEP_P4_#6774_05MARQ UI 345_D	breaker	1195.0	101.53	102.11	DC	15.44

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250166	HLCRST AB114	0.8390	50/50	0.8390
251830	BIOENGRY	0.0970	50/50	0.0970
342957	1SPURLK1G	6.1942	50/50	6.1942
342960	1SPURLK2G	11.4733	50/50	11.4733
342963	1SPURLK3G	6.0291	50/50	6.0291
342966	1SPURLK4G	6.0291	50/50	6.0291
923522	AB1-169 C OP	181.7640	50/50	181.7640
925921	AC1-068 C	19.0767	50/50	19.0767
925922	AC1-068 E	8.9212	50/50	8.9212
925931	AC1-069 C	19.0767	50/50	19.0767
925932	AC1-069 E	8.9212	50/50	8.9212
925981	AC1-074 C O1	3.8237	Adder	4.5
925982	AC1-074 E O1	1.6387	Adder	1.93
926061	AC1-085 C	17.2064	50/50	17.2064
926062	AC1-085 E	28.0736	50/50	28.0736
926791	AC1-165 C	18.8523	50/50	18.8523
926792	AC1-165 E	9.1456	50/50	9.1456
926801	AC1-166 C	18.8523	50/50	18.8523
926802	AC1-166 E	9.1456	50/50	9.1456
930062	AB1-014 E	7.9360	50/50	7.9360
932381	AC2-055 C	1.4331	Adder	1.69
932382	AC2-055 E	2.3383	Adder	2.75
932421	AC2-060 C	5.0815	Adder	5.98
932422	AC2-060 E	2.8583	Adder	3.36
932461	AC2-066 C	0.5034	50/50	0.5034
932462	AC2-066 E	4.7616	50/50	4.7616
932551	AC2-075 C	0.9081	Adder	1.07
932552	AC2-075 E	0.4575	Adder	0.54
932661	AC2-088 C O1	4.4997	50/50	4.4997
932662	AC2-088 E O1	3.7029	50/50	3.7029
934491	AD1-073 C	1.0481	Adder	1.23
934492	AD1-073 E	0.5399	Adder	0.64
935031	AD1-136 C	0.6328	50/50	0.6328
935032	AD1-136 E	0.5390	50/50	0.5390
936251	AD2-031 C O1	1.2540	Adder	1.48
936252	AD2-031 E O1	2.0461	Adder	2.41
936381	AD2-048 C	3.1208	Adder	3.67
936382	AD2-048 E	1.5571	Adder	1.83
938271	AE1-040 C O1	3.9494	50/50	3.9494
938272	AE1-040 E O1	1.9872	50/50	1.9872
938921	AE1-120	4.5056	50/50	4.5056
939141	AE1-144 C O1	8.3961	50/50	8.3961

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939142	AE1-144 E O1	4.1667	50/50	4.1667
940531	AE2-038 C O1	5.6009	50/50	5.6009
940532	AE2-038 E O1	2.7743	50/50	2.7743
941411	AE2-138 C	14.1664	Adder	16.67
941412	AE2-138 E	5.2396	Adder	6.16
941981	AE2-210 C O1	4.8814	Adder	5.74
941982	AE2-210 E O1	1.8361	Adder	2.16
942091	AE2-221 C	13.4701	Adder	15.85
942092	AE2-221 E	8.9801	Adder	10.56
942591	AE2-275 C O1	3.8329	Adder	4.51
942592	AE2-275 E O1	1.4417	Adder	1.7
942891	AE2-308 C O1	6.4431	Adder	7.58
942892	AE2-308 E O1	2.3429	Adder	2.76
942981	AE2-320 C O1	37.5363	50/50	37.5363
942982	AE2-320 E O1	18.5717	50/50	18.5717
943111	AE2-339 C	1.7586	Adder	2.07
943112	AE2-339 E	0.8662	Adder	1.02
943191	AE2-319 C O1	37.5363	50/50	37.5363
943192	AE2-319 E O1	18.5717	50/50	18.5717
943201	AE2-318 C	5.0089	Adder	5.89
943202	AE2-318 E	2.4448	Adder	2.88
943771	AF1-045	2.3330	Adder	2.74
943773	AF1-045 E	1.5578	Adder	1.83
944521	AF1-117 C	83.3550	50/50	83.3550
944522	AF1-117 E	25.6770	50/50	25.6770
944621	AF1-127 C O1	3.9118	Adder	4.6
944622	AF1-127 E O1	1.9267	Adder	2.27
944941	AF1-159	0.7260	Adder	0.85
945681	AF1-233 C	16.0118	50/50	16.0118
945682	AF1-233 E	7.9102	50/50	7.9102
945861	AF1-251 C	9.7479	Adder	11.47
945862	AF1-251 E	6.4986	Adder	7.65
945911	AF1-256 C	5.1322	50/50	5.1322
945912	AF1-256 E	3.4214	50/50	3.4214
946021	AF1-267 C	2.1194	Adder	2.49
946022	AF1-267 E	0.9738	Adder	1.15
946102	AF1-275 BAT	3.4955	Merchant Transmission	3.4955
946171	AF1-282 C	6.7920	50/50	6.7920
946172	AF1-282 E	4.5280	50/50	4.5280
946181	AF1-283 C	8.8296	50/50	8.8296
946182	AF1-283 E	5.8864	50/50	5.8864
946511	AF1-315 C O1	2.7537	Adder	3.24
946512	AF1-315 E O1	1.8358	Adder	2.16
958171	AF2-111 C	17.8320	50/50	17.8320
958172	AF2-111 E	11.8880	50/50	11.8880
959541	AF2-245 C	9.1199	50/50	9.1199
959542	AF2-245 E	6.0799	50/50	6.0799
960151	AF2-306	0.8672	Adder	1.92
960161	AF2-307 C	1.3209	Adder	2.93
960162	AF2-307 E	0.8806	Adder	1.95
960571	AF2-348 C	17.5275	50/50	17.5275
960572	AF2-348 E	11.6850	50/50	11.6850

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960641	AF2-355 C O1	4.1733	Adder	9.26
960642	AF2-355 E O1	2.7822	Adder	6.18
961491	AF2-440 C	0.8094	Adder	1.8
961492	AF2-440 E	0.8094	Adder	1.8
WEC	WEC	0.3704	Confirmed LTF	0.3704
LGEE	LGEE	2.2398	Confirmed LTF	2.2398
CPL	CPL	0.3109	Confirmed LTF	0.3109
CBM-W2	CBM-W2	15.2744	Confirmed LTF	15.2744
NY	NY	0.4352	Confirmed LTF	0.4352
CBM-W1	CBM-W1	10.8086	Confirmed LTF	10.8086
TVA	TVA	2.5592	Confirmed LTF	2.5592
O-066	O-066	5.0938	Confirmed LTF	5.0938
CBM-S2	CBM-S2	4.3061	Confirmed LTF	4.3061
CBM-S1	CBM-S1	18.8974	Confirmed LTF	18.8974
G-007	G-007	0.7852	Confirmed LTF	0.7852
MEC	MEC	2.2739	Confirmed LTF	2.2739

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
98902582	324010	7TRIMBL REAC	LGEE	248000	06CLIFTY	OVEC	1	AEP_P1-2_#363	single	1451.0	128.48	129.52	DC	15.12

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
243442	05RKG1	14.5062	80/20	14.5062
243443	05RKG2	14.2864	80/20	14.2864
342900	1COOPER1 G	2.4207	80/20	2.4207
342903	1COOPER2 G	4.6942	80/20	4.6942
342918	1JKCT 1G	1.8896	80/20	1.8896
342921	1JKCT 2G	1.3706	80/20	1.3706
342924	1JKCT 3G	1.8896	80/20	1.8896
342927	1JKCT 4G	1.2540	80/20	1.2540
342930	1JKCT 5G	1.2472	80/20	1.2472
342933	1JKCT 6G	1.2540	80/20	1.2540
342936	1JKCT 7G	1.2540	80/20	1.2540
342939	1JKCT 9G	1.2895	80/20	1.2895
342942	1JKCT 10G	1.2895	80/20	1.2895
342945	1LAUREL 1G	1.3659	80/20	1.3659
925981	AC1-074 C O1	3.9855	80/20	3.9855
930461	AB1-087	35.0735	80/20	35.0735
930471	AB1-088	35.0735	80/20	35.0735
932551	AC2-075 C	0.9466	80/20	0.9466
933441	AC2-157 C	4.8465	80/20	4.8465
936381	AD2-048 C	3.4301	80/20	3.4301
936571	AD2-072 C O1	10.1176	80/20	10.1176
939131	AE1-143 C	9.5735	80/20	9.5735
940041	AE1-246 C O1	11.9517	80/20	11.9517
940831	AE2-071 C	3.0314	80/20	3.0314
941341	AE2-130 C	30.5808	80/20	30.5808
941411	AE2-138 C	15.1422	80/20	15.1422
941981	AE2-210 C O1	5.2176	80/20	5.2176
942411	AE2-254 C O1	4.0278	80/20	4.0278
942591	AE2-275 C O1	6.8134	80/20	6.8134
942601	AE2-276	3.1885	80/20	3.1885
942891	AE2-308 C O1	11.5071	80/20	11.5071
943111	AE2-339 C	2.5623	80/20	2.5623
943701	AF1-038 C	4.6588	80/20	4.6588
943821	AF1-050 C	5.4126	80/20	5.4126
944151	AF1-083 C O1	4.9790	80/20	4.9790
944201	AF1-088 FTIR	63.7700	80/20	63.7700
944511	AF1-116 C	10.7366	80/20	10.7366
944621	AF1-127 C O1	4.4322	80/20	4.4322
945381	AF1-203 C	1.7322	80/20	1.7322
945541	AF1-219 C O1	3.2077	80/20	3.2077
945861	AF1-251 C	10.7144	80/20	10.7144
946021	AF1-267 C	3.8151	80/20	3.8151

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
952811	J759	9.7391	PJM External (MISO)	9.7391
952821	J762	30.0320	PJM External (MISO)	30.0320
952861	J783 C	9.3334	PJM External (MISO)	9.3334
953611	J800	14.1350	PJM External (MISO)	14.1350
953931	J856	9.4496	PJM External (MISO)	9.4496
955451	J1027	13.7985	PJM External (MISO)	13.7985
955461	J1028	15.2805	PJM External (MISO)	15.2805
955891	J1074	23.0880	PJM External (MISO)	23.0880
956911	J1189	0.4479	PJM External (MISO)	0.4479
957141	AF2-008 FTIR	31.8850	80/20	31.8850
957961	AF2-090 C	16.4592	80/20	16.4592
959691	AF2-260 C O1	11.9778	80/20	11.9778
960151	AF2-306	1.6749	80/20	1.6749
960161	AF2-307 C	2.5510	80/20	2.5510
960171	AF2-308	5.7854	80/20	5.7854
960181	AF2-309 C	8.6780	80/20	8.6780
960621	AF2-353 C	35.6776	80/20	35.6776
960641	AF2-355 C O1	15.1214	80/20	15.1214
960741	AF2-365 C O1	4.7367	80/20	4.7367
961001	AF2-391 C O1	15.6096	80/20	15.6096
961281	AF2-419 C	1.8240	80/20	1.8240
961291	AF2-420 C	1.8240	80/20	1.8240
WEC	WEC	0.6634	Confirmed LTF	0.6634
LGEE	LGEE	18.1402	Confirmed LTF	18.1402
CPL	CPL	1.1986	Confirmed LTF	1.1986
CBM-W2	CBM-W2	56.1670	Confirmed LTF	56.1670
NY	NY	0.2737	Confirmed LTF	0.2737
CBM-W1	CBM-W1	19.6532	Confirmed LTF	19.6532
TVA	TVA	9.5130	Confirmed LTF	9.5130
CBM-S2	CBM-S2	14.7563	Confirmed LTF	14.7563
CBM-S1	CBM-S1	97.4858	Confirmed LTF	97.4858
MADISON	MADISON	12.3480	Confirmed LTF	12.3480
MEC	MEC	6.0890	Confirmed LTF	6.0890

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
98902963	342559	4BOONE CO	EKPC	250054	08LONGBR	DEO&K	1	DAY_P734541 34553	tower	284.0	154.02	156.47	DC	15.46

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	2.7850	Adder	6.18
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

10.6.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
98902969	342838	7SPURLO CK	EKPC	253077	09STUART	DAY	1	DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGRVZIMMER	tower	1532.0	149.57	151.18	DC	54.35

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	9.7932	Adder	21.74
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

10.6.10 Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
98902408	342838	7SPURLOCK	EKPC	249581	08MELDAL	DEO&K	1	DAY_P4_L34553-1	breaker	1421.0	101.7	103.23	DC	48.23

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342918	1JKCT 1G	4.4184	50/50	4.4184
342921	1JKCT 2G	3.2048	50/50	3.2048
342924	1JKCT 3G	4.4184	50/50	4.4184
342939	1JKCT 9G	3.2527	50/50	3.2527
342942	1JKCT 10G	3.2527	50/50	3.2527
342957	1SPURLK1G	23.2349	50/50	23.2349
342960	1SPURLK2G	44.5392	50/50	44.5392
342963	1SPURLK3G	23.4049	50/50	23.4049
342966	1SPURLK4G	23.4049	50/50	23.4049
925981	AC1-074 C O1	13.7547	50/50	13.7547
925982	AC1-074 E O1	5.8949	50/50	5.8949
926101	AC1-089 C O1 (Suspended)	3.8813	Adder	4.57
926102	AC1-089 E O1 (Suspended)	6.3327	Adder	7.45
932551	AC2-075 C	3.2667	50/50	3.2667
932552	AC2-075 E	1.6457	50/50	1.6457
936381	AD2-048 C	11.1725	50/50	11.1725
936382	AD2-048 E	5.5743	50/50	5.5743
936571	AD2-072 C O1	7.0232	Adder	8.26
936572	AD2-072 E O1	3.4436	Adder	4.05
939131	AE1-143 C	5.1678	Adder	6.08
939132	AE1-143 E	2.5597	Adder	3.01
939141	AE1-144 C O1	30.4543	50/50	30.4543
939142	AE1-144 E O1	15.1133	50/50	15.1133
940531	AE2-038 C O1	20.3156	50/50	20.3156
940532	AE2-038 E O1	10.0628	50/50	10.0628
941411	AE2-138 C	57.5208	50/50	57.5208
941412	AE2-138 E	21.2748	50/50	21.2748
941981	AE2-210 C O1	19.8201	50/50	19.8201
941982	AE2-210 E O1	7.4553	50/50	7.4553
942411	AE2-254 C O1	3.6424	Adder	4.29
942412	AE2-254 E O1	2.4283	Adder	2.86
942591	AE2-275 C O1	12.0024	Adder	14.12
942592	AE2-275 E O1	4.5147	Adder	5.31
942891	AE2-308 C O1	20.0829	Adder	23.63
942892	AE2-308 E O1	7.3029	Adder	8.59
943111	AE2-339 C	6.6464	50/50	6.6464
943112	AE2-339 E	3.2736	50/50	3.2736
943701	AF1-038 C	2.6350	Adder	3.1
943702	AF1-038 E	1.7566	Adder	2.07
944151	AF1-083 C O1	2.3913	Adder	2.81

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944152	AF1-083 E O1	1.5942	Adder	1.88
944511	AF1-116 C	5.7956	Adder	6.82
944512	AF1-116 E	3.8638	Adder	4.55
944621	AF1-127 C O1	15.7010	50/50	15.7010
944622	AF1-127 E O1	7.7334	50/50	7.7334
945541	AF1-219 C O1	2.2969	Adder	2.7
945542	AF1-219 E O1	1.0809	Adder	1.27
945681	AF1-233 C	58.4705	50/50	58.4705
945682	AF1-233 E	28.8858	50/50	28.8858
945861	AF1-251 C	39.3677	50/50	39.3677
945862	AF1-251 E	26.2451	50/50	26.2451
945911	AF1-256 C	18.7651	50/50	18.7651
945912	AF1-256 E	12.5101	50/50	12.5101
946021	AF1-267 C	6.6146	Adder	7.78
946022	AF1-267 E	3.0391	Adder	3.58
958171	AF2-111 C	67.7040	50/50	67.7040
958172	AF2-111 E	45.1360	50/50	45.1360
959541	AF2-245 C	33.9229	50/50	33.9229
959542	AF2-245 E	22.6153	50/50	22.6153
960151	AF2-306	6.4397	50/50	6.4397
960161	AF2-307 C	9.8081	50/50	9.8081
960162	AF2-307 E	6.5388	50/50	6.5388
960571	AF2-348 C	66.2550	50/50	66.2550
960572	AF2-348 E	44.1700	50/50	44.1700
960641	AF2-355 C O1	13.0362	Adder	28.94
960642	AF2-355 E O1	8.6908	Adder	19.29
961281	AF2-419 C	0.7607	Adder	1.69
961282	AF2-419 E	0.5072	Adder	1.13
961291	AF2-420 C	0.7607	Adder	1.69
961292	AF2-420 E	0.5072	Adder	1.13
LGEE	LGEE	2.8519	Confirmed LTF	2.8519
CPL	CPL	0.8176	Confirmed LTF	0.8176
LGE-0012019	LGE-0012019	7.0246	LTF	7.0246
CBM-W2	CBM-W2	13.2596	Confirmed LTF	13.2596
NY	NY	0.1128	Confirmed LTF	0.1128
TVA	TVA	4.0404	Confirmed LTF	4.0404
O-066	O-066	0.9408	Confirmed LTF	0.9408
CBM-S2	CBM-S2	9.3000	Confirmed LTF	9.3000
CBM-S1	CBM-S1	27.9371	Confirmed LTF	27.9371
G-007	G-007	0.1425	Confirmed LTF	0.1425
MADISON	MADISON	12.7391	Confirmed LTF	12.7391
MEC	MEC	0.9868	Confirmed LTF	0.9868

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
AB1-087	Sullivan 345kV #1	Active
AB1-088	Sullivan 345kV #2	Active
AB1-169	Stuart 345kV	Engineering and Procurement
AB2-083	Delano 138kV	Active
AB2-085	Adams 138kV	Active
AC1-001	Delano 138kV	Active
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
AC1-194	Elk 138kV	Active
AC2-029	Circleville 138kV	Active
AC2-055	Buckskin 69kV	Active
AC2-059	Biers Run-Circleville 138kV	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
AC2-157	Sullivan 345 kV	Active
AD1-072	Biers Run-Circleville 138 kV	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
AD2-016	Biers Run-Circleville 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
AD2-162	Biers Run-Circleville 138kV	Active
AE1-007	Camden-Crystal III 69 kV	Active

Queue Number	Project Name	Status
AE1-040	Greenfield 69 kV	Active
AE1-093	Elk 138 kV	Active
AE1-120	Hillcrest 138 kV	Engineering and Procurement
AE1-143	Marion County 161 kV	
AE1-144	Goddard-Plumville 138 kV	Active
AE1-246	Barren County-Summer Shade 161 kV	Active
AE2-038	Goddard-Plumville 138 kV II	Active
AE2-071	Patton Rd-Summer Shade 69 kV	Active
AE2-130	Rockport 765 kV	Active
AE2-138	Avon-North Clark 345 kV	Active
AE2-148	Beatty-Greene 345 kV	Active
AE2-149	Biers Run-Bixby 345 kV	Active
AE2-210	Avon-North Clark 345 kV	Active
AE2-217	East Springfield-London 138 kV	Active
AE2-218	Eldean 138 kV	Active
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
AE2-276	Sullivan 345kV	Active
AE2-302	East Beaver-Lick 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
AF1-062	Jug Street 138 kV	Active
AF1-083	Green County-Saloma 161 kV	Active
AF1-088	Sullivan 345 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
AF1-203	Patton Rd-Summer Shade 69 kV	Active
AF1-219	Hunt Farm 69 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
AF2-008	Sullivan 345 kV	Active
AF2-011	Tait 69 kV	Active
AF2-012	Tait 69 kV	Active

Queue Number	Project Name	Status
AF2-033	Miami Fort 138 kV	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
AF2-218	Gettysburg 69 kV	Active
AF2-245	Spurlock-Flemingsburg 345 kV	Active
AF2-260	Stephensburg 69 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
AF2-353	Rockport 765 kV	Active
AF2-355	West Gerrard-J.K. Smith 345 nkV	Active
AF2-365	Munfordville KU Tap-Horse Cave Jct. 69 kV	Active
AF2-371	Harrison-Good Hope 138 kV	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
J1027	MISO	MISO
J1028	MISO	MISO
J1074	MISO	MISO
J1189	MISO	MISO
J759	MISO	MISO
J762	MISO	MISO
J783	MISO	MISO
J800	MISO	MISO
J856	MISO	MISO

10.8 Contingency Descriptions - Primary POI

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
EKPC_P4-6_JKSM E63-91T	CONTINGENCY 'EKPC_P4-6_JKSM E63-91T' /* JK SMITH OPEN BRANCH FROM BUS 342596 TO BUS 342607 CKT 1 /* 342596 4HUNT 138.00 342607 4JK SMITH 138.00 OPEN BRANCH FROM BUS 942590 TO BUS 342607 CKT 1 /* 942590 AE2-275 TAP 138.00 342607 4JK SMITH 138.00 END
EKPC_P1-2_FAWK 138 TIE	CONTINGENCY 'EKPC_P1-2_FAWK 138 TIE' OPEN BUS 342577 /* 342577 4FAWKES EK 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
EKPC_P1-3_AVON 345/138	CONTINGENCY 'EKPC_P1-3_AVON 345/138' /* OPEN BRANCH FROM BUS 342541 TO BUS 342829 CKT 1 /* 342541 4AVON 138.00 342829 7AVON 345.00 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
EKPC_P2-4_JKSM E63-91T-A	CONTINGENCY 'EKPC_P2-4_JKSM E63-91T-A' /* JK SMITH OPEN BRANCH FROM BUS 342596 TO BUS 342607 CKT 1 /* 342596 4HUNT 138.00 342607 4JK SMITH 138.00 OPEN BRANCH FROM BUS 342577 TO BUS 942590 CKT 1 /* 342577 4FAWKES EK 138.00 942590 AE2-275 TAP 138.00 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_P2-4_JKSM E63-91T-B	CONTINGENCY 'EKPC_P2-4_JKSM E63-91T-B' /* JK SMITH OPEN BRANCH FROM BUS 342596 TO BUS 342607 CKT 1 /* 342596 4HUNT 138.00 342607 4JK SMITH 138.00 OPEN BRANCH FROM BUS 942590 TO BUS 342607 CKT 1 /* 942590 AE2-275 TAP 138.00 342607 4JK SMITH 138.00 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

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	
EKPC_P4-2_FAWKES S62-824	CONTINGENCY 'EKPC_P4-2_FAWKES S62-824' /* OPEN BUS 342577 /* 4FAWKES EK DROPS BUS OPEN BRANCH FROM BUS 342430 TO BUS 342691 CKT 1 /* 342430 2W BERE 69.000 342691 4W BERE 138.00 END
EKPC_P4-2_FAWKES S62-804	CONTINGENCY 'EKPC_P4-2_FAWKES S62-804' /* OPEN BUS 342577 /* 4FAWKES EK DROPS BUS OPEN BRANCH FROM BUS 942890 TO BUS 342676 CKT 1 /* 942890 AE2-308 TAP 138.00 342676 4THREE FK T 138.00 OPEN BRANCH FROM BUS 342676 TO BUS 342679 CKT 1 /* 342676 4THREE FK T 138.00 342679 4THREE FORKS 138.00 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
AEP_P1-2_#10136	CONTINGENCY 'AEP_P1-2_#10136' OPEN BRANCH FROM BUS 243208 TO BUS 243209 CKT 1 / 243208 05JEFRSO 765 243209 05ROCKPT 765 1 OPEN BRANCH FROM BUS 243209 TO BUS 243443 CKT 2 / 243209 05ROCKPT 765 243443 05RKG2 26.0 2 REMOVE UNIT 2H FROM BUS 243443 / 243443 05RKG2 26.0 REMOVE UNIT 2L FROM BUS 243443 / 243443 05RKG2 26.0 END

Contingency Name	Contingency Definition
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
AEP_P1-2_#363	CONTINGENCY 'AEP_P1-2_#363' OPEN BRANCH FROM BUS 243208 TO BUS 243209 CKT 1 / 243208 05JEFRSO 765 243209 05ROCKPT 765 1 END
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_#6774_05MARQUI 345_D	CONTINGENCY 'AEP_P4_#6774_05MARQUI 345_D' OPEN BRANCH FROM BUS 246888 TO BUS 242938 CKT 1 / 246888 05BIERSR 345 242938 05MARQUI 345 1 OPEN BRANCH FROM BUS 242938 TO BUS 253038 CKT 1 / 242938 05MARQUI 345 253038 09KILLEN 345 1 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 LG&E

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

14.2 MISO

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

14.3 TVA

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

14.4 Duke Energy Progress

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

15 Summer Peak - Load Flow Analysis - Secondary POI

The Queue Project AF2-355 was evaluated as a 255.0 MW (Capacity 135.0 MW) injection tapping the Fawkes to Three Forks 138 kV line in the EKPC area. Project AF2-355 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF2-355 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	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
101997003	342574	4DALE	138.0	EKPC	342565	4BOONESBOR T	138.0	EKPC	1	EKPC_P1-2_JKS-NCLA345	single	296.0	89.57	101.38	DC	34.95
155140190	342577	4FAWKES EK	138.0	EKPC	324247	4FAWKES TAP	138.0	LGEE	1	EKPC_P1-2_KU-FAW-FAW138	single	284.0	80.41	100.46	DC	56.96
153546771	942890	AE2-308 TAP	138.0	EKPC	342574	4DALE	138.0	EKPC	1	EKPC_P1-2_DALE-FAWK 138-C	single	203.0	52.91	119.41	DC	135.0
153546772	942890	AE2-308 TAP	138.0	EKPC	342574	4DALE	138.0	EKPC	1	EKPC_P1-2_FAWK 138 TIE	single	203.0	52.61	119.11	DC	135.0
153546763	960640	AF2-355 TAP	138.0	EKPC	342577	4FAWKES EK	138.0	EKPC	1	EKPC_P1-2_AVN-BBN-DLE138	single	203.0	77.0	122.06	DC	91.48
153546764	960640	AF2-355 TAP	138.0	EKPC	342577	4FAWKES EK	138.0	EKPC	1	EKPC_P1-2_DALE-FAWK 138-A	single	203.0	52.91	119.41	DC	135.0

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	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
100297939	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P2-3_FAWKES S62-824	bus	306.0	98.78	101.28	DC	16.87
100298267	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P4-2_FAWKES S62-824	breaker	306.0	98.78	101.28	DC	16.87

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	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
95497314	243454	05BIXBY	345.0	AEP	243459	05KIRK	345.0	AEP	1	AEP_P4_#3196_05BEATTY 345_302E	breaker	1409.0	105.27	105.86	DC	18.33
98902431	249581	08MELD AL	345.0	DEO &K	249577	08ZIME R	345.0	DEO &K	1	DAY_P4_L34553-1	breaker	1509.0	100.13	101.73	DC	54.36
100782127	250054	08LONG BR	138.0	DEO &K	250077	08MTZI ON	138.0	DEO &K	1	DAY_P734541 34553	tower	284.0	147.73	150.72	DC	18.79
100782128	250077	08MTZI ON	138.0	DEO &K	249991	08BUFT N1	138.0	DEO &K	1	DAY_P734541 34553	tower	298.0	136.5	139.34	DC	18.79

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
98902424	253100	09ATLNTA	345.0	DAY	253110	09ADKINS	345.0	DAY	1	AEP_P4_#6774_05MARQUI345_D	breaker	1195.0	101.45	102.11	DC	17.51
98902586	324010	7TRIMBL REAC	345.0	LGEE	248000	06CLIFTY	345.0	OVEC	1	Base Case	single	1134.0	112.3	113.56	DC	14.28
101996205	342541	4AVON	138.0	EKPC	342631	4PARIST	138.0	EKPC	1	EKPC_P2-4_NCLK E114-151T-B	bus	220.0	114.73	119.57	DC	23.63
101996502	342541	4AVON	138.0	EKPC	342631	4PARIST	138.0	EKPC	1	EKPC_P4-6_NCLK E114-151T	breaker	220.0	114.73	119.57	DC	23.63
101997590	342541	4AVON	138.0	EKPC	342631	4PARIST	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-A	tower	220.0	105.12	109.79	DC	22.83
153083556	342541	4AVON	138.0	EKPC	342631	4PARIST	138.0	EKPC	1	EKPC_P2-4_SPUR N39-150T	bus	220.0	109.41	114.05	DC	22.67
153970184	342541	4AVON	138.0	EKPC	342631	4PARIST	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-C	tower	220.0	105.12	109.79	DC	22.83
153970185	342541	4AVON	138.0	EKPC	342631	4PARIST	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-E	tower	220.0	105.12	109.79	DC	22.83
153970186	342541	4AVON	138.0	EKPC	342631	4PARIST	138.0	EKPC	1	EKPC_P7-1_SPUR 345&138-G	tower	220.0	105.07	109.75	DC	22.83
100299180	342544	4AVON-R	138.0	EKPC	324275	4LOUDON AVE	138.0	LGEE	1	DAY_P734541 34553	tower	203.0	127.47	130.74	DC	14.74
155139458	342544	4AVON-R	138.0	EKPC	324275	4LOUDON AVE	138.0	LGEE	1	EKPC_P2-4_NCLK E114-151T-B	bus	203.0	123.07	126.75	DC	16.56
155139774	342544	4AVON-R	138.0	EKPC	324275	4LOUDON AVE	138.0	LGEE	1	EKPC_P4-6_NCLK E114-151T	breaker	203.0	123.07	126.75	DC	16.56
98902963	342559	4BOON ECO	138.0	EKPC	250054	08LONGBR	138.0	DEO&K	1	DAY_P734541 34553	tower	284.0	155.09	158.08	DC	18.79
98902191	342838	7SPURL OCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P2-2_C1 SILVER GROVE 345 BUS	bus	1532.0	149.18	151.0	DC	61.41
98902308	342838	7SPURL OCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P2-3_C2 816_SILVERGROVE	breaker	1532.0	149.37	151.19	DC	61.48
98902309	342838	7SPURL OCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P2-3_C2 1493_RED BANK	breaker	1532.0	149.25	151.07	DC	61.41
98902408	342838	7SPURL OCK	345.0	EKPC	249581	08MELDAL	345.0	DEO&K	1	DAY_P4_L34553-1	breaker	1421.0	101.3	103.03	DC	54.51
98902525	342838	7SPURL OCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	Base Case	single	1240.0	139.18	141.66	DC	30.55
98902526	342838	7SPURL OCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P1-3_B3 SILVER GROVE 345/138 TB23*	single	1532.0	131.33	133.47	DC	32.51
98902969	342838	7SPURL OCK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSIL GRVZIMMER	tower	1532.0	149.2	151.02	DC	61.41
98903028	926060	AC1-085 TAP	345.0	DAY	942090	AE2-221 TAP	345.0	DAY	1	DAY_P734569 34598 34524	tower	1374.0	103.81	104.28	DC	14.46
98903000	942090	AE2-221 TAP	345.0	DAY	253014	09CLINTO	345.0	DAY	1	DAY_P734569 34598 34524	tower	1374.0	115.99	116.47	DC	14.46

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	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
95497602	243454	05BIXBY	345.0	AEP	243459	05KIRK	345.0	AEP	1	AEP_P1-2_#10137	operation	1409.0	100.77	101.35	DC	17.97
98902684	249581	08MELDA L	345.0	DEO&K	249577	08ZIMER	345.0	DEO&K	1	DAY-P1-STU SPUR	operation	1509.0	100.12	101.72	DC	54.37
98902579	324010	7TRIMBL REAC	345.0	LGEE	248000	06CLIFTY	345.0	OVEC	1	AEP_P1-2_#363	operation	1451.0	131.94	133.79	DC	26.74
98902585	324010	7TRIMBL REAC	345.0	LGEE	248000	06CLIFTY	345.0	OVEC	1	Base Case	operation	1134.0	118.64	121.02	DC	26.97
101997438	342541	4AVON	138.0	EKPC	342631	4PARIS T	138.0	EKPC	1	EKPC_P1-2_AVON - NCLA34 5-C	operation	220.0	101.02	104.94	DC	19.11
100298960	342544	4AVON-R	138.0	EKPC	324275	4LOUDON AVE	138.0	LGEE	1	EKPC_P1-2_AVON - NCLA34 5-C	operation	203.0	121.31	124.76	DC	15.56
101997002	342574	4DALE	138.0	EKPC	342565	4BOONESB OR T	138.0	EKPC	1	EKPC_P1-2_JKS- NCLA34 5	operation	296.0	93.35	115.67	DC	66.02
110356309	342577	4FAWKES EK	138.0	EKPC	324247	4FAWKES TAP	138.0	LGEE	1	EKPC_P1-2_KU FAW- FAW138	operation	284.0	88.52	126.4	DC	107.6
110356334	342577	4FAWKES EK	138.0	EKPC	324248	4FAWKES KU	138.0	LGEE	1	EKPC_P1-2_FAW- FAW- REB138	operation	296.0	85.67	115.08	DC	87.07
153547047	342676	4THREE FK T	138.0	EKPC	942890	AE2-308 TAP	138.0	EKPC	1	EKPC_P1-2_DALE- FAWK 138-C	operation	203.0	-1.28	124.33	DC	255.0
98902522	342838	7SPURLO CK	345.0	EKPC	253077	09STUART	345.0	DAY	1	Base Case	operation	1240.0	156.66	158.74	DC	57.7
98902523	342838	7SPURLO CK	345.0	EKPC	253077	09STUART	345.0	DAY	1	DEOK_P 1-3_B3 SILVER GROVE 345/138 TB23*	operation	1532.0	149.15	150.97	DC	61.41
98902670	342838	7SPURLO CK	345.0	EKPC	249581	08MELDAL	345.0	DEO&K	1	DAY-P1-STU SPUR	operation	1421.0	101.29	103.02	DC	54.51
153546769	942890	AE2-308 TAP	138.0	EKPC	342574	4DALE	138.0	EKPC	1	EKPC_P1-2_DALE- FAWK 138-C	operation	203.0	72.61	198.23	DC	255.0
100298662	946020	AF1-267 TAP	138.0	EKPC	324276	4LAKE REBA T	138.0	LGEE	1	EKPC_P1-2_FAWK 138 TIE	operation	306.0	98.74	101.24	DC	16.87
153546758	960640	AF2-355 TAP	138.0	EKPC	342577	4FAWKES EK	138.0	EKPC	1	EKPC_P1-2_DALE- FAWK 138-A	operation	203.0	72.61	198.23	DC	255.0
153546762	960640	AF2-355 TAP	138.0	EKPC	342577	4FAWKES EK	138.0	EKPC	1	Base Case	operation	183.0	69.22	150.09	DC	147.99

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Ratin g MVA	PRE PROJEC T LOADIN G %	POST PROJEC T LOADIN G %	AC D C	MW IMPAC T
1535470 35	96064 0	AF2-355 TAP	138. 0	EKPC	34267 6	4THREE FK T	138. 0	EKPC	1	EKPC_P1 - 2_DALE- FAWK 138-C	operatio n	203.0	0.0	125.62	DC	255.0

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
101997003	342574	4DALE	EKPC	342565	4BOONESBOR T	EKPC	1	EKPC_P1-2_JKS-NCLA345	single	296.0	89.57	101.38	DC	34.95

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342900	1COOPER1 G	1.1017	80/20	1.1017
342903	1COOPER2 G	2.1381	80/20	2.1381
342918	1JKCT 1G	3.4262	80/20	3.4262
342921	1JKCT 2G	2.4851	80/20	2.4851
342924	1JKCT 3G	3.4262	80/20	3.4262
342927	1JKCT 4G	2.2737	80/20	2.2737
342930	1JKCT 5G	2.2613	80/20	2.2613
342933	1JKCT 6G	2.2737	80/20	2.2737
342936	1JKCT 7G	2.2737	80/20	2.2737
342939	1JKCT 9G	1.8504	80/20	1.8504
342942	1JKCT 10G	1.8504	80/20	1.8504
342945	1LAUREL 1G	0.8292	80/20	0.8292
936571	AD2-072 C O1	5.1895	80/20	5.1895
942411	AE2-254 C O1	3.1182	80/20	3.1182
942591	AE2-275 C O1	12.5038	80/20	12.5038
942891	AE2-308 C O1	29.7649	80/20	29.7649
945541	AF1-219 C O1	2.1387	80/20	2.1387
946021	AF1-267 C	6.7111	80/20	6.7111
960151	AF2-306	1.8811	80/20	1.8811
960161	AF2-307 C	2.8651	80/20	2.8651
960641	AF2-355 C O2	34.9529	80/20	34.9529
961281	AF2-419 C	1.5346	80/20	1.5346
961291	AF2-420 C	1.5346	80/20	1.5346
WEC	WEC	0.0529	Confirmed LTF	0.0529
LGEE	LGEE	0.7861	Confirmed LTF	0.7861
CPL	CPL	0.4115	Confirmed LTF	0.4115
LGE-0012019	LGE-0012019	3.4122	LTF	3.4122
CBM-W2	CBM-W2	7.1089	Confirmed LTF	7.1089
NY	NY	0.0299	Confirmed LTF	0.0299
CBM-W1	CBM-W1	1.4512	Confirmed LTF	1.4512
TVA	TVA	2.0272	Confirmed LTF	2.0272
CBM-S2	CBM-S2	4.6587	Confirmed LTF	4.6587
CBM-S1	CBM-S1	12.2262	Confirmed LTF	12.2262
MADISON	MADISON	3.4252	Confirmed LTF	3.4252
MEC	MEC	0.7055	Confirmed LTF	0.7055

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
155140190	342577	4FAWKES EK	EKPC	324247	4FAWKES TAP	LGEE	1	EKPC_P1-2_KU FAW-FAW138	single	284.0	80.41	100.46	DC	56.96

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342918	1JKCT 1G	1.5515	80/20	1.5515
342921	1JKCT 2G	1.1254	80/20	1.1254
342924	1JKCT 3G	1.5515	80/20	1.5515
342927	1JKCT 4G	1.0297	80/20	1.0297
342930	1JKCT 5G	1.0240	80/20	1.0240
342933	1JKCT 6G	1.0297	80/20	1.0297
342936	1JKCT 7G	1.0297	80/20	1.0297
342939	1JKCT 9G	0.6757	80/20	0.6757
342942	1JKCT 10G	0.6757	80/20	0.6757
941411	AE2-138 C	9.5337	80/20	9.5337
941981	AE2-210 C O1	3.2850	80/20	3.2850
942591	AE2-275 C O1	25.6898	80/20	25.6898
942891	AE2-308 C O1	44.1298	80/20	44.1298
943111	AE2-339 C	2.1134	80/20	2.1134
944621	AF1-127 C O1	2.9743	80/20	2.9743
945861	AF1-251 C	6.9604	80/20	6.9604
960641	AF2-355 C O2	56.9633	80/20	56.9633
961281	AF2-419 C	0.6146	80/20	0.6146
961291	AF2-420 C	0.6146	80/20	0.6146
NEWTON	NEWTON	0.1633	Confirmed LTF	0.1633
FARMERCITY	FARMERCITY	0.0090	Confirmed LTF	0.0090
CALDERWOOD	CALDERWOOD	0.1600	Confirmed LTF	0.1600
NY	NY	0.0210	Confirmed LTF	0.0210
PRAIRIE	PRAIRIE	0.4959	Confirmed LTF	0.4959
CHEOAH	CHEOAH	0.1592	Confirmed LTF	0.1592
EDWARDS	EDWARDS	0.0329	Confirmed LTF	0.0329
TILTON	TILTON	0.0668	Confirmed LTF	0.0668
GIBSON	GIBSON	0.1174	Confirmed LTF	0.1174
BLUEG	BLUEG	0.5920	Confirmed LTF	0.5920
TRIMBLE	TRIMBLE	0.1775	Confirmed LTF	0.1775
CATAWBA	CATAWBA	0.0703	Confirmed LTF	0.0703

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
153546772	942890	AE2-308 TAP	EKPC	342574	4DALE	EKPC	1	EKPC_P1-2_FAWK 138 TIE	single	203.0	52.61	119.11	DC	135.0

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942891	AE2-308 C O1	110.0000	80/20	110.0000
960641	AF2-355 C O2	135.0000	80/20	135.0000

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
153546763	960640	AF2-355 TAP	EKPC	342577	4FAWKES EK	EKPC	1	EKPC_P1-2_AVN-BBN-DLE138	single	203.0	77.0	122.06	DC	91.48

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
936571	AD2-072 C O1	4.1887	80/20	4.1887
942411	AE2-254 C O1	1.9773	80/20	1.9773
942891	AE2-308 C O1	71.7541	80/20	71.7541
945541	AF1-219 C O1	1.9823	80/20	1.9823
960641	AF2-355 C O2	91.4773	80/20	91.4773
961281	AF2-419 C	1.5446	80/20	1.5446
961291	AF2-420 C	1.5446	80/20	1.5446
NEWTON	NEWTON	0.0365	Confirmed LTF	0.0365
FARMERCITY	FARMERCITY	0.0024	Confirmed LTF	0.0024
CALDERWOOD	CALDERWOOD	0.0557	Confirmed LTF	0.0557
NY	NY	0.0122	Confirmed LTF	0.0122
PRAIRIE	PRAIRIE	0.1240	Confirmed LTF	0.1240
CHEOAH	CHEOAH	0.0551	Confirmed LTF	0.0551
EDWARDS	EDWARDS	0.0081	Confirmed LTF	0.0081
TILTON	TILTON	0.0139	Confirmed LTF	0.0139
GIBSON	GIBSON	0.0197	Confirmed LTF	0.0197
BLUEG	BLUEG	0.1180	Confirmed LTF	0.1180
TRIMBLE	TRIMBLE	0.0384	Confirmed LTF	0.0384
CATAWBA	CATAWBA	0.0256	Confirmed LTF	0.0256

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
100298267	946020	AF1-267 TAP	EKPC	324276	4LAKE REBA T	LGEE	1	EKPC_P4-2_FAWKES S62-824	breaker	306.0	98.78	101.28	DC	16.87

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342918	1JKCT 1G	2.5092	50/50	2.5092
342921	1JKCT 2G	1.8200	50/50	1.8200
342924	1JKCT 3G	2.5092	50/50	2.5092
342927	1JKCT 4G	1.6652	50/50	1.6652
342930	1JKCT 5G	1.6560	50/50	1.6560
342933	1JKCT 6G	1.6652	50/50	1.6652
342936	1JKCT 7G	1.6652	50/50	1.6652
941411	AE2-138 C	8.3730	Adder	9.85
941412	AE2-138 E	3.0969	Adder	3.64
941981	AE2-210 C O1	2.8851	Adder	3.39
941982	AE2-210 E O1	1.0852	Adder	1.28
942591	AE2-275 C O1	8.6485	50/50	8.6485
942592	AE2-275 E O1	3.2531	50/50	3.2531
942891	AE2-308 C O1	6.1869	Adder	7.28
942892	AE2-308 E O1	2.2498	Adder	2.65
945861	AF1-251 C	5.6627	Adder	6.66
945862	AF1-251 E	3.7752	Adder	4.44
946021	AF1-267 C	19.9323	50/50	19.9323
946022	AF1-267 E	9.1581	50/50	9.1581
960641	AF2-355 C O2	4.0243	Adder	8.93
960642	AF2-355 E O2	3.5772	Adder	7.94
NEWTON	NEWTON	0.1580	Confirmed LTF	0.1580
FARMERCITY	FARMERCITY	0.0111	Confirmed LTF	0.0111
CALDERWOOD	CALDERWOOD	0.2738	Confirmed LTF	0.2738
NY	NY	0.0348	Confirmed LTF	0.0348
PRAIRIE	PRAIRIE	0.5993	Confirmed LTF	0.5993
O-066	O-066	0.4771	Confirmed LTF	0.4771
CHEOAH	CHEOAH	0.2713	Confirmed LTF	0.2713
EDWARDS	EDWARDS	0.0308	Confirmed LTF	0.0308
TILTON	TILTON	0.0479	Confirmed LTF	0.0479
G-007	G-007	0.0749	Confirmed LTF	0.0749
GIBSON	GIBSON	0.0814	Confirmed LTF	0.0814
BLUEG	BLUEG	0.3559	Confirmed LTF	0.3559
TRIMBLE	TRIMBLE	0.1024	Confirmed LTF	0.1024
CATAWBA	CATAWBA	0.1138	Confirmed LTF	0.1138

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
95497314	243454	05BIXBY	AEP	243459	05KIRK	AEP	1	AEP_P4_#3196_05BEATTY 345_302E	breaker	1409.0	105.27	105.86	DC	18.33

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250164	08BKJDB1	0.1408	Adder	0.17
250165	08BKJDB2	0.1408	Adder	0.17
251827	WILLYESP	0.4289	Adder	0.5
251828	CLNTESP1	0.4910	Adder	0.58
251829	CLNTESP2	0.3274	Adder	0.39
253110	09ADKINS	25.9041	50/50	25.9041
904722	V4-073 E	0.1570	Adder	0.18
913222	Y1-054 E	1.4236	Adder	1.67
918802	AA1-099 E	0.3274	Adder	0.39
923522	AB1-169 C OP	139.5900	50/50	139.5900
924351	AB2-083 C O1	4.8329	50/50	4.8329
924352	AB2-083 E O1	2.2743	50/50	2.2743
924371	AB2-085 C O1	5.1696	Adder	6.08
924372	AB2-085 E O1	2.4328	Adder	2.86
925341	AC1-001 C O1	9.6658	50/50	9.6658
925342	AC1-001 E O1	4.5486	50/50	4.5486
925921	AC1-068 C	9.0369	50/50	9.0369
925922	AC1-068 E	4.2261	50/50	4.2261
925931	AC1-069 C	9.0369	50/50	9.0369
925932	AC1-069 E	4.2261	50/50	4.2261
925981	AC1-074 C O1	3.9360	Adder	4.63
925982	AC1-074 E O1	1.6869	Adder	1.98
926011	AC1-078 C O1	6.5766	Adder	7.74
926012	AC1-078 E O1	10.9610	Adder	12.9
926061	AC1-085 C	20.2692	50/50	20.2692
926062	AC1-085 E	33.0708	50/50	33.0708
926101	AC1-089 C O1 (Suspended)	4.7316	Adder	5.57
926102	AC1-089 E O1 (Suspended)	7.7200	Adder	9.08
926791	AC1-165 C	8.9305	50/50	8.9305
926792	AC1-165 E	4.3324	50/50	4.3324
926801	AC1-166 C	8.9305	50/50	8.9305
926802	AC1-166 E	4.3324	50/50	4.3324
927061	AC1-194 C O1	2.8085	Adder	3.3
927062	AC1-194 E O1	4.5823	Adder	5.39
930062	AB1-014 E	7.2779	Adder	8.56
932201	AC2-029 C	4.9625	50/50	4.9625
932202	AC2-029 E	8.0967	50/50	8.0967
932381	AC2-055 C	3.1941	50/50	3.1941
932382	AC2-055 E	5.2115	50/50	5.2115
932411	AC2-059 C	13.0575	50/50	13.0575

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
932412	AC2-059 E	13.4753	50/50	13.4753
932421	AC2-060 C	11.3254	50/50	11.3254
932422	AC2-060 E	6.3706	50/50	6.3706
932431	AC2-061 C	4.8644	Adder	5.72
932432	AC2-061 E	4.9314	Adder	5.8
932462	AC2-066 E	4.3667	Adder	5.14
932481	AC2-068 C	2.4199	Adder	2.85
932482	AC2-068 E	3.9631	Adder	4.66
932551	AC2-075 C	0.9348	Adder	1.1
932552	AC2-075 E	0.4709	Adder	0.55
932661	AC2-088 C O1	3.7291	Adder	4.39
932662	AC2-088 E O1	3.0688	Adder	3.61
934481	AD1-072 C	2.8685	50/50	2.8685
934482	AD1-072 E	1.3099	50/50	1.3099
934491	AD1-073 C	2.3359	50/50	2.3359
934492	AD1-073 E	1.2033	50/50	1.2033
934561	AD1-081 C	1.3153	Adder	1.55
934562	AD1-081 E	0.6776	Adder	0.8
935031	AD1-136 C	0.5244	Adder	0.62
935032	AD1-136 E	0.4467	Adder	0.53
935041	AD1-140 C O1	8.4500	Adder	9.94
935042	AD1-140 E O1	6.9858	Adder	8.22
936111	AD2-016 C	13.0575	50/50	13.0575
936112	AD2-016 E	13.4753	50/50	13.4753
936251	AD2-031 C O1	2.5920	50/50	2.5920
936252	AD2-031 E O1	4.2290	50/50	4.2290
936381	AD2-048 C	3.2653	Adder	3.84
936382	AD2-048 E	1.6292	Adder	1.92
937231	AD2-162 C	14.9126	50/50	14.9126
937232	AD2-162 E	7.3118	50/50	7.3118
938051	AE1-007 C	0.6940	Adder	0.82
938052	AE1-007 E	1.1323	Adder	1.33
938271	AE1-040 C O1	5.7901	50/50	5.7901
938272	AE1-040 E O1	2.9134	50/50	2.9134
938711	AE1-093	2.4833	Adder	2.92
938921	AE1-120	4.1320	Adder	4.86
939141	AE1-144 C O1	6.6200	Adder	7.79
939142	AE1-144 E O1	3.2852	Adder	3.86
940531	AE2-038 C O1	4.4161	Adder	5.2
940532	AE2-038 E O1	2.1874	Adder	2.57
941411	AE2-138 C	13.5775	Adder	15.97
941412	AE2-138 E	5.0218	Adder	5.91
941511	AE2-148 C	126.2540	50/50	126.2540
941512	AE2-148 E	57.1051	50/50	57.1051
941521	AE2-149 C	100.9730	50/50	100.9730
941522	AE2-149 E	37.6310	50/50	37.6310
941981	AE2-210 C O1	4.6785	Adder	5.5
941982	AE2-210 E O1	1.7598	Adder	2.07
942051	AE2-217 C	7.0704	Adder	8.32
942052	AE2-217 E	4.7136	Adder	5.55
942061	AE2-218 C	7.8720	Adder	9.26
942062	AE2-218 E	5.3470	Adder	6.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
942091	AE2-221 C	24.5628	50/50	24.5628
942092	AE2-221 E	16.3752	50/50	16.3752
942521	AE2-267 C O1	2.4053	Adder	2.83
942522	AE2-267 E O1	1.4868	Adder	1.75
942591	AE2-275 C O1	3.9980	Adder	4.7
942592	AE2-275 E O1	1.5038	Adder	1.77
942831	AE2-302 C O1	2.7320	Adder	3.21
942832	AE2-302 E O1	1.8213	Adder	2.14
942891	AE2-308 C O1	6.7367	Adder	7.93
942892	AE2-308 E O1	2.4497	Adder	2.88
942951	AE2-315	2.3810	Adder	2.8
942981	AE2-320 C O1	17.7814	50/50	17.7814
942982	AE2-320 E O1	8.7976	50/50	8.7976
943111	AE2-339 C	1.7793	Adder	2.09
943112	AE2-339 E	0.8764	Adder	1.03
943191	AE2-319 C O1	17.7814	50/50	17.7814
943192	AE2-319 E O1	8.7976	50/50	8.7976
943201	AE2-318 C	5.9987	Adder	7.06
943202	AE2-318 E	2.9280	Adder	3.44
943771	AF1-045	2.7941	Adder	3.29
943773	AF1-045 E	1.8657	Adder	2.19
943943	AF1-062 BAT	43.1660	50/50	43.1660
944521	AF1-117 C	37.9574	50/50	37.9574
944522	AF1-117 E	11.6926	50/50	11.6926
944621	AF1-127 C O1	3.7838	Adder	4.45
944622	AF1-127 E O1	1.8636	Adder	2.19
944941	AF1-159	1.5006	50/50	1.5006
945561	AF1-221 C O1	8.1042	Adder	9.53
945562	AF1-221 E O1	2.4360	Adder	2.87
945631	AF1-228 C	31.0973	50/50	31.0973
945632	AF1-228 E	20.7316	50/50	20.7316
945681	AF1-233 C	12.5360	Adder	14.75
945682	AF1-233 E	6.1931	Adder	7.29
945841	AF1-249 C	1.0988	Adder	1.29
945842	AF1-249 E	0.4081	Adder	0.48
945861	AF1-251 C	9.3833	Adder	11.04
945862	AF1-251 E	6.2555	Adder	7.36
945911	AF1-256 C	4.0102	Adder	4.72
945912	AF1-256 E	2.6735	Adder	3.15
946021	AF1-267 C	2.2226	Adder	2.61
946022	AF1-267 E	1.0212	Adder	1.2
946171	AF1-282 C	8.0010	50/50	8.0010
946172	AF1-282 E	5.3340	50/50	5.3340
946181	AF1-283 C	10.4013	50/50	10.4013
946182	AF1-283 E	6.9342	50/50	6.9342
946511	AF1-315 C O1	3.2375	Adder	3.81
946512	AF1-315 E O1	2.1583	Adder	2.54
957171	AF2-011 O2	1.0334	Adder	2.29
957181	AF2-012 O2	5.3739	Adder	11.93
957391	AF2-033 C	0.3651	Adder	0.81
957392	AF2-033 E	0.5476	Adder	1.22
957401	AF2-034 C	0.3764	Adder	0.84

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
957402	AF2-034 E	0.3207	Adder	0.71
957721	AF2-066 C O2	2.1797	Adder	4.84
957722	AF2-066 E O2	1.4531	Adder	3.23
957731	AF2-067 C O2	1.0704	Adder	2.38
957732	AF2-067 E O2	0.7136	Adder	1.58
957851	AF2-079 C O2	4.0809	Adder	9.06
957852	AF2-079 E O2	2.7206	Adder	6.04
958171	AF2-111 C O2	6.9771	Adder	15.49
958172	AF2-111 E O2	4.6514	Adder	10.32
959073	AF2-198 BAT	3.1911	50/50	3.1911
959191	AF2-210 C	5.2854	Adder	11.73
959192	AF2-210 E	3.5236	Adder	7.82
959271	AF2-218 C O2	1.1623	Adder	2.58
959272	AF2-218 E O2	0.7751	Adder	1.72
959541	AF2-245 C O2	3.6839	Adder	8.18
959542	AF2-245 E O2	2.4559	Adder	5.45
960071	AF2-298 C O2	1.4820	Adder	3.29
960072	AF2-298 E O2	0.9913	Adder	2.2
960151	AF2-306	0.8868	Adder	1.97
960161	AF2-307 C	1.3507	Adder	3.0
960162	AF2-307 E	0.9004	Adder	2.0
960571	AF2-348 C	6.9345	Adder	15.39
960572	AF2-348 E	4.6230	Adder	10.26
960641	AF2-355 C O2	4.3716	Adder	9.7
960642	AF2-355 E O2	3.8858	Adder	8.63
960801	AF2-371 C	7.2894	50/50	7.2894
960802	AF2-371 E	4.8596	50/50	4.8596
961491	AF2-440 C O2	1.1281	Adder	2.5
961492	AF2-440 E O2	1.1281	Adder	2.5
WEC	WEC	0.6029	Confirmed LTF	0.6029
LGEE	LGEE	3.2016	Confirmed LTF	3.2016
CPL	CPL	0.6562	Confirmed LTF	0.6562
CBM-W2	CBM-W2	24.6191	Confirmed LTF	24.6191
NY	NY	0.8964	Confirmed LTF	0.8964
CBM-W1	CBM-W1	19.9910	Confirmed LTF	19.9910
TVA	TVA	4.0362	Confirmed LTF	4.0362
O-066	O-066	10.6243	Confirmed LTF	10.6243
CBM-S2	CBM-S2	8.3810	Confirmed LTF	8.3810
CBM-S1	CBM-S1	28.8828	Confirmed LTF	28.8828
G-007	G-007	1.6370	Confirmed LTF	1.6370
MEC	MEC	3.6944	Confirmed LTF	3.6944

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
98902431	249581	08MELDAL	DEO&K	249577	08ZIMER	DEO&K	1	DAY_P4_L34553-1	breaker	1509.0	100.13	101.73	DC	54.36

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
251970	08MELDL1	4.5281	50/50	4.5281
251971	08MELDL2	4.5281	50/50	4.5281
251972	08MELDL3	4.5402	50/50	4.5402
342939	1JKCT 9G	3.2451	50/50	3.2451
342942	1JKCT 10G	3.2451	50/50	3.2451
342957	1SPURLK1G	23.2044	50/50	23.2044
342960	1SPURLK2G	44.4882	50/50	44.4882
342963	1SPURLK3G	23.3781	50/50	23.3781
342966	1SPURLK4G	23.3781	50/50	23.3781
925981	AC1-074 C O1	13.7222	50/50	13.7222
925982	AC1-074 E O1	5.8810	50/50	5.8810
932551	AC2-075 C	3.2590	50/50	3.2590
932552	AC2-075 E	1.6418	50/50	1.6418
936381	AD2-048 C	11.1454	50/50	11.1454
936382	AD2-048 E	5.5608	50/50	5.5608
936571	AD2-072 C O1	6.9918	Adder	8.23
936572	AD2-072 E O1	3.4282	Adder	4.03
939131	AE1-143 C	5.1361	Adder	6.04
939132	AE1-143 E	2.5441	Adder	2.99
939141	AE1-144 C O1	30.4070	50/50	30.4070
939142	AE1-144 E O1	15.0898	50/50	15.0898
940531	AE2-038 C O1	20.2840	50/50	20.2840
940532	AE2-038 E O1	10.0472	50/50	10.0472
941411	AE2-138 C	57.4107	50/50	57.4107
941412	AE2-138 E	21.2341	50/50	21.2341
941981	AE2-210 C O1	19.7822	50/50	19.7822
941982	AE2-210 E O1	7.4410	50/50	7.4410
942411	AE2-254 C O1	3.6276	Adder	4.27
942412	AE2-254 E O1	2.4184	Adder	2.85
942591	AE2-275 C O1	11.9702	Adder	14.08
942592	AE2-275 E O1	4.5026	Adder	5.3
942891	AE2-308 C O1	20.0286	Adder	23.56
942892	AE2-308 E O1	7.2831	Adder	8.57
943111	AE2-339 C	6.6309	50/50	6.6309
943112	AE2-339 E	3.2659	50/50	3.2659
944511	AF1-116 C	5.7601	Adder	6.78
944512	AF1-116 E	3.8401	Adder	4.52
944621	AF1-127 C O1	15.6700	50/50	15.6700
944622	AF1-127 E O1	7.7180	50/50	7.7180
945541	AF1-219 C O1	2.2868	Adder	2.69
945542	AF1-219 E O1	1.0761	Adder	1.27
945681	AF1-233 C	58.3831	50/50	58.3831

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
945682	AF1-233 E	28.8426	50/50	28.8426
945861	AF1-251 C	39.2911	50/50	39.2911
945862	AF1-251 E	26.1941	50/50	26.1941
945911	AF1-256 C	18.7373	50/50	18.7373
945912	AF1-256 E	12.4915	50/50	12.4915
946021	AF1-267 C	6.5963	Adder	7.76
946022	AF1-267 E	3.0307	Adder	3.57
958171	AF2-111 C O2	64.1610	50/50	64.1610
958172	AF2-111 E O2	42.7740	50/50	42.7740
959541	AF2-245 C O2	33.8770	50/50	33.8770
959542	AF2-245 E O2	22.5847	50/50	22.5847
960151	AF2-306	6.4246	50/50	6.4246
960161	AF2-307 C	9.7852	50/50	9.7852
960162	AF2-307 E	6.5234	50/50	6.5234
960571	AF2-348 C	66.1680	50/50	66.1680
960572	AF2-348 E	44.1120	50/50	44.1120
960641	AF2-355 C O2	12.9651	Adder	28.78
960642	AF2-355 E O2	11.5245	Adder	25.58
961281	AF2-419 C	0.7576	Adder	1.68
961282	AF2-419 E	0.5051	Adder	1.12
961291	AF2-420 C	0.7576	Adder	1.68
961292	AF2-420 E	0.5051	Adder	1.12
LGEE	LGEE	2.8188	Confirmed LTF	2.8188
CPLE	CPLE	0.7792	Confirmed LTF	0.7792
LGE-0012019	LGE-0012019	7.0246	LTF	7.0246
CBM-W2	CBM-W2	12.7846	Confirmed LTF	12.7846
NY	NY	0.1454	Confirmed LTF	0.1454
TVA	TVA	3.9592	Confirmed LTF	3.9592
O-066	O-066	1.3306	Confirmed LTF	1.3306
CBM-S2	CBM-S2	8.9648	Confirmed LTF	8.9648
CBM-S1	CBM-S1	27.4429	Confirmed LTF	27.4429
G-007	G-007	0.2028	Confirmed LTF	0.2028
MADISON	MADISON	12.7391	Confirmed LTF	12.7391
MEC	MEC	0.8946	Confirmed LTF	0.8946

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
100782127	250054	08LONGBR	DEO&K	250077	08MTZION	DEO&K	1	DAY_P734541 34553	tower	284.0	147.73	150.72	DC	18.79

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

15.5.9 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
100782128	250077	08MTZION	DEO&K	249991	08BUFTN1	DEO&K	1	DAY_P734541 34553	tower	298.0	136.5	139.34	DC	18.79

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

15.5.10 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
98902424	253100	09ATLNTA	DAY	253110	09ADKINS	DAY	1	AEP_P4_#6774_05MARQ UI 345_D	breaker	1195.0	101.45	102.11	DC	17.51

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250166	HLCRST AB114	0.8390	50/50	0.8390
251830	BIOENGRY	0.0970	50/50	0.0970
342957	1SPURLK1G	6.1942	50/50	6.1942
342960	1SPURLK2G	11.4733	50/50	11.4733
342963	1SPURLK3G	6.0291	50/50	6.0291
342966	1SPURLK4G	6.0291	50/50	6.0291
923522	AB1-169 C OP	181.7640	50/50	181.7640
925921	AC1-068 C	19.0767	50/50	19.0767
925922	AC1-068 E	8.9212	50/50	8.9212
925931	AC1-069 C	19.0767	50/50	19.0767
925932	AC1-069 E	8.9212	50/50	8.9212
925981	AC1-074 C O1	3.8237	Adder	4.5
925982	AC1-074 E O1	1.6387	Adder	1.93
926061	AC1-085 C	17.2064	50/50	17.2064
926062	AC1-085 E	28.0736	50/50	28.0736
926791	AC1-165 C	18.8523	50/50	18.8523
926792	AC1-165 E	9.1456	50/50	9.1456
926801	AC1-166 C	18.8523	50/50	18.8523
926802	AC1-166 E	9.1456	50/50	9.1456
930062	AB1-014 E	7.9360	50/50	7.9360
932381	AC2-055 C	1.4331	Adder	1.69
932382	AC2-055 E	2.3383	Adder	2.75
932421	AC2-060 C	5.0815	Adder	5.98
932422	AC2-060 E	2.8583	Adder	3.36
932461	AC2-066 C	0.5034	50/50	0.5034
932462	AC2-066 E	4.7616	50/50	4.7616
932551	AC2-075 C	0.9081	Adder	1.07
932552	AC2-075 E	0.4575	Adder	0.54
932661	AC2-088 C O1	4.4997	50/50	4.4997
932662	AC2-088 E O1	3.7029	50/50	3.7029
934491	AD1-073 C	1.0481	Adder	1.23
934492	AD1-073 E	0.5399	Adder	0.64
935031	AD1-136 C	0.6328	50/50	0.6328
935032	AD1-136 E	0.5390	50/50	0.5390
936251	AD2-031 C O1	1.2540	Adder	1.48
936252	AD2-031 E O1	2.0461	Adder	2.41
936381	AD2-048 C	3.1208	Adder	3.67
936382	AD2-048 E	1.5571	Adder	1.83
938271	AE1-040 C O1	3.9494	50/50	3.9494
938272	AE1-040 E O1	1.9872	50/50	1.9872
938921	AE1-120	4.5056	50/50	4.5056
939141	AE1-144 C O1	8.3961	50/50	8.3961

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939142	AE1-144 E O1	4.1667	50/50	4.1667
940531	AE2-038 C O1	5.6009	50/50	5.6009
940532	AE2-038 E O1	2.7743	50/50	2.7743
941411	AE2-138 C	14.1664	Adder	16.67
941412	AE2-138 E	5.2396	Adder	6.16
941981	AE2-210 C O1	4.8814	Adder	5.74
941982	AE2-210 E O1	1.8361	Adder	2.16
942091	AE2-221 C	13.4701	Adder	15.85
942092	AE2-221 E	8.9801	Adder	10.56
942591	AE2-275 C O1	3.8329	Adder	4.51
942592	AE2-275 E O1	1.4417	Adder	1.7
942891	AE2-308 C O1	6.4431	Adder	7.58
942892	AE2-308 E O1	2.3429	Adder	2.76
942981	AE2-320 C O1	37.5363	50/50	37.5363
942982	AE2-320 E O1	18.5717	50/50	18.5717
943111	AE2-339 C	1.7586	Adder	2.07
943112	AE2-339 E	0.8662	Adder	1.02
943191	AE2-319 C O1	37.5363	50/50	37.5363
943192	AE2-319 E O1	18.5717	50/50	18.5717
943201	AE2-318 C	5.0089	Adder	5.89
943202	AE2-318 E	2.4448	Adder	2.88
943771	AF1-045	2.3330	Adder	2.74
943773	AF1-045 E	1.5578	Adder	1.83
944521	AF1-117 C	83.3550	50/50	83.3550
944522	AF1-117 E	25.6770	50/50	25.6770
944621	AF1-127 C O1	3.9118	Adder	4.6
944622	AF1-127 E O1	1.9267	Adder	2.27
944941	AF1-159	0.7260	Adder	0.85
945681	AF1-233 C	16.0118	50/50	16.0118
945682	AF1-233 E	7.9102	50/50	7.9102
945861	AF1-251 C	9.7479	Adder	11.47
945862	AF1-251 E	6.4986	Adder	7.65
945911	AF1-256 C	5.1322	50/50	5.1322
945912	AF1-256 E	3.4214	50/50	3.4214
946021	AF1-267 C	2.1194	Adder	2.49
946022	AF1-267 E	0.9738	Adder	1.15
946102	AF1-275 BAT	3.4955	Merchant Transmission	3.4955
946171	AF1-282 C	6.7920	50/50	6.7920
946172	AF1-282 E	4.5280	50/50	4.5280
946181	AF1-283 C	8.8296	50/50	8.8296
946182	AF1-283 E	5.8864	50/50	5.8864
946511	AF1-315 C O1	2.7537	Adder	3.24
946512	AF1-315 E O1	1.8358	Adder	2.16
958171	AF2-111 C O2	17.2725	50/50	17.2725
958172	AF2-111 E O2	11.5150	50/50	11.5150
959541	AF2-245 C O2	9.1199	50/50	9.1199
959542	AF2-245 E O2	6.0799	50/50	6.0799
960151	AF2-306	0.8672	Adder	1.92
960161	AF2-307 C	1.3209	Adder	2.93
960162	AF2-307 E	0.8806	Adder	1.95
960571	AF2-348 C	17.5275	50/50	17.5275
960572	AF2-348 E	11.6850	50/50	11.6850

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
960641	AF2-355 C O2	4.1763	Adder	9.27
960642	AF2-355 E O2	3.7123	Adder	8.24
WEC	WEC	0.3704	Confirmed LTF	0.3704
LGEE	LGEE	2.2398	Confirmed LTF	2.2398
CPL	CPL	0.3109	Confirmed LTF	0.3109
CBM-W2	CBM-W2	15.2744	Confirmed LTF	15.2744
NY	NY	0.4352	Confirmed LTF	0.4352
CBM-W1	CBM-W1	10.8086	Confirmed LTF	10.8086
TVA	TVA	2.5592	Confirmed LTF	2.5592
O-066	O-066	5.0938	Confirmed LTF	5.0938
CBM-S2	CBM-S2	4.3061	Confirmed LTF	4.3061
CBM-S1	CBM-S1	18.8974	Confirmed LTF	18.8974
G-007	G-007	0.7852	Confirmed LTF	0.7852
MEC	MEC	2.2739	Confirmed LTF	2.2739

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
98902586	324010	7TRIMBL REAC	LGEE	248000	06CLIFTY	OVEC	1	Base Case	single	1134.0	112.3	113.56	DC	14.28

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342900	1COOPER1 G	2.4061	80/20	2.4061
342903	1COOPER2 G	4.6659	80/20	4.6659
342918	1JKCT 1G	1.9082	80/20	1.9082
342921	1JKCT 2G	1.3841	80/20	1.3841
342924	1JKCT 3G	1.9082	80/20	1.9082
342927	1JKCT 4G	1.2664	80/20	1.2664
342930	1JKCT 5G	1.2594	80/20	1.2594
342933	1JKCT 6G	1.2664	80/20	1.2664
342936	1JKCT 7G	1.2664	80/20	1.2664
342939	1JKCT 9G	1.3026	80/20	1.3026
342942	1JKCT 10G	1.3026	80/20	1.3026
342945	1LAUREL 1G	1.3616	80/20	1.3616
925981	AC1-074 C O1	4.0858	80/20	4.0858
932551	AC2-075 C	0.9704	80/20	0.9704
936381	AD2-048 C	3.5137	80/20	3.5137
936571	AD2-072 C O1	10.1068	80/20	10.1068
939131	AE1-143 C	9.4721	80/20	9.4721
940041	AE1-246 C O1	11.7160	80/20	11.7160
940831	AE2-071 C	2.9730	80/20	2.9730
941411	AE2-138 C	15.4118	80/20	15.4118
941981	AE2-210 C O1	5.3105	80/20	5.3105
942411	AE2-254 C O1	4.0269	80/20	4.0269
942591	AE2-275 C O1	6.8722	80/20	6.8722
942891	AE2-308 C O1	11.6061	80/20	11.6061
943111	AE2-339 C	2.5945	80/20	2.5945
943701	AF1-038 C	4.6019	80/20	4.6019
943821	AF1-050 C	5.3273	80/20	5.3273
944151	AF1-083 C O1	4.9157	80/20	4.9157
944511	AF1-116 C	10.6229	80/20	10.6229
944621	AF1-127 C O1	4.5062	80/20	4.5062
945381	AF1-203 C	1.6988	80/20	1.6988
945541	AF1-219 C O1	3.2016	80/20	3.2016
945861	AF1-251 C	10.8979	80/20	10.8979
946021	AF1-267 C	3.8473	80/20	3.8473
952811	J759	9.7195	PJM External (MISO)	9.7195
952821	J762	30.3840	PJM External (MISO)	30.3840
952861	J783 C	9.2991	PJM External (MISO)	9.2991
953611	J800	12.5675	PJM External (MISO)	12.5675
953931	J856	9.2400	PJM External (MISO)	9.2400
955451	J1027	12.8910	PJM External (MISO)	12.8910
955461	J1028	14.5680	PJM External (MISO)	14.5680
955891	J1074	22.4080	PJM External (MISO)	22.4080

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
956911	J1189	0.4233	PJM External (MISO)	0.4233
957961	AF2-090 C	16.2340	80/20	16.2340
959691	AF2-260 C O2	12.1470	80/20	12.1470
960151	AF2-306	1.7217	80/20	1.7217
960161	AF2-307 C	2.6223	80/20	2.6223
960171	AF2-308	5.6980	80/20	5.6980
960181	AF2-309 C	8.5470	80/20	8.5470
960641	AF2-355 C O2	14.2776	80/20	14.2776
960741	AF2-365 C O2	5.0091	80/20	5.0091
961001	AF2-391 C O2	15.0012	80/20	15.0012
961281	AF2-419 C	1.8217	80/20	1.8217
961291	AF2-420 C	1.8217	80/20	1.8217
WEC	WEC	0.4401	Confirmed LTF	0.4401
LGEE	LGEE	18.1636	Confirmed LTF	18.1636
CPL	CPL	1.2840	Confirmed LTF	1.2840
CBM-W2	CBM-W2	48.1244	Confirmed LTF	48.1244
NY	NY	0.1106	Confirmed LTF	0.1106
CBM-W1	CBM-W1	13.0229	Confirmed LTF	13.0229
TVA	TVA	8.8564	Confirmed LTF	8.8564
CBM-S2	CBM-S2	15.0800	Confirmed LTF	15.0800
CBM-S1	CBM-S1	94.2908	Confirmed LTF	94.2908
MADISON	MADISON	9.7998	Confirmed LTF	9.7998
MEC	MEC	4.6002	Confirmed LTF	4.6002

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
101996502	342541	4AVON	EKPC	342631	4PARIS T	EKPC	1	EKPC_P4-6_NCLK E114-151T	breaker	220.0	114.73	119.57	DC	23.63

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
941411	AE2-138 C	48.8279	50/50	48.8279
941412	AE2-138 E	18.0597	50/50	18.0597
941981	AE2-210 C O1	16.8248	50/50	16.8248
941982	AE2-210 E O1	6.3286	50/50	6.3286
942411	AE2-254 C O1	1.2911	Adder	1.52
942412	AE2-254 E O1	0.8607	Adder	1.01
942591	AE2-275 C O1	4.1376	Adder	4.87
942592	AE2-275 E O1	1.5563	Adder	1.83
942891	AE2-308 C O1	8.9274	Adder	10.5
942892	AE2-308 E O1	3.2463	Adder	3.82
943111	AE2-339 C	6.8946	50/50	6.8946
943112	AE2-339 E	3.3958	50/50	3.3958
944621	AF1-127 C O1	13.7891	50/50	13.7891
944622	AF1-127 E O1	6.7917	50/50	6.7917
945861	AF1-251 C	33.9583	50/50	33.9583
945862	AF1-251 E	22.6389	50/50	22.6389
946021	AF1-267 C	2.2330	Adder	2.63
946022	AF1-267 E	1.0260	Adder	1.21
960641	AF2-355 C O2	5.6347	Adder	12.51
960642	AF2-355 E O2	5.0087	Adder	11.12
961281	AF2-419 C	0.2984	Adder	0.66
961282	AF2-419 E	0.1989	Adder	0.44
961291	AF2-420 C	0.2984	Adder	0.66
961292	AF2-420 E	0.1989	Adder	0.44
WEC	WEC	0.0403	Confirmed LTF	0.0403
LGEE	LGEE	0.6646	Confirmed LTF	0.6646
CPL	CPL	0.2229	Confirmed LTF	0.2229
CBM-W2	CBM-W2	4.2506	Confirmed LTF	4.2506
NY	NY	0.0127	Confirmed LTF	0.0127
CBM-W1	CBM-W1	1.2010	Confirmed LTF	1.2010
TVA	TVA	1.1326	Confirmed LTF	1.1326
O-066	O-066	0.0605	Confirmed LTF	0.0605
CBM-S2	CBM-S2	2.5201	Confirmed LTF	2.5201
CBM-S1	CBM-S1	7.4550	Confirmed LTF	7.4550
G-007	G-007	0.0083	Confirmed LTF	0.0083
MADISON	MADISON	2.0059	Confirmed LTF	2.0059
MEC	MEC	0.4465	Confirmed LTF	0.4465

15.5.13 Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
100299180	342544	4AVON-R	EKPC	324275	4LOUDON AVE	LGEE	1	DAY_P734541 34553	tower	203.0	127.47	130.74	DC	14.74

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

15.5.14 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
98902963	342559	4BOONE CO	EKPC	250054	08LONGBR	DEO&K	1	DAY_P734541 34553	tower	284.0	155.09	158.08	DC	18.79

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

15.5.15 Index 15

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC/D C	MW IMPACT
98902969	342838	7SPURLO CK	EKPC	253077	09STUART	DAY	1	DEOK_P7-1_C5 CIRCUIT1883&4545REDBANKSILGRVZIMMER	tower	1532.0	149.2	151.02	DC	61.41

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
CPL	CPL	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
98902408	342838	7SPURLOCK	EKPC	249581	08MELDAL	DEO&K	1	DAY_P4_L34553-1	breaker	1421.0	101.3	103.03	DC	54.51

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
342918	1JKCT 1G	4.4184	50/50	4.4184
342921	1JKCT 2G	3.2048	50/50	3.2048
342924	1JKCT 3G	4.4184	50/50	4.4184
342939	1JKCT 9G	3.2527	50/50	3.2527
342942	1JKCT 10G	3.2527	50/50	3.2527
342957	1SPURLK1G	23.2349	50/50	23.2349
342960	1SPURLK2G	44.5392	50/50	44.5392
342963	1SPURLK3G	23.4049	50/50	23.4049
342966	1SPURLK4G	23.4049	50/50	23.4049
925981	AC1-074 C O1	13.7547	50/50	13.7547
925982	AC1-074 E O1	5.8949	50/50	5.8949
926101	AC1-089 C O1 (Suspended)	3.8813	Adder	4.57
926102	AC1-089 E O1 (Suspended)	6.3327	Adder	7.45
932551	AC2-075 C	3.2667	50/50	3.2667
932552	AC2-075 E	1.6457	50/50	1.6457
936381	AD2-048 C	11.1725	50/50	11.1725
936382	AD2-048 E	5.5743	50/50	5.5743
936571	AD2-072 C O1	7.0232	Adder	8.26
936572	AD2-072 E O1	3.4436	Adder	4.05
939131	AE1-143 C	5.1678	Adder	6.08
939132	AE1-143 E	2.5597	Adder	3.01
939141	AE1-144 C O1	30.4543	50/50	30.4543
939142	AE1-144 E O1	15.1133	50/50	15.1133
940531	AE2-038 C O1	20.3156	50/50	20.3156
940532	AE2-038 E O1	10.0628	50/50	10.0628
941411	AE2-138 C	57.5208	50/50	57.5208
941412	AE2-138 E	21.2748	50/50	21.2748
941981	AE2-210 C O1	19.8201	50/50	19.8201
941982	AE2-210 E O1	7.4553	50/50	7.4553
942411	AE2-254 C O1	3.6424	Adder	4.29
942412	AE2-254 E O1	2.4283	Adder	2.86
942591	AE2-275 C O1	12.0024	Adder	14.12
942592	AE2-275 E O1	4.5147	Adder	5.31
942891	AE2-308 C O1	20.0829	Adder	23.63
942892	AE2-308 E O1	7.3029	Adder	8.59
943111	AE2-339 C	6.6464	50/50	6.6464
943112	AE2-339 E	3.2736	50/50	3.2736
943701	AF1-038 C	2.6350	Adder	3.1
943702	AF1-038 E	1.7566	Adder	2.07
944151	AF1-083 C O1	2.3915	Adder	2.81

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
944152	AF1-083 E O1	1.5944	Adder	1.88
944511	AF1-116 C	5.7956	Adder	6.82
944512	AF1-116 E	3.8638	Adder	4.55
944621	AF1-127 C O1	15.7010	50/50	15.7010
944622	AF1-127 E O1	7.7334	50/50	7.7334
945541	AF1-219 C O1	2.2969	Adder	2.7
945542	AF1-219 E O1	1.0809	Adder	1.27
945681	AF1-233 C	58.4705	50/50	58.4705
945682	AF1-233 E	28.8858	50/50	28.8858
945861	AF1-251 C	39.3677	50/50	39.3677
945862	AF1-251 E	26.2451	50/50	26.2451
945911	AF1-256 C	18.7651	50/50	18.7651
945912	AF1-256 E	12.5101	50/50	12.5101
946021	AF1-267 C	6.6146	Adder	7.78
946022	AF1-267 E	3.0391	Adder	3.58
958171	AF2-111 C O2	64.2480	50/50	64.2480
958172	AF2-111 E O2	42.8320	50/50	42.8320
959541	AF2-245 C O2	33.9229	50/50	33.9229
959542	AF2-245 E O2	22.6153	50/50	22.6153
960151	AF2-306	6.4397	50/50	6.4397
960161	AF2-307 C	9.8081	50/50	9.8081
960162	AF2-307 E	6.5388	50/50	6.5388
960571	AF2-348 C	66.2550	50/50	66.2550
960572	AF2-348 E	44.1700	50/50	44.1700
960641	AF2-355 C O2	13.0003	Adder	28.86
960642	AF2-355 E O2	11.5559	Adder	25.65
961281	AF2-419 C	0.7607	Adder	1.69
961282	AF2-419 E	0.5072	Adder	1.13
961291	AF2-420 C	0.7607	Adder	1.69
961292	AF2-420 E	0.5072	Adder	1.13
LGEE	LGEE	2.8519	Confirmed LTF	2.8519
CPL	CPL	0.8176	Confirmed LTF	0.8176
LGE-0012019	LGE-0012019	7.0246	LTF	7.0246
CBM-W2	CBM-W2	13.2596	Confirmed LTF	13.2596
NY	NY	0.1128	Confirmed LTF	0.1128
TVA	TVA	4.0404	Confirmed LTF	4.0404
O-066	O-066	0.9408	Confirmed LTF	0.9408
CBM-S2	CBM-S2	9.3000	Confirmed LTF	9.3000
CBM-S1	CBM-S1	27.9371	Confirmed LTF	27.9371
G-007	G-007	0.1425	Confirmed LTF	0.1425
MADISON	MADISON	12.7391	Confirmed LTF	12.7391
MEC	MEC	0.9868	Confirmed LTF	0.9868

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
98903028	926060	AC1-085 TAP	DAY	942090	AE2-221 TAP	DAY	1	DAY_P734569 34598 34524	tower	1374.0	103.81	104.28	DC	14.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250166	HLCRST AB114	1.0791	50/50	1.0791
251830	BIOENGRY	0.1021	50/50	0.1021
342957	1SPURLK1G	5.5184	50/50	5.5184
342960	1SPURLK2G	10.4431	50/50	10.4431
342963	1SPURLK3G	5.4878	50/50	5.4878
342966	1SPURLK4G	5.4878	50/50	5.4878
923522	AB1-169 C OP	174.0420	50/50	174.0420
925981	AC1-074 C O1	3.1483	Adder	3.7
925982	AC1-074 E O1	1.3493	Adder	1.59
926061	AC1-085 C	65.1913	50/50	65.1913
926062	AC1-085 E	106.3647	50/50	106.3647
927181	AC1-212 C	-0.1206	Adder	-0.14
927183	AC1-212 BAT	1.4865	Merchant Transmission	1.4865
930062	AB1-014 E	10.2067	50/50	10.2067
932461	AC2-066 C	0.6474	50/50	0.6474
932462	AC2-066 E	6.1240	50/50	6.1240
932481	AC2-068 C	-2.8262	Adder	-3.32
932551	AC2-075 C	0.7477	Adder	0.88
932552	AC2-075 E	0.3767	Adder	0.44
932661	AC2-088 C O1	4.7363	50/50	4.7363
932662	AC2-088 E O1	3.8975	50/50	3.8975
935031	AD1-136 C	0.6660	50/50	0.6660
935032	AD1-136 E	0.5674	50/50	0.5674
936381	AD2-048 C	2.5139	Adder	2.96
936382	AD2-048 E	1.2543	Adder	1.48
938921	AE1-120	5.7948	50/50	5.7948
939141	AE1-144 C O1	6.2226	Adder	7.32
939142	AE1-144 E O1	3.0880	Adder	3.63
940531	AE2-038 C O1	4.1510	Adder	4.88
940532	AE2-038 E O1	2.0561	Adder	2.42
941411	AE2-138 C	12.2304	Adder	14.39
941412	AE2-138 E	4.5236	Adder	5.32
941981	AE2-210 C O1	4.2143	Adder	4.96
941982	AE2-210 E O1	1.5852	Adder	1.86
942591	AE2-275 C O1	3.1736	Adder	3.73
942592	AE2-275 E O1	1.1938	Adder	1.4
942891	AE2-308 C O1	5.3230	Adder	6.26
942892	AE2-308 E O1	1.9356	Adder	2.28
943111	AE2-339 C	1.4716	Adder	1.73
943112	AE2-339 E	0.7248	Adder	0.85
943201	AE2-318 C	5.0506	Adder	5.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943202	AE2-318 E	2.4651	Adder	2.9
943771	AF1-045	2.3524	Adder	2.77
943773	AF1-045 E	1.5708	Adder	1.85
943863	AF1-053 BAT	3.0908	Merchant Transmission	3.0908
944521	AF1-117 C	6.8868	Adder	8.1
944522	AF1-117 E	2.1215	Adder	2.5
944621	AF1-127 C O1	3.3596	Adder	3.95
944622	AF1-127 E O1	1.6547	Adder	1.95
945681	AF1-233 C	11.9241	Adder	14.03
945682	AF1-233 E	5.8908	Adder	6.93
945861	AF1-251 C	8.3959	Adder	9.88
945862	AF1-251 E	5.5973	Adder	6.59
945911	AF1-256 C	3.8250	Adder	4.5
945912	AF1-256 E	2.5500	Adder	3.0
946021	AF1-267 C	1.7543	Adder	2.06
946022	AF1-267 E	0.8060	Adder	0.95
946171	AF1-282 C	25.7334	50/50	25.7334
946172	AF1-282 E	17.1556	50/50	17.1556
946181	AF1-283 C	33.4534	50/50	33.4534
946182	AF1-283 E	22.3023	50/50	22.3023
946511	AF1-315 C O1	2.8424	Adder	3.34
946512	AF1-315 E O1	1.8950	Adder	2.23
957393	AF2-033 BAT	2.4906	50/50	2.4906
958171	AF2-111 C O2	15.3075	50/50	15.3075
958172	AF2-111 E O2	10.2050	50/50	10.2050
959541	AF2-245 C O2	8.0824	50/50	8.0824
959542	AF2-245 E O2	5.3882	50/50	5.3882
960151	AF2-306	0.7356	Adder	1.63
960161	AF2-307 C	1.1203	Adder	2.49
960162	AF2-307 E	0.7469	Adder	1.66
960571	AF2-348 C	15.7590	50/50	15.7590
960572	AF2-348 E	10.5060	50/50	10.5060
960641	AF2-355 C O2	3.4484	Adder	7.65
960642	AF2-355 E O2	3.0652	Adder	6.8
WEC	WEC	0.0369	Confirmed LTF	0.0369
LGEE	LGEE	1.3703	Confirmed LTF	1.3703
CPL	CPL	0.3976	Confirmed LTF	0.3976
CBM-W2	CBM-W2	7.6085	Confirmed LTF	7.6085
NY	NY	0.1698	Confirmed LTF	0.1698
TVA	TVA	1.7318	Confirmed LTF	1.7318
O-066	O-066	1.8010	Confirmed LTF	1.8010
CBM-S2	CBM-S2	4.4159	Confirmed LTF	4.4159
CBM-S1	CBM-S1	12.3796	Confirmed LTF	12.3796
G-007	G-007	0.2766	Confirmed LTF	0.2766
MEC	MEC	0.6849	Confirmed LTF	0.6849

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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
98903000	942090	AE2-221 TAP	DAY	253014	09CLINTO	DAY	1	DAY_P734569 34598 34524	tower	1374.0	115.99	116.47	DC	14.46

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
250166	HLCRST AB114	1.0791	50/50	1.0791
251830	BIOENGRY	0.1021	50/50	0.1021
342957	1SPURLK1G	5.5184	50/50	5.5184
342960	1SPURLK2G	10.4431	50/50	10.4431
342963	1SPURLK3G	5.4878	50/50	5.4878
342966	1SPURLK4G	5.4878	50/50	5.4878
923522	AB1-169 C OP	174.0420	50/50	174.0420
925981	AC1-074 C O1	3.1483	Adder	3.7
925982	AC1-074 E O1	1.3493	Adder	1.59
926061	AC1-085 C	65.1913	50/50	65.1913
926062	AC1-085 E	106.3647	50/50	106.3647
927181	AC1-212 C	-0.1206	Adder	-0.14
927183	AC1-212 BAT	1.4865	Merchant Transmission	1.4865
930062	AB1-014 E	10.2067	50/50	10.2067
932461	AC2-066 C	0.6474	50/50	0.6474
932462	AC2-066 E	6.1240	50/50	6.1240
932481	AC2-068 C	-2.8262	Adder	-3.32
932551	AC2-075 C	0.7477	Adder	0.88
932552	AC2-075 E	0.3767	Adder	0.44
932661	AC2-088 C O1	4.7363	50/50	4.7363
932662	AC2-088 E O1	3.8975	50/50	3.8975
935031	AD1-136 C	0.6660	50/50	0.6660
935032	AD1-136 E	0.5674	50/50	0.5674
936381	AD2-048 C	2.5139	Adder	2.96
936382	AD2-048 E	1.2543	Adder	1.48
938921	AE1-120	5.7948	50/50	5.7948
939141	AE1-144 C O1	6.2226	Adder	7.32
939142	AE1-144 E O1	3.0880	Adder	3.63
940531	AE2-038 C O1	4.1510	Adder	4.88
940532	AE2-038 E O1	2.0561	Adder	2.42
941411	AE2-138 C	12.2304	Adder	14.39
941412	AE2-138 E	4.5236	Adder	5.32
941981	AE2-210 C O1	4.2143	Adder	4.96
941982	AE2-210 E O1	1.5852	Adder	1.86
942091	AE2-221 C	100.7658	50/50	100.7658
942092	AE2-221 E	67.1772	50/50	67.1772
942591	AE2-275 C O1	3.1736	Adder	3.73
942592	AE2-275 E O1	1.1938	Adder	1.4
942891	AE2-308 C O1	5.3230	Adder	6.26
942892	AE2-308 E O1	1.9356	Adder	2.28
943111	AE2-339 C	1.4716	Adder	1.73

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943112	AE2-339 E	0.7248	Adder	0.85
943201	AE2-318 C	5.0506	Adder	5.94
943202	AE2-318 E	2.4651	Adder	2.9
943771	AF1-045	2.3524	Adder	2.77
943773	AF1-045 E	1.5708	Adder	1.85
943863	AF1-053 BAT	3.0908	Merchant Transmission	3.0908
944521	AF1-117 C	6.8868	Adder	8.1
944522	AF1-117 E	2.1215	Adder	2.5
944621	AF1-127 C O1	3.3596	Adder	3.95
944622	AF1-127 E O1	1.6547	Adder	1.95
945681	AF1-233 C	11.9241	Adder	14.03
945682	AF1-233 E	5.8908	Adder	6.93
945861	AF1-251 C	8.3959	Adder	9.88
945862	AF1-251 E	5.5973	Adder	6.59
945911	AF1-256 C	3.8250	Adder	4.5
945912	AF1-256 E	2.5500	Adder	3.0
946021	AF1-267 C	1.7543	Adder	2.06
946022	AF1-267 E	0.8060	Adder	0.95
946171	AF1-282 C	25.7334	50/50	25.7334
946172	AF1-282 E	17.1556	50/50	17.1556
946181	AF1-283 C	33.4534	50/50	33.4534
946182	AF1-283 E	22.3023	50/50	22.3023
946511	AF1-315 C O1	2.8424	Adder	3.34
946512	AF1-315 E O1	1.8950	Adder	2.23
957393	AF2-033 BAT	2.4906	50/50	2.4906
958171	AF2-111 C O2	15.3075	50/50	15.3075
958172	AF2-111 E O2	10.2050	50/50	10.2050
959541	AF2-245 C O2	8.0824	50/50	8.0824
959542	AF2-245 E O2	5.3882	50/50	5.3882
960151	AF2-306	0.7356	Adder	1.63
960161	AF2-307 C	1.1203	Adder	2.49
960162	AF2-307 E	0.7469	Adder	1.66
960571	AF2-348 C	15.7590	50/50	15.7590
960572	AF2-348 E	10.5060	50/50	10.5060
960641	AF2-355 C O2	3.4484	Adder	7.65
960642	AF2-355 E O2	3.0652	Adder	6.8
WEC	WEC	0.0369	Confirmed LTF	0.0369
LGEE	LGEE	1.3703	Confirmed LTF	1.3703
CPL	CPL	0.3976	Confirmed LTF	0.3976
CBM-W2	CBM-W2	7.6085	Confirmed LTF	7.6085
NY	NY	0.1698	Confirmed LTF	0.1698
TVA	TVA	1.7318	Confirmed LTF	1.7318
O-066	O-066	1.8010	Confirmed LTF	1.8010
CBM-S2	CBM-S2	4.4159	Confirmed LTF	4.4159
CBM-S1	CBM-S1	12.3796	Confirmed LTF	12.3796
G-007	G-007	0.2766	Confirmed LTF	0.2766
MEC	MEC	0.6849	Confirmed LTF	0.6849

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_P2-3_FAWKES S62-824	CONTINGENCY 'EKPC_P2-3_FAWKES S62-824' /* OPEN BUS 342577 /* 4FAWKES EK OPEN BRANCH FROM BUS 342430 TO BUS 342691 CKT 1 /* 342430 2W BERE 69.000 342691 4W BERE 138.00 END
EKPC_P1-2_AVON-NCLA345-C	CONTINGENCY 'EKPC_P1-2_AVON-NCLA345-C' /* AVON - N CLARK OPEN BRANCH FROM BUS 941410 TO BUS 342835 CKT 1 /* 941410 AE2-138 TAP 345.00 342835 7N CLARK 345.00 END
EKPC_P1-2_FAWK 138 TIE	CONTINGENCY 'EKPC_P1-2_FAWK 138 TIE' OPEN BUS 342577 /* 342577 4FAWKES EK 138.00 END
EKPC_P2-4_SPUR N39-150T	CONTINGENCY 'EKPC_P2-4_SPUR N39-150T' /* SPURLOCK OPEN BUS 342960 /* 1SPURLK2G OPEN BRANCH FROM BUS 960570 TO BUS 342838 CKT 1 /* 960570 AF2-348 TAP 345.00 342838 7SPURLOCK 345.00 END

Contingency Name	Contingency Definition
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
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
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
EKPC_P1-2_JKS-NCLA345	CONTINGENCY 'EKPC_P1-2_JKS-NCLA345' /* JK SMITH - N CLARK OPEN BRANCH FROM BUS 342832 TO BUS 342835 CKT 1 /* 342832 7JK SMITH 345.00 342835 7N CLARK 345.00 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

Contingency Name	Contingency Definition
EKPC_P1-2_KU FAW-FAW138	CONTINGENCY 'EKPC_P1-2_KU FAW-FAW138' /* KU FAWKES - FAWKES OPEN BRANCH FROM BUS 324248 TO BUS 342577 CKT 1 /* 324248 4FAWKES 138.00 342577 4FAWKES EK 138.00 END
DAY-P1-STU SPUR	CONTINGENCY 'DAY-P1-STU SPUR' DISCONNECT BRANCH FROM BUS 253077 TO BUS 342838 CKT 1 /* STU SPUR END
EKPC_P1-2_AVN-BBN-DLE138	CONTINGENCY 'EKPC_P1-2_AVN-BBN-DLE138' /* AVON - BOONESBORO NORTH - DALE OPEN BRANCH FROM BUS 342541 TO BUS 342556 CKT 1 /* 342541 4AVON 138.00 342556 4BECKNERV T 138.00 OPEN BRANCH FROM BUS 342553 TO BUS 342556 CKT 1 /* 342553 4BECKNERV 138.00 342556 4BECKNERV T 138.00 OPEN BRANCH FROM BUS 342556 TO BUS 342565 CKT 1 /* 342556 4BECKNERV T 138.00 342565 4BOONESBOR T 138.00 OPEN BRANCH FROM BUS 342565 TO BUS 342567 CKT 1 /* 342565 4BOONESBOR T 138.00 342567 4BBORO N 138.00 OPEN BRANCH FROM BUS 324449 TO BUS 342567 CKT 1 /* 324449 2BOONSB N 69.000 342567 4BBORO N 138.00 OPEN BRANCH FROM BUS 342565 TO BUS 342574 CKT 1 /* 342565 4BOONESBOR T 138.00 342574 4DALE 138.00 END
EKPC_P1-2_DALE-FAWK 138-A	CONTINGENCY 'EKPC_P1-2_DALE-FAWK 138-A' /* DALE - FAWKES OPEN BRANCH FROM BUS 342574 TO BUS 942890 CKT 1 /* 342574 4DALE 138.00 942890 AE2-308 TAP 138.00 END
EKPC_P2-4_NCLK E114-151T-B	CONTINGENCY 'EKPC_P2-4_NCLK E114-151T-B' /* NORTH CLARK OPEN BRANCH FROM BUS 342832 TO BUS 342835 CKT 1 /* 342832 7JK SMITH 345.00 342835 7N CLARK 345.00 OPEN BRANCH FROM BUS 941410 TO BUS 342835 CKT 1 /* 941410 AE2-138 TAP 345.00 342835 7N CLARK 345.00 END
EKPC_P1-2_DALE-FAWK 138-C	CONTINGENCY 'EKPC_P1-2_DALE-FAWK 138-C' /* DALE - FAWKES OPEN BRANCH FROM BUS 342577 TO BUS 960640 CKT 1 /* 342577 4FAWKES EK 138.00 960640 AF2-355 TAP 138.00 END
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

Contingency Name	Contingency Definition
Base Case	
EKPC_P1-2_FAW-FAW-REB138	CONTINGENCY 'EKPC_P1-2_FAW-FAW-REB138' /* FAWKES - KU FAWKES - LAKE REBA OPEN BRANCH FROM BUS 324247 TO BUS 342577 CKT 1 /* 324247 4FAWK T 138.00 342577 4FAWKES EK 138.00 OPEN BRANCH FROM BUS 324247 TO BUS 324248 CKT 1 /* 324247 4FAWK T 138.00 324248 4FAWKES 138.00 OPEN BRANCH FROM BUS 324247 TO BUS 324276 CKT 1 /* 324247 4FAWK T 138.00 324276 4LKR TAP 138.00 END
EKPC_P4-2_FAWKES S62-824	CONTINGENCY 'EKPC_P4-2_FAWKES S62-824' /* OPEN BUS 342577 /* 4FAWKES EK DROPS BUS OPEN BRANCH FROM BUS 342430 TO BUS 342691 CKT 1 /* 342430 2W BERE 69.000 342691 4W BERE 138.00 END
AEP_P4_#6774_05MARQUI 345_D	CONTINGENCY 'AEP_P4_#6774_05MARQUI 345_D' OPEN BRANCH FROM BUS 246888 TO BUS 242938 CKT 1 / 246888 05BIERSR 345 242938 05MARQUI 345 1 OPEN BRANCH FROM BUS 242938 TO BUS 253038 CKT 1 / 242938 05MARQUI 345 253038 09KILLEN 345 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
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

Contingency Name	Contingency Definition
AEP_P1-2_#363	CONTINGENCY 'AEP_P1-2_#363' OPEN BRANCH FROM BUS 243208 TO BUS 243209 CKT 1 / 243208 05JEFRSO 765 243209 05ROCKPT 765 1 END
EKPC_P7-1_SPUR 345&138-E	CONTINGENCY 'EKPC_P7-1_SPUR 345&138-E' /* 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 945680 TO BUS 945910 CKT 1 /* 945680 AF1-233 TAP 138.00 945910 AF1-256 TAP 138.00 END
EKPC_P7-1_SPUR 345&138-G	CONTINGENCY 'EKPC_P7-1_SPUR 345&138-G' /* 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 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
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
EKPC_P7-1_SPUR 345&138-C	CONTINGENCY 'EKPC_P7-1_SPUR 345&138-C' /* 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 945910 TO BUS 958170 CKT 1 /* 945910 AF1-256 TAP 138.00 958170 AF2-111 TAP 138.00 END
EKPC_P4-6_NCLK E114-151T	CONTINGENCY 'EKPC_P4-6_NCLK E114-151T' OPEN BRANCH FROM BUS 342832 TO BUS 342835 CKT 1 /* 342832 7JK SMITH 345.00 342835 7N CLARK 345.00 OPEN BRANCH FROM BUS 941410 TO BUS 342835 CKT 1 /* 941410 AE2-138 TAP 345.00 342835 7N CLARK 345.00 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 LG&E

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

19.2 MISO

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

19.3 TVA

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

19.4 Duke Energy Progress

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