

Generation Interconnection Feasibility Study Report Queue Position AE1-104

The Interconnection Customer (IC) has proposed a 496.0 MW (139.4 MW Capacity) offshore wind generating facility to be located in the Atlantic Ocean east of Ocean City, New Jersey at coordinates 39.234082, -74.2913980. At the IC's request, PJM studied the AE1-104 project at both a Primary and Secondary Point of Interconnection. The project was studied at a commercial probability of 53% with the results provided below. The planned in-service date, as requested by the IC during the project kick-off call, is June 1, 2023. This date may not be attainable due to required PJM studies (System Impact and Facilities) and the Transmission Owner's construction schedule.

Point(s) of Interconnection

The Interconnection Customer requested a Primary and Secondary Point of Interconnection (POI) be evaluated for the AE1-104 project.

Primary Point of Interconnection

PJM studied the AE1-104 project as an injection into the Atlantic City Electric Company (ACE) transmission system at the BL England 138 kV Substation (PSSE bus #228110) and evaluated it for compliance with reliability criteria for summer peak conditions in 2022. The AE1-104 project will connect with the ACE transmission system at the B L England 138 kV Substation.

Transmission Owner Scope of Attachment Facilities Work

Substation Interconnection Estimate

Scope: Build a new position onto the 138 kV bus at BL England Substation. The new position will be connected to the AE1-104 generator. The project will require the addition of one (1) 138 kV breaker, three (3) 138 kV disconnect switches, three (3) CT/VT combination units, and substation bus.

Estimate: \$6,500,000

Construction Time: 36-48 months

Major Equipment Included in Estimate:

- | | |
|---|---------|
| • Power Circuit Breaker, 138 kV, 3 cycle | Qty. 1 |
| • Breaker Disconnect, 138 kV | Qty. 4 |
| • Line Disconnect, 138 kV | Qty. 1 |
| • Double 1590 ACSR (325') | Qty. 3 |
| • Insulators, 138 kV | Qty. 21 |
| • Disconnect Switch Stand, Low, 138 kV, Steel | Qty. 1 |
| • Relay Panel, Transmission Line, FL/BU (20") | Qty. 1 |
| • Control Panel, 138 kV Circuit Breaker (10") | Qty. 1 |

- | | |
|-------------------------------------|--------|
| • Take-off structure, 138 kV | Qty. 2 |
| • 138 kV Lightning Arresters | Qty. 3 |
| • 138 kV Lightning Arresters Stands | Qty. 3 |

Estimate Assumptions:

- Upgrade of existing circuit breaker A & B to 3000A rating (see “Attachment 1”).
- Current bus work is adequate to support AE1-104 new generation input.
- At proposed IC, Generator 1 has been completely disengaged/disassembled.
- Previous operator does not maintain rights or legal interests.
- Room in Control Enclosure for New Relay Panel.
- Fiber optic cable necessary is 1,000 linear feet.
- Developer to purchase additional land for substation expansion.
- Existing AC & DC systems are adequate
- Existing ground grid and storm water management requires southward expansion.

Required Relaying and Communications

New protection relays are required for the new terminals.

Front line and back-up line protection will be required. One 20” relay panel for each generator terminal will be required for front line and back-up protection.

A breaker control relay on a 20” breaker control panel will be required for the control and operation of each new 138 kV circuit breaker (1 total).

The project will require re-wiring and adjustment of existing relay schemes to accommodate the new 138 kV substation.

Metering

Three phase 138 kV revenue metering points will need to be established. ACE will purchase and install all metering instrument transformers as well as construct a metering structure. The secondary wiring connections at the instrument transformers will be completed by ACE’s metering technicians. The metering control cable and meter cabinets will be supplied and installed by ACE. ACE will install conduit for the control cable between the instrument transformers and the metering enclosure. The location of the metering enclosure will be determined in the construction phase. ACE will provide both the Primary and the Backup meters. ACE’s meter technicians will program and install the Primary & Backup solid state multi-function meters for each new metering position. Each meter will be equipped with load profile, telemetry, and DNP outputs. The IC will be provided with one meter DNP output for each meter. ACE will own the metering equipment for the interconnection point, unless the IC asserts its right to install, own, and operate the metering system.

The IC will be required to make provisions for a voice quality phone line within approximately 3 feet of each Company metering position to facilitate remote interrogation and data collection.

It is the IC's responsibility to send the data that PJM and ACE requires directly to PJM. The IC will grant permission for PJM to send ACE the following telemetry that the IC sends to PJM: real time MW, MVAR, volts, amperes, generator status, and interval MWH and MVARH.

The estimate for ACE to design, purchase, and install metering as specified in the aforementioned scope for metering is included in the Substation Interconnection Estimate.

Interconnection Customer Scope of Direct Connection Work

The IC is responsible for all design and construction related to activities on their side of the Point of Interconnection. Site preparation, including grading and an access road, as necessary, is assumed to be by the IC. Route selection, line design, and right-of-way acquisition of the direct connect facilities is not included in this report, and is the responsibility of the IC. Protective relaying and metering design and installation must comply with ACE's applicable standards. The IC is also required to provide revenue metering and real-time telemetering data to PJM in conformance with the requirements contained in PJM Manuals M-01 and M-14 and the PJM Tariff.

ACE Interconnection Customer Scope of Direct Connection Work Requirements:

- ACE requires that an IC circuit breaker is located within 500 feet of the ACE substation to facilitate the relay protection scheme between ACE and the IC at the Point of Interconnection (POI).

Special Operating Requirements

1. ACE will require the capability to remotely disconnect the generator from the grid by communication from its System Operations facility. Such disconnection may be facilitated by a generator breaker, or other method depending upon the specific circumstances and the evaluation by ACE.
2. ACE reserves the right to charge the Interconnection Customer operation and maintenance expenses to maintain the Interconnection Customer attachment facilities, including metering and telecommunications facilities, owned by ACE.

Additional Interconnection Customer Responsibilities:

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 seeking to interconnect a wind generation facility shall maintain meteorological data facilities as well as provide that meteorological data which is required per item 5.IV of Schedule H to the Interconnection Service Agreement.

Summer Peak Analysis - 2022

Transmission Network Impacts

Potential transmission network impacts are as follows:

Generator Deliverability

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

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
635051	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	Base Case	single	550.0	99.04	99.78	DC	9.18
635234	219754	CUTHBERT_3	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_Z-2305_LT	single	792.0	99.87	100.7	DC	14.78
635235	219754	CUTHBERT_3	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_Z-2305	single	792.0	99.84	100.68	DC	14.78
634650	227903	MILL #1	AE	227902	LEWIS #1	AE	1	AE_P1-2 BLE-ML-LEW2	single	306.0	79.38	101.01	DC	66.17
634595	227905	SCULL#1	AE	227903	MILL #1	AE	1	AE_P1-2 BLE-SC-ML2	single	306.0	91.25	115.42	DC	73.97
634598	227905	SCULL#1	AE	227903	MILL #1	AE	1	AE_P1-2 BLE-ML-LEW2	single	306.0	79.41	101.04	DC	66.17
634588	227906	SCULL#2	AE	227904	MILL #2	AE	1	AE_P1-2 BLE-SC-ML1	single	307.0	92.22	116.32	DC	73.98
634589	227906	SCULL#2	AE	227904	MILL #2	AE	1	AE_P1-2 BLE-ML-LEW1	single	307.0	88.7	111.71	DC	70.63
634565	228110	BLE	AE	227905	SCULL#1	AE	1	AE_P1-2 BLE-SC-ML2	single	307.0	98.28	122.37	DC	73.97
634568	228110	BLE	AE	227905	SCULL#1	AE	1	AE_P1-2 BLE-ML-LEW2	single	307.0	86.52	108.07	DC	66.17
634569	228110	BLE	AE	227905	SCULL#1	AE	1	Base Case	single	219.0	80.58	99.94	DC	42.4
634573	228110	BLE	AE	227906	SCULL#2	AE	1	AE_P1-2 BLE-SC-ML1	single	307.0	97.5	121.6	DC	73.98
634574	228110	BLE	AE	227906	SCULL#2	AE	1	AE_P1-2 BLE-ML-LEW1	single	307.0	93.98	116.99	DC	70.63
634577	228110	BLE	AE	227906	SCULL#2	AE	1	Base Case	single	219.0	78.58	97.95	DC	42.42
635151	228313	BRIDGPRT	AE	228401	MCKLTON	AE	1	Base Case	single	650.0	97.8	99.93	DC	15.53

Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
634407	206297	28MANITOU	JCP&L	206296	28LEISUR U	JCP&L	1	JC-P2-3-JCC-230-9A	breaker	817.0	96.69	99.95	DC	59.24

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
634416	206297	28MANITOU	JCP&L	206295	28LEISUR D	JCP&L	1	JC-P2-3-JCC-230-10A	breaker	817.0	95.53	98.79	DC	59.23
633781	206302	28OYSTER C	JCP&L	206297	28MANITOU	JCP&L	1	JC-P2-3-JCC-500-002D	breaker	817.0	98.51	100.94	DC	44.07
633782	206302	28OYSTER C	JCP&L	206297	28MANITOU	JCP&L	1	JC-P2-3-JCC-500-002B	breaker	817.0	98.21	100.66	DC	44.41
635674	206319	28WHITINGS	JCP&L	206720	28MANCHSTR	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	99.03	101.92	DC	55.63
635692	206720	28MANCHSTR	JCP&L	206318	28VANHISV L	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	97.29	100.18	DC	55.63
633656	213922	RICHMOND	PECO	214012	WANEETA3	PECO	1	PECO_P 2-2_CHI23 OB1/* \$ DELCO \$ PECO_P 2-2_CHI23 OB1 \$ B	bus	1180.0	96.0	99.61	DC	94.24
634379	213922	RICHMOND	PECO	214012	WANEETA3	PECO	1	PECO_P 4_CHICH 045/* \$ DELCO \$ PECO_P 4_CHICH 045 \$ STBK	breaker	1180.0	95.99	99.6	DC	94.24
633655	214206	RICHRE29	PECO	213922	RICHMOND	PECO	1	PECO_P 2-2_CHI23 OB1/* \$ DELCO \$ PECO_P 2-2_CHI23 OB1 \$ B	bus	1336.0	97.82	101.19	DC	98.75
634336	214206	RICHRE29	PECO	213922	RICHMOND	PECO	1	PECO_P 4_CHICH 045/* \$ DELCO \$ PECO_P 4_CHICH 045 \$ STBK	breaker	1336.0	97.81	101.17	DC	98.75
634314	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	PS_P2-3_CUTB 3-4 LT	breaker	771.0	98.71	101.59	DC	48.54
633654	219125	CAMDEN	PSE&G	214206	RICHRE29	PECO	1	PECO_P 2-2_CHI23 OB1/* \$ DELCO \$ PECO_P 2-2_CHI23 OB1 \$ B	bus	1336.0	97.84	101.21	DC	98.75
634335	219125	CAMDEN	PSE&G	214206	RICHRE29	PECO	1	PECO_P 4_CHICH 045/* \$ DELCO \$ PECO_P 4_CHICH 045 \$ STBK	breaker	1336.0	97.83	101.19	DC	98.75

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 LOADIN G %	AC DC	MW IMPACT
635676	219702	HILLTOP_1	PSE&G	219101	BEAVERBK_1	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	740.0	94.92	97.84	DC	48.83
633977	227904	MILL #2	AE	227945	LEWIS #2	AE	1	AE_P4-2 AE33	breaker	282.0	63.73	132.7	DC	194.47
633731	227905	SCULL#1	AE	227903	MILL #1	AE	1	AE_P4-2 AE29	breaker	306.0	94.94	191.64	DC	295.81
633760	227906	SCULL#2	AE	227904	MILL #2	AE	1	AE_P4-2 AE28	breaker	307.0	93.24	179.01	DC	263.22
634236	228106	CORSON 1	AE	228185	CORSON#1	AE	1	AE_P4-2 AE16	breaker	168.0	60.08	113.0	DC	88.9
633750	228110	BLE	AE	227906	SCULL#2	AE	1	AE_P4-2 AE28	breaker	307.0	98.52	184.28	DC	263.22
635679	228110	BLE	AE	228197	MERION	AE	1	AE_P7-1 AE7TO WER	tower	482.0	51.84	101.98	DC	241.7
635617	228111	MDLE TP	AE	228107	CORSON 2	AE	1	AE_P7-1 AE7TO WER	tower	315.0	31.79	109.52	DC	244.83
635586	228130	TUCKAHOE	AE	227946	MILL#2	AE	1	AE_P7-1 AE7TO WER	tower	146.0	65.03	111.39	DC	67.67
635534	228217	DENNIS	AE	228130	TUCKAHOE	AE	1	AE_P7-1 AE7TO WER	tower	146.0	69.76	116.11	DC	67.67
634207	228312	PEDRKWTN	AE	228313	BRIDGPRT	AE	1	AE_P4-2 AE45	breaker	552.0	89.7	98.48	DC	107.3
634352	228313	BRIDGPRT	AE	228401	MCKLTON	AE	1	AE_P4-2 AE45	breaker	805.0	87.74	93.26	DC	106.73
635619	228402	MONROE	AE	219100	NEWFRDM	PSE&G	1	AE_P7-1 W2275_O2241	tower	804.0	95.22	98.07	DC	63.59

Contribution to Previously Identified Overloads

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

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADIN G %	AC DC	MW IMPACT
635513	206297	28MANITOU	JCP&L	206319	28WHITINGS	JCP&L	1	JC-P7-1-JCC-230-10A	tower	817.0	116.65	119.71	DC	55.53
635514	206297	28MANITOU	JCP&L	206319	28WHITINGS	JCP&L	1	JC-P7-1-JCC-230-12	tower	817.0	108.1	111.4	DC	59.88
633780	206302	28OYSTER C	JCP&L	206297	28MANITOU	JCP&L	1	JC-P2-3-JCC-230-11	breaker	817.0	165.7	169.86	DC	75.44
633800	206302	28OYSTER C	JCP&L	206297	28MANITOU	JCP&L	2	JC-P2-3-JCC-230-18A	breaker	869.0	156.0	159.97	DC	76.47
633801	206302	28OYSTER C	JCP&L	206297	28MANITOU	JCP&L	2	JC-P2-3-JCC-230-12	breaker	869.0	155.89	159.81	DC	75.46
635611	206318	28VANHISVL	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	106.66	109.58	DC	56.35
634024	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	2	JC-P2-3-JCC-230-13H	breaker	817.0	127.06	130.28	DC	58.34

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
634025	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	2	JC-P2-3-JCC-230-13D	breaker	817.0	126.27	129.63	DC	60.88
634122	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-13B	breaker	869.0	117.44	120.6	DC	60.93
634123	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-13A	breaker	869.0	117.13	120.22	DC	59.46
634124	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-8A	breaker	869.0	113.68	116.42	DC	52.8
635535	219100	NEWFRDM	PSE&G	219704	HILLTOP_3	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	740.0	110.37	113.41	DC	51.74
635536	219100	NEWFRDM	PSE&G	219704	HILLTOP_3	PSE&G	1	AE_P7-1_W2275_O2241	tower	740.0	104.61	107.66	DC	51.94
635121	219108	CUTHBERT	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_U-2299_LT	single	771.0	105.01	105.89	DC	15.15
635122	219108	CUTHBERT	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_U-2299	single	771.0	104.87	105.75	DC	15.15
634313	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	PS_P2-3_CUTB_1-4_LT	breaker	771.0	100.07	102.99	DC	49.26
635045	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308_LT	single	758.0	110.34	111.18	DC	14.16
635047	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308	single	758.0	109.76	110.6	DC	14.16
635113	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	Base Case	single	500.0	105.59	106.42	DC	9.29
635197	219110	GLOUCSTR	PSE&G	219753	CUTHBERT_2	PSE&G	1	PS_P1-2_D-2282_LT	single	771.0	102.92	103.7	DC	13.43
635199	219110	GLOUCSTR	PSE&G	219753	CUTHBERT_2	PSE&G	1	PS_P1-2_D-2282	single	771.0	102.51	103.29	DC	13.43
633726	228110	BLE	AE	227905	SCULL#1	AE	1	AE_P4-2 AE29	breaker	307.0	101.99	198.37	DC	295.81
635618	228402	MONROE	AE	219100	NEWFRDM	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	804.0	103.07	105.08	DC	63.3
634543	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	Base Case	single	230.0	117.86	124.11	DC	14.38
634546	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	AE_P1-2 CARD-CEDAR	single	286.0	108.78	114.33	DC	15.87
634606	228503	MNOTLA 2	AE	228502	MNOTLA 1	AE	1	AE_P1-2 CARD-CEDAR	single	311.0	101.85	106.95	DC	15.87
634607	228503	MNOTLA 2	AE	228502	MNOTLA 1	AE	1	AE_P1-2 OYCK-CEDAR	single	311.0	100.75	106.17	DC	16.86

Summer Peak Load Flow Analysis Reinforcements

New System Reinforcements

(Upgrades required to mitigate reliability criteria violations, i.e. Network Impacts, initially caused by the addition of this project generation)

ID	Index	Facility	Upgrade Description	Cost
635679	21	BLE 138.0 kV - MERION 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) B.L. England – Merion 138 kV line (from bus 228110 to bus 228197 ckt 1) overload, it will require increasing the emergency rating of the B.L. England to Merion 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at both B.L. England and Merion. Time Estimate : 36-60 Months Cost : \$12,500,000	\$12,500,000
635676	18	HILLTOP_1 230.0 kV - BEAVERBK_1 230.0 kV Ckt 1	<u>PSE&G</u> Description : No Violation. Current Ratings: S/N: 732, S/E: 886	\$0
635534	24	DENNIS 69.0 kV - TUCKAHOE 69.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) Dennis – Tuckahoe 69 kV line (from bus 228217 to bus 228130 ckt 1) overload, it will require increasing the emergency rating of the Dennis to Tuckahoe 69 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at Tuckahoe. Time Estimate : 36-60 Months Cost : \$7,000,000	\$7,000,000
633656,634379	14	RICHMOND 230.0 kV - WANEETA3 230.0 kV Ckt 1	<u>PECO</u> Description : No Violation. Queue Project W4-016 withdrew from the queue after the AE1 analysis run. After removing W4-016's contribution, the flowgate loading is less than 100%.	\$0
635618,635619	26	MONROE 230.0 kV - NEWFRDM 230.0 kV Ckt 1	<u>PSE&G</u> Description : No Violation. PSE&G Terminal Equipment is Not Limiting Component <u>AE</u> Description : To mitigate the (ACE) Monroe – New Freedom 230 kV line (from bus 228402 to bus 219100 ckt 1) overload, it will require increasing the emergency rating of the Monroe to New Freedom 230 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Time Estimate : 36-60 Months Cost : \$13,400,000	\$13,400,000
635536,635535	32	NEWFRDM 230.0 kV - HILLTOP_3 230.0 kV Ckt 1	<u>PSE&G</u> Description : No Violation. Current Ratings: S/N: 732, S/E: 886	\$0

ID	Index	Facility	Upgrade Description	Cost
634416	10	28MANITOU 230.0 kV - 28LEISUR D 230.0 kV Ckt 1	<u>JCP&L</u> Description : No Violation. Facility loading does not exceed 100%.	\$0
635234,635235	2	CUTHBERT_3 230.0 kV - CAMDEN 230.0 kV Ckt 1	<u>PSE&G</u> Description : New Cable: Gloucester 230kV to Camden 230kV Time Estimate : 48.0 Months Cost : \$181,977,178	\$181,977,178
634313,634314,635113	16	GLOUCSTR 230.0 kV - CAMDEN 230.0 kV Ckt 1		
635197,635199	34	GLOUCSTR 230.0 kV - CUTHBERT_2 230.0 kV Ckt 1		
635051,635045,635047	1	GLOUCSTR 230.0 kV - CUTHBERT_4 230.0 kV Ckt 1		
635121,635122	33	CUTHBERT 230.0 kV - CAMDEN 230.0 kV Ckt 1		
635692	13	28MANCHSTR 230.0 kV - 28VANHISVL 230.0 kV Ckt 1	<u>JCP&L</u> Description : Reconductor the transmission line between Larrabee - Van Hiseville tap - Manchester - Whittings with 1590 45/7 MCM ACSS. Upgrade wave traps at Larrabee & Whittings to match or exceed 1334 MVA STE Rating. Time Estimate : 31.0 Months Cost : \$93,163,200	\$93,163,200
635674	12	28WHITINGS 230.0 kV - 28MANCHSTR 230.0 kV Ckt 1		
635611	29	28VANHISVL 230.0 kV - 28LARRABEE 230.0 kV Ckt 1		
634122,634123,634124	31	28LAKEWOOD 230.0 kV - 28LARRABEE 230.0 kV Ckt 1	<u>JCP&L</u> Description : Reconductor with 1590 45/7 MCM ACSS, and upgrade all equipment on line to match or exceed 1334 MVA STE rating. Time Estimate : 19.0 Months Cost : \$17,442,500	\$17,442,500
634024,634025	30	28LAKEWOOD 230.0 kV - 28LARRABEE 230.0 kV Ckt 2	<u>JCP&L</u> Description : Reconductor with 1590 45/7 MCM ACSS, and upgrade all equipment on line to match or exceed 1334 MVA STE Rating. Time Estimate : 19.0 Months Cost : \$7,692,500	\$7,692,500
635617	22	MDLE TP 138.0 kV - CORSON 2 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) Middle Tap – Corson#2 138 kV line (from bus 228111 to bus 228107 ckt 1) overload, it will require increasing the emergency rating of the Middle Tap to Corson#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at Corson#2. Time Estimate : 24-48 Months Cost : \$400,000	\$400,000

ID	Index	Facility	Upgrade Description	Cost
634574,634577,634573,633750	7	BLE 138.0 kV - SCULL#2 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) B.L. England – Scull#2 138 kV line (from bus 228110 to bus 227906 ckt 1) overload, it will require increasing the emergency rating of the B.L. England to Scull#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at both B.L. England and Scull#2. Time Estimate : 36-60 Months Cost : \$6,000,000	\$6,000,000
635513,635514	27	28MANITOU 230.0 kV - 28WHITINGS 230.0 kV Ckt 1	<u>JCP&L</u> Description : Reconductor with 1590 45/7 MCM ACSS, and upgrade all equipment on line to match or exceed 1334 MVA STE rating. Time Estimate : 24.0 Months Cost : \$95,038,900	\$95,038,900
634568,634569,634565,633726	6	BLE 138.0 kV - SCULL#1 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) B.L. England – Scull#1 138 kV line (from bus 228110 to bus 227905 ckt 1) overload, it will require increasing the emergency rating of the B.L. England to Scull#1 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at both B.L. England and Scull#1. Time Estimate : 36-60 Months Cost : \$5,900,000	\$5,900,000
634546,634543	35	MNOTLA 1 138.0 kV - LANDIS 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (AE - AE) MNOTLA 1-LANDIS 138 kV line (from bus 228502 to bus 228500 ckt 1) overload will include rebuilding the Minotola to Landis 138 kV transmission line. Also, upgrades to the terminals at Minotola and Landis Substation will be required. Time Estimate : 36.0 Months Cost : \$25,800,000	\$25,800,000
633760,634588,634589	5	SCULL#2 138.0 kV - MILL #2 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) Mill#2– Scull#2 138 kV line (from bus 228904 to bus 227906 ckt 1) overload, it will require increasing the emergency rating of the Mill#2 to Scull#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at both Mill#2 to Scull#2. Time Estimate : 36-60 Months Cost : \$12,800,000	\$12,800,000
634336,633655	15	RICHRE29 230.0 kV - RICHMOND 230.0 kV Ckt 1	<u>PECO</u> Description : No Violation. Queue Project W4-016 withdrew from the queue after the AE1 analysis run. After removing W4-016's contribution, the flowgate loading is less than 100%.	\$0

ID	Index	Facility	Upgrade Description	Cost
633800,633801	28	28OYSTER C 230.0 kV - 28MANITOU 230.0 kV Ckt 2	<u>JCP&L</u> Description : Reconductor with 2-bundle 1590 45/7 MCM ACSR, and upgrade all equipment on line to match or exceed 2667 MVA STE rating. Additionally, upgrade relays & metering at both Manitou and Oyster Creek. Time Estimate : 31.0 Months Cost : \$13,501,500	\$13,501,500
633780,633781,633782	11	28OYSTER C 230.0 kV - 28MANITOU 230.0 kV Ckt 1	<u>JCP&L</u> Description : Reconductor with 2-bundle 1590 45/7 MCM ACSR, and upgrade all equipment on line to match or exceed 2667 MVA STE rating. Additionally, upgrade relays & metering at both Manitou and Oyster Creek. Time Estimate : 31.0 Months Cost : \$106,343,200	\$106,343,200
634236	20	CORSON 1 138.0 kV - CORSON#1 69.0 kV Ckt 1	<u>AE</u> Description : Corson substation has the Limiting Equipment at emergency rating of 168 MVA. Reinforcement of the limiting equipment is required at Corson Substation. Time Estimate : 24.0 Months Cost : \$250,000	\$250,000
634207	25	PEDRKTWN 230.0 kV - BRIDGPRT 230.0 kV Ckt 1	<u>AE</u> Description : No Violation. Incorrect rating in case.	\$0
633731,634598,634595	4	SCULL#1 138.0 kV - MILL #1 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) Scull#1-Mill#1 - 138 kV line (from bus 227905 to bus 227903 ckt 1) overload, it will require increasing the emergency rating of the Scull#1 to Mill#1 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements at Mill#1. Time Estimate : 36-60 Months Cost : \$12,800,000	\$12,800,000
633654,634335	17	CAMDEN 230.0 kV - RICHRE29 230.0 kV Ckt 1	<u>PECO</u> Description : No Violation. Queue Project W4-016 withdrew from the queue after the AE1 analysis run. After removing W4-016's contribution, the flowgate loading is less than 100%. <u>PSE&G</u> Description : No Violation. Tie Line. Limiting Component NOT owned by PSE&G	\$0

ID	Index	Facility	Upgrade Description	Cost
634650	3	MILL #1 138.0 kV - LEWIS #1 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) Mill#1– Lewis#1 138 kV line (from bus 228903 to bus 227902 ckt 1) overload, it will require increasing the emergency rating of the Mill#1 to Lewis#1 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Time Estimate : 36-60 Months Cost : \$11,300,000	\$11,300,000
634606,634607	36	MNOTLA 2 138.0 kV - MNOTLA 1 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (AE - AE) MNOTLA 2-MNOTLA 1 138 kV line (from bus 228503 to bus 228502 ckt 1) overload will require substation reinforcements at Minotola Substation. Time Estimate : 18.0 Months Cost : \$1,300,000	\$1,300,000
635586	23	TUCKAHOE 69.0 kV - MILL#2 69.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) Tuckahoe – Mill#2 69 kV line (from bus 228130 to bus 227946 ckt 1) overload, it will require increasing the emergency rating of the Tuckahoe to Mill#2 69 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. Time Estimate : 36-60 Months Cost : \$20,000,000	\$20,000,000
633977	19	MILL #2 138.0 kV - LEWIS #2 138.0 kV Ckt 1	<u>AE</u> Description : To mitigate the (ACE) Mill#2– Lewis#2 138 kV line (from bus 228904 to bus 227945 ckt 1) overload, it will require increasing the emergency rating of the Mill#2 to Lewis#2 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements are required at Lewis#2. Time Estimate : 36-60 Months Cost : \$12,500,000	\$12,500,000
634407	9	28MANITOU 230.0 kV - 28LEISUR U 230.0 kV Ckt 1	<u>JCP&L</u> Description : No Violation. Facility loading does not exceed 100%.	\$0
634352,635151	8	BRIDGPRT 230.0 kV - MCKLTON 230.0 kV Ckt 1	<u>AE</u> Description : No Violation. Facility loading does not exceed 100%.	\$0
			TOTAL COST	\$657,108,978

Steady-State Voltage Requirements

To be performed during later study phases as required.

Short Circuit

No issues identified.

Stability and Reactive Power Requirement

To be performed during later study phases as required.

Light Load Analysis - 2022

To be performed during later study phases (as required by PJM Manual 14B).

Delivery of Energy Portion of Interconnection Request

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. Only the most severely overloaded conditions are listed. 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 will study all overload conditions associated with the overloaded element(s) identified.

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
635011	206302	28OYSTER C	JCP&L	206297	28MANI TOU	JCP&L	1	Base Case	operation	650.0	115.14	118.06	DC	42.08
635012	206302	28OYSTER C	JCP&L	206297	28MANI TOU	JCP&L	1	PECO_P1-2_5038/* \$ CHESCO \$ PECO_P1-2_5038 \$ L	operation	817.0	98.11	100.56	DC	44.55
635156	206302	28OYSTER C	JCP&L	206297	28MANI TOU	JCP&L	2	Base Case	operation	709.0	105.7	108.37	DC	42.13
635119	219108	CUTHBERT	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_U-2299_LT	operation	771.0	102.93	106.13	DC	53.92
635044	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308_LT	operation	758.0	108.37	111.41	DC	50.39
635050	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	Base Case	operation	550.0	97.27	99.99	DC	32.65
635112	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	Base Case	operation	500.0	103.63	106.65	DC	33.05
635196	219110	GLOUCSTR	PSE&G	219753	CUTHBERT_2	PSE&G	1	PS_P1-2_D-2282_LT	operation	771.0	101.08	103.92	DC	47.78
635232	219754	CUTHBERT_3	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_Z-2305_LT	operation	792.0	97.89	100.93	DC	52.6
634647	227903	MILL #1	AE	227902	LEWIS #1	AE	1	AE_P1-2 BLE-ML-LEW2	operation	306.0	78.94	155.91	DC	235.46
634649	227903	MILL #1	AE	227902	LEWIS #1	AE	1	Base Case	operation	218.0	47.41	104.14	DC	123.64
634848	227904	MILL #2	AE	227945	LEWIS #2	AE	1	AE_P1-2 BLE-ML-LEW1	operation	282.0	60.03	126.45	DC	187.24

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
634849	227904	MILL #2	AE	227945	LEWIS #2	AE	1	Base Case	operation	219.0	47.1	103.41	DC	123.28
634592	227905	SCULL#1	AE	227903	MILL #1	AE	1	AE_P1-2 BLE-SC-ML2	operation	306.0	90.7	176.73	DC	263.18
634594	227905	SCULL#1	AE	227903	MILL #1	AE	1	Base Case	operation	218.0	70.11	139.33	DC	150.86
634585	227906	SCULL#2	AE	227904	MILL #2	AE	1	AE_P1-2 BLE-SC-ML1	operation	307.0	91.68	177.44	DC	263.22
634587	227906	SCULL#2	AE	227904	MILL #2	AE	1	Base Case	operation	219.0	70.71	139.65	DC	150.93
634562	228110	BLE	AE	227905	SCULL#1	AE	1	AE_P1-2 BLE-SC-ML2	operation	307.0	97.74	183.48	DC	263.18
634564	228110	BLE	AE	227905	SCULL#1	AE	1	Base Case	operation	219.0	80.11	149.01	DC	150.86
634570	228110	BLE	AE	227906	SCULL#2	AE	1	AE_P1-2 BLE-SC-ML1	operation	307.0	96.96	182.72	DC	263.22
634572	228110	BLE	AE	227906	SCULL#2	AE	1	Base Case	operation	219.0	78.11	147.05	DC	150.93
635150	228313	BRIDGPRT	AE	228401	MCKLTON	AE	1	Base Case	operation	650.0	96.19	100.02	DC	55.27
634542	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	Base Case	operation	230.0	123.77	132.26	DC	51.16
634609	228503	MNOTLA 2	AE	228502	MNOTLA 1	AE	1	Base Case	operation	311.0	91.76	97.97	DC	51.17

Secondary Point of Interconnection

PJM studied the AE1-104 project into the Atlantic City Electric Company (DPL) system at the Lewis 138 kV Substation (PSSE bus #227902) and evaluated it for compliance with reliability criteria for summer peak conditions in 2022.

Summer Peak Analysis - 2022

Transmission Network Impacts

Potential transmission network impacts are as follows:

Generator Deliverability

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

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
629633	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	Base Case	single	550.0	99.04	99.75	DC	8.8
629824	219754	CUTHBERT_3	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_Z-2305_LT	single	792.0	99.87	100.67	DC	14.18
629825	219754	CUTHBERT_3	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_Z-2305	single	792.0	99.84	100.64	DC	14.18
629773	228313	BRIDGPRT	AE	228401	MCKLTON	AE	1	Base Case	single	650.0	97.8	98.56	DC	12.79

Multiple Facility Contingency

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

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
628965	206316	28WINDSOR	JCP&L	219752	CLRKSVLL_1	PSE&G	1	PS_P2-3_DEAN 5_5-6	breaker	813.0	90.56	92.33	DC	31.92
630147	206318	28VANHISVL	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P7-1-JCC-230-12	tower	869.0	99.61	103.07	DC	66.71
630181	206319	28WHITINGS	JCP&L	206720	28MANCHSTR	JCP&L	1	JC-P7-1-JCC-230-12	tower	869.0	96.19	99.78	DC	69.25
628940	206326	28E WINDSR	JCP&L	206316	28WINDSOR	JCP&L	1	PS_P2-3_DEAN 5_5-6	breaker	869.0	95.83	97.47	DC	31.71
628383	213922	RICHMOND	PECO	214012	WANEETA3	PECO	1	PECO_P 2-2_CHI2 30B1/* \$ DELCO \$ PECO_P 2-2_CHI2 30B1 \$ B	bus	1180.0	96.0	99.58	DC	93.43
629043	213922	RICHMOND	PECO	214012	WANEETA3	PECO	1	PECO_P 4_CHIC H045/* \$ DELCO \$ PECO_P 4_CHIC H045 \$ STBK	breaker	1180.0	95.99	99.57	DC	93.43
628381	214206	RICHRE29	PECO	213922	RICHMOND	PECO	1	PECO_P 2-2_CHI2 30B1/* \$ DELCO \$ PECO_P 2-2_CHI2 30B1 \$ B	bus	1336.0	97.82	101.14	DC	97.45
629004	214206	RICHRE29	PECO	213922	RICHMOND	PECO	1	PECO_P 4_CHIC H045/* \$ DELCO \$ PECO_P 4_CHIC H045 \$ STBK	breaker	1336.0	97.81	101.13	DC	97.45
628975	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	PS_P2-3_CUTB _3-4_LT	breaker	771.0	98.71	101.47	DC	46.54

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
628380	219125	CAMDEN	PSE&G	214206	RICHRE29	PECO	1	PECO_P 2-2_CHI2 30B1/* \$ DELCO \$ PECO_P 2-2_CHI2 30B1 \$ B	bus	1336.0	97.84	101.16	DC	97.45
629003	219125	CAMDEN	PSE&G	214206	RICHRE29	PECO	1	PECO_P 4_CHIC H045/* \$ DELCO \$ PECO_P 4_CHIC H045 \$ STBK	breaker	1336.0	97.83	101.15	DC	97.45
630242	219702	HILLTOP_1	PSE&G	219101	BEAVERBK_1	PSE&G	1	PS_P7-1_V227 4+P224 2_LT	tower	740.0	94.91	97.85	DC	49.16
628487	227902	LEWIS #1	AE	227945	LEWIS #2	AE	1	AE_P4-2 AE33	breaker	286.8	42.36	167.46	DC	358.79
629984	227902	LEWIS #1	AE	227945	LEWIS #2	AE	1	AE_P7-1 AE13TOWER	tower	286.8	72.83	153.18	DC	230.44
630183	228402	MONROE	AE	219100	NEWFRDM	PSE&G	1	AE_P7-1 W2275_O2241	tower	804.0	95.22	97.84	DC	59.5

Contribution to Previously Identified Overloads

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

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
628946	206297	28MANITOU	JCP&L	206296	28LEISUR U	JCP&L	1	JC-P2-3-JCC-230-9A	breaker	817.0	103.33	107.12	DC	68.65
628947	206297	28MANITOU	JCP&L	206296	28LEISUR U	JCP&L	1	JC-P2-3-JCC-230-11	breaker	817.0	101.7	105.24	DC	64.28
628959	206297	28MANITOU	JCP&L	206295	28LEISUR D	JCP&L	1	JC-P2-3-JCC-230-10A	breaker	817.0	102.17	105.95	DC	68.64
628960	206297	28MANITOU	JCP&L	206295	28LEISUR D	JCP&L	1	JC-P2-3-JCC-230-12	breaker	817.0	101.09	104.64	DC	64.3
630061	206297	28MANITOU	JCP&L	206319	28WHITINGS	JCP&L	1	JC-P7-1-JCC-230-10A	tower	817.0	124.11	127.7	DC	65.18

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
630062	206297	28MANITOU	JCP&L	206319	28WHITINGS	JCP&L	1	JC-P7-1-JCC-230-12	tower	817.0	115.97	119.83	DC	70.07
630146	206318	28VANHISVL	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	110.71	113.99	DC	63.17
630180	206319	28WHITINGS	JCP&L	206720	28MANCHSTR	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	105.32	108.71	DC	65.29
628616	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	2	JC-P2-3-JCC-230-13H	breaker	817.0	133.79	137.54	DC	67.88
628617	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	2	JC-P2-3-JCC-230-13D	breaker	817.0	133.22	137.13	DC	70.77
628717	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-13B	breaker	869.0	123.98	127.66	DC	70.82
628718	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-13A	breaker	869.0	123.54	127.13	DC	69.13
628719	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-8A	breaker	869.0	119.38	122.56	DC	61.41
628720	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-7A	breaker	869.0	100.06	103.76	DC	71.4
630195	206720	28MANCHSTR	JCP&L	206318	28VANHISVL	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	103.58	106.97	DC	65.29
630118	219100	NEWFRDM	PSE&G	219704	HILLTOP_3	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	740.0	110.37	113.41	DC	52.08
630119	219100	NEWFRDM	PSE&G	219704	HILLTOP_3	PSE&G	1	AE_P7-1_W2275_Q2241	tower	740.0	104.61	107.66	DC	52.28
629707	219108	CUTHBERT	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_U-2299_LT	single	771.0	105.01	105.85	DC	14.53
629708	219108	CUTHBERT	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_U-2299	single	771.0	104.87	105.71	DC	14.53
628974	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	PS_P2-3_CUTB_1-4_LT	breaker	771.0	100.07	102.87	DC	47.23
629627	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308_LT	single	758.0	110.34	111.14	DC	13.58

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
629629	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308	single	758.0	109.76	110.56	DC	13.58
629690	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	Base Case	single	500.0	105.59	106.39	DC	8.91
629784	219110	GLOUCSTR	PSE&G	219753	CUTHBERT_2	PSE&G	1	PS_P1-2_D-2282_LT	single	771.0	102.92	103.67	DC	12.88
629786	219110	GLOUCSTR	PSE&G	219753	CUTHBERT_2	PSE&G	1	PS_P1-2_D-2282	single	771.0	102.51	103.25	DC	12.88
630182	228402	MONROE	AE	219100	NEWFRDM	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	804.0	103.06	104.86	DC	59.21
629207	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	Base Case	single	230.0	117.86	126.29	DC	19.37
629208	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	AE_P1-2_CARD-CEDAR	single	286.0	108.78	116.16	DC	21.09
629260	228503	MNOTLA 2	AE	228502	MNOTLA 1	AE	1	AE_P1-2_CARD-CEDAR	single	311.0	101.85	108.63	DC	21.09
629261	228503	MNOTLA 2	AE	228502	MNOTLA 1	AE	1	AE_P1-2_OYCK-CEDAR	single	311.0	100.75	107.91	DC	22.26

Delivery of Energy Portion of Interconnection Request

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.

Only the most severely overloaded conditions are listed. 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 will study all overload conditions associated with the overloaded element(s) identified.

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
629807	206316	28WINDSOR	JCP&L	219752	CLRKSVLL_1	PSE&G	1	PS_P1-2_5022	operation	813.0	89.0	90.77	DC	31.95
629726	206326	28E WINDSR	JCP&L	206316	28WINDSOR	JCP&L	1	PS_P1-2_5022	operation	869.0	94.38	96.02	DC	31.74
629705	219108	CUTHBERT	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_U-2299_LT	operation	771.0	102.93	106.0	DC	51.7
629626	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308_LT	operation	758.0	108.37	111.28	DC	48.32
629632	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	Base Case	operation	550.0	97.27	99.88	DC	31.31

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
629689	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	Base Case	operation	500.0	103.63	106.53	DC	31.69
629783	219110	GLOUCSTR	PSE&G	219753	CUTHBERT_2	PSE&G	1	PS_P1-2_D-2282_LT	operation	771.0	101.08	103.8	DC	45.82
629822	219754	CUTHBERT_3	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_Z-2305_LT	operation	792.0	97.89	100.8	DC	50.44
629322	227902	LEWIS #1	AE	227945	LEWIS #2	AE	1	AE_P1-2 LANDIS-MINO	operation	286.8	72.53	153.02	DC	230.83
629772	228313	BRIDGPRT	AE	228401	MCKLTON	AE	1	Base Case	operation	650.0	96.19	99.34	DC	45.5
629204	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	Base Case	operation	230.0	124.12	151.86	DC	68.93
629259	228503	MNOTLA 2	AE	228502	MNOTLA 1	AE	1	Base Case	operation	311.0	91.97	112.44	DC	68.94

Primary POI Flow Gate Details

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

Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
635045	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308_LT	single	758.0	110.34	111.18	DC	14.16

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.75
219124	CAMDEN_STG	3.35
219126	CAMDEN_CTG	4.12
219128	GLOUCSTR_26	1.82
219229	EAGLEPT_G3	2.9
219230	EAGLEPT_G1	4.29
219231	EAGLEPT_G2	4.29
227801	ONTC&DCT	3.71

Bus #	Bus	MW Impact
227881	GRENWCHG	0.05
228304	LOGAN	6.64
228306	PCLP STM	1.75
228307	PCLP GT	1.74
228309	CCLP NUG	6.06
228334	MANNMILG	0.21
228343	QUINTN#1	0.05
228351	V2-046C	0.17
228400	MICK 1CT	1.4
228423	Q-090 2	27.23
228471	VALERO1	0.47
228472	VALERO2	0.32
228473	VALERO3	0.32
228484	VALERO4	0.28
228720	V2-035C	0.02
291995	U4-036 C	0.08
292104	V1-030 C6	0.02
292194	V1-030 CE	0.11
903963	W3-175	9.01
905143	W4-016	53.1
914231	Y2-081 C OP1	1.38
914232	Y2-081 E OP1	0.07
915591	Y3-087 C OP1	0.06
917381	Z2-062	0.15
917471	Z2-083	2.56
918891	AA1-108	3.84
924051	AB2-049 C	0.43
924531	AB2-102 C	24.6
924701	AB2-122 C	0.07
925391	AC1-010 C	0.74
931191	AB1-169A	70.82
936411	AD2-052 C	1.03
936491	AD2-064 C	0.06
936501	AD2-065 C	0.19
937011	AD2-135 C	0.07
938301	AE1-045 C	0.26
938311	AE1-046 C	0.26
938421	AE1-061 C	0.34
938431	AE1-062 C	0.47
938781	AE1-104 C O1	14.16
938871	AE1-115 C	1.64
939301	AE1-161 C	2.79
939501	AE1-179 C O1	4.36
939821	AE1-218 C O1	0.11
939831	AE1-219 C O1	0.24
939931	AE1-229 C O1	13.37
940001	AE1-240 C O1	3.63
BAYOU	BAYOU	0.38
BIG_CAJUN1	BIG_CAJUN1	0.59
BIG_CAJUN2	BIG_CAJUN2	1.18
BLUEG	BLUEG	1.88
CALDERWOOD	CALDERWOOD	0.19

Bus #	Bus	MW Impact
CANNELTON	CANNELTON	0.11
CARR	CARR	0.4
CATAWBA	CATAWBA	0.12
CHEOAH	CHEOAH	0.18
CHILHOWEE	CHILHOWEE	0.06
CHOCTAW	CHOCTAW	0.39
COFFEEN	COFFEEN	0.2
COTTONWOOD	COTTONWOOD	1.51
DEARBORN	DEARBORN	0.34
DUCKCREEK	DUCKCREEK	0.43
EDWARDS	EDWARDS	0.2
ELMERSMITH	ELMERSMITH	0.2
FARMERCITY	FARMERCITY	0.13
GIBSON	GIBSON	0.08
HAMLET	HAMLET	0.38
NEWTON	NEWTON	0.52
PRAIRIE	PRAIRIE	0.96
RENSSELAER	RENSSELAER	0.32
SANTEETLA	SANTEETLA	0.05
SMITHLAND	SMITHLAND	0.08
TATANKA	TATANKA	0.24
TILTON	TILTON	0.24
TRIMBLE	TRIMBLE	0.21
TVA	TVA	0.63
UNIONPOWER	UNIONPOWER	0.28

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
635235	219754	CUTHBERT_3	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_Z-2305	single	792.0	99.84	100.68	DC	14.78

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.83
219124	CAMDEN_STG	3.5
219126	CAMDEN_CTG	4.3
219128	GLOUCSTR_26	1.9
219229	EAGLEPT_G3	3.02
219230	EAGLEPT_G1	4.48
219231	EAGLEPT_G2	4.48
227801	ONTC&DCT	3.88
227881	GRENWCHG	0.05
228304	LOGAN	6.93
228306	PCLP STM	1.82
228307	PCLP GT	1.82
228309	CCLP NUG	6.33
228334	MANNMILG	0.22

Bus #	Bus	MW Impact
228343	QUINTN#1	0.05
228351	V2-046C	0.18
228400	MICK 1CT	1.46
228423	Q-090 2	28.43
228471	VALERO1	0.49
228472	VALERO2	0.34
228473	VALERO3	0.34
228484	VALERO4	0.29
228720	V2-035C	0.02
291995	U4-036 C	0.08
292104	V1-030 C6	0.03
292194	V1-030 CE	0.11
903963	W3-175	9.4
905143	W4-016	55.43
914231	Y2-081 C OP1	1.44
914232	Y2-081 E OP1	0.08
915591	Y3-087 C OP1	0.07
917381	Z2-062	0.16
917471	Z2-083	2.68
918891	AA1-108	4.0
924051	AB2-049 C	0.45
924531	AB2-102 C	25.67
924701	AB2-122 C	0.07
925391	AC1-010 C	0.77
931191	AB1-169A	73.92
936411	AD2-052 C	1.07
936491	AD2-064 C	0.06
936501	AD2-065 C	0.2
937011	AD2-135 C	0.07
938301	AE1-045 C	0.27
938311	AE1-046 C	0.27
938421	AE1-061 C	0.36
938431	AE1-062 C	0.49
938781	AE1-104 C O1	14.78
938871	AE1-115 C	1.71
939301	AE1-161 C	2.92
939501	AE1-179 C O1	4.55
939821	AE1-218 C O1	0.11
939831	AE1-219 C O1	0.25
939931	AE1-229 C O1	13.96
940001	AE1-240 C O1	3.79
BAYOU	BAYOU	0.4
BIG_CAJUN1	BIG_CAJUN1	0.61
BIG_CAJUN2	BIG_CAJUN2	1.23
BLUEG	BLUEG	1.96
CALDERWOOD	CALDERWOOD	0.2
CANNELTON	CANNELTON	0.12
CARR	CARR	0.42
CATAWBA	CATAWBA	0.12
CHEOAH	CHEOAH	0.19
CHILHOWEE	CHILHOWEE	0.07
CHOCTAW	CHOCTAW	0.41

Bus #	Bus	MW Impact
COFFEEN	COFFEEN	0.21
COTTONWOOD	COTTONWOOD	1.57
DEARBORN	DEARBORN	0.36
DUCKCREEK	DUCKCREEK	0.45
EDWARDS	EDWARDS	0.21
ELMERSMITH	ELMERSMITH	0.2
FARMERCITY	FARMERCITY	0.14
GIBSON	GIBSON	0.08
HAMLET	HAMLET	0.4
NEWTON	NEWTON	0.54
PRAIRIE	PRAIRIE	1.0
RENSSELAER	RENSSELAER	0.33
SANTEETLA	SANTEETLA	0.05
SMITHLAND	SMITHLAND	0.08
TATANKA	TATANKA	0.25
TILTON	TILTON	0.25
TRIMBLE	TRIMBLE	0.22
TVA	TVA	0.66
UNIONPOWER	UNIONPOWER	0.29

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
634650	227903	MILL #1	AE	227902	LEWIS #1	AE	1	AE_P1-2 BLE-ML-LEW2	single	306.0	79.38	101.01	DC	66.17

Bus #	Bus	MW Impact
228200	CARL#1CT	0.44
228201	CARL#2CT	0.46
228202	CUMB CT	1.79
228203	P06	1.75
228206	SHRMN CT	1.6
228251	CARLLS#4	0.05
228260	V4-054C	0.13
228343	QUINTN#1	0.02
228702	WEST CT	0.54
228711	V2-041C	0.04
228717	S121	0.85
228727	W2-039G	1.4
292062	V1-021 C	0.1
913341	Y1-077	32.54
924531	AB2-102 C	38.94
936411	AD2-052 C	0.36
938421	AE1-061 C	0.3
938781	AE1-104 C O1	66.17
939501	AE1-179 C O1	4.78

Bus #	Bus	MW Impact
940001	AE1-240 C O1	3.98
BAYOU	BAYOU	0.17
BIG_CAJUN1	BIG_CAJUN1	0.26
BIG_CAJUN2	BIG_CAJUN2	0.51
BLUEG	BLUEG	0.8
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.05
CARR	CARR	0.12
CATAWBA	CATAWBA	0.05
CHEOAH	CHEOAH	0.08
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.17
COFFEEN	COFFEEN	0.08
COTTONWOOD	COTTONWOOD	0.66
DEARBORN	DEARBORN	0.14
DUCKCREEK	DUCKCREEK	0.18
EDWARDS	EDWARDS	0.08
ELMERSMITH	ELMERSMITH	0.08
FARMERCITY	FARMERCITY	0.06
GIBSON	GIBSON	0.03
HAMLET	HAMLET	0.18
NEWTON	NEWTON	0.22
PRAIRIE	PRAIRIE	0.41
RENSSELAER	RENSSELAER	0.09
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.03
TATANKA	TATANKA	0.1
TILTON	TILTON	0.1
TRIMBLE	TRIMBLE	0.09
TVA	TVA	0.28
UNIONPOWER	UNIONPOWER	0.12

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
633731	227905	SCULL#1	AE	227903	MILL #1	AE	1	AE_P4-2 AE29	breaker	306.0	94.94	191.64	DC	295.81

Bus #	Bus	MW Impact
228202	CUMB CT	1.7
228203	P06	1.66
228206	SHRMN CT	1.51
228261	V4-054E	0.63
228711	V2-041C	0.04
228712	V2-041E	0.44
292062	V1-021 C	0.09
292063	V1-021 E	0.09
913341	Y1-077	40.88

Bus #	Bus	MW Impact
924531	AB2-102 C	36.78
924532	AB2-102 E	0.82
936411	AD2-052 C	0.34
936412	AD2-052 E	0.17
938421	AE1-061 C	0.14
938422	AE1-061 E	0.14
938781	AE1-104 C O1	83.14
938782	AE1-104 E O1	212.68
939501	AE1-179 C O1	4.52
939502	AE1-179 E O1	3.19
940001	AE1-240 C O1	3.76
940002	AE1-240 E O1	2.69
BAYOU	BAYOU	0.19
BIG_CAJUN1	BIG_CAJUN1	0.3
BIG_CAJUN2	BIG_CAJUN2	0.6
BLUEG	BLUEG	0.94
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.06
CARR	CARR	0.13
CATAWBA	CATAWBA	0.06
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.2
COFFEEN	COFFEEN	0.1
COTTONWOOD	COTTONWOOD	0.77
DEARBORN	DEARBORN	0.17
DUCKCREEK	DUCKCREEK	0.22
EDWARDS	EDWARDS	0.1
ELMERSMITH	ELMERSMITH	0.1
FARMERCITY	FARMERCITY	0.07
G-007	G-007	0.7
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.21
NEWTON	NEWTON	0.26
O-066	O-066	1.46
PRAIRIE	PRAIRIE	0.48
RENSSELAER	RENSSELAER	0.1
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.04
TATANKA	TATANKA	0.12
TILTON	TILTON	0.12
TRIMBLE	TRIMBLE	0.1
TVA	TVA	0.32
UNIONPOWER	UNIONPOWER	0.14

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
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											%	%		
633760	227906	SCULL#2	AE	227904	MILL #2	AE	1	AE_P4- 2 AE28	breaker	307.0	93.24	179.01	DC	263.22

Bus #	Bus	MW Impact
228202	CUMB CT	1.98
228203	P06	1.93
228206	SHRMN CT	1.76
228261	V4-054E	0.74
228711	V2-041C	0.05
228712	V2-041E	0.51
292062	V1-021 C	0.1
292063	V1-021 E	0.1
913341	Y1-077	36.37
924531	AB2-102 C	42.91
924532	AB2-102 E	0.95
936411	AD2-052 C	0.4
936412	AD2-052 E	0.2
938421	AE1-061 C	0.16
938422	AE1-061 E	0.16
938781	AE1-104 C O1	73.98
938782	AE1-104 E O1	189.24
939501	AE1-179 C O1	5.28
939502	AE1-179 E O1	3.73
940001	AE1-240 C O1	4.39
940002	AE1-240 E O1	3.14
BAYOU	BAYOU	0.18
BIG_CAJUN1	BIG_CAJUN1	0.28
BIG_CAJUN2	BIG_CAJUN2	0.57
BLUEG	BLUEG	0.89
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.05
CARR	CARR	0.13
CATAWBA	CATAWBA	0.06
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.19
COFFEEN	COFFEEN	0.09
COTTONWOOD	COTTONWOOD	0.73
DEARBORN	DEARBORN	0.16
DUCKCREEK	DUCKCREEK	0.2
EDWARDS	EDWARDS	0.09
ELMERSMITH	ELMERSMITH	0.09
FARMERCITY	FARMERCITY	0.06
G-007	G-007	0.78
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.2
NEWTON	NEWTON	0.25
O-066	O-066	1.57
PRAIRIE	PRAIRIE	0.46
RENSSELAER	RENSSELAER	0.1
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.04
TATANKA	TATANKA	0.11

Bus #	Bus	MW Impact
TILTON	TILTON	0.11
TRIMBLE	TRIMBLE	0.1
TVA	TVA	0.31
UNIONPOWER	UNIONPOWER	0.14

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
633726	228110	BLE	AE	227905	SCULL#1	AE	1	AE_P4-2 AE29	breaker	307.0	101.99	198.37	DC	295.81

Bus #	Bus	MW Impact
228202	CUMB CT	1.7
228203	P06	1.66
228206	SHRMN CT	1.51
228261	V4-054E	0.63
228711	V2-041C	0.04
228712	V2-041E	0.44
292062	V1-021 C	0.09
292063	V1-021 E	0.09
913341	Y1-077	40.88
924531	AB2-102 C	36.78
924532	AB2-102 E	0.82
936411	AD2-052 C	0.34
936412	AD2-052 E	0.17
938421	AE1-061 C	0.14
938422	AE1-061 E	0.14
938781	AE1-104 C O1	83.14
938782	AE1-104 E O1	212.68
939501	AE1-179 C O1	4.52
939502	AE1-179 E O1	3.19
940001	AE1-240 C O1	3.76
940002	AE1-240 E O1	2.69
BAYOU	BAYOU	0.19
BIG_CAJUN1	BIG_CAJUN1	0.3
BIG_CAJUN2	BIG_CAJUN2	0.6
BLUEG	BLUEG	0.94
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.06
CARR	CARR	0.13
CATAWBA	CATAWBA	0.06
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.2
COFFEEN	COFFEEN	0.1
COTTONWOOD	COTTONWOOD	0.77
DEARBORN	DEARBORN	0.17
DUCKCREEK	DUCKCREEK	0.22

Bus #	Bus	MW Impact
EDWARDS	EDWARDS	0.1
ELMERSMITH	ELMERSMITH	0.1
FARMERCITY	FARMERCITY	0.07
G-007	G-007	0.7
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.21
NEWTON	NEWTON	0.26
O-066	O-066	1.46
PRAIRIE	PRAIRIE	0.48
RENSSELAER	RENSSELAER	0.1
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.04
TATANKA	TATANKA	0.12
TILTON	TILTON	0.12
TRIMBLE	TRIMBLE	0.1
TVA	TVA	0.32
UNIONPOWER	UNIONPOWER	0.14

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
633750	228110	BLE	AE	227906	SCULL#2	AE	1	AE_P4-2 AE28	breaker	307.0	98.52	184.28	DC	263.22

Bus #	Bus	MW Impact
228202	CUMB CT	1.98
228203	P06	1.93
228206	SHRMN CT	1.76
228261	V4-054E	0.74
228711	V2-041C	0.05
228712	V2-041E	0.51
292062	V1-021 C	0.1
292063	V1-021 E	0.1
913341	Y1-077	36.37
924531	AB2-102 C	42.91
924532	AB2-102 E	0.95
936411	AD2-052 C	0.4
936412	AD2-052 E	0.2
938421	AE1-061 C	0.16
938422	AE1-061 E	0.16
938781	AE1-104 C O1	73.98
938782	AE1-104 E O1	189.24
939501	AE1-179 C O1	5.28
939502	AE1-179 E O1	3.73
940001	AE1-240 C O1	4.39
940002	AE1-240 E O1	3.14
BAYOU	BAYOU	0.18
BIG_CAJUN1	BIG_CAJUN1	0.28

Bus #	Bus	MW Impact
BIG_CAJUN2	BIG_CAJUN2	0.57
BLUEG	BLUEG	0.89
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.05
CARR	CARR	0.13
CATAWBA	CATAWBA	0.06
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.19
COFFEEN	COFFEEN	0.09
COTTONWOOD	COTTONWOOD	0.73
DEARBORN	DEARBORN	0.16
DUCKCREEK	DUCKCREEK	0.2
EDWARDS	EDWARDS	0.09
ELMERSMITH	ELMERSMITH	0.09
FARMERCITY	FARMERCITY	0.06
G-007	G-007	0.78
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.2
NEWTON	NEWTON	0.25
O-066	O-066	1.57
PRAIRIE	PRAIRIE	0.46
RENSSELAER	RENSSELAER	0.1
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.04
TATANKA	TATANKA	0.11
TILTON	TILTON	0.11
TRIMBLE	TRIMBLE	0.1
TVA	TVA	0.31
UNIONPOWER	UNIONPOWER	0.14

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
635151	228313	BRIDGPRT	AE	228401	MCKLTON	AE	1	Base Case	single	650.0	97.8	99.93	DC	15.53

Bus #	Bus	MW Impact
227801	ONTC&DCT	3.48
228200	CARL#1CT	0.69
228201	CARL#2CT	0.73
228202	CUMB CT	1.36
228203	P06	1.55
228206	SHRMN CT	1.28
228251	CARLLS#4	0.08
228260	V4-054C	0.19
228304	LOGAN	23.48
228306	PCLP STM	5.89

Bus #	Bus	MW Impact
228307	PCLP GT	5.88
228309	CCLP NUG	16.9
228334	MANNMILG	0.29
228343	QUINTN#1	0.08
228351	V2-046C	0.21
228702	WEST CT	0.49
228711	V2-041C	0.03
228717	S121	0.77
228720	V2-035C	0.02
228727	W2-039G	1.3
292062	V1-021 C	0.04
902091	W1-130C	0.05
903963	W3-175	23.49
913341	Y1-077	7.64
918891	AA1-108	10.01
924531	AB2-102 C	34.44
924701	AB2-122 C	0.06
931191	AB1-169A	51.13
936411	AD2-052 C	1.65
938301	AE1-045 C	0.19
938311	AE1-046 C	0.19
938421	AE1-061 C	0.25
938781	AE1-104 C O1	15.53
938871	AE1-115 C	2.96
939301	AE1-161 C	1.87
939501	AE1-179 C O1	5.03
939931	AE1-229 C O1	24.46
940001	AE1-240 C O1	4.26
BAYOU	BAYOU	0.33
BIG_CAJUN1	BIG_CAJUN1	0.51
BIG_CAJUN2	BIG_CAJUN2	1.03
BLUEG	BLUEG	1.6
CALDERWOOD	CALDERWOOD	0.17
CANNELTON	CANNELTON	0.1
CARR	CARR	0.15
CATAWBA	CATAWBA	0.11
CHEOAH	CHEOAH	0.16
CHILHOWEE	CHILHOWEE	0.06
CHOCTAW	CHOCTAW	0.34
COFFEEN	COFFEEN	0.17
COTTONWOOD	COTTONWOOD	1.32
DEARBORN	DEARBORN	0.28
DUCKCREEK	DUCKCREEK	0.37
EDWARDS	EDWARDS	0.17
ELMERSMITH	ELMERSMITH	0.17
FARMERCITY	FARMERCITY	0.11
GIBSON	GIBSON	0.07
HAMLET	HAMLET	0.36
NEWTON	NEWTON	0.44
PRAIRIE	PRAIRIE	0.82
RENSSELAER	RENSSELAER	0.12
SANTEETLA	SANTEETLA	0.05

Bus #	Bus	MW Impact
SMITHLAND	SMITHLAND	0.07
TATANKA	TATANKA	0.2
TILTON	TILTON	0.2
TRIMBLE	TRIMBLE	0.18
TVA	TVA	0.55
UNIONPOWER	UNIONPOWER	0.25

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
634407	206297	28MANITOU	JCP&L	206296	28LEISUR U	JCP&L	1	JC-P2-3-JCC-230-9A	breaker	817.0	96.69	99.95	DC	59.24

Bus #	Bus	MW Impact
206280	28LAKEHURS	0.44
206325	28O C GEN	308.0
206360	28O CRK C1	2.61
206361	28O CRK C2	1.68
227801	ONTC&DCT	5.51
227842	MARINGEN	0.08
227843	MARINGEN E	0.57
227927	V4-067C	0.02
227928	V4-067E	0.24
228014	PVILLEG	0.09
228712	V2-041E	0.2
292063	V1-021 E	0.03
292966	U2-045 C	0.06
292967	U2-045 E	2.49
293404	V3-036	0.79
901982	W1-119 E	1.03
901991	W1-120C	0.7
901992	W1-120E	1.15
902092	W1-130E	0.49
902432	W2-030 E	0.87
905531	W4-063 C	0.01
905532	W4-063 E	0.62
915022	Y3-012 E	1.07
917612	Z2-102 E	0.84
919662	AA2-048 E	0.5
919672	AA2-049 E	0.21
924531	AB2-102 C	18.26
924532	AB2-102 E	0.41
924701	AB2-122 C	0.1
924702	AB2-122 E	0.18
930001	AB1-001 C	0.02
930002	AB1-001 E	0.21

Bus #	Bus	MW Impact
930891	AB1-138 C	0.74
930892	AB1-138 E	1.23
931122	AB1-163 E	0.37
931191	AB1-169A	43.85
933962	AD1-019 E	1.09
938151	AE1-020 C O1	154.63
938152	AE1-020 E O1	395.65
938301	AE1-045 C	0.16
938302	AE1-045 E	0.08
938311	AE1-046 C	0.16
938312	AE1-046 E	0.08
938421	AE1-061 C	0.21
938422	AE1-061 E	0.21
938781	AE1-104 C O1	16.65
938782	AE1-104 E O1	42.59
939121	AE1-142 C O1	4.05
939122	AE1-142 E O1	5.82
939501	AE1-179 C O1	2.44
939502	AE1-179 E O1	1.72
940001	AE1-240 C O1	2.02
940002	AE1-240 E O1	1.44
BAYOU	BAYOU	0.01
BIG_CAJUN1	BIG_CAJUN1	0.02
BIG_CAJUN2	BIG_CAJUN2	0.04
BLUEG	BLUEG	0.11
CALDERWOOD	CALDERWOOD	0.0
CANNELTON	CANNELTON	0.01
CARR	CARR	0.46
CBM-S2	CBM-S2	0.01
CHEOAH	CHEOAH	0.0
CHILHOWEE	CHILHOWEE	0.0
CHOCTAW	CHOCTAW	0.01
COFFEEN	COFFEEN	0.01
COTTONWOOD	COTTONWOOD	0.05
CPL	CPL	0.01
DEARBORN	DEARBORN	0.03
DUCKCREEK	DUCKCREEK	0.03
EDWARDS	EDWARDS	0.01
ELMERSMITH	ELMERSMITH	0.01
FARMERCITY	FARMERCITY	0.01
G-007	G-007	4.69
GIBSON	GIBSON	0.0
NEWTON	NEWTON	0.03
O-066	O-066	6.55
PRAIRIE	PRAIRIE	0.05
RENSSELAER	RENSSELAER	0.36
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.0
TATANKA	TATANKA	0.01
TILTON	TILTON	0.01
TRIMBLE	TRIMBLE	0.01
TVA	TVA	0.02

Bus #	Bus	MW Impact
UNIONPOWER	UNIONPOWER	0.01

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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
634416	206297	28MANITOU	JCP&L	206295	28LEISUR D	JCP&L	1	JC-P2-3-JCC-230-10A	breaker	817.0	95.53	98.79	DC	59.23

Bus #	Bus	MW Impact
206280	28LAKEHURS	0.45
206325	28O C GEN	307.95
206360	28O CRK C1	2.61
206361	28O CRK C2	1.68
227801	ONTC&DCT	5.51
227842	MARINGEN	0.08
227843	MARINGEN E	0.57
227927	V4-067C	0.02
227928	V4-067E	0.24
228014	PVILLEG	0.09
228712	V2-041E	0.2
292063	V1-021 E	0.03
292966	U2-045 C	0.06
292967	U2-045 E	2.49
293404	V3-036	0.79
901982	W1-119 E	1.04
901991	W1-120C	0.71
901992	W1-120E	1.16
902092	W1-130E	0.49
902432	W2-030 E	0.87
905531	W4-063 C	0.01
905532	W4-063 E	0.62
915022	Y3-012 E	1.07
917612	Z2-102 E	0.85
919662	AA2-048 E	0.5
919672	AA2-049 E	0.21
924531	AB2-102 C	18.26
924532	AB2-102 E	0.41
924701	AB2-122 C	0.1
924702	AB2-122 E	0.18
930001	AB1-001 C	0.02
930002	AB1-001 E	0.21
930891	AB1-138 C	0.75
930892	AB1-138 E	1.25
931122	AB1-163 E	0.38
931191	AB1-169A	43.85
933962	AD1-019 E	1.09

Bus #	Bus	MW Impact
938151	AE1-020 C O1	154.6
938152	AE1-020 E O1	395.58
938301	AE1-045 C	0.16
938302	AE1-045 E	0.08
938311	AE1-046 C	0.16
938312	AE1-046 E	0.08
938421	AE1-061 C	0.21
938422	AE1-061 E	0.21
938781	AE1-104 C O1	16.65
938782	AE1-104 E O1	42.58
939121	AE1-142 C O1	4.15
939122	AE1-142 E O1	5.98
939501	AE1-179 C O1	2.44
939502	AE1-179 E O1	1.72
940001	AE1-240 C O1	2.02
940002	AE1-240 E O1	1.44
BAYOU	BAYOU	0.01
BIG_CAJUN1	BIG_CAJUN1	0.02
BIG_CAJUN2	BIG_CAJUN2	0.04
BLUEG	BLUEG	0.11
CALDERWOOD	CALDERWOOD	0.0
CANNELTON	CANNELTON	0.01
CARR	CARR	0.46
CBM-S2	CBM-S2	0.01
CHEOAH	CHEOAH	0.0
CHILHOWEE	CHILHOWEE	0.0
CHOCTAW	CHOCTAW	0.01
COFFEEN	COFFEEN	0.01
COTTONWOOD	COTTONWOOD	0.05
CPL	CPL	0.01
DEARBORN	DEARBORN	0.03
DUCKCREEK	DUCKCREEK	0.03
EDWARDS	EDWARDS	0.01
ELMERSMITH	ELMERSMITH	0.01
FARMERCITY	FARMERCITY	0.01
G-007	G-007	4.69
GIBSON	GIBSON	0.0
NEWTON	NEWTON	0.03
O-066	O-066	6.55
PRAIRIE	PRAIRIE	0.05
RENSSELAER	RENSSELAER	0.36
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.0
TATANKA	TATANKA	0.01
TILTON	TILTON	0.01
TRIMBLE	TRIMBLE	0.01
TVA	TVA	0.02
UNIONPOWER	UNIONPOWER	0.01

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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
633780	206302	28OYSTER C	JCP&L	206297	28MANITOU	JCP&L	1	JC-P2-3-JCC-230-11	breaker	817.0	165.7	169.86	DC	75.44

Bus #	Bus	MW Impact
206325	28O C GEN	411.92
206360	28O CRK C1	3.49
206361	28O CRK C2	2.25
227801	ONTC&DCT	7.09
227842	MARINGEN	0.11
227843	MARINGEN E	0.73
227927	V4-067C	0.03
227928	V4-067E	0.31
228014	PVILLEG	0.11
228261	V4-054E	0.47
228712	V2-041E	0.25
292063	V1-021 E	0.04
292966	U2-045 C	0.07
292967	U2-045 E	3.2
293404	V3-036	1.01
902092	W1-130E	0.6
902432	W2-030 E	1.12
905531	W4-063 C	0.02
905532	W4-063 E	0.8
915022	Y3-012 E	1.38
919662	AA2-048 E	0.6
924531	AB2-102 C	22.67
924532	AB2-102 E	0.5
924701	AB2-122 C	0.13
924702	AB2-122 E	0.23
930001	AB1-001 C	0.02
930002	AB1-001 E	0.26
931191	AB1-169A	53.62
933962	AD1-019 E	1.4
938151	AE1-020 C O1	206.79
938152	AE1-020 E O1	529.13
938301	AE1-045 C	0.19
938302	AE1-045 E	0.1
938311	AE1-046 C	0.19
938312	AE1-046 E	0.1
938421	AE1-061 C	0.26
938422	AE1-061 E	0.26
938781	AE1-104 C O1	21.2
938782	AE1-104 E O1	54.24
939501	AE1-179 C O1	2.95
939502	AE1-179 E O1	2.09
940001	AE1-240 C O1	2.45
940002	AE1-240 E O1	1.75
BAYOU	BAYOU	0.05
BIG_CAJUN1	BIG_CAJUN1	0.07

Bus #	Bus	MW Impact
BIG_CAJUN2	BIG_CAJUN2	0.15
BLUEG	BLUEG	0.29
CALDERWOOD	CALDERWOOD	0.02
CANNELTON	CANNELTON	0.02
CARR	CARR	0.46
CATAWBA	CATAWBA	0.01
CHEOAH	CHEOAH	0.02
CHILHOWEE	CHILHOWEE	0.01
CHOCTAW	CHOCTAW	0.05
COFFEEN	COFFEEN	0.03
COTTONWOOD	COTTONWOOD	0.2
DEARBORN	DEARBORN	0.06
DUCKCREEK	DUCKCREEK	0.07
EDWARDS	EDWARDS	0.03
ELMERSMITH	ELMERSMITH	0.03
FARMERCITY	FARMERCITY	0.02
G-007	G-007	4.52
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.03
NEWTON	NEWTON	0.08
O-066	O-066	6.57
PRAIRIE	PRAIRIE	0.14
RENSSELAER	RENSSELAER	0.37
SANTEETLA	SANTEETLA	0.01
SMITHLAND	SMITHLAND	0.01
TATANKA	TATANKA	0.04
TILTON	TILTON	0.04
TRIMBLE	TRIMBLE	0.03
TVA	TVA	0.08
UNIONPOWER	UNIONPOWER	0.03

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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
635674	206319	28WHITINGS	JCP&L	206720	28MANCHSTR	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	99.03	101.92	DC	55.63

Bus #	Bus	MW Impact
206306	28LKWD G1	7.06
206308	28LKWD G2	7.06
206312	28LKWD G3	4.98
206325	28O C GEN	312.94
206360	28O CRK C1	2.65
206361	28O CRK C2	1.71
206366	28LKWD CT1	13.38
206367	28LKWD CT2	13.38

Bus #	Bus	MW Impact
227801	ONTC&DCT	5.26
227843	MARINGEN E	0.55
227928	V4-067E	0.23
292063	V1-021 E	0.03
292967	U2-045 E	2.37
293404	V3-036	0.75
902432	W2-030 E	0.83
905532	W4-063 E	0.59
915022	Y3-012 E	1.02
917612	Z2-102 E	0.76
924701	AB2-122 C	0.1
924702	AB2-122 E	0.17
930002	AB1-001 E	0.2
930891	AB1-138 C	1.34
930892	AB1-138 E	2.24
931122	AB1-163 E	0.78
933962	AD1-019 E	1.04
934351	AD1-059	1.26
938151	AE1-020 C O1	157.11
938152	AE1-020 E O1	401.99
938781	AE1-104 C O1	15.64
938782	AE1-104 E O1	40.0
939121	AE1-142 C O1	4.44
939122	AE1-142 E O1	6.39
BAYOU	BAYOU	0.25
BIG_CAJUN1	BIG_CAJUN1	0.39
BIG_CAJUN2	BIG_CAJUN2	0.79
BLUEG	BLUEG	1.25
CALDERWOOD	CALDERWOOD	0.13
CANNELTON	CANNELTON	0.08
CARR	CARR	0.39
CATAWBA	CATAWBA	0.08
CHEOAH	CHEOAH	0.12
CHILHOWEE	CHILHOWEE	0.04
CHOCTAW	CHOCTAW	0.26
COFFEEN	COFFEEN	0.13
COTTONWOOD	COTTONWOOD	1.01
DEARBORN	DEARBORN	0.23
DUCKCREEK	DUCKCREEK	0.29
EDWARDS	EDWARDS	0.13
ELMERSMITH	ELMERSMITH	0.13
FARMERCITY	FARMERCITY	0.09
G-007	G-007	3.18
GIBSON	GIBSON	0.05
HAMLET	HAMLET	0.26
NEWTON	NEWTON	0.34
O-066	O-066	5.15
PRAIRIE	PRAIRIE	0.64
RENSSELAER	RENSSELAER	0.31
SANTEETLA	SANTEETLA	0.04
SMITHLAND	SMITHLAND	0.05
TATANKA	TATANKA	0.16

Bus #	Bus	MW Impact
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.14
TVA	TVA	0.42
UNIONPOWER	UNIONPOWER	0.19

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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
635692	206720	28MANCHSTR	JCP&L	206318	28VANHISVL	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	97.29	100.18	DC	55.63

Bus #	Bus	MW Impact
206306	28LKWD G1	7.06
206308	28LKWD G2	7.06
206312	28LKWD G3	4.98
206325	28O C GEN	312.94
206360	28O CRK C1	2.65
206361	28O CRK C2	1.71
206366	28LKWD CT1	13.38
206367	28LKWD CT2	13.38
227801	ONTC&DCT	5.26
227843	MARINGEN E	0.55
227928	V4-067E	0.23
292063	V1-021 E	0.03
292967	U2-045 E	2.37
293404	V3-036	0.75
902432	W2-030 E	0.83
905532	W4-063 E	0.59
915022	Y3-012 E	1.02
917612	Z2-102 E	0.76
924701	AB2-122 C	0.1
924702	AB2-122 E	0.17
930002	AB1-001 E	0.2
930891	AB1-138 C	1.34
930892	AB1-138 E	2.24
931122	AB1-163 E	0.78
933962	AD1-019 E	1.04
934351	AD1-059	1.26
938151	AE1-020 C O1	157.11
938152	AE1-020 E O1	401.99
938781	AE1-104 C O1	15.64
938782	AE1-104 E O1	40.0
939121	AE1-142 C O1	4.44
939122	AE1-142 E O1	6.39
BAYOU	BAYOU	0.25
BIG_CAJUN1	BIG_CAJUN1	0.39

Bus #	Bus	MW Impact
BIG_CAJUN2	BIG_CAJUN2	0.79
BLUEG	BLUEG	1.25
CALDERWOOD	CALDERWOOD	0.13
CANNELTON	CANNELTON	0.08
CARR	CARR	0.39
CATAWBA	CATAWBA	0.08
CHEOAH	CHEOAH	0.12
CHILHOWEE	CHILHOWEE	0.04
CHOCTAW	CHOCTAW	0.26
COFFEEN	COFFEEN	0.13
COTTONWOOD	COTTONWOOD	1.01
DEARBORN	DEARBORN	0.23
DUCKCREEK	DUCKCREEK	0.29
EDWARDS	EDWARDS	0.13
ELMERSMITH	ELMERSMITH	0.13
FARMERCITY	FARMERCITY	0.09
G-007	G-007	3.18
GIBSON	GIBSON	0.05
HAMLET	HAMLET	0.26
NEWTON	NEWTON	0.34
O-066	O-066	5.15
PRAIRIE	PRAIRIE	0.64
RENSSELAER	RENSSELAER	0.31
SANTEETLA	SANTEETLA	0.04
SMITHLAND	SMITHLAND	0.05
TATANKA	TATANKA	0.16
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.14
TVA	TVA	0.42
UNIONPOWER	UNIONPOWER	0.19

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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
634379	213922	RICHMOND	PECO	214012	WANEETA3	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	breaker	1180.0	95.99	99.6	DC	94.24

Bus #	Bus	MW Impact
213918	RICHMD91	3.55
213919	RICHMD92	3.55
219124	CAMDEN_STG	3.52
219126	CAMDEN_CTG	4.33
219128	GLOUCSTR_26	1.91
219229	EAGLEPT_G3	3.14
219230	EAGLEPT_G1	4.65
219241	CAMDEN1	0.26

Bus #	Bus	MW Impact
219242	CAMDEN2	0.03
227801	ONTC&DCT	7.23
227843	MARINGEN E	0.75
227928	V4-067E	0.3
228261	V4-054E	1.34
228357	V2-046E	3.05
228712	V2-041E	0.49
228721	V2-035E	0.28
291996	U4-036 E	1.01
292063	V1-021 E	0.06
292088	V1-030 CB	0.12
292099	V1-030 E3	0.23
292105	V1-030 E6	0.3
292115	V1-030 EB	1.32
292194	V1-030 CE	0.12
292195	V1-030 EE	1.22
292967	U2-045 E	3.26
293404	V3-036	1.03
902092	W1-130E	1.35
902432	W2-030 E	1.16
902692	W2-056 E	1.63
902842	W2-071E	0.45
903152	W2-102 E	1.03
903991	W3-080C	1.96
903992	W3-080E	3.2
904042	V4-005 E	0.43
904432	W3-124 E	0.42
905143	W4-016	67.01
905232	W4-029 E	0.44
905532	W4-063 E	0.81
905792	W4-103 E	1.03
907382	X1-070 E	0.73
907392	X1-071 E	0.26
909032	X2-013 E	0.63
910862	X3-075 E	1.06
913242	Y1-057 E	0.32
913332	Y1-075 E	0.41
915022	Y3-012 E	1.4
915072	Y3-026 E	1.6
915592	Y3-087 E OP1	0.8
916292	Z1-082 E	0.34
917381	Z2-062	0.16
918852	AA1-104 E	5.7
924051	AB2-049 C	0.86
924052	AB2-049 E	1.41
924531	AB2-102 C	43.28
924532	AB2-102 E	0.96
924701	AB2-122 C	0.13
924702	AB2-122 E	0.22
925391	AC1-010 C	0.78
925392	AC1-010 E	1.34
925442	AC1-016 E	1.41

Bus #	Bus	MW Impact
925452	AC1-017 E	0.67
925562	AC1-030 E	0.51
930002	AB1-001 E	0.27
930102	AB1-025 E	1.0
930242	AB1-063 E	0.14
930722	AB1-116 E	0.18
930732	AB1-119 E	0.16
931191	AB1-169A	119.2
932361	AC2-050 C O1	0.89
932362	AC2-050 E O1	1.45
933962	AD1-019 E	1.42
936211	AD2-027 C	1.4
936212	AD2-027 E	2.28
936321	AD2-042 C	1.84
936322	AD2-042 E	3.02
936411	AD2-052 C	1.54
936412	AD2-052 E	0.76
936491	AD2-064 C	0.12
936492	AD2-064 E	0.16
936501	AD2-065 C	0.5
936502	AD2-065 E	0.69
936541	AD2-069 C	0.52
936542	AD2-069 E	0.26
937011	AD2-135 C	0.13
937012	AD2-135 E	0.23
938301	AE1-045 C	0.43
938302	AE1-045 E	0.22
938311	AE1-046 C	0.43
938312	AE1-046 E	0.22
938421	AE1-061 C	0.58
938422	AE1-061 E	0.58
938431	AE1-062 C	1.2
938432	AE1-062 E	1.2
938611	AE1-083 C	0.51
938612	AE1-083 E	0.71
938781	AE1-104 C O1	26.49
938782	AE1-104 E O1	67.76
938871	AE1-115 C	1.26
938872	AE1-115 E	1.26
939301	AE1-161 C	2.4
939302	AE1-161 E	3.6
939501	AE1-179 C O1	7.31
939502	AE1-179 E O1	5.16
939821	AE1-218 C O1	0.19
939822	AE1-218 E O1	0.28
939831	AE1-219 C O1	0.42
939832	AE1-219 E O1	0.6
939931	AE1-229 C O1	20.36
939932	AE1-229 E O1	13.79
940001	AE1-240 C O1	6.06
940002	AE1-240 E O1	4.32
BAYOU	BAYOU	1.46

Bus #	Bus	MW Impact
BIG_CAJUN1	BIG_CAJUN1	2.24
BIG_CAJUN2	BIG_CAJUN2	4.51
BLUEG	BLUEG	6.97
CALDERWOOD	CALDERWOOD	0.76
CANNELTON	CANNELTON	0.42
CATAWBA	CATAWBA	0.48
CBM-N	CBM-N	0.79
CHEOAH	CHEOAH	0.69
CHILHOWEE	CHILHOWEE	0.25
CHOCTAW	CHOCTAW	1.49
COFFEEN	COFFEEN	0.74
COTTONWOOD	COTTONWOOD	5.78
DEARBORN	DEARBORN	1.22
DUCKCREEK	DUCKCREEK	1.6
EDWARDS	EDWARDS	0.73
ELMERSMITH	ELMERSMITH	0.73
FARMERCITY	FARMERCITY	0.49
G-007A	G-007A	12.41
GIBSON	GIBSON	0.29
HAMLET	HAMLET	1.59
NEWTON	NEWTON	1.92
NYISO	NYISO	3.41
O-066A	O-066A	3.17
PRAIRIE	PRAIRIE	3.59
SANTEETLA	SANTEETLA	0.2
SMITHLAND	SMITHLAND	0.29
TATANKA	TATANKA	0.88
TILTON	TILTON	0.88
TRIMBLE	TRIMBLE	0.77
TVA	TVA	2.43
UNIONPOWER	UNIONPOWER	1.08
VFT	VFT	22.21

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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
634336	214206	RICHRE29	PECO	213922	RICHMOND	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	breaker	1336.0	97.81	101.17	DC	98.75

Bus #	Bus	MW Impact
219124	CAMDEN_STG	3.94
219126	CAMDEN_CTG	4.84
219128	GLOUCSTR_26	2.13
219229	EAGLEPT_G3	3.5
219230	EAGLEPT_G1	5.18
219231	EAGLEPT_G2	5.18

Bus #	Bus	MW Impact
219241	CAMDEN1	0.29
219242	CAMDEN2	0.03
227801	ONTC&DCT	7.53
227843	MARINGEN E	0.78
227928	V4-067E	0.31
228261	V4-054E	1.43
228357	V2-046E	3.29
228423	Q-090 2	37.81
228712	V2-041E	0.52
228721	V2-035E	0.3
291995	U4-036 C	0.1
291996	U4-036 E	1.12
292063	V1-021 E	0.06
292088	V1-030 CB	0.14
292099	V1-030 E3	0.21
292104	V1-030 C6	0.03
292105	V1-030 E6	0.33
292115	V1-030 EB	1.49
292194	V1-030 CE	0.13
292195	V1-030 EE	1.37
292967	U2-045 E	3.4
293404	V3-036	1.07
902092	W1-130E	1.43
902432	W2-030 E	1.21
902692	W2-056 E	1.52
902842	W2-071E	0.44
903152	W2-102 E	0.97
903991	W3-080C	1.34
903992	W3-080E	2.19
904042	V4-005 E	0.4
904432	W3-124 E	0.39
905143	W4-016	73.72
905232	W4-029 E	0.42
905532	W4-063 E	0.85
905792	W4-103 E	0.97
907381	X1-070 C	0.06
907382	X1-070 E	0.77
907391	X1-071 C	0.02
907392	X1-071 E	0.26
909032	X2-013 E	0.7
910862	X3-075 E	1.18
913242	Y1-057 E	0.3
913332	Y1-075 E	0.39
914231	Y2-081 C OP1	1.7
914232	Y2-081 E OP1	0.09
915022	Y3-012 E	1.46
915072	Y3-026 E	1.1
915591	Y3-087 C OP1	0.08
915592	Y3-087 E OP1	0.89
916292	Z1-082 E	0.37
917381	Z2-062	0.18
918852	AA1-104 E	6.27

Bus #	Bus	MW Impact
919901	AB1-000 1	1.03
919911	AB1-000 2	1.03
919921	AB1-000 3	1.03
924051	AB2-049 C	0.9
924052	AB2-049 E	1.47
924531	AB2-102 C	45.75
924532	AB2-102 E	1.02
924701	AB2-122 C	0.13
924702	AB2-122 E	0.23
925391	AC1-010 C	0.87
925392	AC1-010 E	1.5
925442	AC1-016 E	0.96
925452	AC1-017 E	0.56
925561	AC1-030 C	0.05
925562	AC1-030 E	0.52
930002	AB1-001 E	0.28
930102	AB1-025 E	0.94
930242	AB1-063 E	0.15
930722	AB1-116 E	0.19
930732	AB1-119 E	0.17
931191	AB1-169A	126.46
932361	AC2-050 C O1	0.86
932362	AC2-050 E O1	1.41
933962	AD1-019 E	1.48
934661	AD1-097 1	1.67
934671	AD1-097 2	1.67
934681	AD1-097 3	1.67
934691	AD1-097 4	0.99
936211	AD2-027 C	1.57
936212	AD2-027 E	2.56
936321	AD2-042 C	2.07
936322	AD2-042 E	3.39
936411	AD2-052 C	1.66
936412	AD2-052 E	0.82
936491	AD2-064 C	0.12
936492	AD2-064 E	0.17
936501	AD2-065 C	0.51
936502	AD2-065 E	0.7
936541	AD2-069 C	0.5
936542	AD2-069 E	0.25
937011	AD2-135 C	0.14
937012	AD2-135 E	0.24
938301	AE1-045 C	0.46
938302	AE1-045 E	0.23
938311	AE1-046 C	0.46
938312	AE1-046 E	0.23
938421	AE1-061 C	0.61
938422	AE1-061 E	0.61
938431	AE1-062 C	1.23
938432	AE1-062 E	1.23
938611	AE1-083 C	0.35
938612	AE1-083 E	0.48

Bus #	Bus	MW Impact
938781	AE1-104 C O1	27.75
938782	AE1-104 E O1	71.0
938871	AE1-115 C	1.36
938872	AE1-115 E	1.36
939301	AE1-161 C	2.56
939302	AE1-161 E	3.84
939501	AE1-179 C O1	7.77
939502	AE1-179 E O1	5.48
939821	AE1-218 C O1	0.2
939822	AE1-218 E O1	0.3
939831	AE1-219 C O1	0.44
939832	AE1-219 E O1	0.64
939931	AE1-229 C O1	21.87
939932	AE1-229 E O1	14.82
940001	AE1-240 C O1	6.44
940002	AE1-240 E O1	4.6
BAYOU	BAYOU	1.26
BIG_CAJUN1	BIG_CAJUN1	1.94
BIG_CAJUN2	BIG_CAJUN2	3.9
BLUEG	BLUEG	6.05
CALDERWOOD	CALDERWOOD	0.65
CANNELTON	CANNELTON	0.37
CATAWBA	CATAWBA	0.41
CBM-N	CBM-N	0.28
CHEOAH	CHEOAH	0.6
CHILHOWEE	CHILHOWEE	0.21
CHOCTAW	CHOCTAW	1.29
COFFEEN	COFFEEN	0.64
COTTONWOOD	COTTONWOOD	4.99
DEARBORN	DEARBORN	1.07
DUCKCREEK	DUCKCREEK	1.39
EDWARDS	EDWARDS	0.63
ELMERSMITH	ELMERSMITH	0.63
FARMERCITY	FARMERCITY	0.42
G-007A	G-007A	9.68
GIBSON	GIBSON	0.25
HAMLET	HAMLET	1.36
NEWTON	NEWTON	1.67
NYISO	NYISO	1.21
O-066A	O-066A	1.91
PRAIRIE	PRAIRIE	3.11
SANTEETLA	SANTEETLA	0.18
SMITHLAND	SMITHLAND	0.25
TATANKA	TATANKA	0.76
TILTON	TILTON	0.76
TRIMBLE	TRIMBLE	0.67
TVA	TVA	2.09
UNIONPOWER	UNIONPOWER	0.93
VFT	VFT	13.99

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
635113	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	Base Case	single	500.0	105.59	106.42	DC	9.29

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.15
219124	CAMDEN_STG	2.2
219126	CAMDEN_CTG	2.7
219128	GLOUCSTR_26	1.19
219229	EAGLEPT_G3	1.9
219230	EAGLEPT_G1	2.81
219231	EAGLEPT_G2	2.81
227801	ONTC&DCT	2.44
227881	GRENWCHG	0.03
228304	LOGAN	4.35
228306	PCLP STM	1.15
228307	PCLP GT	1.14
228309	CCLP NUG	3.98
228334	MANNMILG	0.14
228343	QUINTN#1	0.03
228351	V2-046C	0.11
228400	MICK 1CT	0.92
228423	Q-090 2	17.86
228471	VALERO1	0.31
228472	VALERO2	0.21
228473	VALERO3	0.21
228484	VALERO4	0.18
228720	V2-035C	0.01
291995	U4-036 C	0.05
292104	V1-030 C6	0.02
292194	V1-030 CE	0.07
903963	W3-175	5.91
905143	W4-016	34.83
914231	Y2-081 C OP1	0.91
914232	Y2-081 E OP1	0.05
915591	Y3-087 C OP1	0.04
917381	Z2-062	0.1
917471	Z2-083	1.68
918891	AA1-108	2.52
924051	AB2-049 C	0.28
924531	AB2-102 C	16.13
924701	AB2-122 C	0.04
925391	AC1-010 C	0.48
931191	AB1-169A	46.45
936411	AD2-052 C	0.67
936491	AD2-064 C	0.04
936501	AD2-065 C	0.13
937011	AD2-135 C	0.04
938301	AE1-045 C	0.17

Bus #	Bus	MW Impact
938311	AE1-046 C	0.17
938421	AE1-061 C	0.22
938431	AE1-062 C	0.31
938781	AE1-104 C O1	9.29
938871	AE1-115 C	1.08
939301	AE1-161 C	1.83
939501	AE1-179 C O1	2.86
939821	AE1-218 C O1	0.07
939831	AE1-219 C O1	0.16
939931	AE1-229 C O1	8.77
940001	AE1-240 C O1	2.38
BAYOU	BAYOU	0.25
BIG_CAJUN1	BIG_CAJUN1	0.38
BIG_CAJUN2	BIG_CAJUN2	0.77
BLUEG	BLUEG	1.24
CALDERWOOD	CALDERWOOD	0.13
CANNELTON	CANNELTON	0.07
CARR	CARR	0.26
CATAWBA	CATAWBA	0.08
CHEOAH	CHEOAH	0.12
CHILHOWEE	CHILHOWEE	0.04
CHOCTAW	CHOCTAW	0.26
COFFEEN	COFFEEN	0.13
COTTONWOOD	COTTONWOOD	1.0
DEARBORN	DEARBORN	0.23
DUCKCREEK	DUCKCREEK	0.29
EDWARDS	EDWARDS	0.13
ELMERSMITH	ELMERSMITH	0.13
FARMERCITY	FARMERCITY	0.09
GIBSON	GIBSON	0.05
HAMLET	HAMLET	0.25
NEWTON	NEWTON	0.34
PRAIRIE	PRAIRIE	0.63
RENSSELAER	RENSSELAER	0.21
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.05
TATANKA	TATANKA	0.15
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.14
TVA	TVA	0.42
UNIONPOWER	UNIONPOWER	0.18

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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
634335	219125	CAMDEN	PSE&G	214206	RICHRE29	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$	breaker	1336.0	97.83	101.19	DC	98.75

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Bus #	Bus	MW Impact
219124	CAMDEN_STG	3.94
219126	CAMDEN_CTG	4.84
219128	GLOUCSTR_26	2.13
219229	EAGLEPT_G3	3.5
219230	EAGLEPT_G1	5.18
219231	EAGLEPT_G2	5.18
219241	CAMDEN1	0.29
219242	CAMDEN2	0.03
227801	ONTC&DCT	7.53
227843	MARINGEN E	0.78
227928	V4-067E	0.31
228261	V4-054E	1.43
228357	V2-046E	3.29
228423	Q-090 2	37.81
228712	V2-041E	0.52
228721	V2-035E	0.3
291995	U4-036 C	0.1
291996	U4-036 E	1.12
292063	V1-021 E	0.06
292088	V1-030 CB	0.14
292099	V1-030 E3	0.21
292104	V1-030 C6	0.03
292105	V1-030 E6	0.33
292115	V1-030 EB	1.49
292194	V1-030 CE	0.13
292195	V1-030 EE	1.37
292967	U2-045 E	3.4
293404	V3-036	1.07
902092	W1-130E	1.43
902432	W2-030 E	1.21
902692	W2-056 E	1.52
902842	W2-071E	0.44
903152	W2-102 E	0.97
903991	W3-080C	1.34
903992	W3-080E	2.19
904042	V4-005 E	0.4
904432	W3-124 E	0.39
905143	W4-016	73.72
905232	W4-029 E	0.42
905532	W4-063 E	0.85
905792	W4-103 E	0.97
907381	X1-070 C	0.06
907382	X1-070 E	0.77
907391	X1-071 C	0.02
907392	X1-071 E	0.26
909032	X2-013 E	0.7
910862	X3-075 E	1.18
913242	Y1-057 E	0.3
913332	Y1-075 E	0.39
914231	Y2-081 C OP1	1.7

Bus #	Bus	MW Impact
914232	Y2-081 E OP1	0.09
915022	Y3-012 E	1.46
915072	Y3-026 E	1.1
915591	Y3-087 C OP1	0.08
915592	Y3-087 E OP1	0.89
916292	Z1-082 E	0.37
917381	Z2-062	0.18
918852	AA1-104 E	6.27
919901	AB1-000 1	1.03
919911	AB1-000 2	1.03
919921	AB1-000 3	1.03
924051	AB2-049 C	0.9
924052	AB2-049 E	1.47
924531	AB2-102 C	45.75
924532	AB2-102 E	1.02
924701	AB2-122 C	0.13
924702	AB2-122 E	0.23
925391	AC1-010 C	0.87
925392	AC1-010 E	1.5
925442	AC1-016 E	0.96
925452	AC1-017 E	0.56
925561	AC1-030 C	0.05
925562	AC1-030 E	0.52
930002	AB1-001 E	0.28
930102	AB1-025 E	0.94
930242	AB1-063 E	0.15
930722	AB1-116 E	0.19
930732	AB1-119 E	0.17
931191	AB1-169A	126.46
932361	AC2-050 C O1	0.86
932362	AC2-050 E O1	1.41
933962	AD1-019 E	1.48
934661	AD1-097 1	1.67
934671	AD1-097 2	1.67
934681	AD1-097 3	1.67
934691	AD1-097 4	0.99
936211	AD2-027 C	1.57
936212	AD2-027 E	2.56
936321	AD2-042 C	2.07
936322	AD2-042 E	3.39
936411	AD2-052 C	1.66
936412	AD2-052 E	0.82
936491	AD2-064 C	0.12
936492	AD2-064 E	0.17
936501	AD2-065 C	0.51
936502	AD2-065 E	0.7
936541	AD2-069 C	0.5
936542	AD2-069 E	0.25
937011	AD2-135 C	0.14
937012	AD2-135 E	0.24
938301	AE1-045 C	0.46
938302	AE1-045 E	0.23

Bus #	Bus	MW Impact
938311	AE1-046 C	0.46
938312	AE1-046 E	0.23
938421	AE1-061 C	0.61
938422	AE1-061 E	0.61
938431	AE1-062 C	1.23
938432	AE1-062 E	1.23
938611	AE1-083 C	0.35
938612	AE1-083 E	0.48
938781	AE1-104 C O1	27.75
938782	AE1-104 E O1	71.0
938871	AE1-115 C	1.36
938872	AE1-115 E	1.36
939301	AE1-161 C	2.56
939302	AE1-161 E	3.84
939501	AE1-179 C O1	7.77
939502	AE1-179 E O1	5.48
939821	AE1-218 C O1	0.2
939822	AE1-218 E O1	0.3
939831	AE1-219 C O1	0.44
939832	AE1-219 E O1	0.64
939931	AE1-229 C O1	21.87
939932	AE1-229 E O1	14.82
940001	AE1-240 C O1	6.44
940002	AE1-240 E O1	4.6
BAYOU	BAYOU	1.26
BIG_CAJUN1	BIG_CAJUN1	1.94
BIG_CAJUN2	BIG_CAJUN2	3.9
BLUEG	BLUEG	6.05
CALDERWOOD	CALDERWOOD	0.65
CANNELTON	CANNELTON	0.37
CATAWBA	CATAWBA	0.41
CBM-N	CBM-N	0.28
CHEOAH	CHEOAH	0.6
CHILHOWEE	CHILHOWEE	0.21
CHOCTAW	CHOCTAW	1.29
COFFEEN	COFFEEN	0.64
COTTONWOOD	COTTONWOOD	4.99
DEARBORN	DEARBORN	1.07
DUCKCREEK	DUCKCREEK	1.39
EDWARDS	EDWARDS	0.63
ELMERSMITH	ELMERSMITH	0.63
FARMERCITY	FARMERCITY	0.42
G-007A	G-007A	9.68
GIBSON	GIBSON	0.25
HAMLET	HAMLET	1.36
NEWTON	NEWTON	1.67
NYISO	NYISO	1.21
O-066A	O-066A	1.91
PRAIRIE	PRAIRIE	3.11
SANTEETLA	SANTEETLA	0.18
SMITHLAND	SMITHLAND	0.25
TATANKA	TATANKA	0.76

Bus #	Bus	MW Impact
TILTON	TILTON	0.76
TRIMBLE	TRIMBLE	0.67
TVA	TVA	2.09
UNIONPOWER	UNIONPOWER	0.93
VFT	VFT	13.99

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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
635676	219702	HILLTOP_1	PSE&G	219101	BEAVERBK_1	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	740.0	94.92	97.84	DC	48.83

Bus #	Bus	MW Impact
227801	ONTC&DCT	3.79
227843	MARINGEN E	0.39
227928	V4-067E	0.16
228260	V4-054C	0.12
228261	V4-054E	0.63
228357	V2-046E	1.3
228702	WEST CT	0.41
228712	V2-041E	0.25
228717	S121	0.68
228720	V2-035C	0.01
228721	V2-035E	0.13
228727	W2-039G	0.99
291996	U4-036 E	0.3
292063	V1-021 E	0.03
292105	V1-030 E6	0.09
292967	U2-045 E	1.71
293404	V3-036	0.54
902091	W1-130C	0.06
902092	W1-130E	0.69
902432	W2-030 E	0.61
905143	W4-016	21.77
905532	W4-063 E	0.43
909032	X2-013 E	0.19
915022	Y3-012 E	0.74
918852	AA1-104 E	1.85
924051	AB2-049 C	0.47
924052	AB2-049 E	0.77
924531	AB2-102 C	21.78
924532	AB2-102 E	0.48
924701	AB2-122 C	0.07
924702	AB2-122 E	0.12
930002	AB1-001 E	0.14
930722	AB1-116 E	0.1
930732	AB1-119 E	0.09
931191	AB1-169A	60.74

Bus #	Bus	MW Impact
933962	AD1-019 E	0.75
936411	AD2-052 C	0.66
936412	AD2-052 E	0.33
936491	AD2-064 C	0.06
936492	AD2-064 E	0.09
936501	AD2-065 C	0.24
936502	AD2-065 E	0.33
937011	AD2-135 C	0.08
937012	AD2-135 E	0.14
938301	AE1-045 C	0.22
938302	AE1-045 E	0.11
938311	AE1-046 C	0.22
938312	AE1-046 E	0.11
938421	AE1-061 C	0.55
938422	AE1-061 E	0.55
938431	AE1-062 C	1.13
938432	AE1-062 E	1.13
938781	AE1-104 C O1	13.72
938782	AE1-104 E O1	35.11
938871	AE1-115 C	0.51
938872	AE1-115 E	0.51
939301	AE1-161 C	2.29
939302	AE1-161 E	3.43
939501	AE1-179 C O1	3.56
939502	AE1-179 E O1	2.51
939821	AE1-218 C O1	0.1
939822	AE1-218 E O1	0.15
939831	AE1-219 C O1	0.22
939832	AE1-219 E O1	0.32
939931	AE1-229 C O1	9.22
939932	AE1-229 E O1	6.25
940001	AE1-240 C O1	2.94
940002	AE1-240 E O1	2.1
BAYOU	BAYOU	0.15
BIG_CAJUN1	BIG_CAJUN1	0.22
BIG_CAJUN2	BIG_CAJUN2	0.45
BLUEG	BLUEG	0.77
CALDERWOOD	CALDERWOOD	0.07
CANNELTON	CANNELTON	0.05
CARR	CARR	0.27
CATAWBA	CATAWBA	0.04
CHEOAH	CHEOAH	0.07
CHILHOWEE	CHILHOWEE	0.02
CHOCTAW	CHOCTAW	0.15
COFFEEN	COFFEEN	0.08
COTTONWOOD	COTTONWOOD	0.58
DEARBORN	DEARBORN	0.15
DUCKCREEK	DUCKCREEK	0.18
EDWARDS	EDWARDS	0.08
ELMERSMITH	ELMERSMITH	0.08
FARMERCITY	FARMERCITY	0.05
G-007	G-007	0.18

Bus #	Bus	MW Impact
GIBSON	GIBSON	0.03
HAMLET	HAMLET	0.13
NEWTON	NEWTON	0.21
O-066	O-066	3.07
PRAIRIE	PRAIRIE	0.38
RENSSELAER	RENSSELAER	0.21
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.03
TATANKA	TATANKA	0.1
TILTON	TILTON	0.1
TRIMBLE	TRIMBLE	0.09
TVA	TVA	0.24
UNIONPOWER	UNIONPOWER	0.11

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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
633977	227904	MILL #2	AE	227945	LEWIS #2	AE	1	AE_P4-2 AE33	breaker	282.0	63.73	132.7	DC	194.47

Bus #	Bus	MW Impact
228202	CUMB CT	1.56
228203	P06	1.55
228206	SHRMN CT	1.39
228261	V4-054E	0.58
228711	V2-041C	0.04
228712	V2-041E	0.4
292062	V1-021 C	0.08
292063	V1-021 E	0.08
902432	W2-030 E	0.5
913341	Y1-077	26.87
924531	AB2-102 C	34.31
924532	AB2-102 E	0.76
938421	AE1-061 C	0.27
938422	AE1-061 E	0.27
938781	AE1-104 C O1	54.66
938782	AE1-104 E O1	139.82
939301	AE1-161 C	0.57
939302	AE1-161 E	0.85
939501	AE1-179 C O1	4.14
939502	AE1-179 E O1	2.92
940001	AE1-240 C O1	3.44
940002	AE1-240 E O1	2.46
BAYOU	BAYOU	0.14
BIG_CAJUN1	BIG_CAJUN1	0.21
BIG_CAJUN2	BIG_CAJUN2	0.43
BLUEG	BLUEG	0.67
CALDERWOOD	CALDERWOOD	0.07

Bus #	Bus	MW Impact
CANNELTON	CANNELTON	0.04
CARR	CARR	0.09
CATAWBA	CATAWBA	0.05
CHEOAH	CHEOAH	0.07
CHILHOWEE	CHILHOWEE	0.02
CHOCTAW	CHOCTAW	0.14
COFFEEN	COFFEEN	0.07
COTTONWOOD	COTTONWOOD	0.55
DEARBORN	DEARBORN	0.12
DUCKCREEK	DUCKCREEK	0.15
EDWARDS	EDWARDS	0.07
ELMERSMITH	ELMERSMITH	0.07
FARMERCITY	FARMERCITY	0.05
G-007	G-007	0.53
GIBSON	GIBSON	0.03
HAMLET	HAMLET	0.15
NEWTON	NEWTON	0.18
O-066	O-066	1.12
PRAIRIE	PRAIRIE	0.34
RENSSELAER	RENSSELAER	0.07
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.03
TATANKA	TATANKA	0.08
TILTON	TILTON	0.08
TRIMBLE	TRIMBLE	0.07
TVA	TVA	0.23
UNIONPOWER	UNIONPOWER	0.1

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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
634236	228106	CORSON 1	AE	228185	CORSON#1	AE	1	AE_P4-2 AE16	breaker	168.0	60.08	113.0	DC	88.9

Bus #	Bus	MW Impact
227801	ONTC&DCT	2.54
227843	MARINGEN E	0.26
227928	V4-067E	0.08
292967	U2-045 E	1.15
293404	V3-036	0.36
902432	W2-030 E	0.38
905532	W4-063 E	0.29
913341	Y1-077	12.28
915022	Y3-012 E	0.49
924701	AB2-122 C	0.04
924702	AB2-122 E	0.06
930002	AB1-001 E	0.1
933962	AD1-019 E	0.5

Bus #	Bus	MW Impact
938781	AE1-104 C O1	24.98
938782	AE1-104 E O1	63.91
BAYOU	BAYOU	0.02
BIG_CAJUN1	BIG_CAJUN1	0.03
BIG_CAJUN2	BIG_CAJUN2	0.06
BLUEG	BLUEG	0.09
CALDERWOOD	CALDERWOOD	0.01
CANNELTON	CANNELTON	0.01
CATAWBA	CATAWBA	0.01
CBM-N	CBM-N	0.05
CHEOAH	CHEOAH	0.01
CHILHOWEE	CHILHOWEE	0.0
CHOCTAW	CHOCTAW	0.02
COFFEEN	COFFEEN	0.01
COTTONWOOD	COTTONWOOD	0.08
DEARBORN	DEARBORN	0.01
DUCKCREEK	DUCKCREEK	0.02
EDWARDS	EDWARDS	0.01
ELMERSMITH	ELMERSMITH	0.01
FARMERCITY	FARMERCITY	0.01
G-007A	G-007A	0.63
GIBSON	GIBSON	0.0
HAMLET	HAMLET	0.02
NEWTON	NEWTON	0.02
NYISO	NYISO	0.24
O-066A	O-066A	0.13
PRAIRIE	PRAIRIE	0.05
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.0
TATANKA	TATANKA	0.01
TILTON	TILTON	0.01
TRIMBLE	TRIMBLE	0.01
TVA	TVA	0.03
UNIONPOWER	UNIONPOWER	0.01
VFT	VFT	0.74

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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
635679	228110	BLE	AE	228197	MERION	AE	1	AE_P7-1 AE7TOWER	tower	482.0	51.84	101.98	DC	241.7

Bus #	Bus	MW Impact
913341	Y1-077	33.4
938781	AE1-104 C O1	67.93
938782	AE1-104 E O1	173.77
BAYOU	BAYOU	0.12
BIG_CAJUN1	BIG_CAJUN1	0.19

Bus #	Bus	MW Impact
BIG_CAJUN2	BIG_CAJUN2	0.38
BLUEG	BLUEG	0.59
CALDERWOOD	CALDERWOOD	0.06
CANNELTON	CANNELTON	0.04
CARR	CARR	0.04
CATAWBA	CATAWBA	0.04
CHEOAH	CHEOAH	0.06
CHILHOWEE	CHILHOWEE	0.02
CHOCTAW	CHOCTAW	0.13
COFFEEN	COFFEEN	0.06
COTTONWOOD	COTTONWOOD	0.49
DEARBORN	DEARBORN	0.1
DUCKCREEK	DUCKCREEK	0.13
EDWARDS	EDWARDS	0.06
ELMERSMITH	ELMERSMITH	0.06
FARMERCITY	FARMERCITY	0.04
G-007	G-007	0.12
GIBSON	GIBSON	0.02
HAMLET	HAMLET	0.14
NEWTON	NEWTON	0.16
O-066	O-066	0.41
PRAIRIE	PRAIRIE	0.3
RENSSELAER	RENSSELAER	0.03
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.02
TATANKA	TATANKA	0.07
TILTON	TILTON	0.07
TRIMBLE	TRIMBLE	0.07
TVA	TVA	0.2
UNIONPOWER	UNIONPOWER	0.09

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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
635617	228111	MDLE TP	AE	228107	CORSON 2	AE	1	AE_P7-1 AE7TOWER	tower	315.0	31.79	109.52	DC	244.83

Bus #	Bus	MW Impact
292063	V1-021 E	0.02
913341	Y1-077	33.83
938781	AE1-104 C O1	68.81
938782	AE1-104 E O1	176.02
BAYOU	BAYOU	0.12
BIG_CAJUN1	BIG_CAJUN1	0.19
BIG_CAJUN2	BIG_CAJUN2	0.38
BLUEG	BLUEG	0.59
CALDERWOOD	CALDERWOOD	0.06
CANNELTON	CANNELTON	0.04

Bus #	Bus	MW Impact
CARR	CARR	0.04
CATAWBA	CATAWBA	0.04
CHEOAH	CHEOAH	0.06
CHILHOWEE	CHILHOWEE	0.02
CHOCTAW	CHOCTAW	0.13
COFFEEN	COFFEEN	0.06
COTTONWOOD	COTTONWOOD	0.49
DEARBORN	DEARBORN	0.1
DUCKCREEK	DUCKCREEK	0.14
EDWARDS	EDWARDS	0.06
ELMERSMITH	ELMERSMITH	0.06
FARMERCITY	FARMERCITY	0.04
G-007	G-007	0.12
GIBSON	GIBSON	0.02
HAMLET	HAMLET	0.14
NEWTON	NEWTON	0.16
O-066	O-066	0.4
PRAIRIE	PRAIRIE	0.3
RENSSELAER	RENSSELAER	0.03
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.02
TATANKA	TATANKA	0.07
TILTON	TILTON	0.07
TRIMBLE	TRIMBLE	0.07
TVA	TVA	0.21
UNIONPOWER	UNIONPOWER	0.09

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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
635586	228130	TUCKAHOE	AE	227946	MILL#2	AE	1	AE_P7-1 AE7TOWER	tower	146.0	65.03	111.39	DC	67.67

Bus #	Bus	MW Impact
228712	V2-041E	0.21
292062	V1-021 C	0.05
292063	V1-021 E	0.05
913341	Y1-077	9.35
924531	AB2-102 C	18.8
924532	AB2-102 E	0.42
938781	AE1-104 C O1	19.02
938782	AE1-104 E O1	48.65
939501	AE1-179 C O1	2.18
939502	AE1-179 E O1	1.54
940001	AE1-240 C O1	1.82
940002	AE1-240 E O1	1.3
BAYOU	BAYOU	0.06
BIG_CAJUN1	BIG_CAJUN1	0.09

Bus #	Bus	MW Impact
BIG_CAJUN2	BIG_CAJUN2	0.17
BLUEG	BLUEG	0.27
CALDERWOOD	CALDERWOOD	0.03
CANNELTON	CANNELTON	0.02
CARR	CARR	0.05
CATAWBA	CATAWBA	0.02
CHEOAH	CHEOAH	0.03
CHILHOWEE	CHILHOWEE	0.01
CHOCTAW	CHOCTAW	0.06
COFFEEN	COFFEEN	0.03
COTTONWOOD	COTTONWOOD	0.22
DEARBORN	DEARBORN	0.05
DUCKCREEK	DUCKCREEK	0.06
EDWARDS	EDWARDS	0.03
ELMERSMITH	ELMERSMITH	0.03
FARMERCITY	FARMERCITY	0.02
G-007	G-007	0.32
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.06
NEWTON	NEWTON	0.07
O-066	O-066	0.61
PRAIRIE	PRAIRIE	0.14
RENSSELAER	RENSSELAER	0.04
SANTEETLA	SANTEETLA	0.01
SMITHLAND	SMITHLAND	0.01
TATANKA	TATANKA	0.03
TILTON	TILTON	0.03
TRIMBLE	TRIMBLE	0.03
TVA	TVA	0.09
UNIONPOWER	UNIONPOWER	0.04

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
635534	228217	DENNIS	AE	228130	TUCKAHOE	AE	1	AE_P7-1 AE7TOWER	tower	146.0	69.76	116.11	DC	67.67

Bus #	Bus	MW Impact
228712	V2-041E	0.21
292062	V1-021 C	0.05
292063	V1-021 E	0.05
913341	Y1-077	9.35
924531	AB2-102 C	18.8
924532	AB2-102 E	0.42
938781	AE1-104 C O1	19.02
938782	AE1-104 E O1	48.65
939501	AE1-179 C O1	2.18
939502	AE1-179 E O1	1.54

Bus #	Bus	MW Impact
940001	AE1-240 C O1	1.82
940002	AE1-240 E O1	1.3
BAYOU	BAYOU	0.06
BIG_CAJUN1	BIG_CAJUN1	0.09
BIG_CAJUN2	BIG_CAJUN2	0.17
BLUEG	BLUEG	0.27
CALDERWOOD	CALDERWOOD	0.03
CANNELTON	CANNELTON	0.02
CARR	CARR	0.05
CATAWBA	CATAWBA	0.02
CHEOAH	CHEOAH	0.03
CHILHOWEE	CHILHOWEE	0.01
CHOCTAW	CHOCTAW	0.06
COFFEEN	COFFEEN	0.03
COTTONWOOD	COTTONWOOD	0.22
DEARBORN	DEARBORN	0.05
DUCKCREEK	DUCKCREEK	0.06
EDWARDS	EDWARDS	0.03
ELMERSMITH	ELMERSMITH	0.03
FARMERCITY	FARMERCITY	0.02
G-007	G-007	0.32
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.06
NEWTON	NEWTON	0.07
O-066	O-066	0.61
PRAIRIE	PRAIRIE	0.14
RENSSELAER	RENSSELAER	0.04
SANTEETLA	SANTEETLA	0.01
SMITHLAND	SMITHLAND	0.01
TATANKA	TATANKA	0.03
TILTON	TILTON	0.03
TRIMBLE	TRIMBLE	0.03
TVA	TVA	0.09
UNIONPOWER	UNIONPOWER	0.04

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
634207	228312	PEDRKTWN	AE	228313	BRIDGPRT	AE	1	AE_P4-2 AE45	breaker	552.0	89.7	98.48	DC	107.3

Bus #	Bus	MW Impact
227801	ONTC&DCT	5.46
227843	MARINGEN E	0.56
227928	V4-067E	0.21
228203	P06	3.78
228261	V4-054E	2.0
228306	PCLP STM	7.01

Bus #	Bus	MW Impact
228307	PCLP GT	7.0
228309	CCLP NUG	23.18
228343	QUINTN#1	0.12
228357	V2-046E	4.24
228712	V2-041E	0.82
228721	V2-035E	0.37
292063	V1-021 E	0.08
292967	U2-045 E	2.46
293404	V3-036	0.78
902092	W1-130E	0.96
902432	W2-030 E	0.92
903963	W3-175	33.92
905532	W4-063 E	0.61
915022	Y3-012 E	1.06
918891	AA1-108	14.45
924531	AB2-102 C	83.86
924532	AB2-102 E	1.86
924701	AB2-122 C	0.09
924702	AB2-122 E	0.15
930002	AB1-001 E	0.2
931191	AB1-169A	85.29
933962	AD1-019 E	1.07
936411	AD2-052 C	2.68
936412	AD2-052 E	1.32
938301	AE1-045 C	0.31
938302	AE1-045 E	0.16
938311	AE1-046 C	0.31
938312	AE1-046 E	0.16
938421	AE1-061 C	0.41
938422	AE1-061 E	0.41
938781	AE1-104 C O1	30.16
938782	AE1-104 E O1	77.15
938871	AE1-115 C	4.49
938872	AE1-115 E	4.49
939301	AE1-161 C	1.69
939302	AE1-161 E	2.53
939501	AE1-179 C O1	10.7
939502	AE1-179 E O1	7.55
939931	AE1-229 C O1	36.26
939932	AE1-229 E O1	24.57
940001	AE1-240 C O1	9.02
940002	AE1-240 E O1	6.44
BAYOU	BAYOU	0.45
BIG_CAJUN1	BIG_CAJUN1	0.69
BIG_CAJUN2	BIG_CAJUN2	1.38
BLUEG	BLUEG	2.12
CALDERWOOD	CALDERWOOD	0.23
CANNELTON	CANNELTON	0.13
CARR	CARR	0.09
CATAWBA	CATAWBA	0.15
CHEOAH	CHEOAH	0.21
CHILHOWEE	CHILHOWEE	0.08

Bus #	Bus	MW Impact
CHOCTAW	CHOCTAW	0.46
COFFEEN	COFFEEN	0.22
COTTONWOOD	COTTONWOOD	1.77
DEARBORN	DEARBORN	0.37
DUCKCREEK	DUCKCREEK	0.49
EDWARDS	EDWARDS	0.22
ELMERSMITH	ELMERSMITH	0.22
FARMERCITY	FARMERCITY	0.15
G-007A	G-007A	0.67
GIBSON	GIBSON	0.09
HAMLET	HAMLET	0.49
NEWTON	NEWTON	0.59
O-066	O-066	0.51
PRAIRIE	PRAIRIE	1.1
RENSSELAER	RENSSELAER	0.07
SANTEETLA	SANTEETLA	0.06
SMITHLAND	SMITHLAND	0.09
TATANKA	TATANKA	0.27
TILTON	TILTON	0.27
TRIMBLE	TRIMBLE	0.24
TVA	TVA	0.74
UNIONPOWER	UNIONPOWER	0.33

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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
635618	228402	MONROE	AE	219100	NEWFRDM	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	804.0	103.07	105.08	DC	63.3

Bus #	Bus	MW Impact
219229	EAGLEPT_G3	3.84
219230	EAGLEPT_G1	5.68
219231	EAGLEPT_G2	5.68
227801	ONTC&DCT	4.46
227843	MARINGEN E	0.46
228261	V4-054E	1.48
228357	V2-046E	3.92
228400	MICK 1CT	2.61
228423	Q-090 2	49.81
228471	VALERO1	0.88
228472	VALERO2	0.61
228473	VALERO3	0.61
228484	VALERO4	0.52
228712	V2-041E	0.41
228720	V2-035C	0.05
228721	V2-035E	0.48
291995	U4-036 C	0.12
291996	U4-036 E	1.32

Bus #	Bus	MW Impact
292063	V1-021 E	0.04
292104	V1-030 C6	0.04
292105	V1-030 E6	0.38
292967	U2-045 E	2.01
293404	V3-036	0.64
902091	W1-130C	0.21
902092	W1-130E	2.23
902432	W2-030 E	0.69
905143	W4-016	97.12
905532	W4-063 E	0.5
909032	X2-013 E	0.83
915022	Y3-012 E	0.87
917471	Z2-083	4.69
918852	AA1-104 E	8.27
924051	AB2-049 C	0.69
924052	AB2-049 E	1.13
924531	AB2-102 C	32.0
924532	AB2-102 E	0.71
930002	AB1-001 E	0.17
930722	AB1-116 E	0.21
930732	AB1-119 E	0.1
931191	AB1-169A	196.86
933962	AD1-019 E	0.88
936411	AD2-052 C	1.83
936412	AD2-052 E	0.9
936491	AD2-064 C	0.07
936492	AD2-064 E	0.1
938301	AE1-045 C	0.72
938302	AE1-045 E	0.36
938311	AE1-046 C	0.72
938312	AE1-046 E	0.36
938421	AE1-061 C	0.96
938422	AE1-061 E	1.8
938781	AE1-104 C O1	17.79
938782	AE1-104 E O1	45.51
938871	AE1-115 C	1.54
938872	AE1-115 E	1.54
939301	AE1-161 C	8.82
939302	AE1-161 E	13.22
939501	AE1-179 C O1	7.57
939502	AE1-179 E O1	5.34
939821	AE1-218 C O1	0.3
939822	AE1-218 E O1	0.45
939831	AE1-219 C O1	0.68
939832	AE1-219 E O1	0.98
939931	AE1-229 C O1	30.48
939932	AE1-229 E O1	20.65
940001	AE1-240 C O1	6.23
940002	AE1-240 E O1	4.45
BAYOU	BAYOU	0.58
BIG_CAJUN1	BIG_CAJUN1	0.89
BIG_CAJUN2	BIG_CAJUN2	1.79

Bus #	Bus	MW Impact
BLUEG	BLUEG	2.79
CALDERWOOD	CALDERWOOD	0.3
CANNELTON	CANNELTON	0.17
CARR	CARR	0.42
CATAWBA	CATAWBA	0.19
CHEOAH	CHEOAH	0.27
CHILHOWEE	CHILHOWEE	0.1
CHOCTAW	CHOCTAW	0.59
COFFEEN	COFFEEN	0.29
COTTONWOOD	COTTONWOOD	2.29
DEARBORN	DEARBORN	0.49
DUCKCREEK	DUCKCREEK	0.64
EDWARDS	EDWARDS	0.29
ELMERSMITH	ELMERSMITH	0.29
FARMERCITY	FARMERCITY	0.19
G-007	G-007	1.48
GIBSON	GIBSON	0.12
HAMLET	HAMLET	0.62
NEWTON	NEWTON	0.77
O-066	O-066	5.0
PRAIRIE	PRAIRIE	1.43
RENSSELAER	RENSSELAER	0.33
SANTEETLA	SANTEETLA	0.08
SMITHLAND	SMITHLAND	0.11
TATANKA	TATANKA	0.35
TILTON	TILTON	0.35
TRIMBLE	TRIMBLE	0.31
TVA	TVA	0.96
UNIONPOWER	UNIONPOWER	0.43

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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
635513	206297	28MANITOU	JCP&L	206319	28WHITINGS	JCP&L	1	JC-P7-1-JCC-230-10A	tower	817.0	116.65	119.71	DC	55.53

Bus #	Bus	MW Impact
206306	28LKWD G1	7.11
206308	28LKWD G2	7.11
206312	28LKWD G3	5.01
206325	28O C GEN	312.71
206360	28O CRK C1	2.65
206361	28O CRK C2	1.7
206366	28LKWD CT1	13.47
206367	28LKWD CT2	13.47
227801	ONTC&DCT	5.25

Bus #	Bus	MW Impact
227843	MARINGEN E	0.54
227928	V4-067E	0.23
292063	V1-021 E	0.03
292967	U2-045 E	2.37
293404	V3-036	0.75
902432	W2-030 E	0.83
905532	W4-063 E	0.59
915022	Y3-012 E	1.02
924701	AB2-122 C	0.1
924702	AB2-122 E	0.17
930002	AB1-001 E	0.2
930891	AB1-138 C	0.52
930892	AB1-138 E	0.87
933962	AD1-019 E	1.03
934351	AD1-059	1.27
938151	AE1-020 C O1	156.99
938152	AE1-020 E O1	401.69
938781	AE1-104 C O1	15.61
938782	AE1-104 E O1	39.92
939121	AE1-142 C O1	3.93
939122	AE1-142 E O1	5.66
BAYOU	BAYOU	0.25
BIG_CAJUN1	BIG_CAJUN1	0.39
BIG_CAJUN2	BIG_CAJUN2	0.78
BLUEG	BLUEG	1.23
CALDERWOOD	CALDERWOOD	0.13
CANNELTON	CANNELTON	0.07
CARR	CARR	0.38
CATAWBA	CATAWBA	0.08
CHEOAH	CHEOAH	0.12
CHILHOWEE	CHILHOWEE	0.04
CHOCTAW	CHOCTAW	0.26
COFFEEN	COFFEEN	0.13
COTTONWOOD	COTTONWOOD	1.0
DEARBORN	DEARBORN	0.22
DUCKCREEK	DUCKCREEK	0.28
EDWARDS	EDWARDS	0.13
ELMERSMITH	ELMERSMITH	0.13
FARMERCITY	FARMERCITY	0.09
G-007	G-007	3.14
GIBSON	GIBSON	0.05
HAMLET	HAMLET	0.26
NEWTON	NEWTON	0.34
O-066	O-066	5.1
PRAIRIE	PRAIRIE	0.63
RENSSELAER	RENSSELAER	0.3
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.05
TATANKA	TATANKA	0.15
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.14
TVA	TVA	0.42

Bus #	Bus	MW Impact
UNIONPOWER	UNIONPOWER	0.18

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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
633801	206302	28OYSTER C	JCP&L	206297	28MANITOU	JCP&L	2	JC-P2-3-JCC-230-12	breaker	869.0	155.89	159.81	DC	75.46

Bus #	Bus	MW Impact
206325	28O C GEN	412.02
206360	28O CRK C1	3.49
206361	28O CRK C2	2.25
227801	ONTC&DCT	7.09
227842	MARINGEN	0.11
227843	MARINGEN E	0.73
227927	V4-067C	0.03
227928	V4-067E	0.31
228014	PVILLEG	0.11
228261	V4-054E	0.47
228712	V2-041E	0.25
292063	V1-021 E	0.04
292966	U2-045 C	0.07
292967	U2-045 E	3.2
293404	V3-036	1.01
902092	W1-130E	0.6
902432	W2-030 E	1.12
905531	W4-063 C	0.02
905532	W4-063 E	0.8
915022	Y3-012 E	1.38
919662	AA2-048 E	0.6
924531	AB2-102 C	22.67
924532	AB2-102 E	0.5
924701	AB2-122 C	0.13
924702	AB2-122 E	0.23
930001	AB1-001 C	0.02
930002	AB1-001 E	0.26
931191	AB1-169A	53.64
933962	AD1-019 E	1.4
938151	AE1-020 C O1	206.85
938152	AE1-020 E O1	529.26
938301	AE1-045 C	0.2
938302	AE1-045 E	0.1
938311	AE1-046 C	0.2
938312	AE1-046 E	0.1
938421	AE1-061 C	0.26
938422	AE1-061 E	0.26

Bus #	Bus	MW Impact
938781	AE1-104 C O1	21.21
938782	AE1-104 E O1	54.25
939501	AE1-179 C O1	2.96
939502	AE1-179 E O1	2.09
940001	AE1-240 C O1	2.46
940002	AE1-240 E O1	1.75
BAYOU	BAYOU	0.05
BIG_CAJUN1	BIG_CAJUN1	0.07
BIG_CAJUN2	BIG_CAJUN2	0.15
BLUEG	BLUEG	0.29
CALDERWOOD	CALDERWOOD	0.02
CANNELTON	CANNELTON	0.02
CARR	CARR	0.46
CATAWBA	CATAWBA	0.01
CHEOAH	CHEOAH	0.02
CHILHOWEE	CHILHOWEE	0.01
CHOCTAW	CHOCTAW	0.05
COFFEEN	COFFEEN	0.03
COTTONWOOD	COTTONWOOD	0.2
DEARBORN	DEARBORN	0.06
DUCKCREEK	DUCKCREEK	0.07
EDWARDS	EDWARDS	0.03
ELMERSMITH	ELMERSMITH	0.03
FARMERCITY	FARMERCITY	0.02
G-007	G-007	4.52
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.03
NEWTON	NEWTON	0.08
O-066	O-066	6.57
PRAIRIE	PRAIRIE	0.14
RENSSELAER	RENSSELAER	0.37
SANTEETLA	SANTEETLA	0.01
SMITHLAND	SMITHLAND	0.01
TATANKA	TATANKA	0.04
TILTON	TILTON	0.04
TRIMBLE	TRIMBLE	0.03
TVA	TVA	0.08
UNIONPOWER	UNIONPOWER	0.03

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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
635611	206318	28VANHISVL	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	106.66	109.58	DC	56.35

Bus #	Bus	MW Impact
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Bus #	Bus	MW Impact
206306	28LKWD G1	5.08
206308	28LKWD G2	5.08
206312	28LKWD G3	3.58
206325	28O C GEN	228.31
206360	28O CRK C1	1.93
206361	28O CRK C2	1.24
206366	28LKWD CT1	9.63
206367	28LKWD CT2	9.63
207207	28JCB_W1-129	0.09
207208	28JCB_W4-025	0.13
227801	ONTC&DCT	5.03
227843	MARINGEN E	0.52
227928	V4-067E	0.22
292063	V1-021 E	0.03
292099	V1-030 E3	0.1
292967	U2-045 E	2.27
293404	V3-036	0.72
901981	W1-119 C	0.35
901982	W1-119 E	3.71
901991	W1-120C	2.53
901992	W1-120E	4.12
902082	W1-129E	1.0
902092	W1-130E	0.55
902321	W2-019 C	0.11
902322	W2-019 E	1.18
902432	W2-030 E	0.8
902692	W2-056 E	0.89
902842	W2-071E	0.18
902951	W2-082 C OP1	0.32
902952	W2-082 E OP1	3.39
903152	W2-102 E	0.55
904042	V4-005 E	0.23
904432	W3-124 E	0.24
905232	W4-029 E	0.23
905252	W4-025 E	1.42
905532	W4-063 E	0.57
905792	W4-103 E	0.6
907272	X1-085 E	0.34
912101	X4-015 C	0.09
912102	X4-015 E	1.0
913332	Y1-075 E	0.21
915022	Y3-012 E	0.98
917611	Z2-102 C	0.25
917612	Z2-102 E	2.71
917682	Z2-109 E	2.07
918452	AA1-060 E	4.89
919672	AA2-049 E	0.43
924701	AB2-122 C	0.09
924702	AB2-122 E	0.16
930002	AB1-001 E	0.19
930102	AB1-025 E	0.54
930891	AB1-138 C	0.98

Bus #	Bus	MW Impact
930892	AB1-138 E	1.63
931122	AB1-163 E	0.82
931191	AB1-169A	49.15
932361	AC2-050 C O1	0.42
932362	AC2-050 E O1	0.68
933962	AD1-019 E	0.99
934351	AD1-059	0.91
936541	AD2-069 C	0.21
936542	AD2-069 E	0.1
938151	AE1-020 C O1	114.62
938152	AE1-020 E O1	293.27
938301	AE1-045 C	0.18
938302	AE1-045 E	0.09
938311	AE1-046 C	0.18
938312	AE1-046 E	0.09
938421	AE1-061 C	0.24
938422	AE1-061 E	0.24
938781	AE1-104 C O1	15.84
938782	AE1-104 E O1	40.51
939121	AE1-142 C O1	3.22
939122	AE1-142 E O1	4.63
BAYOU	BAYOU	0.19
BIG_CAJUN1	BIG_CAJUN1	0.29
BIG_CAJUN2	BIG_CAJUN2	0.59
BLUEG	BLUEG	1.01
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.06
CARR	CARR	0.97
CATAWBA	CATAWBA	0.05
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.19
COFFEEN	COFFEEN	0.11
COTTONWOOD	COTTONWOOD	0.76
DEARBORN	DEARBORN	0.2
DUCKCREEK	DUCKCREEK	0.23
EDWARDS	EDWARDS	0.11
ELMERSMITH	ELMERSMITH	0.1
FARMERCITY	FARMERCITY	0.07
G-007	G-007	9.99
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.16
NEWTON	NEWTON	0.28
O-066	O-066	13.69
PRAIRIE	PRAIRIE	0.5
RENSSELAER	RENSSELAER	0.77
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.04
TATANKA	TATANKA	0.13
TILTON	TILTON	0.13
TRIMBLE	TRIMBLE	0.11
TVA	TVA	0.31

Bus #	Bus	MW Impact
UNIONPOWER	UNIONPOWER	0.14

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
634024	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	2	JC-P2-3-JCC-230-13H	breaker	817.0	127.06	130.28	DC	58.34

Bus #	Bus	MW Impact
206306	28LKWD G1	8.98
206308	28LKWD G2	8.98
206312	28LKWD G3	6.33
206325	28O C GEN	310.52
206360	28O CRK C1	2.63
206361	28O CRK C2	1.69
206366	28LKWD CT1	17.02
206367	28LKWD CT2	17.02
227801	ONTC&DCT	5.46
227843	MARINGEN E	0.57
227928	V4-067E	0.23
292063	V1-021 E	0.03
292967	U2-045 E	2.46
293404	V3-036	0.78
902432	W2-030 E	0.86
905532	W4-063 E	0.62
915022	Y3-012 E	1.06
917612	Z2-102 E	0.83
924701	AB2-122 C	0.1
924702	AB2-122 E	0.17
930002	AB1-001 E	0.2
930891	AB1-138 C	1.11
930892	AB1-138 E	1.85
931122	AB1-163 E	0.58
933962	AD1-019 E	1.07
934351	AD1-059	1.6
938151	AE1-020 C O1	155.89
938152	AE1-020 E O1	398.88
938781	AE1-104 C O1	16.4
938782	AE1-104 E O1	41.94
939121	AE1-142 C O1	4.27
939122	AE1-142 E O1	6.14
BAYOU	BAYOU	0.28
BIG_CAJUN1	BIG_CAJUN1	0.43
BIG_CAJUN2	BIG_CAJUN2	0.87
BLUEG	BLUEG	1.4
CALDERWOOD	CALDERWOOD	0.14

Bus #	Bus	MW Impact
CANNELTON	CANNELTON	0.08
CARR	CARR	0.55
CATAWBA	CATAWBA	0.09
CHEOAH	CHEOAH	0.13
CHILHOWEE	CHILHOWEE	0.05
CHOCTAW	CHOCTAW	0.29
COFFEEN	COFFEEN	0.15
COTTONWOOD	COTTONWOOD	1.12
DEARBORN	DEARBORN	0.26
DUCKCREEK	DUCKCREEK	0.32
EDWARDS	EDWARDS	0.15
ELMERSMITH	ELMERSMITH	0.14
FARMERCITY	FARMERCITY	0.1
G-007	G-007	5.95
GIBSON	GIBSON	0.06
HAMLET	HAMLET	0.28
NEWTON	NEWTON	0.38
O-066	O-066	7.67
PRAIRIE	PRAIRIE	0.71
RENSSELAER	RENSSELAER	0.44
SANTEETLA	SANTEETLA	0.04
SMITHLAND	SMITHLAND	0.06
TATANKA	TATANKA	0.18
TILTON	TILTON	0.18
TRIMBLE	TRIMBLE	0.16
TVA	TVA	0.47
UNIONPOWER	UNIONPOWER	0.21

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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
634123	206323	28LAKWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-13A	breaker	869.0	117.13	120.22	DC	59.46

Bus #	Bus	MW Impact
206306	28LKWD G1	9.09
206308	28LKWD G2	9.09
206312	28LKWD G3	6.41
206325	28O C GEN	315.11
206360	28O CRK C1	2.67
206361	28O CRK C2	1.72
206366	28LKWD CT1	17.23
206367	28LKWD CT2	17.23
227801	ONTC&DCT	5.56
227843	MARINGEN E	0.58
227928	V4-067E	0.24

Bus #	Bus	MW Impact
292063	V1-021 E	0.03
292967	U2-045 E	2.51
293404	V3-036	0.79
902432	W2-030 E	0.87
905532	W4-063 E	0.63
915022	Y3-012 E	1.08
917612	Z2-102 E	0.89
924701	AB2-122 C	0.1
924702	AB2-122 E	0.18
930002	AB1-001 E	0.21
930891	AB1-138 C	1.16
930892	AB1-138 E	1.93
931122	AB1-163 E	0.64
933962	AD1-019 E	1.09
934351	AD1-059	1.62
938151	AE1-020 C O1	158.19
938152	AE1-020 E O1	404.77
938781	AE1-104 C O1	16.71
938782	AE1-104 E O1	42.75
939121	AE1-142 C O1	4.34
939122	AE1-142 E O1	6.24
BAYOU	BAYOU	0.3
BIG_CAJUN1	BIG_CAJUN1	0.46
BIG_CAJUN2	BIG_CAJUN2	0.92
BLUEG	BLUEG	1.48
CALDERWOOD	CALDERWOOD	0.15
CANNELTON	CANNELTON	0.09
CARR	CARR	0.57
CATAWBA	CATAWBA	0.09
CHEOAH	CHEOAH	0.14
CHILHOWEE	CHILHOWEE	0.05
CHOCTAW	CHOCTAW	0.31
COFFEEN	COFFEEN	0.16
COTTONWOOD	COTTONWOOD	1.19
DEARBORN	DEARBORN	0.27
DUCKCREEK	DUCKCREEK	0.34
EDWARDS	EDWARDS	0.16
ELMERSMITH	ELMERSMITH	0.15
FARMERCITY	FARMERCITY	0.1
G-007	G-007	5.47
GIBSON	GIBSON	0.06
HAMLET	HAMLET	0.3
NEWTON	NEWTON	0.41
O-066	O-066	7.78
PRAIRIE	PRAIRIE	0.75
RENSSELAER	RENSSELAER	0.45
SANTEETLA	SANTEETLA	0.04
SMITHLAND	SMITHLAND	0.06
TATANKA	TATANKA	0.19
TILTON	TILTON	0.19
TRIMBLE	TRIMBLE	0.16
TVA	TVA	0.5

Bus #	Bus	MW Impact
UNIONPOWER	UNIONPOWER	0.22

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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
635535	219100	NEWFRDM	PSE&G	219704	HILLTOP_3	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	740.0	110.37	113.41	DC	51.74

Bus #	Bus	MW Impact
227801	ONTC&DCT	4.02
227843	MARINGEN E	0.42
227928	V4-067E	0.17
228260	V4-054C	0.12
228261	V4-054E	0.66
228357	V2-046E	1.38
228702	WEST CT	0.44
228712	V2-041E	0.26
228717	S121	0.72
228720	V2-035C	0.01
228721	V2-035E	0.14
228727	W2-039G	1.05
291996	U4-036 E	0.31
292063	V1-021 E	0.03
292105	V1-030 E6	0.09
292967	U2-045 E	1.81
293404	V3-036	0.57
902091	W1-130C	0.07
902092	W1-130E	0.73
902432	W2-030 E	0.65
905143	W4-016	23.09
905532	W4-063 E	0.45
909032	X2-013 E	0.2
915022	Y3-012 E	0.78
916292	Z1-082 E	0.26
918852	AA1-104 E	1.96
924051	AB2-049 C	0.5
924052	AB2-049 E	0.81
924531	AB2-102 C	23.08
924532	AB2-102 E	0.51
924701	AB2-122 C	0.07
924702	AB2-122 E	0.13
930002	AB1-001 E	0.15
930722	AB1-116 E	0.1
930732	AB1-119 E	0.09
931191	AB1-169A	64.37
933962	AD1-019 E	0.79
936411	AD2-052 C	0.7
936412	AD2-052 E	0.34

Bus #	Bus	MW Impact
936491	AD2-064 C	0.07
936492	AD2-064 E	0.09
936501	AD2-065 C	0.25
936502	AD2-065 E	0.35
937011	AD2-135 C	0.09
937012	AD2-135 E	0.15
938301	AE1-045 C	0.23
938302	AE1-045 E	0.12
938311	AE1-046 C	0.23
938312	AE1-046 E	0.12
938421	AE1-061 C	0.59
938422	AE1-061 E	0.59
938431	AE1-062 C	1.19
938432	AE1-062 E	1.19
938781	AE1-104 C O1	14.54
938782	AE1-104 E O1	37.2
938871	AE1-115 C	0.55
938872	AE1-115 E	0.55
939301	AE1-161 C	2.42
939302	AE1-161 E	3.64
939501	AE1-179 C O1	3.77
939502	AE1-179 E O1	2.66
939821	AE1-218 C O1	0.1
939822	AE1-218 E O1	0.16
939831	AE1-219 C O1	0.23
939832	AE1-219 E O1	0.34
939931	AE1-229 C O1	9.77
939932	AE1-229 E O1	6.62
940001	AE1-240 C O1	3.11
940002	AE1-240 E O1	2.22
BAYOU	BAYOU	0.16
BIG_CAJUN1	BIG_CAJUN1	0.24
BIG_CAJUN2	BIG_CAJUN2	0.48
BLUEG	BLUEG	0.81
CALDERWOOD	CALDERWOOD	0.08
CANNELTON	CANNELTON	0.05
CARR	CARR	0.29
CATAWBA	CATAWBA	0.04
CHEOAH	CHEOAH	0.07
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.16
COFFEEN	COFFEEN	0.09
COTTONWOOD	COTTONWOOD	0.62
DEARBORN	DEARBORN	0.16
DUCKCREEK	DUCKCREEK	0.19
EDWARDS	EDWARDS	0.09
ELMERSMITH	ELMERSMITH	0.08
FARMERCITY	FARMERCITY	0.06
G-007	G-007	0.22
GIBSON	GIBSON	0.03
HAMLET	HAMLET	0.14
NEWTON	NEWTON	0.22

Bus #	Bus	MW Impact
O-066	O-066	3.31
PRAIRIE	PRAIRIE	0.41
RENSSELAER	RENSSELAER	0.23
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.03
TATANKA	TATANKA	0.1
TILTON	TILTON	0.1
TRIMBLE	TRIMBLE	0.09
TVA	TVA	0.26
UNIONPOWER	UNIONPOWER	0.11

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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
635122	219108	CUTHBERT	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_U-2299	single	771.0	104.87	105.75	DC	15.15

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.87
219124	CAMDEN_STG	3.59
219126	CAMDEN_CTG	4.41
219128	GLOUCSTR_26	1.94
219229	EAGLEPT_G3	3.1
219230	EAGLEPT_G1	4.59
219231	EAGLEPT_G2	4.59
227801	ONTC&DCT	3.97
227881	GRENWCHG	0.05
228304	LOGAN	7.1
228306	PCLP STM	1.87
228307	PCLP GT	1.87
228309	CCLP NUG	6.48
228334	MANNMILG	0.22
228343	QUINTN#1	0.05
228351	V2-046C	0.18
228400	MICK 1CT	1.49
228423	Q-090 2	29.14
228471	VALERO1	0.51
228472	VALERO2	0.35
228473	VALERO3	0.35
228484	VALERO4	0.3
228720	V2-035C	0.02
291995	U4-036 C	0.09
292104	V1-030 C6	0.03
292194	V1-030 CE	0.12
903963	W3-175	9.64
905143	W4-016	56.82
914231	Y2-081 C OP1	1.48

Bus #	Bus	MW Impact
914232	Y2-081 E OP1	0.08
915591	Y3-087 C OP1	0.07
917381	Z2-062	0.17
917471	Z2-083	2.74
918891	AA1-108	4.1
924051	AB2-049 C	0.46
924531	AB2-102 C	26.32
924701	AB2-122 C	0.07
925391	AC1-010 C	0.79
931191	AB1-169A	75.77
936411	AD2-052 C	1.1
936491	AD2-064 C	0.06
936501	AD2-065 C	0.21
937011	AD2-135 C	0.07
938301	AE1-045 C	0.28
938311	AE1-046 C	0.28
938421	AE1-061 C	0.37
938431	AE1-062 C	0.5
938781	AE1-104 C O1	15.15
938871	AE1-115 C	1.76
939301	AE1-161 C	2.99
939501	AE1-179 C O1	4.67
939821	AE1-218 C O1	0.11
939831	AE1-219 C O1	0.26
939931	AE1-229 C O1	14.31
940001	AE1-240 C O1	3.88
BAYOU	BAYOU	0.41
BIG_CAJUN1	BIG_CAJUN1	0.63
BIG_CAJUN2	BIG_CAJUN2	1.26
BLUEG	BLUEG	2.01
CALDERWOOD	CALDERWOOD	0.21
CANNELTON	CANNELTON	0.12
CARR	CARR	0.43
CATAWBA	CATAWBA	0.13
CHEOAH	CHEOAH	0.19
CHILHOWEE	CHILHOWEE	0.07
CHOCTAW	CHOCTAW	0.42
COFFEEN	COFFEEN	0.21
COTTONWOOD	COTTONWOOD	1.62
DEARBORN	DEARBORN	0.37
DUCKCREEK	DUCKCREEK	0.46
EDWARDS	EDWARDS	0.21
ELMERSMITH	ELMERSMITH	0.21
FARMERCITY	FARMERCITY	0.14
GIBSON	GIBSON	0.08
HAMLET	HAMLET	0.41
NEWTON	NEWTON	0.55
PRAIRIE	PRAIRIE	1.03
RENSSELAER	RENSSELAER	0.34
SANTEETLA	SANTEETLA	0.06
SMITHLAND	SMITHLAND	0.08
TATANKA	TATANKA	0.25

Bus #	Bus	MW Impact
TILTON	TILTON	0.25
TRIMBLE	TRIMBLE	0.22
TVA	TVA	0.68
UNIONPOWER	UNIONPOWER	0.3

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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
635199	219110	GLOUCSTR	PSE&G	219753	CUTHBERT_2	PSE&G	1	PS_P1-2_D-2282	single	771.0	102.51	103.29	DC	13.43

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.66
219124	CAMDEN_STG	3.18
219126	CAMDEN_CTG	3.91
219128	GLOUCSTR_26	1.72
219229	EAGLEPT_G3	2.75
219230	EAGLEPT_G1	4.07
219231	EAGLEPT_G2	4.07
227801	ONTC&DCT	3.52
227881	GRENWCHG	0.05
228304	LOGAN	6.29
228306	PCLP STM	1.66
228307	PCLP GT	1.65
228309	CCLP NUG	5.75
228334	MANNMILG	0.2
228343	QUINTN#1	0.04
228351	V2-046C	0.16
228400	MICK 1CT	1.32
228423	Q-090 2	25.82
228471	VALERO1	0.45
228472	VALERO2	0.31
228473	VALERO3	0.31
228484	VALERO4	0.26
228720	V2-035C	0.02
291995	U4-036 C	0.08
292104	V1-030 C6	0.02
292194	V1-030 CE	0.1
903963	W3-175	8.54
905143	W4-016	50.35
914231	Y2-081 C OP1	1.31
914232	Y2-081 E OP1	0.07
915591	Y3-087 C OP1	0.06
917381	Z2-062	0.15
917471	Z2-083	2.43
918891	AA1-108	3.64
924051	AB2-049 C	0.41
924531	AB2-102 C	23.33
924701	AB2-122 C	0.06
925391	AC1-010 C	0.7
931191	AB1-169A	67.16
936411	AD2-052 C	0.97

Bus #	Bus	MW Impact
936491	AD2-064 C	0.05
936501	AD2-065 C	0.18
937011	AD2-135 C	0.06
938301	AE1-045 C	0.24
938311	AE1-046 C	0.24
938421	AE1-061 C	0.32
938431	AE1-062 C	0.45
938781	AE1-104 C O1	13.43
938871	AE1-115 C	1.56
939301	AE1-161 C	2.65
939501	AE1-179 C O1	4.14
939821	AE1-218 C O1	0.1
939831	AE1-219 C O1	0.23
939931	AE1-229 C O1	12.68
940001	AE1-240 C O1	3.44
BAYOU	BAYOU	0.36
BIG_CAJUN1	BIG_CAJUN1	0.55
BIG_CAJUN2	BIG_CAJUN2	1.12
BLUEG	BLUEG	1.78
CALDERWOOD	CALDERWOOD	0.18
CANNELTON	CANNELTON	0.11
CARR	CARR	0.38
CATAWBA	CATAWBA	0.11
CHEOAH	CHEOAH	0.17
CHILHOWEE	CHILHOWEE	0.06
CHOCTAW	CHOCTAW	0.37
COFFEEN	COFFEEN	0.19
COTTONWOOD	COTTONWOOD	1.43
DEARBORN	DEARBORN	0.33
DUCKCREEK	DUCKCREEK	0.41
EDWARDS	EDWARDS	0.19
ELMERSMITH	ELMERSMITH	0.19
FARMERCITY	FARMERCITY	0.12
GIBSON	GIBSON	0.07
HAMLET	HAMLET	0.36
NEWTON	NEWTON	0.49
PRAIRIE	PRAIRIE	0.91
RENSSELAER	RENSSELAER	0.3
SANTEETLA	SANTEETLA	0.05
SMITHLAND	SMITHLAND	0.07
TATANKA	TATANKA	0.22
TILTON	TILTON	0.23
TRIMBLE	TRIMBLE	0.2
TVA	TVA	0.6
UNIONPOWER	UNIONPOWER	0.27

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
634543	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	Base Case	single	230.0	117.86	124.11	DC	14.38

Bus #	Bus	MW Impact
227801	ONTC&DCT	4.74
227842	MARINGEN	0.07
227927	V4-067C	0.01
228014	PVILLEG	0.08
292062	V1-021 C	0.02
292966	U2-045 C	0.05
902091	W1-130C	0.37
902431	W2-030 C	0.07
905531	W4-063 C	0.01
913341	Y1-077	7.07
924701	AB2-122 C	0.07
930001	AB1-001 C	0.02
931191	AB1-169A	344.85
938301	AE1-045 C	1.25
938311	AE1-046 C	1.25
938421	AE1-061 C	3.16
938781	AE1-104 C O1	14.38
939301	AE1-161 C	4.07
BAYOU	BAYOU	0.03
BIG_CAJUN1	BIG_CAJUN1	0.05
BIG_CAJUN2	BIG_CAJUN2	0.1
BLUEG	BLUEG	0.16
CALDERWOOD	CALDERWOOD	0.02
CANNELTON	CANNELTON	0.01
CATAWBA	CATAWBA	0.01
CBM-N	CBM-N	0.06
CHEOAH	CHEOAH	0.02
CHILHOWEE	CHILHOWEE	0.01
CHOCTAW	CHOCTAW	0.03
COFFEEN	COFFEEN	0.02
COTTONWOOD	COTTONWOOD	0.13
DEARBORN	DEARBORN	0.03
DUCKCREEK	DUCKCREEK	0.04
EDWARDS	EDWARDS	0.02
ELMERSMITH	ELMERSMITH	0.02
FARMERCITY	FARMERCITY	0.01
G-007A	G-007A	1.02
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.04
NEWTON	NEWTON	0.04
NYISO	NYISO	0.26

Bus #	Bus	MW Impact
O-066A	O-066A	0.15
PRAIRIE	PRAIRIE	0.08
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.01
TATANKA	TATANKA	0.02
TILTON	TILTON	0.02
TRIMBLE	TRIMBLE	0.02
TVA	TVA	0.06
UNIONPOWER	UNIONPOWER	0.03
VFT	VFT	0.87

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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
634607	228503	MNOTLA 2	AE	228502	MNOTLA 1	AE	1	AE_P1-2 OY CK-CEDAR	single	311.0	100.75	106.17	DC	16.86

Bus #	Bus	MW Impact
227801	ONTC&DCT	5.57
227842	MARINGEN	0.08
227927	V4-067C	0.02
228014	PVILLEG	0.09
228202	CUMB CT	0.56
228203	P06	0.58
228206	SHRMN CT	0.49
228711	V2-041C	0.01
292062	V1-021 C	0.03
292966	U2-045 C	0.06
902431	W2-030 C	0.08
905531	W4-063 C	0.01
913341	Y1-077	8.29
924531	AB2-102 C	12.81
924701	AB2-122 C	0.08
930001	AB1-001 C	0.02
931191	AB1-169A	351.14
938301	AE1-045 C	1.28
938311	AE1-046 C	1.28
938421	AE1-061 C	1.78
938781	AE1-104 C O1	16.86
939301	AE1-161 C	3.91
BAYOU	BAYOU	0.03
BIG_CAJUN1	BIG_CAJUN1	0.05
BIG_CAJUN2	BIG_CAJUN2	0.1
BLUEG	BLUEG	0.16
CALDERWOOD	CALDERWOOD	0.02
CANNELTON	CANNELTON	0.01

Bus #	Bus	MW Impact
CARR	CARR	0.02
CATAWBA	CATAWBA	0.01
CHEOAH	CHEOAH	0.02
CHILHOWEE	CHILHOWEE	0.01
CHOCTAW	CHOCTAW	0.03
COFFEEN	COFFEEN	0.02
COTTONWOOD	COTTONWOOD	0.13
DEARBORN	DEARBORN	0.03
DUCKCREEK	DUCKCREEK	0.04
EDWARDS	EDWARDS	0.02
ELMERSMITH	ELMERSMITH	0.02
FARMERCITY	FARMERCITY	0.01
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.03
NEWTON	NEWTON	0.04
PRAIRIE	PRAIRIE	0.08
RENSSELAER	RENSSELAER	0.02
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.01
TATANKA	TATANKA	0.02
TILTON	TILTON	0.02
TRIMBLE	TRIMBLE	0.02
TVA	TVA	0.05
UNIONPOWER	UNIONPOWER	0.02

Contingency Name

Contingency Name	Contingency Definition
PS_P1-2_U-2299_LT	CONTINGENCY 'PS_P1-2_U-2299_LT' /* CAMDEN CUTBERTH DISCONNECT BUS 219754 /* CUTHBERTH SECTION 3 CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219676 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219724 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWNSIDE END
AE_P7-1 AE7TOWER	CONTINGENCY 'AE_P7-1 AE7TOWER' DISCONNECT BUS 227905 /* #1 BLE TO SCULL TO MILL 138 KV DISCONNECT BUS 227929 /* #1 SCULL 12 KV DISCONNECT BUS 227906 /* #2 BLE TO SCULL TO MILL 138 KV DISCONNECT BUS 227930 /* #2 SCULL 12 KV DISCONNECT BUS 227903 /* #1 MILL TO LEWIS 138 KV DISCONNECT BUS 227904 /* #2 MILL TO LEWIS 138 KV END

Contingency Name	Contingency Definition
PS_P7-1_V2274+P2242_LT	CONTINGENCY 'PS_P7-1_V2274+P2242_LT' /* EAGLE POINT - GLOUCESTER & DEPTFORD - GLOUCESTER DISCONNECT BUS 219757 /* DEPTFORD SECTION 2 DISCONNECT BUS 219760 /* EAGLE POINT SECTION 4 TRIP LINE FROM BUS 219110 TO BUS 219128 CKT 1 /* DISCONNECT TRANSFORMER 26KV CKT 1 CLOSE LINE FROM BUS 219255 TO BUS 219256 CKT Z /* DEPTFORD CLOSE LINE FROM BUS 219180 TO BUS 219181 CKT Z /* DEPTFORD MOVE 8 MW LOAD FROM BUS 219180 TO BUS 219162 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T1 MOVE 8 MW LOAD FROM BUS 219181 TO BUS 219163 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T2 MOVE 8 MW LOAD FROM BUS 219255 TO BUS 219162 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T1 MOVE 8 MW LOAD FROM BUS 219256 TO BUS 219163 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T2 END
PS_P2-3_CUTB_3-4_LT	CONTINGENCY 'PS_P2-3_CUTB_3-4_LT' DISCONNECT BUS 219754 /* CUTHBERTH SECTION 3 DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTHBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219629 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWNSIDE END
PS_P2-3_CUTB_1-4_LT	CONTINGENCY 'PS_P2-3_CUTB_1-4_LT' DISCONNECT BUS 219108 /* CUTHBERTH SECTION 1 DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTHBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219629 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWNSIDE END

Contingency Name	Contingency Definition
AE_P4-2 AE28	CONTINGENCY 'AE_P4-2 AE28' /*ENGLAND TO OCEAN CITY BREAKER C DISCONNECT BRANCH FROM BUS 228110 TO BUS 228660 CKT 1 /*ENGLAND OCEAN CITY 138 138 DISCONNECT BRANCH FROM BUS 228110 TO BUS 227905 CKT 1 /*ENGLAND #1 SCULL 138 138 END
AE_P4-2 AE29	CONTINGENCY 'AE_P4-2 AE29' /*ENGLAND TO CORSON BREAKER D DISCONNECT BRANCH FROM BUS 228110 TO BUS 228111 CKT 1 /*ENGLAND MIDDLE TAP 138 138 DISCONNECT BRANCH FROM BUS 228110 TO BUS 227906 CKT 1 /*ENGLAND #2 SCULL 138 138 END
JC-P2-3-JCC-500-002D	CONTINGENCY 'JC-P2-3-JCC-500-002D' /* E.WINDSOR CB16 DISCONNECT BRANCH FROM BUS 200006 TO BUS 200028 CKT 1 /* DEANS - WINDSOR 500.00 LINE DISCONNECT BRANCH FROM BUS 200012 TO BUS 200028 CKT 1 /* NEWFRDM - WINDSOR 500.00 LINE END
JC-P2-3-JCC-230-8A	CONTINGENCY 'JC-P2-3-JCC-230-8A' /* LAKEWOOD-LARRABEE (K2011) & LEISURE VILLAGE (D2030) 230 KV DISCONNECT BRANCH FROM BUS 206323 TO BUS 206295 CKT 1 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206276 CKT 4 SET BUS 206295 LOAD TO 0 MW DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 2 END
PS_P1-2_D-2282_LT	CONTINGENCY 'PS_P1-2_D-2282_LT' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE END
PS_P1-2_C-2308	CONTINGENCY 'PS_P1-2_C-2308' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219753 /* CUTHBERTH SECTOIN 2 END
JC-P2-3-JCC-230-12	CONTINGENCY 'JC-P2-3-JCC-230-12' /* MANITOU - LEISURE VILLAGE (C2029) & OYSTER CK (N1028) 230 KV DISCONNECT BRANCH FROM BUS 206323 TO BUS 206296 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206276 CKT 3 SET BUS 206296 LOAD TO 0 MW DISCONNECT BUS 206296 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 1 END
PS_P1-2_D-2282	CONTINGENCY 'PS_P1-2_D-2282' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT END

Contingency Name	Contingency Definition
JC-P2-3-JCC-230-13D	CONTINGENCY 'JC-P2-3-JCC-230-13D' /* LARRABEE SE BUS & LARRABEE-LAKEWOOD (K2011) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206274 CKT 4 /* 28LARRABEE 230 28LARR AB 35 REMOVE SWSHUNT FROM BUS 206294 BLOCK 1 STEP 1 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 1 /* 28LARRABEE 230 28LAKEWOOD 230 END
JC-P7-1-JCC-230-10A	CONTINGENCY 'JC-P7-1-JCC-230-10A' /* LAKEWOOD - LARRABEE 230 KV LINES DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 2 DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 1 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206274 CKT 3 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 /* LARRABEE 12 FUTURE BREAKER AND A HALF SET BUS 206294 LOAD TO 38 MW /* LARRABEE 8 FUTURE BREAKER AND A HALF END
JC-P2-3-JCC-230-13B	CONTINGENCY 'JC-P2-3-JCC-230-13B' /* LARRABEE-LAKEWOOD (Z2026) & LARRABEE SE BUS 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 /* 28LARRABEE 230 28LARR CD 35 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 2 /* 28LARRABEE 230 28LAKEWOOD 230 REMOVE LOAD 8 FROM BUS 206294 /* 28LARRABEE 230 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206274 CKT 4 /* 28LARRABEE 230 28LARR AB 35 REMOVE SWSHUNT FROM BUS 206294 BLOCK 1 STEP 1 END
JC-P2-3-JCC-230-13A	CONTINGENCY 'JC-P2-3-JCC-230-13A' /* LARRABEE-SMITHBURG (D2004) & LARRABEE-LAKEWOOD (Z2026) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 1 /* 28LARRABEE 230 28SMITHBRG 230 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 2 /* 28LARRABEE 230 28LAKEWOOD 230 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 /* 28LARRABEE 230 28LARR CD 35 REMOVE LOAD 8 FROM BUS 206294 /* 28LARRABEE 230 END
PECO_P1-2_5038/* \$ CHESCO \$ PECO_P1-2_5038 \$ L PECO_P1-2_5038 \$ L	CONTINGENCY 'PECO_P1-2_5038/* \$ CHESCO \$ PECO_P1-2_5038 \$ L' TRIP BRANCH FROM BUS 200012 TO BUS 200028 CKT 1 /* NFREEDOM 500.00 WINDSOR 500.00 \$ CHESCO \$ PECO_P1-2_5038 \$ L END
JC-P2-3-JCC-230-13H	CONTINGENCY 'JC-P2-3-JCC-230-13H' /* LARRABEE-LAKEWOOD (K2011) & LARRABEE-SMITHBURG (H2008) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 1 /* 28LARRABEE 230 28LAKEWOOD 230 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 1 /* 28LARRABEE 230 28SMITHBRG 230 DISCONNECT BRANCH FROM BUS 200017 TO BUS 206309 CKT 4 /* SMITHBRG 500 28SMITHBRG 230 END

Contingency Name	Contingency Definition
PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B	CONTINGENCY 'PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B' DISCONNECT BUS 213489 /* CHICHST1 230.00 \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B END
JC-P2-3-JCC-230-9A	CONTINGENCY 'JC-P2-3-JCC-230-9A' /* LAKEWOOD-LEISURE VILAGE(D2030) & LEISURE VILAGE-MANITOU(A2027) DISCONNECT BRANCH FROM BUS 206323 TO BUS 206295 CKT 1 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206276 CKT 4 SET BUS 206295 LOAD TO 0 MW DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 DISCONNECT BUS 206295 END
Base Case	
AE_P4-2 AE16	CONTINGENCY 'AE_P4-2 AE16' /*CORSON TO ENGLAND BREAKER R DISCONNECT BRANCH FROM BUS 228107 TO BUS 228216 CKT 1 /*CORSON DENNIS 138 138 DISCONNECT BRANCH FROM BUS 228111 TO BUS 228107 CKT 1 /*MIDDLETAP CORSON 138 138 DISCONNECT BRANCH FROM BUS 228111 TO BUS 228110 CKT 1 /*MIDDLETAP ENGLAND 138 138 DISCONNECT BRANCH FROM BUS 228111 TO BUS 228112 CKT 1 /*MIDDLETAP MIDDLE 138 138 DISCONNECT BRANCH FROM BUS 228107 TO BUS 228115 CKT 1 /*CORSON 138 69 T2 DISCONNECT BUS 228107 /*CORSON 138 #2 BUS SECTION END
JC-P7-1-JCC-230-12	CONTINGENCY 'JC-P7-1-JCC-230-12' /* LEISURE VILLAGE-MANITOU A2027 & C2029 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206276 CKT 3 SET BUS 206296 LOAD TO 0 MW END
AE_P4-2 AE33	CONTINGENCY 'AE_P4-2 AE33' /*LEWIS TO CARDIFF BREAKER V DISCONNECT BRANCH FROM BUS 227902 TO BUS 227913 CKT 1 /*LEWIS CARDIFF 138 138 DISCONNECT BRANCH FROM BUS 227902 TO BUS 227903 CKT 1 /*LEWIS MILL #1 138 138 DISCONNECT BRANCH FROM BUS 227902 TO BUS 227918 CKT 1 /*LEWIS 138 69 T1 END
AE_P1-2 BLE-ML-LEW2	CONTINGENCY 'AE_P1-2 BLE-ML-LEW2' DISCONNECT BUS 227904 / DISCONNECT BUS 227906 / DISCONNECT BUS 227930 / 227930 CIRCUIT 1 / CLOSE LINE FROM BUS 227929 TO BUS 227930 CIRCUIT 1 / END

Contingency Name	Contingency Definition
AE_P1-2 BLE-ML-LEW1	CONTINGENCY 'AE_P1-2 BLE-ML-LEW1' DISCONNECT BUS 227903 / DISCONNECT BUS 227905 / DISCONNECT BUS 227929 / CLOSE LINE FROM BUS 227929 TO BUS 227930 CIRCUIT 1 / END
PS_P1-2_Z-2305_LT	CONTINGENCY 'PS_P1-2_Z-2305_LT' /* CAMDEN TO CUTBERTH DISCONNECT BUS 219108 /* CUTBERTH SECTION 1 CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWN SIDE END
PS_P1-2_Z-2305	CONTINGENCY 'PS_P1-2_Z-2305' /* CAMDEN TO CUTBERTH DISCONNECT BUS 219108 /* CUTBERTH SECTION 1 END
AE_P1-2 BLE-SC-ML1	CONTINGENCY 'AE_P1-2 BLE-SC-ML1' DISCONNECT BUS 227905 / DISCONNECT BUS 227929 / CLOSE LINE FROM BUS 227929 TO BUS 227930 CIRCUIT 1 / END
AE_P1-2 OY CK-CEDAR	CONTINGENCY 'AE_P1-2 OY CK-CEDAR' OPEN LINE FROM BUS 206302 TO BUS 227955 CIRCUIT 1 / END
AE_P1-2 BLE-SC-ML2	CONTINGENCY 'AE_P1-2 BLE-SC-ML2' DISCONNECT BUS 227906 / DISCONNECT BUS 227930 / CLOSE LINE FROM BUS 227929 TO BUS 227930 CIRCUIT 1 / END
PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	CONTINGENCY 'PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK' DISCONNECT BUS 213489 /* CHICHST1 230.00 \$ DELCO \$ PECO_P4_CHICH045 \$ STBK DISCONNECT BUS 213627 /* FOULK8 230.00 \$ DELCO \$ PECO_P4_CHICH045 \$ STBK END
PS_P1-2_U-2299	CONTINGENCY 'PS_P1-2_U-2299' /* CAMDEN CUTBERTH DISCONNECT BUS 219754 /* CUTHBERTH SECTION 3 END

Contingency Name	Contingency Definition
JC-P2-3-JCC-500-002B	CONTINGENCY 'JC-P2-3-JCC-500-002B' /* E.WINDSOR CB10 DISCONNECT BRANCH FROM BUS 200012 TO BUS 200028 CKT 1 /* NEWFRDM - WINDSOR 500.00 LINE DISCONNECT BRANCH FROM BUS 200028 TO BUS 206326 CKT 2 /* WINDSOR 500.00 - 28E WINDSR 230.00 XFMR END
AE_P7-1 W2275_O2241	CONTINGENCY 'AE_P7-1 W2275_O2241' /* DOUBLE CIRCUIT TOWER W- 2275(MICKLETON - DEPTFORD) AND O-2241(MICKLETON - THOROFARE) TRIP BRANCH FROM BUS 219762 TO BUS 228401 CKT 1 /* TRIP O-2241(MICKLETON - THOROFARE) 230KV TRIP BRANCH FROM BUS 219121 TO BUS 228401 CKT 1 /* TRIP (MICKLETON - THOROFARE #2) 230KV END
AE_P1-2 CARD-CEDAR	CONTINGENCY 'AE_P1-2 CARD-CEDAR' OPEN LINE FROM BUS 227900 TO BUS 227955 CIRCUIT 1 / END
PS_P1-2_C-2308_LT	CONTINGENCY 'PS_P1-2_C-2308_LT' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219753 /* CUTHBERTH SECTOIN 2 CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE END
JC-P2-3-JCC-230-11	CONTINGENCY 'JC-P2-3-JCC-230-11' /* LEISURE VILLAGE - MANITOU & MANITOU - OYSTER CRK 230 KV DISCONNECT BRANCH FROM BUS 206295 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 2 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 END
JC-P2-3-JCC-230-10A	CONTINGENCY 'JC-P2-3-JCC-230-10A' /* LAKEWOOD-LEISURE VILAGE(U2021) & LEISURE VILAGE-MANITOU(C2029) DISCONNECT BRANCH FROM BUS 206323 TO BUS 206296 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206323 TO BUS 206282 CKT 6 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206276 CKT 3 SET BUS 206296 LOAD TO 0 MW DISCONNECT BUS 206296 DISCONNECT BUS 206999 DISCONNECT BUS 207110 DISCONNECT BUS 207010 DISCONNECT BUS 207111 END
AE_P4-2 AE45	CONTINGENCY 'AE_P4-2 AE45' /*ORCHARD 230 BUS BREAKER E DISCONNECT BRANCH FROM BUS 228002 TO BUS 227900 CKT 1 /* ORCHARD TO CARDIFF 230 230 DISCONNECT BRANCH FROM BUS 200063 TO BUS 228002 CKT 1 /*ORCHARD ORCHARD 500 230 T1 END

Contingency Name	Contingency Definition
JC-P2-3-JCC-230-18A	CONTINGENCY 'JC-P2-3-JCC-230-18A' /* OYSTER CRK-MANITOU & MANITOU-WHITINGS 230 KV DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206319 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 DISCONNECT BRANCH FROM BUS 206319 TO BUS 206281 CKT 4 END

Secondary POI Flow Gate Details

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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
629627	219110	GLOUCSTR	PSE&G	219755	CUTHBERT_4	PSE&G	1	PS_P1-2_C-2308_LT	single	758.0	110.34	111.14	DC	13.58

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.75
219124	CAMDEN_STG	3.35
219126	CAMDEN_CTG	4.12
219128	GLOUCSTR_26	1.82
219229	EAGLEPT_G3	2.9
219230	EAGLEPT_G1	4.29
219231	EAGLEPT_G2	4.29
227801	ONTC&DCT	3.71
227881	GRENWCHG	0.05
228304	LOGAN	6.64
228306	PCLP STM	1.75
228307	PCLP GT	1.74
228309	CCLP NUG	6.06
228334	MANNMILG	0.21
228343	QUINTN#1	0.05
228351	V2-046C	0.17
228400	MICK 1CT	1.4
228423	Q-090 2	27.23
228471	VALERO1	0.47
228472	VALERO2	0.32
228473	VALERO3	0.32
228484	VALERO4	0.28
228720	V2-035C	0.02
291995	U4-036 C	0.08
292104	V1-030 C6	0.02
292194	V1-030 CE	0.11
903963	W3-175	9.01

Bus #	Bus	MW Impact
905143	W4-016	53.1
914231	Y2-081 C OP1	1.38
914232	Y2-081 E OP1	0.07
915591	Y3-087 C OP1	0.06
917381	Z2-062	0.15
917471	Z2-083	2.56
918891	AA1-108	3.84
924051	AB2-049 C	0.43
924531	AB2-102 C	24.6
924701	AB2-122 C	0.07
925391	AC1-010 C	0.74
931191	AB1-169A	70.82
936411	AD2-052 C	1.03
936491	AD2-064 C	0.06
936501	AD2-065 C	0.19
937011	AD2-135 C	0.07
938301	AE1-045 C	0.26
938311	AE1-046 C	0.26
938421	AE1-061 C	0.34
938431	AE1-062 C	0.47
938781	AE1-104 C O2	13.58
938871	AE1-115 C	1.64
939301	AE1-161 C	2.79
939501	AE1-179 C O2	4.27
939821	AE1-218 C O2	0.11
939831	AE1-219 C O2	0.24
939931	AE1-229 C O2	14.34
940001	AE1-240 C O2	3.48
BAYOU	BAYOU	0.38
BIG_CAJUN1	BIG_CAJUN1	0.59
BIG_CAJUN2	BIG_CAJUN2	1.18
BLUEG	BLUEG	1.88
CALDERWOOD	CALDERWOOD	0.19
CANNELTON	CANNELTON	0.11
CARR	CARR	0.4
CATAWBA	CATAWBA	0.12
CHEOAH	CHEOAH	0.18
CHILHOWEE	CHILHOWEE	0.06
CHOCTAW	CHOCTAW	0.39
COFFEEN	COFFEEN	0.2
COTTONWOOD	COTTONWOOD	1.51
DEARBORN	DEARBORN	0.34
DUCKCREEK	DUCKCREEK	0.43
EDWARDS	EDWARDS	0.2
ELMERSMITH	ELMERSMITH	0.2
FARMERCITY	FARMERCITY	0.13
GIBSON	GIBSON	0.08
HAMLET	HAMLET	0.38
NEWTON	NEWTON	0.52
PRAIRIE	PRAIRIE	0.96
RENSSELAER	RENSSELAER	0.32
SANTEETLA	SANTEETLA	0.05

Bus #	Bus	MW Impact
SMITHLAND	SMITHLAND	0.08
TATANKA	TATANKA	0.24
TILTON	TILTON	0.24
TRIMBLE	TRIMBLE	0.21
TVA	TVA	0.63
UNIONPOWER	UNIONPOWER	0.28

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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
629825	219754	CUTHBERT_3	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_Z-2305	single	792.0	99.84	100.64	DC	14.18

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.83
219124	CAMDEN_STG	3.5
219126	CAMDEN_CTG	4.3
219128	GLOUCSTR_26	1.9
219229	EAGLEPT_G3	3.02
219230	EAGLEPT_G1	4.48
219231	EAGLEPT_G2	4.48
227801	ONTC&DCT	3.88
227881	GRENWCHG	0.05
228304	LOGAN	6.93
228306	PCLP STM	1.82
228307	PCLP GT	1.82
228309	CCLP NUG	6.33
228334	MANNMILG	0.22
228343	QUINTN#1	0.05
228351	V2-046C	0.18
228400	MICK 1CT	1.46
228423	Q-090 2	28.43
228471	VALERO1	0.49
228472	VALERO2	0.34
228473	VALERO3	0.34
228484	VALERO4	0.29
228720	V2-035C	0.02
291995	U4-036 C	0.08
292104	V1-030 C6	0.03
292194	V1-030 CE	0.11
903963	W3-175	9.4
905143	W4-016	55.43
914231	Y2-081 C OP1	1.44
914232	Y2-081 E OP1	0.08
915591	Y3-087 C OP1	0.07
917381	Z2-062	0.16
917471	Z2-083	2.68

Bus #	Bus	MW Impact
918891	AA1-108	4.0
924051	AB2-049 C	0.45
924531	AB2-102 C	25.67
924701	AB2-122 C	0.07
925391	AC1-010 C	0.77
931191	AB1-169A	73.92
936411	AD2-052 C	1.07
936491	AD2-064 C	0.06
936501	AD2-065 C	0.2
937011	AD2-135 C	0.07
938301	AE1-045 C	0.27
938311	AE1-046 C	0.27
938421	AE1-061 C	0.36
938431	AE1-062 C	0.49
938781	AE1-104 C O2	14.18
938871	AE1-115 C	1.71
939301	AE1-161 C	2.92
939501	AE1-179 C O2	4.46
939821	AE1-218 C O2	0.11
939831	AE1-219 C O2	0.25
939931	AE1-229 C O2	14.97
940001	AE1-240 C O2	3.63
BAYOU	BAYOU	0.4
BIG_CAJUN1	BIG_CAJUN1	0.61
BIG_CAJUN2	BIG_CAJUN2	1.23
BLUEG	BLUEG	1.96
CALDERWOOD	CALDERWOOD	0.2
CANNELTON	CANNELTON	0.12
CARR	CARR	0.42
CATAWBA	CATAWBA	0.12
CHEOAH	CHEOAH	0.19
CHILHOWEE	CHILHOWEE	0.07
CHOCTAW	CHOCTAW	0.41
COFFEEN	COFFEEN	0.21
COTTONWOOD	COTTONWOOD	1.57
DEARBORN	DEARBORN	0.36
DUCKCREEK	DUCKCREEK	0.45
EDWARDS	EDWARDS	0.21
ELMERSMITH	ELMERSMITH	0.2
FARMERCITY	FARMERCITY	0.14
GIBSON	GIBSON	0.08
HAMLET	HAMLET	0.4
NEWTON	NEWTON	0.54
PRAIRIE	PRAIRIE	1.0
RENSSELAER	RENSSELAER	0.33
SANTEETLA	SANTEETLA	0.05
SMITHLAND	SMITHLAND	0.08
TATANKA	TATANKA	0.25
TILTON	TILTON	0.25
TRIMBLE	TRIMBLE	0.22
TVA	TVA	0.66
UNIONPOWER	UNIONPOWER	0.29

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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
629773	228313	BRIDGPRT	AE	228401	MCKLTON	AE	1	Base Case	single	650.0	97.8	98.56	DC	12.79

Bus #	Bus	MW Impact
227801	ONTC&DCT	3.48
228200	CARL#1CT	0.69
228201	CARL#2CT	0.73
228202	CUMB CT	1.36
228203	P06	1.55
228206	SHRMN CT	1.28
228251	CARLLS#4	0.08
228260	V4-054C	0.19
228304	LOGAN	23.48
228306	PCLP STM	5.89
228307	PCLP GT	5.88
228309	CCLP NUG	16.9
228334	MANNMILG	0.29
228343	QUINTN#1	0.08
228351	V2-046C	0.21
228702	WEST CT	0.49
228711	V2-041C	0.03
228717	S121	0.77
228720	V2-035C	0.02
228727	W2-039G	1.3
292062	V1-021 C	0.04
902091	W1-130C	0.05
903963	W3-175	23.49
913341	Y1-077	7.64
918891	AA1-108	10.01
924531	AB2-102 C	34.44
924701	AB2-122 C	0.06
931191	AB1-169A	51.13
936411	AD2-052 C	1.65
938301	AE1-045 C	0.19
938311	AE1-046 C	0.19
938421	AE1-061 C	0.25
938781	AE1-104 C O2	12.79
938871	AE1-115 C	2.96
939301	AE1-161 C	1.87
939501	AE1-179 C O2	4.81
939931	AE1-229 C O2	19.73
940001	AE1-240 C O2	3.96
BAYOU	BAYOU	0.33
BIG_CAJUN1	BIG_CAJUN1	0.51
BIG_CAJUN2	BIG_CAJUN2	1.03

Bus #	Bus	MW Impact
BLUEG	BLUEG	1.6
CALDERWOOD	CALDERWOOD	0.17
CANNELTON	CANNELTON	0.1
CARR	CARR	0.15
CATAWBA	CATAWBA	0.11
CHEOAH	CHEOAH	0.16
CHILHOWEE	CHILHOWEE	0.06
CHOCTAW	CHOCTAW	0.34
COFFEEN	COFFEEN	0.17
COTTONWOOD	COTTONWOOD	1.32
DEARBORN	DEARBORN	0.28
DUCKCREEK	DUCKCREEK	0.37
EDWARDS	EDWARDS	0.17
ELMERSMITH	ELMERSMITH	0.17
FARMERCITY	FARMERCITY	0.11
GIBSON	GIBSON	0.07
HAMLET	HAMLET	0.36
NEWTON	NEWTON	0.44
PRAIRIE	PRAIRIE	0.82
RENSSELAER	RENSSELAER	0.12
SANTEETLA	SANTEETLA	0.05
SMITHLAND	SMITHLAND	0.07
TATANKA	TATANKA	0.2
TILTON	TILTON	0.2
TRIMBLE	TRIMBLE	0.18
TVA	TVA	0.55
UNIONPOWER	UNIONPOWER	0.25

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
628965	206316	28WINDSOR	JCP&L	219752	CLRKSVLL_1	PSE&G	1	PS_P2-3_DEAN5_5-6	breaker	813.0	90.56	92.33	DC	31.92

Bus #	Bus	MW Impact
206201	28JERSVGEN	0.05
206271	28MCRC/REC	0.15
206280	28LAKEHURS	0.31
206306	28LKWD G1	1.97
206308	28LKWD G2	1.97
206312	28LKWD G3	1.39
206325	28O C GEN	83.3
206366	28LKWD CT1	3.73
206367	28LKWD CT2	3.73
206412	28R11	32.85
207144	28HOW_X1-037	0.15
207145	28FRN_Y2-051	0.05

Bus #	Bus	MW Impact
207205	28MAN_W1-024	0.04
207206	28TIN_W1-124	0.16
227801	ONTC&DCT	2.52
227843	MARINGEN E	0.26
227928	V4-067E	0.11
292967	U2-045 E	1.14
293404	V3-036	0.36
901032	W1-024E OP1	0.48
901111	W1-032 C OP1	0.03
901112	W1-032 E OP1	0.37
901421	W1-113 C	0.12
901422	W1-113 E	1.27
901912	W1-112E OP1	0.31
901982	W1-119 E	1.36
901991	W1-120C	0.92
901992	W1-120E	1.51
902032	W1-124E	1.7
902082	W1-129E	0.37
902322	W2-019 E	0.44
902432	W2-030 E	0.4
902911	W2-078 C	0.12
902912	W2-078 E	1.29
902952	W2-082 E OP1	1.26
903981	W3-079 C	0.06
903982	W3-079 E	0.67
905252	W4-025 E	0.52
905502	W4-060 E OP1	0.68
905532	W4-063 E	0.28
907082	X1-037 E	1.64
907271	X1-085 C	0.06
907272	X1-085 E	0.66
912102	X4-015 E	0.37
912182	X4-031 E	0.29
914092	Y2-051 E	0.48
915022	Y3-012 E	0.49
917612	Z2-102 E	0.99
917682	Z2-109 E	1.49
918452	AA1-060 E	3.04
919662	AA2-048 E	1.07
919672	AA2-049 E	0.41
920732	AA2-184 E	2.74
924701	AB2-122 C	0.05
924702	AB2-122 E	0.08
924852	AB2-139 E	0.09
927131	AC1-207 C	0.14
927132	AC1-207 E	1.56
930002	AB1-001 E	0.09
930891	AB1-138 C	0.52
930892	AB1-138 E	0.87
931122	AB1-163 E	0.7
933962	AD1-019 E	0.5
934032	AD1-028 E	0.02

Bus #	Bus	MW Impact
934351	AD1-059	0.35
934841	AD1-113	2.25
937261	AD2-165	2.99
937522	AD2-213 E O1	1.8
938151	AE1-020 C O2	49.11
938152	AE1-020 E O2	125.67
938211	AE1-034 C O2	44.68
938212	AE1-034 E O2	114.32
938781	AE1-104 C O2	8.97
938782	AE1-104 E O2	22.95
939121	AE1-142 C O2	1.18
939122	AE1-142 E O2	1.7
939981	AE1-238 C	31.36
939982	AE1-238 E	82.37
BAYOU	BAYOU	0.21
BIG_CAJUN1	BIG_CAJUN1	0.32
BIG_CAJUN2	BIG_CAJUN2	0.64
BLUEG	BLUEG	1.05
CALDERWOOD	CALDERWOOD	0.1
CANNELTON	CANNELTON	0.06
CARR	CARR	0.51
CATAWBA	CATAWBA	0.06
CHEOAH	CHEOAH	0.1
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.21
COFFEEN	COFFEEN	0.11
COTTONWOOD	COTTONWOOD	0.82
DEARBORN	DEARBORN	0.2
DUCKCREEK	DUCKCREEK	0.24
EDWARDS	EDWARDS	0.11
ELMERSMITH	ELMERSMITH	0.11
FARMERCITY	FARMERCITY	0.07
G-007A	G-007A	15.4
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.19
NEWTON	NEWTON	0.29
O-066	O-066	6.91
PRAIRIE	PRAIRIE	0.53
RENSSELAER	RENSSELAER	0.4
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.04
TATANKA	TATANKA	0.13
TILTON	TILTON	0.13
TRIMBLE	TRIMBLE	0.12
TVA	TVA	0.34
UNIONPOWER	UNIONPOWER	0.15

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ID	FROM	FROM BUS	FROM	TO	TO BUS	TO	CKT	CONT	Type	Rating	PRE	POST	AC DC	MW
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	BUS#		BUS AREA	BUS#		BUS AREA	ID	NAME		MVA	PROJECT LOADING %	PROJECT LOADING %		IMPACT
630146	206318	28VANHISVL	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	110.71	113.99	DC	63.17

Bus #	Bus	MW Impact
206306	28LKWD G1	5.08
206308	28LKWD G2	5.08
206312	28LKWD G3	3.58
206325	28O C GEN	228.31
206360	28O CRK C1	1.93
206361	28O CRK C2	1.24
206366	28LKWD CT1	9.63
206367	28LKWD CT2	9.63
207207	28JCB_W1-129	0.09
207208	28JCB_W4-025	0.13
227801	ONTC&DCT	5.03
227843	MARINGEN E	0.52
227928	V4-067E	0.22
292063	V1-021 E	0.03
292099	V1-030 E3	0.1
292967	U2-045 E	2.27
293404	V3-036	0.72
901981	W1-119 C	0.35
901982	W1-119 E	3.71
901991	W1-120C	2.53
901992	W1-120E	4.12
902082	W1-129E	1.0
902092	W1-130E	0.55
902321	W2-019 C	0.11
902322	W2-019 E	1.18
902432	W2-030 E	0.8
902692	W2-056 E	0.89
902842	W2-071E	0.18
902951	W2-082 C OP1	0.32
902952	W2-082 E OP1	3.39
903152	W2-102 E	0.55
904042	V4-005 E	0.23
904432	W3-124 E	0.24
905232	W4-029 E	0.23
905252	W4-025 E	1.42
905532	W4-063 E	0.57
905792	W4-103 E	0.6
907272	X1-085 E	0.34
912101	X4-015 C	0.09
912102	X4-015 E	1.0
913332	Y1-075 E	0.21
915022	Y3-012 E	0.98
917611	Z2-102 C	0.25
917612	Z2-102 E	2.71
917682	Z2-109 E	2.07
918452	AA1-060 E	4.89

Bus #	Bus	MW Impact
919672	AA2-049 E	0.43
924701	AB2-122 C	0.09
924702	AB2-122 E	0.16
930002	AB1-001 E	0.19
930102	AB1-025 E	0.54
930891	AB1-138 C	0.98
930892	AB1-138 E	1.63
931122	AB1-163 E	0.82
931191	AB1-169A	49.15
932361	AC2-050 C O1	0.42
932362	AC2-050 E O1	0.68
933962	AD1-019 E	0.99
934351	AD1-059	0.91
936541	AD2-069 C	0.21
936542	AD2-069 E	0.1
938211	AE1-034 C O2	124.5
938212	AE1-034 E O2	318.56
938301	AE1-045 C	0.18
938302	AE1-045 E	0.09
938311	AE1-046 C	0.18
938312	AE1-046 E	0.09
938421	AE1-061 C	0.24
938422	AE1-061 E	0.24
938781	AE1-104 C O2	17.75
938782	AE1-104 E O2	45.41
939121	AE1-142 C O2	2.96
939122	AE1-142 E O2	4.26
BAYOU	BAYOU	0.19
BIG_CAJUN1	BIG_CAJUN1	0.29
BIG_CAJUN2	BIG_CAJUN2	0.59
BLUEG	BLUEG	1.01
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.06
CARR	CARR	0.97
CATAWBA	CATAWBA	0.05
CHEOAH	CHEOAH	0.09
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.19
COFFEEN	COFFEEN	0.11
COTTONWOOD	COTTONWOOD	0.76
DEARBORN	DEARBORN	0.2
DUCKCREEK	DUCKCREEK	0.23
EDWARDS	EDWARDS	0.11
ELMERSMITH	ELMERSMITH	0.1
FARMERCITY	FARMERCITY	0.07
G-007	G-007	10.0
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.16
NEWTON	NEWTON	0.28
O-066	O-066	13.7
PRAIRIE	PRAIRIE	0.51
RENSSELAER	RENSSELAER	0.77

Bus #	Bus	MW Impact
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.04
TATANKA	TATANKA	0.13
TILTON	TILTON	0.13
TRIMBLE	TRIMBLE	0.11
TVA	TVA	0.32
UNIONPOWER	UNIONPOWER	0.14

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ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
630180	206319	28WHITINGS	JCP&L	206720	28MANCHSTR	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	105.32	108.71	DC	65.29

Bus #	Bus	MW Impact
206306	28LKWD G1	7.06
206308	28LKWD G2	7.06
206312	28LKWD G3	4.98
206325	28O C GEN	312.94
206360	28O CRK C1	2.65
206361	28O CRK C2	1.71
206366	28LKWD CT1	13.38
206367	28LKWD CT2	13.38
227801	ONTC&DCT	5.26
227843	MARINGEN E	0.55
227928	V4-067E	0.23
292063	V1-021 E	0.03
292967	U2-045 E	2.37
293404	V3-036	0.75
902432	W2-030 E	0.83
905532	W4-063 E	0.59
915022	Y3-012 E	1.02
917612	Z2-102 E	0.76
924701	AB2-122 C	0.1
924702	AB2-122 E	0.17
930002	AB1-001 E	0.2
930891	AB1-138 C	1.34
930892	AB1-138 E	2.24
931122	AB1-163 E	0.78
933962	AD1-019 E	1.04
934351	AD1-059	1.26
938211	AE1-034 C O2	172.46
938212	AE1-034 E O2	441.28
938781	AE1-104 C O2	18.35
938782	AE1-104 E O2	46.94
939121	AE1-142 C O2	4.09

Bus #	Bus	MW Impact
939122	AE1-142 E O2	5.89
BAYOU	BAYOU	0.25
BIG_CAJUN1	BIG_CAJUN1	0.39
BIG_CAJUN2	BIG_CAJUN2	0.79
BLUEG	BLUEG	1.25
CALDERWOOD	CALDERWOOD	0.13
CANNELTON	CANNELTON	0.08
CARR	CARR	0.39
CATAWBA	CATAWBA	0.08
CHEOAH	CHEOAH	0.12
CHILHOWEE	CHILHOWEE	0.04
CHOCTAW	CHOCTAW	0.26
COFFEEN	COFFEEN	0.13
COTTONWOOD	COTTONWOOD	1.01
DEARBORN	DEARBORN	0.23
DUCKCREEK	DUCKCREEK	0.29
EDWARDS	EDWARDS	0.13
ELMERSMITH	ELMERSMITH	0.13
FARMERCITY	FARMERCITY	0.09
G-007	G-007	3.18
GIBSON	GIBSON	0.05
HAMLET	HAMLET	0.26
NEWTON	NEWTON	0.34
O-066	O-066	5.15
PRAIRIE	PRAIRIE	0.64
RENSSELAER	RENSSELAER	0.31
SANTEETLA	SANTEETLA	0.04
SMITHLAND	SMITHLAND	0.05
TATANKA	TATANKA	0.16
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.14
TVA	TVA	0.42
UNIONPOWER	UNIONPOWER	0.19

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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
628940	206326	28E WINDSR	JCP&L	206316	28WINDSOR	JCP&L	1	PS_P2-3_DEAN5_5-6	breaker	869.0	95.83	97.47	DC	31.71

Bus #	Bus	MW Impact
206201	28JERSVGEN	0.04
206280	28LAKEHURS	0.28
206306	28LKWD G1	1.88
206308	28LKWD G2	1.88
206312	28LKWD G3	1.32
206325	28O C GEN	79.48

Bus #	Bus	MW Impact
206360	28O CRK C1	0.67
206366	28LKWD CT1	3.56
206367	28LKWD CT2	3.56
206412	28R11	27.37
207144	28HOW_X1-037	0.13
207145	28FRN_Y2-051	0.04
207205	28MAN_W1-024	0.03
227801	ONTC&DCT	2.5
227843	MARINGEN E	0.26
227928	V4-067E	0.11
292063	V1-021 E	0.02
292967	U2-045 E	1.13
293404	V3-036	0.36
901032	W1-024E OP1	0.34
901111	W1-032 C OP1	0.03
901112	W1-032 E OP1	0.36
901912	W1-112E OP1	0.27
901982	W1-119 E	0.77
901991	W1-120C	0.53
901992	W1-120E	0.86
902032	W1-124E	1.57
902082	W1-129E	0.19
902322	W2-019 E	0.22
902432	W2-030 E	0.4
902952	W2-082 E OP1	0.65
903981	W3-079 C	0.06
903982	W3-079 E	0.62
905252	W4-025 E	0.27
905502	W4-060 E OP1	0.53
905532	W4-063 E	0.28
907082	X1-037 E	1.38
912102	X4-015 E	0.19
912182	X4-031 E	0.26
914092	Y2-051 E	0.45
915022	Y3-012 E	0.49
917612	Z2-102 E	0.58
917682	Z2-109 E	1.24
919662	AA2-048 E	0.99
919672	AA2-049 E	0.38
920732	AA2-184 E	2.52
924701	AB2-122 C	0.05
924702	AB2-122 E	0.08
927132	AC1-207 E	0.82
930002	AB1-001 E	0.09
930891	AB1-138 C	0.47
930892	AB1-138 E	0.79
931122	AB1-163 E	0.58
933962	AD1-019 E	0.49
934032	AD1-028 E	0.02
934351	AD1-059	0.34
937261	AD2-165	2.49
937522	AD2-213 E O1	1.78

Bus #	Bus	MW Impact
938151	AE1-020 C O2	46.96
938152	AE1-020 E O2	120.15
938211	AE1-034 C O2	42.54
938212	AE1-034 E O2	108.84
938781	AE1-104 C O2	8.91
938782	AE1-104 E O2	22.8
939121	AE1-142 C O2	1.11
939122	AE1-142 E O2	1.6
939981	AE1-238 C	29.39
939982	AE1-238 E	77.21
BAYOU	BAYOU	0.18
BIG_CAJUN1	BIG_CAJUN1	0.28
BIG_CAJUN2	BIG_CAJUN2	0.56
BLUEG	BLUEG	0.94
CALDERWOOD	CALDERWOOD	0.09
CANNELTON	CANNELTON	0.06
CARR	CARR	0.55
CATAWBA	CATAWBA	0.05
CHEOAH	CHEOAH	0.08
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.19
COFFEEN	COFFEEN	0.1
COTTONWOOD	COTTONWOOD	0.72
DEARBORN	DEARBORN	0.18
DUCKCREEK	DUCKCREEK	0.22
EDWARDS	EDWARDS	0.1
ELMERSMITH	ELMERSMITH	0.1
FARMERCITY	FARMERCITY	0.06
G-007A	G-007A	12.29
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.16
NEWTON	NEWTON	0.26
O-066	O-066	7.66
PRAIRIE	PRAIRIE	0.48
RENSSELAER	RENSSELAER	0.44
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.04
TATANKA	TATANKA	0.12
TILTON	TILTON	0.12
TRIMBLE	TRIMBLE	0.1
TVA	TVA	0.3
UNIONPOWER	UNIONPOWER	0.13

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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
629043	213922	RICHMOND	PECO	214012	WANEETA3	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$	breaker	1180.0	95.99	99.57	DC	93.43

								PECO_P4_CHICH045 \$ STBK						
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Bus #	Bus	MW Impact
213918	RICHMD91	3.55
213919	RICHMD92	3.55
219124	CAMDEN_STG	3.52
219126	CAMDEN_CTG	4.33
219128	GLOUCSTR_26	1.91
219229	EAGLEPT_G3	3.14
219230	EAGLEPT_G1	4.65
219241	CAMDEN1	0.26
219242	CAMDEN2	0.03
227801	ONTC&DCT	7.23
227843	MARINGEN E	0.75
227928	V4-067E	0.3
228261	V4-054E	1.34
228357	V2-046E	3.05
228712	V2-041E	0.49
228721	V2-035E	0.28
291996	U4-036 E	1.01
292063	V1-021 E	0.06
292088	V1-030 CB	0.12
292099	V1-030 E3	0.23
292105	V1-030 E6	0.3
292115	V1-030 EB	1.32
292194	V1-030 CE	0.12
292195	V1-030 EE	1.22
292967	U2-045 E	3.26
293404	V3-036	1.03
902092	W1-130E	1.35
902432	W2-030 E	1.16
902692	W2-056 E	1.63
902842	W2-071E	0.45
903152	W2-102 E	1.03
903991	W3-080C	1.96
903992	W3-080E	3.2
904042	V4-005 E	0.43
904432	W3-124 E	0.42
905143	W4-016	67.01
905232	W4-029 E	0.44
905532	W4-063 E	0.81
905792	W4-103 E	1.03
907382	X1-070 E	0.73
907392	X1-071 E	0.26
909032	X2-013 E	0.63
910862	X3-075 E	1.06
913242	Y1-057 E	0.32
913332	Y1-075 E	0.41
915022	Y3-012 E	1.4
915072	Y3-026 E	1.6
915592	Y3-087 E OP1	0.8
916292	Z1-082 E	0.34
917381	Z2-062	0.16

Bus #	Bus	MW Impact
918852	AA1-104 E	5.7
924051	AB2-049 C	0.86
924052	AB2-049 E	1.41
924531	AB2-102 C	43.28
924532	AB2-102 E	0.96
924701	AB2-122 C	0.13
924702	AB2-122 E	0.22
925391	AC1-010 C	0.78
925392	AC1-010 E	1.34
925442	AC1-016 E	1.41
925452	AC1-017 E	0.67
925562	AC1-030 E	0.51
930002	AB1-001 E	0.27
930102	AB1-025 E	1.0
930242	AB1-063 E	0.14
930722	AB1-116 E	0.18
930732	AB1-119 E	0.16
931191	AB1-169A	119.2
932361	AC2-050 C O1	0.89
932362	AC2-050 E O1	1.45
933962	AD1-019 E	1.42
936211	AD2-027 C	1.4
936212	AD2-027 E	2.28
936321	AD2-042 C	1.84
936322	AD2-042 E	3.02
936411	AD2-052 C	1.54
936412	AD2-052 E	0.76
936491	AD2-064 C	0.12
936492	AD2-064 E	0.16
936501	AD2-065 C	0.5
936502	AD2-065 E	0.69
936541	AD2-069 C	0.52
936542	AD2-069 E	0.26
937011	AD2-135 C	0.13
937012	AD2-135 E	0.23
938301	AE1-045 C	0.43
938302	AE1-045 E	0.22
938311	AE1-046 C	0.43
938312	AE1-046 E	0.22
938421	AE1-061 C	0.58
938422	AE1-061 E	0.58
938431	AE1-062 C	1.2
938432	AE1-062 E	1.2
938611	AE1-083 C	0.51
938612	AE1-083 E	0.71
938781	AE1-104 C O2	26.26
938782	AE1-104 E O2	67.17
938871	AE1-115 C	1.26
938872	AE1-115 E	1.26
939301	AE1-161 C	2.4
939302	AE1-161 E	3.6
939501	AE1-179 C O2	7.24

Bus #	Bus	MW Impact
939502	AE1-179 E O2	5.11
939821	AE1-218 C O2	0.19
939822	AE1-218 E O2	0.28
939831	AE1-219 C O2	0.42
939832	AE1-219 E O2	0.6
939931	AE1-229 C O2	21.08
939932	AE1-229 E O2	14.28
940001	AE1-240 C O2	5.94
940002	AE1-240 E O2	4.24
BAYOU	BAYOU	1.46
BIG_CAJUN1	BIG_CAJUN1	2.24
BIG_CAJUN2	BIG_CAJUN2	4.51
BLUEG	BLUEG	6.97
CALDERWOOD	CALDERWOOD	0.76
CANNELTON	CANNELTON	0.42
CATAWBA	CATAWBA	0.48
CBM-N	CBM-N	0.79
CHEOAH	CHEOAH	0.69
CHILHOWEE	CHILHOWEE	0.25
CHOCTAW	CHOCTAW	1.49
COFFEEN	COFFEEN	0.74
COTTONWOOD	COTTONWOOD	5.78
DEARBORN	DEARBORN	1.22
DUCKCREEK	DUCKCREEK	1.6
EDWARDS	EDWARDS	0.73
ELMERSMITH	ELMERSMITH	0.73
FARMERCITY	FARMERCITY	0.49
G-007A	G-007A	12.41
GIBSON	GIBSON	0.29
HAMLET	HAMLET	1.59
NEWTON	NEWTON	1.92
NYISO	NYISO	3.41
O-066A	O-066A	3.17
PRAIRIE	PRAIRIE	3.59
SANTEETLA	SANTEETLA	0.2
SMITHLAND	SMITHLAND	0.29
TATANKA	TATANKA	0.88
TILTON	TILTON	0.88
TRIMBLE	TRIMBLE	0.77
TVA	TVA	2.43
UNIONPOWER	UNIONPOWER	1.08
VFT	VFT	22.21

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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
629004	214206	RICHRE29	PECO	213922	RICHMOND	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$	breaker	1336.0	97.81	101.13	DC	97.45

								PECO_P4_CHICH045 \$						
								STBK						

Bus #	Bus	MW Impact
219124	CAMDEN_STG	3.94
219126	CAMDEN_CTG	4.84
219128	GLOUCSTR_26	2.13
219229	EAGLEPT_G3	3.5
219230	EAGLEPT_G1	5.18
219231	EAGLEPT_G2	5.18
219241	CAMDEN1	0.29
219242	CAMDEN2	0.03
227801	ONTC&DCT	7.53
227843	MARINGEN E	0.78
227928	V4-067E	0.31
228261	V4-054E	1.43
228357	V2-046E	3.29
228423	Q-090 2	37.81
228712	V2-041E	0.52
228721	V2-035E	0.3
291995	U4-036 C	0.1
291996	U4-036 E	1.12
292063	V1-021 E	0.06
292088	V1-030 CB	0.14
292099	V1-030 E3	0.21
292104	V1-030 C6	0.03
292105	V1-030 E6	0.33
292115	V1-030 EB	1.49
292194	V1-030 CE	0.13
292195	V1-030 EE	1.37
292967	U2-045 E	3.4
293404	V3-036	1.07
902092	W1-130E	1.43
902432	W2-030 E	1.21
902692	W2-056 E	1.52
902842	W2-071E	0.44
903152	W2-102 E	0.97
903991	W3-080C	1.34
903992	W3-080E	2.19
904042	V4-005 E	0.4
904432	W3-124 E	0.39
905143	W4-016	73.72
905232	W4-029 E	0.42
905532	W4-063 E	0.85
905792	W4-103 E	0.97
907381	X1-070 C	0.06
907382	X1-070 E	0.77
907391	X1-071 C	0.02
907392	X1-071 E	0.26
909032	X2-013 E	0.7
910862	X3-075 E	1.18
913242	Y1-057 E	0.3
913332	Y1-075 E	0.39
914231	Y2-081 C OP1	1.7

Bus #	Bus	MW Impact
914232	Y2-081 E OP1	0.09
915022	Y3-012 E	1.46
915072	Y3-026 E	1.1
915591	Y3-087 C OP1	0.08
915592	Y3-087 E OP1	0.89
916292	Z1-082 E	0.37
917381	Z2-062	0.18
918852	AA1-104 E	6.27
919901	AB1-000 1	1.03
919911	AB1-000 2	1.03
919921	AB1-000 3	1.03
924051	AB2-049 C	0.9
924052	AB2-049 E	1.47
924531	AB2-102 C	45.75
924532	AB2-102 E	1.02
924701	AB2-122 C	0.13
924702	AB2-122 E	0.23
925391	AC1-010 C	0.87
925392	AC1-010 E	1.5
925442	AC1-016 E	0.96
925452	AC1-017 E	0.56
925561	AC1-030 C	0.05
925562	AC1-030 E	0.52
930002	AB1-001 E	0.28
930102	AB1-025 E	0.94
930242	AB1-063 E	0.15
930722	AB1-116 E	0.19
930732	AB1-119 E	0.17
931191	AB1-169A	126.46
932361	AC2-050 C O1	0.86
932362	AC2-050 E O1	1.41
933962	AD1-019 E	1.48
934661	AD1-097 1	1.67
934671	AD1-097 2	1.67
934681	AD1-097 3	1.67
934691	AD1-097 4	0.99
936211	AD2-027 C	1.57
936212	AD2-027 E	2.56
936321	AD2-042 C	2.07
936322	AD2-042 E	3.39
936411	AD2-052 C	1.66
936412	AD2-052 E	0.82
936491	AD2-064 C	0.12
936492	AD2-064 E	0.17
936501	AD2-065 C	0.51
936502	AD2-065 E	0.7
936541	AD2-069 C	0.5
936542	AD2-069 E	0.25
937011	AD2-135 C	0.14
937012	AD2-135 E	0.24
938301	AE1-045 C	0.46
938302	AE1-045 E	0.23

Bus #	Bus	MW Impact
938311	AE1-046 C	0.46
938312	AE1-046 E	0.23
938421	AE1-061 C	0.61
938422	AE1-061 E	0.61
938431	AE1-062 C	1.23
938432	AE1-062 E	1.23
938611	AE1-083 C	0.35
938612	AE1-083 E	0.48
938781	AE1-104 C O2	27.39
938782	AE1-104 E O2	70.06
938871	AE1-115 C	1.36
938872	AE1-115 E	1.36
939301	AE1-161 C	2.56
939302	AE1-161 E	3.84
939501	AE1-179 C O2	7.68
939502	AE1-179 E O2	5.42
939821	AE1-218 C O2	0.2
939822	AE1-218 E O2	0.3
939831	AE1-219 C O2	0.44
939832	AE1-219 E O2	0.64
939931	AE1-229 C O2	22.74
939932	AE1-229 E O2	15.41
940001	AE1-240 C O2	6.3
940002	AE1-240 E O2	4.5
BAYOU	BAYOU	1.26
BIG_CAJUN1	BIG_CAJUN1	1.94
BIG_CAJUN2	BIG_CAJUN2	3.9
BLUEG	BLUEG	6.05
CALDERWOOD	CALDERWOOD	0.65
CANNELTON	CANNELTON	0.37
CATAWBA	CATAWBA	0.41
CBM-N	CBM-N	0.28
CHEOAH	CHEOAH	0.6
CHILHOWEE	CHILHOWEE	0.21
CHOCTAW	CHOCTAW	1.29
COFFEEN	COFFEEN	0.64
COTTONWOOD	COTTONWOOD	4.99
DEARBORN	DEARBORN	1.07
DUCKCREEK	DUCKCREEK	1.39
EDWARDS	EDWARDS	0.63
ELMERSMITH	ELMERSMITH	0.63
FARMERCITY	FARMERCITY	0.42
G-007A	G-007A	9.68
GIBSON	GIBSON	0.25
HAMLET	HAMLET	1.36
NEWTON	NEWTON	1.67
NYISO	NYISO	1.21
O-066A	O-066A	1.91
PRAIRIE	PRAIRIE	3.11
SANTEETLA	SANTEETLA	0.18
SMITHLAND	SMITHLAND	0.25
TATANKA	TATANKA	0.76

Bus #	Bus	MW Impact
TILTON	TILTON	0.76
TRIMBLE	TRIMBLE	0.67
TVA	TVA	2.09
UNIONPOWER	UNIONPOWER	0.93
VFT	VFT	13.99

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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
629690	219110	GLOUCSTR	PSE&G	219125	CAMDEN	PSE&G	1	Base Case	single	500.0	105.59	106.39	DC	8.91

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.15
219124	CAMDEN_STG	2.2
219126	CAMDEN_CTG	2.7
219128	GLOUCSTR_26	1.19
219229	EAGLEPT_G3	1.9
219230	EAGLEPT_G1	2.81
219231	EAGLEPT_G2	2.81
227801	ONTC&DCT	2.44
227881	GRENWCHG	0.03
228304	LOGAN	4.35
228306	PCLP STM	1.15
228307	PCLP GT	1.14
228309	CCLP NUG	3.98
228334	MANNMILG	0.14
228343	QUINTN#1	0.03
228351	V2-046C	0.11
228400	MICK 1CT	0.92
228423	Q-090 2	17.86
228471	VALERO1	0.31
228472	VALERO2	0.21
228473	VALERO3	0.21
228484	VALERO4	0.18
228720	V2-035C	0.01
291995	U4-036 C	0.05
292104	V1-030 C6	0.02
292194	V1-030 CE	0.07
903963	W3-175	5.91
905143	W4-016	34.83
914231	Y2-081 C OP1	0.91
914232	Y2-081 E OP1	0.05
915591	Y3-087 C OP1	0.04
917381	Z2-062	0.1
917471	Z2-083	1.68
918891	AA1-108	2.52
924051	AB2-049 C	0.28

Bus #	Bus	MW Impact
924531	AB2-102 C	16.13
924701	AB2-122 C	0.04
925391	AC1-010 C	0.48
931191	AB1-169A	46.45
936411	AD2-052 C	0.67
936491	AD2-064 C	0.04
936501	AD2-065 C	0.13
937011	AD2-135 C	0.04
938301	AE1-045 C	0.17
938311	AE1-046 C	0.17
938421	AE1-061 C	0.22
938431	AE1-062 C	0.31
938781	AE1-104 C O2	8.91
938871	AE1-115 C	1.08
939301	AE1-161 C	1.83
939501	AE1-179 C O2	2.8
939821	AE1-218 C O2	0.07
939831	AE1-219 C O2	0.16
939931	AE1-229 C O2	9.41
940001	AE1-240 C O2	2.28
BAYOU	BAYOU	0.25
BIG_CAJUN1	BIG_CAJUN1	0.38
BIG_CAJUN2	BIG_CAJUN2	0.77
BLUEG	BLUEG	1.24
CALDERWOOD	CALDERWOOD	0.13
CANNELTON	CANNELTON	0.07
CARR	CARR	0.26
CATAWBA	CATAWBA	0.08
CHEOAH	CHEOAH	0.12
CHILHOWEE	CHILHOWEE	0.04
CHOCTAW	CHOCTAW	0.26
COFFEEN	COFFEEN	0.13
COTTONWOOD	COTTONWOOD	1.0
DEARBORN	DEARBORN	0.23
DUCKCREEK	DUCKCREEK	0.29
EDWARDS	EDWARDS	0.13
ELMERSMITH	ELMERSMITH	0.13
FARMERCITY	FARMERCITY	0.09
GIBSON	GIBSON	0.05
HAMLET	HAMLET	0.25
NEWTON	NEWTON	0.34
PRAIRIE	PRAIRIE	0.63
RENSSELAER	RENSSELAER	0.21
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.05
TATANKA	TATANKA	0.15
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.14
TVA	TVA	0.42
UNIONPOWER	UNIONPOWER	0.18

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
629003	219125	CAMDEN	PSE&G	214206	RICHRE29	PECO	1	PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	breaker	1336.0	97.83	101.15	DC	97.45

Bus #	Bus	MW Impact
219124	CAMDEN_STG	3.94
219126	CAMDEN_CTG	4.84
219128	GLOUCSTR_26	2.13
219229	EAGLEPT_G3	3.5
219230	EAGLEPT_G1	5.18
219231	EAGLEPT_G2	5.18
219241	CAMDEN1	0.29
219242	CAMDEN2	0.03
227801	ONTC&DCT	7.53
227843	MARINGEN E	0.78
227928	V4-067E	0.31
228261	V4-054E	1.43
228357	V2-046E	3.29
228423	Q-090 2	37.81
228712	V2-041E	0.52
228721	V2-035E	0.3
291995	U4-036 C	0.1
291996	U4-036 E	1.12
292063	V1-021 E	0.06
292088	V1-030 CB	0.14
292099	V1-030 E3	0.21
292104	V1-030 C6	0.03
292105	V1-030 E6	0.33
292115	V1-030 EB	1.49
292194	V1-030 CE	0.13
292195	V1-030 EE	1.37
292967	U2-045 E	3.4
293404	V3-036	1.07
902092	W1-130E	1.43
902432	W2-030 E	1.21
902692	W2-056 E	1.52
902842	W2-071E	0.44
903152	W2-102 E	0.97
903991	W3-080C	1.34
903992	W3-080E	2.19
904042	V4-005 E	0.4
904432	W3-124 E	0.39
905143	W4-016	73.72
905232	W4-029 E	0.42
905532	W4-063 E	0.85
905792	W4-103 E	0.97
907381	X1-070 C	0.06
907382	X1-070 E	0.77

Bus #	Bus	MW Impact
907391	X1-071 C	0.02
907392	X1-071 E	0.26
909032	X2-013 E	0.7
910862	X3-075 E	1.18
913242	Y1-057 E	0.3
913332	Y1-075 E	0.39
914231	Y2-081 C OP1	1.7
914232	Y2-081 E OP1	0.09
915022	Y3-012 E	1.46
915072	Y3-026 E	1.1
915591	Y3-087 C OP1	0.08
915592	Y3-087 E OP1	0.89
916292	Z1-082 E	0.37
917381	Z2-062	0.18
918852	AA1-104 E	6.27
919901	AB1-000 1	1.03
919911	AB1-000 2	1.03
919921	AB1-000 3	1.03
924051	AB2-049 C	0.9
924052	AB2-049 E	1.47
924531	AB2-102 C	45.75
924532	AB2-102 E	1.02
924701	AB2-122 C	0.13
924702	AB2-122 E	0.23
925391	AC1-010 C	0.87
925392	AC1-010 E	1.5
925442	AC1-016 E	0.96
925452	AC1-017 E	0.56
925561	AC1-030 C	0.05
925562	AC1-030 E	0.52
930002	AB1-001 E	0.28
930102	AB1-025 E	0.94
930242	AB1-063 E	0.15
930722	AB1-116 E	0.19
930732	AB1-119 E	0.17
931191	AB1-169A	126.46
932361	AC2-050 C O1	0.86
932362	AC2-050 E O1	1.41
933962	AD1-019 E	1.48
934661	AD1-097 1	1.67
934671	AD1-097 2	1.67
934681	AD1-097 3	1.67
934691	AD1-097 4	0.99
936211	AD2-027 C	1.57
936212	AD2-027 E	2.56
936321	AD2-042 C	2.07
936322	AD2-042 E	3.39
936411	AD2-052 C	1.66
936412	AD2-052 E	0.82
936491	AD2-064 C	0.12
936492	AD2-064 E	0.17
936501	AD2-065 C	0.51

Bus #	Bus	MW Impact
936502	AD2-065 E	0.7
936541	AD2-069 C	0.5
936542	AD2-069 E	0.25
937011	AD2-135 C	0.14
937012	AD2-135 E	0.24
938301	AE1-045 C	0.46
938302	AE1-045 E	0.23
938311	AE1-046 C	0.46
938312	AE1-046 E	0.23
938421	AE1-061 C	0.61
938422	AE1-061 E	0.61
938431	AE1-062 C	1.23
938432	AE1-062 E	1.23
938611	AE1-083 C	0.35
938612	AE1-083 E	0.48
938781	AE1-104 C O2	27.39
938782	AE1-104 E O2	70.06
938871	AE1-115 C	1.36
938872	AE1-115 E	1.36
939301	AE1-161 C	2.56
939302	AE1-161 E	3.84
939501	AE1-179 C O2	7.68
939502	AE1-179 E O2	5.42
939821	AE1-218 C O2	0.2
939822	AE1-218 E O2	0.3
939831	AE1-219 C O2	0.44
939832	AE1-219 E O2	0.64
939931	AE1-229 C O2	22.74
939932	AE1-229 E O2	15.41
940001	AE1-240 C O2	6.3
940002	AE1-240 E O2	4.5
BAYOU	BAYOU	1.26
BIG_CAJUN1	BIG_CAJUN1	1.94
BIG_CAJUN2	BIG_CAJUN2	3.9
BLUEG	BLUEG	6.05
CALDERWOOD	CALDERWOOD	0.65
CANNELTON	CANNELTON	0.37
CATAWBA	CATAWBA	0.41
CBM-N	CBM-N	0.28
CHEOAH	CHEOAH	0.6
CHILHOWEE	CHILHOWEE	0.21
CHOCTAW	CHOCTAW	1.29
COFFEEN	COFFEEN	0.64
COTTONWOOD	COTTONWOOD	4.99
DEARBORN	DEARBORN	1.07
DUCKCREEK	DUCKCREEK	1.39
EDWARDS	EDWARDS	0.63
ELMERSMITH	ELMERSMITH	0.63
FARMERCITY	FARMERCITY	0.42
G-007A	G-007A	9.68
GIBSON	GIBSON	0.25
HAMLET	HAMLET	1.36

Bus #	Bus	MW Impact
NEWTON	NEWTON	1.67
NYISO	NYISO	1.21
O-066A	O-066A	1.91
PRAIRIE	PRAIRIE	3.11
SANTEETLA	SANTEETLA	0.18
SMITHLAND	SMITHLAND	0.25
TATANKA	TATANKA	0.76
TILTON	TILTON	0.76
TRIMBLE	TRIMBLE	0.67
TVA	TVA	2.09
UNIONPOWER	UNIONPOWER	0.93
VFT	VFT	13.99

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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
630242	219702	HILLTOP_1	PSE&G	219101	BEAVERBK_1	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	740.0	94.91	97.85	DC	49.16

Bus #	Bus	MW Impact
227801	ONTC&DCT	3.79
227843	MARINGEN E	0.39
227928	V4-067E	0.16
228260	V4-054C	0.12
228261	V4-054E	0.63
228357	V2-046E	1.3
228702	WEST CT	0.41
228712	V2-041E	0.25
228717	S121	0.68
228720	V2-035C	0.01
228721	V2-035E	0.13
228727	W2-039G	0.99
291996	U4-036 E	0.3
292063	V1-021 E	0.03
292105	V1-030 E6	0.09
292967	U2-045 E	1.71
293404	V3-036	0.54
902091	W1-130C	0.06
902092	W1-130E	0.69
902432	W2-030 E	0.61
905143	W4-016	21.77
905532	W4-063 E	0.43
909032	X2-013 E	0.19
915022	Y3-012 E	0.74
918852	AA1-104 E	1.85
924051	AB2-049 C	0.47
924052	AB2-049 E	0.77
924531	AB2-102 C	21.78

Bus #	Bus	MW Impact
924532	AB2-102 E	0.48
924701	AB2-122 C	0.07
924702	AB2-122 E	0.12
930002	AB1-001 E	0.14
930722	AB1-116 E	0.1
930732	AB1-119 E	0.09
931191	AB1-169A	60.74
933962	AD1-019 E	0.75
936411	AD2-052 C	0.66
936412	AD2-052 E	0.33
936491	AD2-064 C	0.06
936492	AD2-064 E	0.09
936501	AD2-065 C	0.24
936502	AD2-065 E	0.33
937011	AD2-135 C	0.08
937012	AD2-135 E	0.14
938301	AE1-045 C	0.22
938302	AE1-045 E	0.11
938311	AE1-046 C	0.22
938312	AE1-046 E	0.11
938421	AE1-061 C	0.55
938422	AE1-061 E	0.55
938431	AE1-062 C	1.13
938432	AE1-062 E	1.13
938781	AE1-104 C O2	13.82
938782	AE1-104 E O2	35.34
938871	AE1-115 C	0.51
938872	AE1-115 E	0.51
939301	AE1-161 C	2.29
939302	AE1-161 E	3.43
939501	AE1-179 C O2	3.57
939502	AE1-179 E O2	2.52
939821	AE1-218 C O2	0.1
939822	AE1-218 E O2	0.15
939831	AE1-219 C O2	0.22
939832	AE1-219 E O2	0.32
939931	AE1-229 C O2	8.89
939932	AE1-229 E O2	6.02
940001	AE1-240 C O2	2.94
940002	AE1-240 E O2	2.1
BAYOU	BAYOU	0.15
BIG_CAJUN1	BIG_CAJUN1	0.22
BIG_CAJUN2	BIG_CAJUN2	0.45
BLUEG	BLUEG	0.77
CALDERWOOD	CALDERWOOD	0.07
CANNELTON	CANNELTON	0.05
CARR	CARR	0.27
CATAWBA	CATAWBA	0.04
CHEOAH	CHEOAH	0.07
CHILHOWEE	CHILHOWEE	0.02
CHOCTAW	CHOCTAW	0.15
COFFEEN	COFFEEN	0.08

Bus #	Bus	MW Impact
COTTONWOOD	COTTONWOOD	0.58
DEARBORN	DEARBORN	0.15
DUCKCREEK	DUCKCREEK	0.18
EDWARDS	EDWARDS	0.08
ELMERSMITH	ELMERSMITH	0.08
FARMERCITY	FARMERCITY	0.05
G-007	G-007	0.18
GIBSON	GIBSON	0.03
HAMLET	HAMLET	0.13
NEWTON	NEWTON	0.21
O-066	O-066	3.07
PRAIRIE	PRAIRIE	0.38
RENSSELAER	RENSSELAER	0.21
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.03
TATANKA	TATANKA	0.1
TILTON	TILTON	0.1
TRIMBLE	TRIMBLE	0.09
TVA	TVA	0.24
UNIONPOWER	UNIONPOWER	0.11

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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
628487	227902	LEWIS #1	AE	227945	LEWIS #2	AE	1	AE_P4-2 AE33	breaker	286.8	42.36	167.46	DC	358.79

Bus #	Bus	MW Impact
227801	ONTC&DCT	3.57
227843	MARINGEN E	0.38
228014	PVILLEG	0.08
228720	V2-035C	0.01
228721	V2-035E	0.15
292967	U2-045 E	1.66
293404	V3-036	0.51
902091	W1-130C	0.18
902092	W1-130E	1.91
905532	W4-063 E	0.42
915022	Y3-012 E	0.72
930001	AB1-001 C	0.02
930002	AB1-001 E	0.18
931191	AB1-169A	171.53
933962	AD1-019 E	0.7
938301	AE1-045 C	0.62
938302	AE1-045 E	0.31
938311	AE1-046 C	0.62
938312	AE1-046 E	0.31
938421	AE1-061 C	1.54

Bus #	Bus	MW Impact
938422	AE1-061 E	1.54
938781	AE1-104 C O2	100.84
938782	AE1-104 E O2	257.95
939301	AE1-161 C	3.4
939302	AE1-161 E	5.1
CARR	CARR	0.0
CBM-S1	CBM-S1	0.13
CBM-S2	CBM-S2	0.07
CBM-W1	CBM-W1	0.23
CBM-W2	CBM-W2	0.94
CIN	CIN	0.1
CPLE	CPLE	0.03
G-007	G-007	0.22
IPL	IPL	0.06
LGEE	LGEE	0.03
MEC	MEC	0.18
MECS	MECS	0.14
O-066	O-066	0.14
RENSSELAER	RENSSELAER	0.0
WEC	WEC	0.03

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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
630182	228402	MONROE	AE	219100	NEWFRDM	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	804.0	103.06	104.86	DC	59.21

Bus #	Bus	MW Impact
219229	EAGLEPT_G3	3.84
219230	EAGLEPT_G1	5.68
219231	EAGLEPT_G2	5.68
227801	ONTC&DCT	4.46
227843	MARINGEN E	0.46
228261	V4-054E	1.48
228357	V2-046E	3.92
228400	MICK 1CT	2.61
228423	Q-090 2	49.81
228471	VALERO1	0.88
228472	VALERO2	0.61
228473	VALERO3	0.61
228484	VALERO4	0.52
228712	V2-041E	0.41
228720	V2-035C	0.05
228721	V2-035E	0.48
291995	U4-036 C	0.12
291996	U4-036 E	1.32
292063	V1-021 E	0.04
292104	V1-030 C6	0.04
292105	V1-030 E6	0.38
292967	U2-045 E	2.01
293404	V3-036	0.64
902091	W1-130C	0.21
902092	W1-130E	2.23
902432	W2-030 E	0.69
905143	W4-016	97.12
905532	W4-063 E	0.5
909032	X2-013 E	0.83
915022	Y3-012 E	0.87
917471	Z2-083	4.69
918852	AA1-104 E	8.27
924051	AB2-049 C	0.69
924052	AB2-049 E	1.13
924531	AB2-102 C	32.0
924532	AB2-102 E	0.71
930002	AB1-001 E	0.17
930722	AB1-116 E	0.21
930732	AB1-119 E	0.1
931191	AB1-169A	196.86
933962	AD1-019 E	0.88

Bus #	Bus	MW Impact
936411	AD2-052 C	1.83
936412	AD2-052 E	0.9
936491	AD2-064 C	0.07
936492	AD2-064 E	0.1
938301	AE1-045 C	0.72
938302	AE1-045 E	0.36
938311	AE1-046 C	0.72
938312	AE1-046 E	0.36
938421	AE1-061 C	0.96
938422	AE1-061 E	1.8
938781	AE1-104 C O2	16.64
938782	AE1-104 E O2	42.57
938871	AE1-115 C	1.54
938872	AE1-115 E	1.54
939301	AE1-161 C	8.82
939302	AE1-161 E	13.22
939501	AE1-179 C O2	7.37
939502	AE1-179 E O2	5.2
939821	AE1-218 C O2	0.3
939822	AE1-218 E O2	0.45
939831	AE1-219 C O2	0.68
939832	AE1-219 E O2	0.98
939931	AE1-229 C O2	26.77
939932	AE1-229 E O2	18.14
940001	AE1-240 C O2	5.88
940002	AE1-240 E O2	4.2
BAYOU	BAYOU	0.58
BIG_CAJUN1	BIG_CAJUN1	0.89
BIG_CAJUN2	BIG_CAJUN2	1.79
BLUEG	BLUEG	2.79
CALDERWOOD	CALDERWOOD	0.3
CANNELTON	CANNELTON	0.17
CARR	CARR	0.42
CATAWBA	CATAWBA	0.19
CHEOAH	CHEOAH	0.27
CHILHOWEE	CHILHOWEE	0.1
CHOCTAW	CHOCTAW	0.59
COFFEEN	COFFEEN	0.29
COTTONWOOD	COTTONWOOD	2.29
DEARBORN	DEARBORN	0.49
DUCKCREEK	DUCKCREEK	0.64
EDWARDS	EDWARDS	0.29
ELMERSMITH	ELMERSMITH	0.29
FARMERCITY	FARMERCITY	0.19
G-007	G-007	1.48
GIBSON	GIBSON	0.12
HAMLET	HAMLET	0.62
NEWTON	NEWTON	0.77
O-066	O-066	5.0
PRAIRIE	PRAIRIE	1.43
RENSSELAER	RENSSELAER	0.33
SANTEETLA	SANTEETLA	0.08

Bus #	Bus	MW Impact
SMITHLAND	SMITHLAND	0.11
TATANKA	TATANKA	0.35
TILTON	TILTON	0.35
TRIMBLE	TRIMBLE	0.31
TVA	TVA	0.96
UNIONPOWER	UNIONPOWER	0.43

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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
628946	206297	28MANITOU	JCP&L	206296	28LEISUR U	JCP&L	1	JC-P2-3-JCC-230-9A	breaker	817.0	103.33	107.12	DC	68.65

Bus #	Bus	MW Impact
206280	28LAKEHURS	0.44
206325	28O C GEN	308.0
206360	28O CRK C1	2.61
206361	28O CRK C2	1.68
227801	ONTC&DCT	5.51
227842	MARINGEN	0.08
227843	MARINGEN E	0.57
227927	V4-067C	0.02
227928	V4-067E	0.24
228014	PVILLEG	0.09
228712	V2-041E	0.2
292063	V1-021 E	0.03
292966	U2-045 C	0.06
292967	U2-045 E	2.49
293404	V3-036	0.79
901982	W1-119 E	1.03
901991	W1-120C	0.7
901992	W1-120E	1.15
902092	W1-130E	0.49
902432	W2-030 E	0.87
905531	W4-063 C	0.01
905532	W4-063 E	0.62
915022	Y3-012 E	1.07
917612	Z2-102 E	0.84
919662	AA2-048 E	0.5
919672	AA2-049 E	0.21
924531	AB2-102 C	18.26
924532	AB2-102 E	0.41
924701	AB2-122 C	0.1
924702	AB2-122 E	0.18
930001	AB1-001 C	0.02
930002	AB1-001 E	0.21

Bus #	Bus	MW Impact
930891	AB1-138 C	0.74
930892	AB1-138 E	1.23
931122	AB1-163 E	0.37
931191	AB1-169A	43.85
933962	AD1-019 E	1.09
938211	AE1-034 C O2	169.88
938212	AE1-034 E O2	434.67
938301	AE1-045 C	0.16
938302	AE1-045 E	0.08
938311	AE1-046 C	0.16
938312	AE1-046 E	0.08
938421	AE1-061 C	0.21
938422	AE1-061 E	0.21
938781	AE1-104 C O2	19.29
938782	AE1-104 E O2	49.35
939121	AE1-142 C O2	3.44
939122	AE1-142 E O2	4.96
939501	AE1-179 C O2	2.49
939502	AE1-179 E O2	1.76
940001	AE1-240 C O2	2.12
940002	AE1-240 E O2	1.51
BAYOU	BAYOU	0.01
BIG_CAJUN1	BIG_CAJUN1	0.02
BIG_CAJUN2	BIG_CAJUN2	0.04
BLUEG	BLUEG	0.11
CALDERWOOD	CALDERWOOD	0.0
CANNELTON	CANNELTON	0.01
CARR	CARR	0.46
CBM-S2	CBM-S2	0.01
CHEOAH	CHEOAH	0.0
CHILHOWEE	CHILHOWEE	0.0
CHOCTAW	CHOCTAW	0.01
COFFEEN	COFFEEN	0.01
COTTONWOOD	COTTONWOOD	0.05
CPL	CPL	0.01
DEARBORN	DEARBORN	0.03
DUCKCREEK	DUCKCREEK	0.03
EDWARDS	EDWARDS	0.01
ELMERSMITH	ELMERSMITH	0.01
FARMERCITY	FARMERCITY	0.01
G-007	G-007	4.69
GIBSON	GIBSON	0.0
NEWTON	NEWTON	0.03
O-066	O-066	6.55
PRAIRIE	PRAIRIE	0.05
RENSSELAER	RENSSELAER	0.36
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.0
TATANKA	TATANKA	0.01
TILTON	TILTON	0.01
TRIMBLE	TRIMBLE	0.01
TVA	TVA	0.02

Bus #	Bus	MW Impact
UNIONPOWER	UNIONPOWER	0.01

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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
628959	206297	28MANITOU	JCP&L	206295	28LEISUR D	JCP&L	1	JC-P2-3-JCC-230-10A	breaker	817.0	102.17	105.95	DC	68.64

Bus #	Bus	MW Impact
206280	28LAKEHURS	0.45
206325	28O C GEN	307.95
206360	28O CRK C1	2.61
206361	28O CRK C2	1.68
227801	ONTC&DCT	5.51
227842	MARINGEN	0.08
227843	MARINGEN E	0.57
227927	V4-067C	0.02
227928	V4-067E	0.24
228014	PVILLEG	0.09
228712	V2-041E	0.2
292063	V1-021 E	0.03
292966	U2-045 C	0.06
292967	U2-045 E	2.49
293404	V3-036	0.79
901982	W1-119 E	1.04
901991	W1-120C	0.71
901992	W1-120E	1.16
902092	W1-130E	0.49
902432	W2-030 E	0.87
905531	W4-063 C	0.01
905532	W4-063 E	0.62
915022	Y3-012 E	1.07
917612	Z2-102 E	0.85
919662	AA2-048 E	0.5
919672	AA2-049 E	0.21
924531	AB2-102 C	18.26
924532	AB2-102 E	0.41
924701	AB2-122 C	0.1
924702	AB2-122 E	0.18
930001	AB1-001 C	0.02
930002	AB1-001 E	0.21
930891	AB1-138 C	0.75
930892	AB1-138 E	1.25
931122	AB1-163 E	0.38
931191	AB1-169A	43.85
933962	AD1-019 E	1.09

Bus #	Bus	MW Impact
938211	AE1-034 C O2	169.85
938212	AE1-034 E O2	434.59
938301	AE1-045 C	0.16
938302	AE1-045 E	0.08
938311	AE1-046 C	0.16
938312	AE1-046 E	0.08
938421	AE1-061 C	0.21
938422	AE1-061 E	0.21
938781	AE1-104 C O2	19.29
938782	AE1-104 E O2	49.35
939121	AE1-142 C O2	3.53
939122	AE1-142 E O2	5.08
939501	AE1-179 C O2	2.49
939502	AE1-179 E O2	1.76
940001	AE1-240 C O2	2.12
940002	AE1-240 E O2	1.51
BAYOU	BAYOU	0.01
BIG_CAJUN1	BIG_CAJUN1	0.02
BIG_CAJUN2	BIG_CAJUN2	0.04
BLUEG	BLUEG	0.11
CALDERWOOD	CALDERWOOD	0.0
CANNELTON	CANNELTON	0.01
CARR	CARR	0.46
CBM-S2	CBM-S2	0.01
CHEOAH	CHEOAH	0.0
CHILHOWEE	CHILHOWEE	0.0
CHOCTAW	CHOCTAW	0.01
COFFEEN	COFFEEN	0.01
COTTONWOOD	COTTONWOOD	0.05
CPL	CPL	0.01
DEARBORN	DEARBORN	0.03
DUCKCREEK	DUCKCREEK	0.03
EDWARDS	EDWARDS	0.01
ELMERSMITH	ELMERSMITH	0.01
FARMERCITY	FARMERCITY	0.01
G-007	G-007	4.69
GIBSON	GIBSON	0.0
NEWTON	NEWTON	0.03
O-066	O-066	6.55
PRAIRIE	PRAIRIE	0.05
RENSSELAER	RENSSELAER	0.36
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.0
TATANKA	TATANKA	0.01
TILTON	TILTON	0.01
TRIMBLE	TRIMBLE	0.01
TVA	TVA	0.02
UNIONPOWER	UNIONPOWER	0.01

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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
630061	206297	28MANITOU	JCP&L	206319	28WHITINGS	JCP&L	1	JC-P7-1-JCC-230-10A	tower	817.0	124.11	127.7	DC	65.18

Bus #	Bus	MW Impact
206306	28LKWD G1	7.11
206308	28LKWD G2	7.11
206312	28LKWD G3	5.01
206325	28O C GEN	312.71
206360	28O CRK C1	2.65
206361	28O CRK C2	1.7
206366	28LKWD CT1	13.47
206367	28LKWD CT2	13.47
227801	ONTC&DCT	5.25
227843	MARINGEN E	0.54
227928	V4-067E	0.23
292063	V1-021 E	0.03
292967	U2-045 E	2.37
293404	V3-036	0.75
902432	W2-030 E	0.83
905532	W4-063 E	0.59
915022	Y3-012 E	1.02
924701	AB2-122 C	0.1
924702	AB2-122 E	0.17
930002	AB1-001 E	0.2
930891	AB1-138 C	0.52
930892	AB1-138 E	0.87
933962	AD1-019 E	1.03
934351	AD1-059	1.27
938211	AE1-034 C O2	174.11
938212	AE1-034 E O2	445.5
938781	AE1-104 C O2	18.32
938782	AE1-104 E O2	46.86
939121	AE1-142 C O2	3.23
939122	AE1-142 E O2	4.65
BAYOU	BAYOU	0.25
BIG_CAJUN1	BIG_CAJUN1	0.39
BIG_CAJUN2	BIG_CAJUN2	0.78
BLUEG	BLUEG	1.23
CALDERWOOD	CALDERWOOD	0.13
CANNELTON	CANNELTON	0.07
CARR	CARR	0.38
CATAWBA	CATAWBA	0.08
CHEOAH	CHEOAH	0.12

Bus #	Bus	MW Impact
CHILHOWEE	CHILHOWEE	0.04
CHOCTAW	CHOCTAW	0.26
COFFEEN	COFFEEN	0.13
COTTONWOOD	COTTONWOOD	1.0
DEARBORN	DEARBORN	0.22
DUCKCREEK	DUCKCREEK	0.28
EDWARDS	EDWARDS	0.13
ELMERSMITH	ELMERSMITH	0.13
FARMERCITY	FARMERCITY	0.09
G-007	G-007	3.14
GIBSON	GIBSON	0.05
HAMLET	HAMLET	0.26
NEWTON	NEWTON	0.34
O-066	O-066	5.1
PRAIRIE	PRAIRIE	0.63
RENSSELAER	RENSSELAER	0.3
SANTEETLA	SANTEETLA	0.03
SMITHLAND	SMITHLAND	0.05
TATANKA	TATANKA	0.15
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.14
TVA	TVA	0.42
UNIONPOWER	UNIONPOWER	0.18

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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
628617	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	2	JC-P2-3-JCC-230-13D	breaker	817.0	133.22	137.13	DC	70.77

Bus #	Bus	MW Impact
206306	28LKWD G1	9.25
206308	28LKWD G2	9.25
206312	28LKWD G3	6.53
206325	28O C GEN	321.92
206360	28O CRK C1	2.73
206361	28O CRK C2	1.75
206366	28LKWD CT1	17.54
206367	28LKWD CT2	17.54
227801	ONTC&DCT	5.69
227843	MARINGEN E	0.59
227928	V4-067E	0.24
292063	V1-021 E	0.03
292967	U2-045 E	2.56
293404	V3-036	0.81
901982	W1-119 E	1.2

Bus #	Bus	MW Impact
901991	W1-120C	0.82
901992	W1-120E	1.33
902432	W2-030 E	0.9
905532	W4-063 E	0.64
915022	Y3-012 E	1.11
917612	Z2-102 E	0.97
924701	AB2-122 C	0.11
924702	AB2-122 E	0.18
930002	AB1-001 E	0.21
930891	AB1-138 C	1.19
930892	AB1-138 E	1.99
931122	AB1-163 E	0.72
933962	AD1-019 E	1.12
934351	AD1-059	1.65
938211	AE1-034 C O2	177.58
938212	AE1-034 E O2	454.37
938781	AE1-104 C O2	19.89
938782	AE1-104 E O2	50.88
939121	AE1-142 C O2	4.0
939122	AE1-142 E O2	5.76
BAYOU	BAYOU	0.31
BIG_CAJUN1	BIG_CAJUN1	0.48
BIG_CAJUN2	BIG_CAJUN2	0.97
BLUEG	BLUEG	1.55
CALDERWOOD	CALDERWOOD	0.16
CANNELTON	CANNELTON	0.09
CARR	CARR	0.58
CATAWBA	CATAWBA	0.1
CHEOAH	CHEOAH	0.15
CHILHOWEE	CHILHOWEE	0.05
CHOCTAW	CHOCTAW	0.32
COFFEEN	COFFEEN	0.16
COTTONWOOD	COTTONWOOD	1.25
DEARBORN	DEARBORN	0.29
DUCKCREEK	DUCKCREEK	0.36
EDWARDS	EDWARDS	0.16
ELMERSMITH	ELMERSMITH	0.16
FARMERCITY	FARMERCITY	0.11
G-007	G-007	5.19
GIBSON	GIBSON	0.06
HAMLET	HAMLET	0.32
NEWTON	NEWTON	0.43
O-066	O-066	7.89
PRAIRIE	PRAIRIE	0.79
RENSSELAER	RENSSELAER	0.46
SANTEETLA	SANTEETLA	0.04
SMITHLAND	SMITHLAND	0.06
TATANKA	TATANKA	0.19
TILTON	TILTON	0.2
TRIMBLE	TRIMBLE	0.17
TVA	TVA	0.52
UNIONPOWER	UNIONPOWER	0.23

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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
628718	206323	28LAKEWOOD	JCP&L	206294	28LARRABEE	JCP&L	1	JC-P2-3-JCC-230-13A	breaker	869.0	123.54	127.13	DC	69.13

Bus #	Bus	MW Impact
206306	28LKWD G1	9.09
206308	28LKWD G2	9.09
206312	28LKWD G3	6.41
206325	28O C GEN	315.11
206360	28O CRK C1	2.67
206361	28O CRK C2	1.72
206366	28LKWD CT1	17.23
206367	28LKWD CT2	17.23
227801	ONTC&DCT	5.56
227843	MARINGEN E	0.58
227928	V4-067E	0.24
292063	V1-021 E	0.03
292967	U2-045 E	2.51
293404	V3-036	0.79
902432	W2-030 E	0.87
905532	W4-063 E	0.63
915022	Y3-012 E	1.08
917612	Z2-102 E	0.89
924701	AB2-122 C	0.1
924702	AB2-122 E	0.18
930002	AB1-001 E	0.21
930891	AB1-138 C	1.16
930892	AB1-138 E	1.93
931122	AB1-163 E	0.64
933962	AD1-019 E	1.09
934351	AD1-059	1.62
938211	AE1-034 C O2	173.84
938212	AE1-034 E O2	444.81
938781	AE1-104 C O2	19.43
938782	AE1-104 E O2	49.7
939121	AE1-142 C O2	3.91
939122	AE1-142 E O2	5.62
BAYOU	BAYOU	0.3
BIG_CAJUN1	BIG_CAJUN1	0.46
BIG_CAJUN2	BIG_CAJUN2	0.92
BLUEG	BLUEG	1.48
CALDERWOOD	CALDERWOOD	0.15
CANNELTON	CANNELTON	0.09
CARR	CARR	0.57

Bus #	Bus	MW Impact
CATAWBA	CATAWBA	0.09
CHEOAH	CHEOAH	0.14
CHILHOWEE	CHILHOWEE	0.05
CHOCTAW	CHOCTAW	0.31
COFFEEN	COFFEEN	0.16
COTTONWOOD	COTTONWOOD	1.19
DEARBORN	DEARBORN	0.27
DUCKCREEK	DUCKCREEK	0.34
EDWARDS	EDWARDS	0.16
ELMERSMITH	ELMERSMITH	0.15
FARMERCITY	FARMERCITY	0.1
G-007	G-007	5.47
GIBSON	GIBSON	0.06
HAMLET	HAMLET	0.3
NEWTON	NEWTON	0.41
O-066	O-066	7.78
PRAIRIE	PRAIRIE	0.75
RENSSELAER	RENSSELAER	0.45
SANTEETLA	SANTEETLA	0.04
SMITHLAND	SMITHLAND	0.06
TATANKA	TATANKA	0.19
TILTON	TILTON	0.19
TRIMBLE	TRIMBLE	0.16
TVA	TVA	0.5
UNIONPOWER	UNIONPOWER	0.22

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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
630195	206720	28MANCHSTR	JCP&L	206318	28VANHISVL	JCP&L	1	JC-P7-1-JCC-230-10A	tower	869.0	103.58	106.97	DC	65.29

Bus #	Bus	MW Impact
206306	28LKWD G1	7.06
206308	28LKWD G2	7.06
206312	28LKWD G3	4.98
206325	28O C GEN	312.94
206360	28O CRK C1	2.65
206361	28O CRK C2	1.71
206366	28LKWD CT1	13.38
206367	28LKWD CT2	13.38
227801	ONTC&DCT	5.26
227843	MARINGEN E	0.55
227928	V4-067E	0.23
292063	V1-021 E	0.03
292967	U2-045 E	2.37

Bus #	Bus	MW Impact
293404	V3-036	0.75
902432	W2-030 E	0.83
905532	W4-063 E	0.59
915022	Y3-012 E	1.02
917612	Z2-102 E	0.76
924701	AB2-122 C	0.1
924702	AB2-122 E	0.17
930002	AB1-001 E	0.2
930891	AB1-138 C	1.34
930892	AB1-138 E	2.24
931122	AB1-163 E	0.78
933962	AD1-019 E	1.04
934351	AD1-059	1.26
938211	AE1-034 C O2	172.46
938212	AE1-034 E O2	441.28
938781	AE1-104 C O2	18.35
938782	AE1-104 E O2	46.94
939121	AE1-142 C O2	4.09
939122	AE1-142 E O2	5.89
BAYOU	BAYOU	0.25
BIG_CAJUN1	BIG_CAJUN1	0.39
BIG_CAJUN2	BIG_CAJUN2	0.79
BLUEG	BLUEG	1.25
CALDERWOOD	CALDERWOOD	0.13
CANNELTON	CANNELTON	0.08
CARR	CARR	0.39
CATAWBA	CATAWBA	0.08
CHEOAH	CHEOAH	0.12
CHILHOWEE	CHILHOWEE	0.04
CHOCTAW	CHOCTAW	0.26
COFFEEN	COFFEEN	0.13
COTTONWOOD	COTTONWOOD	1.01
DEARBORN	DEARBORN	0.23
DUCKCREEK	DUCKCREEK	0.29
EDWARDS	EDWARDS	0.13
ELMERSMITH	ELMERSMITH	0.13
FARMERCITY	FARMERCITY	0.09
G-007	G-007	3.18
GIBSON	GIBSON	0.05
HAMLET	HAMLET	0.26
NEWTON	NEWTON	0.34
O-066	O-066	5.15
PRAIRIE	PRAIRIE	0.64
RENSSELAER	RENSSELAER	0.31
SANTEETLA	SANTEETLA	0.04
SMITHLAND	SMITHLAND	0.05
TATANKA	TATANKA	0.16
TILTON	TILTON	0.16
TRIMBLE	TRIMBLE	0.14
TVA	TVA	0.42
UNIONPOWER	UNIONPOWER	0.19

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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
630118	219100	NEWFRDM	PSE&G	219704	HILLTOP_3	PSE&G	1	PS_P7-1_V2274+P2242_LT	tower	740.0	110.37	113.41	DC	52.08

Bus #	Bus	MW Impact
227801	ONTC&DCT	4.02
227843	MARINGEN E	0.42
227928	V4-067E	0.17
228260	V4-054C	0.12
228261	V4-054E	0.66
228357	V2-046E	1.38
228702	WEST CT	0.44
228712	V2-041E	0.26
228717	S121	0.72
228720	V2-035C	0.01
228721	V2-035E	0.14
228727	W2-039G	1.05
291996	U4-036 E	0.31
292063	V1-021 E	0.03
292105	V1-030 E6	0.09
292967	U2-045 E	1.81
293404	V3-036	0.57
902091	W1-130C	0.07
902092	W1-130E	0.73
902432	W2-030 E	0.65
905143	W4-016	23.09
905532	W4-063 E	0.45
909032	X2-013 E	0.2
915022	Y3-012 E	0.78
916292	Z1-082 E	0.26
918852	AA1-104 E	1.96
924051	AB2-049 C	0.5
924052	AB2-049 E	0.81
924531	AB2-102 C	23.08
924532	AB2-102 E	0.51
924701	AB2-122 C	0.07
924702	AB2-122 E	0.13
930002	AB1-001 E	0.15
930722	AB1-116 E	0.1
930732	AB1-119 E	0.09
931191	AB1-169A	64.37
933962	AD1-019 E	0.79
936411	AD2-052 C	0.7
936412	AD2-052 E	0.34
936491	AD2-064 C	0.07
936492	AD2-064 E	0.09
936501	AD2-065 C	0.25

Bus #	Bus	MW Impact
936502	AD2-065 E	0.35
937011	AD2-135 C	0.09
937012	AD2-135 E	0.15
938301	AE1-045 C	0.23
938302	AE1-045 E	0.12
938311	AE1-046 C	0.23
938312	AE1-046 E	0.12
938421	AE1-061 C	0.59
938422	AE1-061 E	0.59
938431	AE1-062 C	1.19
938432	AE1-062 E	1.19
938781	AE1-104 C O2	14.64
938782	AE1-104 E O2	37.44
938871	AE1-115 C	0.55
938872	AE1-115 E	0.55
939301	AE1-161 C	2.42
939302	AE1-161 E	3.64
939501	AE1-179 C O2	3.78
939502	AE1-179 E O2	2.67
939821	AE1-218 C O2	0.1
939822	AE1-218 E O2	0.16
939831	AE1-219 C O2	0.23
939832	AE1-219 E O2	0.34
939931	AE1-229 C O2	9.43
939932	AE1-229 E O2	6.39
940001	AE1-240 C O2	3.12
940002	AE1-240 E O2	2.23
BAYOU	BAYOU	0.16
BIG_CAJUN1	BIG_CAJUN1	0.24
BIG_CAJUN2	BIG_CAJUN2	0.48
BLUEG	BLUEG	0.81
CALDERWOOD	CALDERWOOD	0.08
CANNELTON	CANNELTON	0.05
CARR	CARR	0.29
CATAWBA	CATAWBA	0.04
CHEOAH	CHEOAH	0.07
CHILHOWEE	CHILHOWEE	0.03
CHOCTAW	CHOCTAW	0.16
COFFEEN	COFFEEN	0.09
COTTONWOOD	COTTONWOOD	0.62
DEARBORN	DEARBORN	0.16
DUCKCREEK	DUCKCREEK	0.19
EDWARDS	EDWARDS	0.09
ELMERSMITH	ELMERSMITH	0.08
FARMERCITY	FARMERCITY	0.06
G-007	G-007	0.22
GIBSON	GIBSON	0.03
HAMLET	HAMLET	0.14
NEWTON	NEWTON	0.22
O-066	O-066	3.31
PRAIRIE	PRAIRIE	0.41
RENSSELAER	RENSSELAER	0.23

Bus #	Bus	MW Impact
SANTEETLA	SANTEETLA	0.02
SMITHLAND	SMITHLAND	0.03
TATANKA	TATANKA	0.1
TILTON	TILTON	0.1
TRIMBLE	TRIMBLE	0.09
TVA	TVA	0.26
UNIONPOWER	UNIONPOWER	0.11

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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
629708	219108	CUTHBERT	PSE&G	219125	CAMDEN	PSE&G	1	PS_P1-2_U-2299	single	771.0	104.87	105.71	DC	14.53

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.87
219124	CAMDEN_STG	3.59
219126	CAMDEN_CTG	4.41
219128	GLOUCSTR_26	1.94
219229	EAGLEPT_G3	3.1
219230	EAGLEPT_G1	4.59
219231	EAGLEPT_G2	4.59
227801	ONTC&DCT	3.97
227881	GRENWCHG	0.05
228304	LOGAN	7.1
228306	PCLP STM	1.87
228307	PCLP GT	1.87
228309	CCLP NUG	6.48
228334	MANNMILG	0.22
228343	QUINTN#1	0.05
228351	V2-046C	0.18
228400	MICK 1CT	1.49
228423	Q-090 2	29.14
228471	VALERO1	0.51
228472	VALERO2	0.35
228473	VALERO3	0.35
228484	VALERO4	0.3
228720	V2-035C	0.02
291995	U4-036 C	0.09
292104	V1-030 C6	0.03
292194	V1-030 CE	0.12
903963	W3-175	9.64
905143	W4-016	56.82
914231	Y2-081 C OP1	1.48
914232	Y2-081 E OP1	0.08
915591	Y3-087 C OP1	0.07
917381	Z2-062	0.17

Bus #	Bus	MW Impact
917471	Z2-083	2.74
918891	AA1-108	4.1
924051	AB2-049 C	0.46
924531	AB2-102 C	26.32
924701	AB2-122 C	0.07
925391	AC1-010 C	0.79
931191	AB1-169A	75.77
936411	AD2-052 C	1.1
936491	AD2-064 C	0.06
936501	AD2-065 C	0.21
937011	AD2-135 C	0.07
938301	AE1-045 C	0.28
938311	AE1-046 C	0.28
938421	AE1-061 C	0.37
938431	AE1-062 C	0.5
938781	AE1-104 C O2	14.53
938871	AE1-115 C	1.76
939301	AE1-161 C	2.99
939501	AE1-179 C O2	4.57
939821	AE1-218 C O2	0.11
939831	AE1-219 C O2	0.26
939931	AE1-229 C O2	15.34
940001	AE1-240 C O2	3.72
BAYOU	BAYOU	0.41
BIG_CAJUN1	BIG_CAJUN1	0.63
BIG_CAJUN2	BIG_CAJUN2	1.26
BLUEG	BLUEG	2.01
CALDERWOOD	CALDERWOOD	0.21
CANNELTON	CANNELTON	0.12
CARR	CARR	0.43
CATAWBA	CATAWBA	0.13
CHEOAH	CHEOAH	0.19
CHILHOWEE	CHILHOWEE	0.07
CHOCTAW	CHOCTAW	0.42
COFFEEN	COFFEEN	0.21
COTTONWOOD	COTTONWOOD	1.62
DEARBORN	DEARBORN	0.37
DUCKCREEK	DUCKCREEK	0.46
EDWARDS	EDWARDS	0.21
ELMERSMITH	ELMERSMITH	0.21
FARMERCITY	FARMERCITY	0.14
GIBSON	GIBSON	0.08
HAMLET	HAMLET	0.41
NEWTON	NEWTON	0.55
PRAIRIE	PRAIRIE	1.03
RENSSELAER	RENSSELAER	0.34
SANTEETLA	SANTEETLA	0.06
SMITHLAND	SMITHLAND	0.08
TATANKA	TATANKA	0.25
TILTON	TILTON	0.25
TRIMBLE	TRIMBLE	0.22
TVA	TVA	0.68

Bus #	Bus	MW Impact
UNIONPOWER	UNIONPOWER	0.3

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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
629786	219110	GLOUCSTR	PSE&G	219753	CUTHBERT_2	PSE&G	1	PS_P1-2_D-2282	single	771.0	102.51	103.25	DC	12.88

Bus #	Bus	MW Impact
213400	COVANTA DELA	1.66
219124	CAMDEN_STG	3.18
219126	CAMDEN_CTG	3.91
219128	GLOUCSTR_26	1.72
219229	EAGLEPT_G3	2.75
219230	EAGLEPT_G1	4.07
219231	EAGLEPT_G2	4.07
227801	ONTC&DCT	3.52
227881	GRENWCHG	0.05
228304	LOGAN	6.29
228306	PCLP STM	1.66
228307	PCLP GT	1.65
228309	CCLP NUG	5.75
228334	MANNMILG	0.2
228343	QUINTN#1	0.04
228351	V2-046C	0.16
228400	MICK 1CT	1.32
228423	Q-090 2	25.82
228471	VALERO1	0.45
228472	VALERO2	0.31
228473	VALERO3	0.31
228484	VALERO4	0.26
228720	V2-035C	0.02
291995	U4-036 C	0.08
292104	V1-030 C6	0.02
292194	V1-030 CE	0.1
903963	W3-175	8.54
905143	W4-016	50.35
914231	Y2-081 C OP1	1.31
914232	Y2-081 E OP1	0.07
915591	Y3-087 C OP1	0.06
917381	Z2-062	0.15
917471	Z2-083	2.43
918891	AA1-108	3.64
924051	AB2-049 C	0.41
924531	AB2-102 C	23.33
924701	AB2-122 C	0.06
925391	AC1-010 C	0.7

Bus #	Bus	MW Impact
931191	AB1-169A	67.16
936411	AD2-052 C	0.97
936491	AD2-064 C	0.05
936501	AD2-065 C	0.18
937011	AD2-135 C	0.06
938301	AE1-045 C	0.24
938311	AE1-046 C	0.24
938421	AE1-061 C	0.32
938431	AE1-062 C	0.45
938781	AE1-104 C O2	12.88
938871	AE1-115 C	1.56
939301	AE1-161 C	2.65
939501	AE1-179 C O2	4.05
939821	AE1-218 C O2	0.1
939831	AE1-219 C O2	0.23
939931	AE1-229 C O2	13.6
940001	AE1-240 C O2	3.3
BAYOU	BAYOU	0.36
BIG_CAJUN1	BIG_CAJUN1	0.55
BIG_CAJUN2	BIG_CAJUN2	1.12
BLUEG	BLUEG	1.78
CALDERWOOD	CALDERWOOD	0.18
CANNELTON	CANNELTON	0.11
CARR	CARR	0.38
CATAWBA	CATAWBA	0.11
CHEOAH	CHEOAH	0.17
CHILHOWEE	CHILHOWEE	0.06
CHOCTAW	CHOCTAW	0.37
COFFEEN	COFFEEN	0.19
COTTONWOOD	COTTONWOOD	1.43
DEARBORN	DEARBORN	0.33
DUCKCREEK	DUCKCREEK	0.41
EDWARDS	EDWARDS	0.19
ELMERSMITH	ELMERSMITH	0.19
FARMERCITY	FARMERCITY	0.12
GIBSON	GIBSON	0.07
HAMLET	HAMLET	0.36
NEWTON	NEWTON	0.49
PRAIRIE	PRAIRIE	0.91
RENSSELAER	RENSSELAER	0.3
SANTEETLA	SANTEETLA	0.05
SMITHLAND	SMITHLAND	0.07
TATANKA	TATANKA	0.22
TILTON	TILTON	0.23
TRIMBLE	TRIMBLE	0.2
TVA	TVA	0.6
UNIONPOWER	UNIONPOWER	0.27

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
629207	228502	MNOTLA 1	AE	228500	LANDIS	AE	1	Base Case	single	230.0	117.86	126.29	DC	19.37

Bus #	Bus	MW Impact
227801	ONTC&DCT	4.74
227842	MARINGEN	0.07
227927	V4-067C	0.01
228014	PVILLEG	0.08
292062	V1-021 C	0.02
292966	U2-045 C	0.05
902091	W1-130C	0.37
902431	W2-030 C	0.07
905531	W4-063 C	0.01
913341	Y1-077	7.07
924701	AB2-122 C	0.07
930001	AB1-001 C	0.02
931191	AB1-169A	344.85
938301	AE1-045 C	1.25
938311	AE1-046 C	1.25
938421	AE1-061 C	3.16
938781	AE1-104 C O2	19.37
939301	AE1-161 C	4.07
BAYOU	BAYOU	0.03
BIG_CAJUN1	BIG_CAJUN1	0.05
BIG_CAJUN2	BIG_CAJUN2	0.1
BLUEG	BLUEG	0.16
CALDERWOOD	CALDERWOOD	0.02
CANNELTON	CANNELTON	0.01
CATAWBA	CATAWBA	0.01
CBM-N	CBM-N	0.06
CHEOAH	CHEOAH	0.02
CHILHOWEE	CHILHOWEE	0.01
CHOCTAW	CHOCTAW	0.03
COFFEEN	COFFEEN	0.02
COTTONWOOD	COTTONWOOD	0.13
DEARBORN	DEARBORN	0.03
DUCKCREEK	DUCKCREEK	0.04
EDWARDS	EDWARDS	0.02
ELMERSMITH	ELMERSMITH	0.02
FARMERCITY	FARMERCITY	0.01
G-007A	G-007A	1.02
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.04
NEWTON	NEWTON	0.04
NYISO	NYISO	0.26
O-066A	O-066A	0.15
PRAIRIE	PRAIRIE	0.08
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.01
TATANKA	TATANKA	0.02
TILTON	TILTON	0.02

Bus #	Bus	MW Impact
TRIMBLE	TRIMBLE	0.02
TVA	TVA	0.06
UNIONPOWER	UNIONPOWER	0.03
VFT	VFT	0.87

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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
629260	228503	MNOTLA 2	AE	228502	MNOTLA 1	AE	1	AE_P1-2 CARD-CEDAR	single	311.0	101.85	108.63	DC	21.09

Bus #	Bus	MW Impact
227801	ONTC&DCT	5.19
227842	MARINGEN	0.08
227927	V4-067C	0.02
228014	PVILLEG	0.08
228202	CUMB CT	0.51
228203	P06	0.53
228711	V2-041C	0.01
292062	V1-021 C	0.03
292966	U2-045 C	0.05
902431	W2-030 C	0.07
905531	W4-063 C	0.01
913341	Y1-077	7.8
924531	AB2-102 C	11.83
924701	AB2-122 C	0.08
930001	AB1-001 C	0.02
931191	AB1-169A	348.68
938301	AE1-045 C	1.27
938311	AE1-046 C	1.27
938421	AE1-061 C	1.8
938781	AE1-104 C O2	21.09
939301	AE1-161 C	3.97
BAYOU	BAYOU	0.03
BIG_CAJUN1	BIG_CAJUN1	0.05
BIG_CAJUN2	BIG_CAJUN2	0.1
BLUEG	BLUEG	0.16
CALDERWOOD	CALDERWOOD	0.02
CANNELTON	CANNELTON	0.01
CARR	CARR	0.01
CATAWBA	CATAWBA	0.01
CHEOAH	CHEOAH	0.02
CHILHOWEE	CHILHOWEE	0.01
CHOCTAW	CHOCTAW	0.03
COFFEEN	COFFEEN	0.02
COTTONWOOD	COTTONWOOD	0.13

Bus #	Bus	MW Impact
DEARBORN	DEARBORN	0.03
DUCKCREEK	DUCKCREEK	0.04
EDWARDS	EDWARDS	0.02
ELMERSMITH	ELMERSMITH	0.02
FARMERCITY	FARMERCITY	0.01
G-007A	G-007A	0.22
GIBSON	GIBSON	0.01
HAMLET	HAMLET	0.04
NEWTON	NEWTON	0.04
PRAIRIE	PRAIRIE	0.08
RENSSELAER	RENSSELAER	0.0
SANTEETLA	SANTEETLA	0.0
SMITHLAND	SMITHLAND	0.01
TATANKA	TATANKA	0.02
TILTON	TILTON	0.02
TRIMBLE	TRIMBLE	0.02
TVA	TVA	0.05
UNIONPOWER	UNIONPOWER	0.02

Contingency Name

Contingency Name	Contingency Definition
PS_P2-3_DEAN5_5-6	CONTINGENCY 'PS_P2-3_DEAN5_5-6' DISCONNECT BRANCH FROM BUS 200006 TO BUS 218306 CKT 2/* BRANCHBURG TX -2 TRIP LINE FROM BUS 200006 TO BUS 200028 CKT 1 /* DEANS TO WINSOR END
PS_P1-2_U-2299_LT	CONTINGENCY 'PS_P1-2_U-2299_LT' /* CAMDEN CUTBERTH DISCONNECT BUS 219754 /* CUTHBERTH SECTION 3 CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTHBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219676 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219724 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWNSIDE END
PS_P1-2_D-2282_LT	CONTINGENCY 'PS_P1-2_D-2282_LT' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE END

Contingency Name	Contingency Definition
PS_P7-1_V2274+P2242_LT	CONTINGENCY 'PS_P7-1_V2274+P2242_LT' /* EAGLE POINT - GLOUCESTER & DEPTFORD - GLOUCESTER DISCONNECT BUS 219757 /* DEPTFORD SECTION 2 DISCONNECT BUS 219760 /* EAGLE POINT SECTION 4 TRIP LINE FROM BUS 219110 TO BUS 219128 CKT 1 /* DISCONNECT TRANSFORMER 26KV CKT 1 CLOSE LINE FROM BUS 219255 TO BUS 219256 CKT Z /* DEPTFORD CLOSE LINE FROM BUS 219180 TO BUS 219181 CKT Z /* DEPTFORD MOVE 8 MW LOAD FROM BUS 219180 TO BUS 219162 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T1 MOVE 8 MW LOAD FROM BUS 219181 TO BUS 219163 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T2 MOVE 8 MW LOAD FROM BUS 219255 TO BUS 219162 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T1 MOVE 8 MW LOAD FROM BUS 219256 TO BUS 219163 /* INTERSTATION TIE TRANSFER LOAD FROM DEPTFORD TO BEAVERBK T2 END
PS_P2-3_CUTB_3-4_LT	CONTINGENCY 'PS_P2-3_CUTB_3-4_LT' DISCONNECT BUS 219754 /* CUTHBERTH SECTION 3 DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTHBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219629 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWN SIDE END
PS_P2-3_CUTB_1-4_LT	CONTINGENCY 'PS_P2-3_CUTB_1-4_LT' DISCONNECT BUS 219108 /* CUTHBERTH SECTION 1 DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTHBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219629 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWN SIDE END
Base Case	

Contingency Name	Contingency Definition
JC-P2-3-JCC-230-7A	CONTINGENCY 'JC-P2-3-JCC-230-7A' /* LAKEWOOD - LARRABEE (K2011) & OCEAN POWER PEAKING 230 KV DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 2 REMOVE MACHINE 1 FROM BUS 206366 REMOVE MACHINE 2 FROM BUS 206367 DISCONNECT BUS 206366 DISCONNECT BUS 206367 END
JC-P2-3-JCC-230-12	CONTINGENCY 'JC-P2-3-JCC-230-12' /* MANITOU - LEISURE VILLAGE (C2029) & OYSTER CK (N1028) 230 KV DISCONNECT BRANCH FROM BUS 206323 TO BUS 206296 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206276 CKT 3 SET BUS 206296 LOAD TO 0 MW DISCONNECT BUS 206296 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 1 END
PS_P1-2_C-2308	CONTINGENCY 'PS_P1-2_C-2308' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219753 /* CUTHBERTH SECTOIN 2 END
PS_P1-2_5022	CONTINGENCY 'PS_P1-2_5022' /* DEANS TO WINDSOR TRIP LINE FROM BUS 200006 TO BUS 200028 CKT 1 /* DEANS TO WINDSOR END
JC-P2-3-JCC-230-13D	CONTINGENCY 'JC-P2-3-JCC-230-13D' /* LARRABEE SE BUS & LARRABEE-LAKEWOOD (K2011) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206274 CKT 4 /* 28LARRABEE 230 28LARR AB 35 REMOVE SWSHUNT FROM BUS 206294 BLOCK 1 STEP 1 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 1 /* 28LARRABEE 230 28LAKEWOOD 230 END
JC-P7-1-JCC-230-10A	CONTINGENCY 'JC-P7-1-JCC-230-10A' /* LAKEWOOD - LARRABEE 230 KV LINES DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 2 DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 1 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206274 CKT 3 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 /* LARRABEE 12 FUTURE BREAKER AND A HALF SET BUS 206294 LOAD TO 38 MW /* LARRABEE 8 FUTURE BREAKER AND A HALF END
JC-P2-3-JCC-230-13B	CONTINGENCY 'JC-P2-3-JCC-230-13B' /* LARRABEE-LAKEWOOD (Z2026) & LARRABEE SE BUS 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 /* 28LARRABEE 230 28LARR CD 35 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 2 /* 28LARRABEE 230 28LAKEWOOD 230 REMOVE LOAD 8 FROM BUS 206294 /* 28LARRABEE 230 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206274 CKT 4 /* 28LARRABEE 230 28LARR AB 35 REMOVE SWSHUNT FROM BUS 206294 BLOCK 1 STEP 1 END

Contingency Name	Contingency Definition
JC-P2-3-JCC-230-13A	CONTINGENCY 'JC-P2-3-JCC-230-13A' /* LARRABEE-SMITHBURG (D2004) & LARRABEE-LAKEWOOD (Z2026) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 1 /* 28LARRABEE 230 28SMITHBRG 230 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 2 /* 28LARRABEE 230 28LAKEWOOD 230 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206275 CKT 12 /* 28LARRABEE 230 28LARR CD 35 REMOVE LOAD 8 FROM BUS 206294 /* 28LARRABEE 230 END
AE_P7-1 AE13TOWER	CONTINGENCY 'AE_P7-1 AE13TOWER' DISCONNECT BRANCH FROM BUS 228500 TO BUS 228502 CKT 1 /* LANDIS TO MINO 138 KV DISCONNECT BRANCH FROM BUS 228002 TO BUS 227900 CKT 1 /* ORCH TO CARD 230 KV END
JC-P2-3-JCC-230-13H	CONTINGENCY 'JC-P2-3-JCC-230-13H' /* LARRABEE-LAKEWOOD (K2011) & LARRABEE-SMITHBURG (H2008) 230 KV DISCONNECT BRANCH FROM BUS 206294 TO BUS 206323 CKT 1 /* 28LARRABEE 230 28LAKEWOOD 230 DISCONNECT BRANCH FROM BUS 206294 TO BUS 206309 CKT 1 /* 28LARRABEE 230 28SMITHBRG 230 DISCONNECT BRANCH FROM BUS 200017 TO BUS 206309 CKT 4 /* SMITHBRG 500 28SMITHBRG 230 END
PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B PECO_P2-2_CHI230B1 \$ B	CONTINGENCY 'PECO_P2-2_CHI230B1/* \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B' DISCONNECT BUS 213489 /* CHICHST1 230.00 \$ DELCO \$ PECO_P2-2_CHI230B1 \$ B END
JC-P2-3-JCC-230-9A	CONTINGENCY 'JC-P2-3-JCC-230-9A' /* LAKEWOOD-LEISURE VILAGE(D2030) & LEISURE VILAGE-MANITOU(A2027) DISCONNECT BRANCH FROM BUS 206323 TO BUS 206295 CKT 1 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206276 CKT 4 SET BUS 206295 LOAD TO 0 MW DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 DISCONNECT BUS 206295 END
AE_P7-1 W2275_O2241	CONTINGENCY 'AE_P7-1 W2275_O2241' /* DOUBLE CIRCUIT TOWER W-2275(MICKLETON - DEPTFORD) AND O-2241(MICKLETON - THOROFARE) TRIP BRANCH FROM BUS 219762 TO BUS 228401 CKT 1 /* TRIP O-2241(MICKLETON - THOROFARE) 230KV TRIP BRANCH FROM BUS 219121 TO BUS 228401 CKT 1 /* TRIP (MICKLETON - THOROFARE #2) 230KV END
JC-P7-1-JCC-230-12	CONTINGENCY 'JC-P7-1-JCC-230-12' /* LEISURE VILLAGE-MANITOU A2027 & C2029 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206276 CKT 3 SET BUS 206296 LOAD TO 0 MW END

Contingency Name	Contingency Definition
AE_P4-2 AE33	CONTINGENCY 'AE_P4-2 AE33' /*LEWIS TO CARDIFF BREAKER V DISCONNECT BRANCH FROM BUS 227902 TO BUS 227913 CKT 1 /*LEWIS CARDIFF 138 138 DISCONNECT BRANCH FROM BUS 227902 TO BUS 227903 CKT 1 /*LEWIS MILL #1 138 138 DISCONNECT BRANCH FROM BUS 227902 TO BUS 227918 CKT 1 /*LEWIS 138 69 T1 END
PS_P1-2_D-2282	CONTINGENCY 'PS_P1-2_D-2282' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219755 /* BUS SECTION 4 CUTHBERT END
PS_P1-2_Z-2305_LT	CONTINGENCY 'PS_P1-2_Z-2305_LT' /* CAMDEN TO CUTBERTH DISCONNECT BUS 219108 /* CUTBERTH SECTION 1 CLOSE LINE FROM BUS 219176 TO BUS 219179 CKT Z /* CUTBERTH MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219170 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO CINN T2 MOVE 8 MW LOAD FROM BUS 219176 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219179 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO LAWNSIDE END
PS_P1-2_Z-2305	CONTINGENCY 'PS_P1-2_Z-2305' /* CAMDEN TO CUTBERTH DISCONNECT BUS 219108 /* CUTBERTH SECTION 1 END
AE_P1-2 OY CK-CEDAR	CONTINGENCY 'AE_P1-2 OY CK-CEDAR' OPEN LINE FROM BUS 206302 TO BUS 227955 CIRCUIT 1 / END
PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK	CONTINGENCY 'PECO_P4_CHICH045/* \$ DELCO \$ PECO_P4_CHICH045 \$ STBK' DISCONNECT BUS 213489 /* CHICHST1 230.00 \$ DELCO \$ PECO_P4_CHICH045 \$ STBK DISCONNECT BUS 213627 /* FOULK8 230.00 \$ DELCO \$ PECO_P4_CHICH045 \$ STBK END
PS_P1-2_U-2299	CONTINGENCY 'PS_P1-2_U-2299' /* CAMDEN CUTBERTH DISCONNECT BUS 219754 /* CUTHBERTH SECTION 3 END
AE_P1-2 LANDIS-MINO	CONTINGENCY 'AE_P1-2 LANDIS-MINO' OPEN LINE FROM BUS 228500 TO BUS 228502 CIRCUIT 1 / END
AE_P1-2 CARD-CEDAR	CONTINGENCY 'AE_P1-2 CARD-CEDAR' OPEN LINE FROM BUS 227900 TO BUS 227955 CIRCUIT 1 / END

Contingency Name	Contingency Definition
PS_P1-2_C-2308_LT	CONTINGENCY 'PS_P1-2_C-2308_LT' /* CUTHBERT TO GLOUCESTER DISCONNECT BUS 219753 /* CUTHBERTH SECTOIN 2 CLOSE LINE FROM BUS 219177 TO BUS 219178 CKT Z /* CUTHBERT MOVE 8 MW LOAD FROM BUS 219178 TO BUS 219678 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE MOVE 8 MW LOAD FROM BUS 219177 TO BUS 219677 /* INTERSTATION TIE TRANSFER LOAD FROM CUTHBERT TO MAPLE SHADE END
JC-P2-3-JCC-230-11	CONTINGENCY 'JC-P2-3-JCC-230-11' /* LEISURE VILLAGE - MANITOU & MANITOU - OYSTER CRK 230 KV DISCONNECT BRANCH FROM BUS 206295 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206302 CKT 2 DISCONNECT BRANCH FROM BUS 206297 TO BUS 206277 CKT 7 END
JC-P2-3-JCC-230-10A	CONTINGENCY 'JC-P2-3-JCC-230-10A' /* LAKEWOOD-LEISURE VILAGE(U2021) & LEISURE VILAGE-MANITOU(C2029) DISCONNECT BRANCH FROM BUS 206323 TO BUS 206296 CKT 1 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206297 CKT 1 DISCONNECT BRANCH FROM BUS 206323 TO BUS 206282 CKT 6 DISCONNECT BRANCH FROM BUS 206296 TO BUS 206276 CKT 3 SET BUS 206296 LOAD TO 0 MW DISCONNECT BUS 206296 DISCONNECT BUS 206999 DISCONNECT BUS 207110 DISCONNECT BUS 207010 DISCONNECT BUS 207111 END
JC-P2-3-JCC-230-8A	CONTINGENCY 'JC-P2-3-JCC-230-8A' /* LAKEWOOD-LARRABEE (K2011) & LEISURE VILLAGE (D2030) 230 KV DISCONNECT BRANCH FROM BUS 206323 TO BUS 206295 CKT 1 DISCONNECT BRANCH FROM BUS 206295 TO BUS 206276 CKT 4 SET BUS 206295 LOAD TO 0 MW DISCONNECT BRANCH FROM BUS 206323 TO BUS 206294 CKT 2 END