Generation Interconnection

Feasibility Study Report

for

Queue Project AE2-077

PIERPOINT-FREEPORT

26.6 MW Capacity / 70 MW Energy

July, 2019

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1 Preface

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

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

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

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

PJM utilizes manufacturer models to ensure the performance of turbines and inverters is properly captured during the simulations performed for stability verification and, where applicable, for compliance with low voltage ride through requirements. Turbine manufacturers provide such models to their customers. The list of manufacturer models PJM has already validated is contained in Attachment B of Manual 14G. Manufacturer models may be updated from time to time, for various reasons such as to reflect changes to the control systems or to more accurately represent the capabilities turbines or inverters and controls which are currently available in the field. Additionally, as new turbine models are developed, turbine manufacturers provide such new models which must be used in the conduct of these studies. PJM needs adequate time to evaluate the new models in order to reduce delays to the System Impact Study process timeline for the Interconnection Customer as well as other Interconnection Customers in the study group. Therefore, PJM will require that any Interconnection Customer with a new manufacturer model must supply that model to PJM, along with a $10,000 fully refundable deposit, no later than three (3) months prior to the starting date of the System Impact Study (See Section 4.3 for starting dates) for the Interconnection Request which shall specify the use of the new model. The Interconnection Customer will be required to submit a completed dynamic model study request form (Attachment B-1 of Manual 14G) in order to document the request for the study.

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

2 General

The Interconnection Customer (IC), has proposed a Solar generating facility located in Winnebago County, Illinois. The installed facilities will have a total capability of 70 MW with 26.6 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is December 31, 2021. This study does not imply a TO commitment to this in-service date.

Queue Number	**AE2-077**
Project Name	PIERPOINT-FREEPORT
State	Illinois
County	Winnebago
Transmission Owner	ComEd
MFO	70
MWE	70
MWC	26.6
Fuel	Solar
Basecase Study Year	2022

2.1 Primary Point of Interconnection

Queue Position AE2-077, a 70 MW solar generator facility, proposes to interconnect with the ComEd transmission system by tying to 'Pierpoint-Freeport 138kV line 19414, approximately 2.1 miles from Pierpoint..

2.2 Cost Summary

The AE2-077 project will be responsible for the following costs:

Description	Total Cost
Attachment Facilities	$1,000,000
Direct Connection Network Upgrade	$17,000,000
Non Direct Connection Network Upgrades	$3,000,000
Total Costs	$21,000,000

In addition, the AE2-077 project may be responsible for a contribution to the following costs

Description	Total Cost
System Upgrades	$51,800,000

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

3 Transmission Owner Scope of Work

4 Attachment Facilities

The generator leads for AE2-077 will interconnect to a new 138 kV Interconnection Substation, approximately 2.1 mile from Pierpoint (see details in Direct Connection section below). The required Attachment Facilities are one 138 kV line MOD, one dead-end structure and one set of revenue-metering as shown in the one-line diagram.

Scope of Work	Cost Estimate
Installation of one 138 kV line MOD, one dead-end structure and one set of revenue metering (see notes below on cost estimate)	$ 1,000,000

5 Direct Connection Cost Estimate

In order to accommodate interconnection of AE2-077, a new 138 kV Interconnection Substation would need to be built looping in the 138 kV line 19414 between TSS 162 Pierpoint and TDC 390 S. Pecatonica, as shown in the one-line diagram below.

The scope of work includes installation of three 138 kV circuit breakers in "breaker-and-a-half" bus configuration and tie in the Interconnection Substation to the 138 kV line 19414 2001 between TSS 162 Pierpoint and TDC 390 S. Pecatonica, as shown in the one-line diagram below.

The Interconnection Customer is responsible for constructing all the facilities on the Interconnection Customer side of the Point of Interconnection (POI). It is assumed for the purposes of this report that the IC will obtain the site for the Interconnection Substation and right-of-way between the Interconnection Substation and the 138kV transmission line.

In the event that the IC exercises the option to build the Interconnecting Substation, the IC will be required to construct all interconnection facilities that will be turned over to ComEd in accordance with ComEd published standards and the PJM Tariff.

ComEd would design, engineer and construct the tie in of the Interconnection Substation to 138 kV Line 19414. The preliminary cost estimate for Direct Connection Network Upgrade is given in the following tables.

For Option to Build Direct Connection cost estimates:

Scope of Work	Cost Estimate
Installation of a new 138 kV substation as described above	N/A
Transmission line tie in work (foundations, structures, conductors)	$2,000,000
ComEd oversight and testing	$1,500,000
Total Cost Estimate (see notes below on cost estimate)	$3,500,000

For ComEd building the interconnecting substation cost estimates:

Scope of Work	Cost Estimate
Installation of a new 138 kV substation as described above	$ 15,000,000
Transmission line tie in work (foundations, structures, conductors)	$ 2,000,000
Total Cost Estimate (see notes below on cost estimate)	$ 17,000,000

6 Non-Direct Connection Cost Estimate

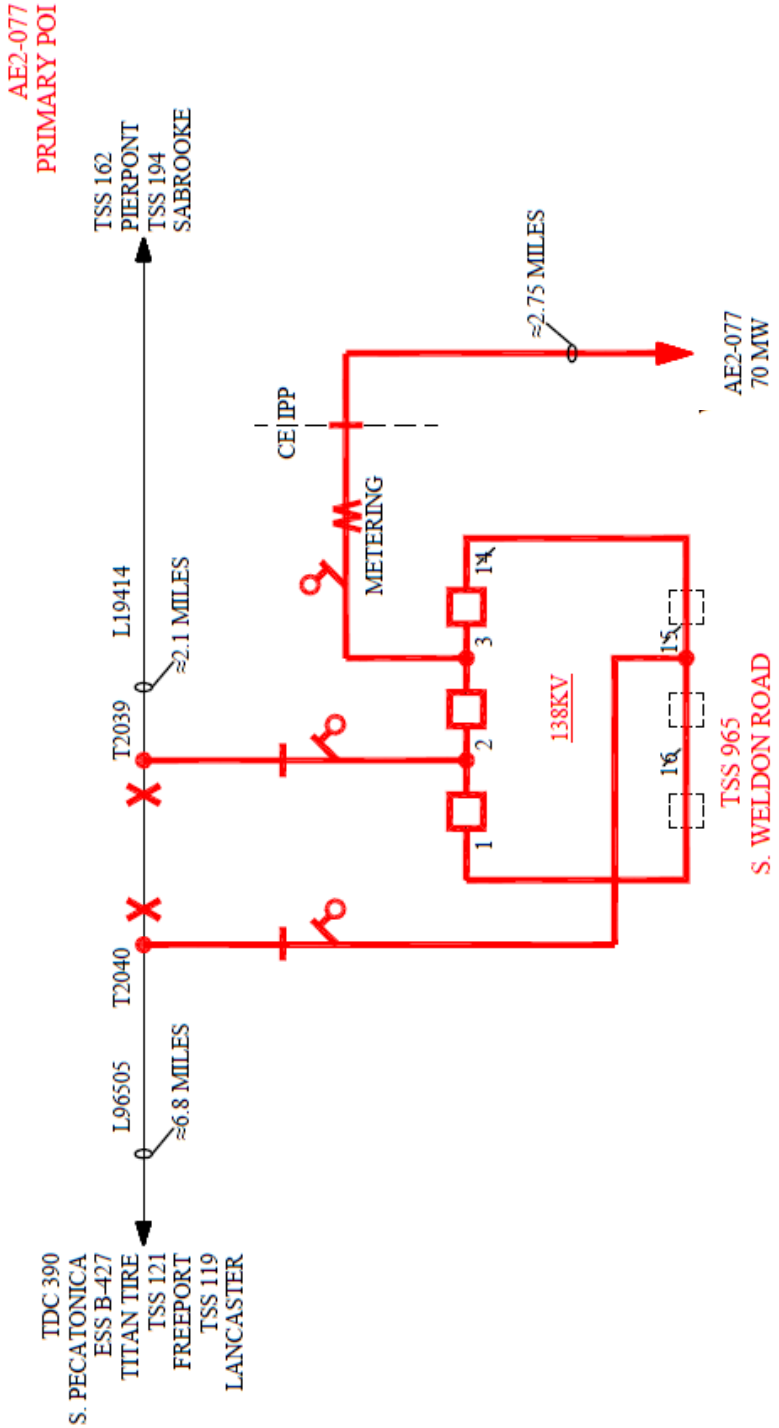
The integration of the new 138kV Interconnection Substation would require relay, communications and SCADA upgrades at the remote ends of the 19414 line. The ComEd cost is given below:

Scope of Work	Cost Estimate
Total Cost Estimate (see notes below on cost estimate)	$ 3,000,000

7 Schedule

Normally it takes about 24-months to engineer, design, procure material and construct 138 V facilities after ISA/ICSA are signed.

8 Transmission Owner Analysis



Notes on Cost Estimate:

1) These estimates are Order-of-Magnitude estimates of the costs that ComEd would bill to the customer for this interconnection. These estimates are based on a one-line electrical diagram of the project and the information provided by the Interconnection Customer.

2) There were no site visits performed for these estimates. There may be costs related to specific site related issues that are not identified in these estimates. The site reviews will be performed during the Facilities Study or during detailed engineering.

3) These estimates are not a guarantee of the maximum amount payable by the Interconnection Customer and the actual costs of ComEd's work may differ significantly from these estimates. Interconnection Customer will be responsible for paying actual costs of ComEd's work in accordance with Sections 212.1 and 217 of the PJM Open Access Transmission Tariff.

4) The Interconnection Customer is responsible for all engineering, procurement, testing and construction of all equipment on the Interconnection Customer's side of the POI.

5) These cost estimates do not include cost of acquiring right-of-way for the transmission line and purchasing any additional land, if needed, for the line terminations. The need and cost for acquiring property and associated legal costs will be investigation during Facilities Study for this project.

9 Interconnection Customer Requirements

In the event that the IC exercises the option to build the Interconnecting Substation, the IC will be required to construct all interconnection facilities that will be turned over to ComEd in accordance with ComEd published standards and the PJM Tariff.

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

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

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

10 Revenue Metering and SCADA Requirements

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

11 Network Impacts for Primary Point of Interconnection

The Queue Project AE2-077 was evaluated as a 70.0 MW (Capacity 26.6 MW) injection tapping the S. Pecatonica to Pierpoint 138kV line in the ComEd area. Project AE2-077 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AE2-077 was studied with a commercial probability of 0.53. Potential network impacts were as follows:

Summer Peak Load Flow

12 Generation Deliverability

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

None

13 Multiple Facility Contingency

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

None

14 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
2160609	270694	CHERRY VA; B	CE	270759	GARDEN PR; R	CE	1	COMED_P4_144-45-BT6-8__	breaker	1479.0	110.43	111.56	DC	16.58
2160610	270694	CHERRY VA; B	CE	270759	GARDEN PR; R	CE	1	COMED_P4_144-45-BT6-7__	breaker	1479.0	110.31	111.44	DC	16.58
2160510	270759	GARDEN PR; R	CE	270883	SILVER LK; R	CE	1	COMED_P4_144-45-BT6-8__	breaker	1479.0	124.92	126.05	DC	16.58

15 Potential Congestion due to Local Energy Deliverability

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

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

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC|DC	MW IMPACT
2160960	270694	CHERRY VA; B	CE	270759	GARDEN PR; R	CE	1	COMED_P1-2_345-L0626__B-R-C	operation	1479.0	109.87	111.03	DC	16.91
2160880	270759	GARDEN PR; R	CE	270883	SILVER LK; R	CE	1	COMED_P1-2_345-L0626__B-R-C	operation	1479.0	124.62	125.78	DC	16.91
2160882	270759	GARDEN PR; R	CE	270883	SILVER LK; R	CE	1	Base Case	operation	1201.0	113.52	114.64	DC	13.37

16 System Reinforcements

2160510	2	GARDEN PR; R 345.0 kV - SILVER LK; R 345.0 kV Ckt 1	ce-012 (21) : L15616 SSTE rating is 1568 MVA. The post contingency flow for this event exceeds the rating therefore upgrades are required. Reconductor 26.7 miles of 2338 kcmil. Mitigate sag limits. Upgrade relay package. Replace station conductor at both line terminals. Replace 2-345 kV breakers at TSS 138 Silver Lake. A preliminary estimate for the upgades is $32.4M with a estimated construction timeline of 36 months. Upon completion of all upgrades the new ratings will be 1461/1656/1909/1912 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : $32,400,000 Time Estimate : 36.0 Months	$32,400,000
2160609,2160610	1	CHERRY VA; B 345.0 kV - GARDEN PR; R 345.0 kV Ckt 1	ce-017 (28) : L15616 SSTE rating is 1568 MVA. The post contingency flow for this event exceeds the rating therefore an upgrade is required. The upgrade will be to re-conductor a portion of the line, perform sag mitigation on another portion of the line and station conductor upgrade at a line terminal. A preliminary estimate for the upgrades is $19.4M with a estimated construction time of 30 months. Upon completion the rating swill be 1248/1441/1667/1982 MVA (SN/SLTE/SSTE/SLD). Project Type : FAC Cost : $19,400,000 Time Estimate : 30.0 Months	$19,400,000

17 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.

17.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC|DC	MW IMPACT
2160610	270694	CHERRY VA; B	CE	270759	GARDEN PR; R	CE	1	COMED_P4_144-45-BT6-7__	breaker	1479.0	110.31	111.44	DC	16.58

Bus #	Bus	MW Impact
274656	BYRON ;1U	36.85
274657	BYRON ;2U	36.09
274760	LEE CO EC;1U	1.72
274765	LEE CO EC;6U	1.72
274822	ROCKFORD ;11	2.75
274823	ROCKFORD ;21	2.82
274824	ROCKFORD ;12	2.73
274856	ECOGROVE ;U1	0.52
274859	EASYR;U1 E	17.07
274860	EASYR;U2 E	17.07
290051	GSG-6; E	8.83
290108	LEEDK;1U E	17.54
290266	R-018	0.19
293516	O-009 E1	8.4
293517	O-009 E2	4.27
293518	O-009 E3	4.7
293715	O-029 E	10.59
293716	O-029 E	5.81
293717	O-029 E	5.34
294763	P-046 E	16.97
295109	WESTBROOK E	4.73
295111	SUBLETTE E	3.09
907361	X1-087	0.4
916221	Z1-073 E	4.55
916522	Z1-108 E	2.09
919221	AA1-146	20.12
919581	AA2-030	20.12
925161	AB2-173	3.59
925302	AB2-191 E	1.17

Bus #	Bus	MW Impact
926431	AC1-114	4.92
927511	AC1-113 1	2.46
927521	AC1-113 2	2.46
927531	AC1-185 1	1.07
927541	AC1-185 2	1.07
927551	AC1-185 3	1.07
927561	AC1-185 4	1.07
927571	AC1-185 5	1.07
927581	AC1-185 6	1.07
927591	AC1-185 7	1.07
927601	AC1-185 8	1.07
930481	AB1-089	139.39
932881	AC2-115 1	4.92
932891	AC2-115 2	4.92
932921	AC2-116	1.72
933341	AC2-147 C	1.24
933342	AC2-147 E	2.03
933911	AD1-013 C	1.54
933912	AD1-013 E	2.45
934401	AD1-064 C O1	6.69
934402	AD1-064 E O1	31.32
934431	AD1-067 C	0.11
934432	AD1-067 E	0.47
934651	AD1-096 C	1.62
934652	AD1-096 E	2.64
934701	AD1-098 C O1	5.94
934702	AD1-098 E O1	4.33
934971	AD1-129 C	1.29
934972	AD1-129 E	0.86
936791	AD2-102 C	24.0
936792	AD2-102 E	23.05
937001	AD2-134 C	2.31
937002	AD2-134 E	9.53
937311	AD2-172 C	4.45
937312	AD2-172 E	6.15
937531	AD2-214 C	4.54
937532	AD2-214 E	2.14
938861	AE1-114 C O1	5.61
938862	AE1-114 E O1	21.44
939051	AE1-134 1	1.56
939061	AE1-134 2	1.56
939691	AE1-199	1.99
939921	AE1-228 C O1	8.3
939922	AE1-228 E O1	5.53
940501	AE2-035 C	4.45
940502	AE2-035 E	6.15
940881	AE2-077 C	6.3
940882	AE2-077 E	10.28
941131	AE2-107 C	5.18
941132	AE2-107 E	3.45
950081	J384	2.65
950101	J390	84.68

Bus #	Bus	MW Impact
950142	J395 E	9.12
952431	J760	5.35
952511	J584 C	1.07
952512	J584 E	5.79
953111	J807 C	0.6
953112	J807 E	3.25
953681	J818	14.3
953691	J819 C	1.5
953692	J819 E	8.14
953901	J850	21.07
954001	J864	4.44
BLUEG	BLUEG	1.85
CANNELTON	CANNELTON	0.03
CARR	CARR	0.18
CATAWBA	CATAWBA	0.01
CBM-S1	CBM-S1	1.41
CBM-W1	CBM-W1	17.68
CBM-W2	CBM-W2	24.24
ELMERSMITH	ELMERSMITH	0.01
G-007	G-007	0.49
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.04
MEC	MEC	27.43
O-066	O-066	3.16
RENSSELAER	RENSSELAER	0.14
TILTON	TILTON	0.13
TRIMBLE	TRIMBLE	0.22
WEC	WEC	0.43

1.1 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
2160510	270759	GARDEN PR; R	CE	270883	SILVER LK; R	CE	1	COMED_P4_144-45-BT6-8__	breaker	1479.0	124.92	126.05	DC	16.58

Bus #	Bus	MW Impact
270859	PWR VTR EC;R	48.92
274656	BYRON ;1U	36.84
274657	BYRON ;2U	36.09
274822	ROCKFORD ;11	2.75
274823	ROCKFORD ;21	2.82
274824	ROCKFORD ;12	2.73
274856	ECOGROVE ;U1	0.52
274859	EASYR;U1 E	17.07
274860	EASYR;U2 E	17.07
290051	GSG-6; E	8.83
290108	LEEDK;1U E	17.54
290266	R-018	0.19
293516	O-009 E1	8.4
293517	O-009 E2	4.27
293518	O-009 E3	4.7
293715	O-029 E	10.59
293716	O-029 E	5.81
293717	O-029 E	5.34
294763	P-046 E	16.97
295109	WESTBROOK E	4.73
295111	SUBLETTE E	3.09
907361	X1-087	0.4
916221	Z1-073 E	4.56
916522	Z1-108 E	2.09
919221	AA1-146	20.12
919581	AA2-030	20.12
924471	AB2-096	171.23
925161	AB2-173	3.59
925302	AB2-191 E	1.17
926431	AC1-114	4.92
927511	AC1-113 1	2.46
927521	AC1-113 2	2.46
927531	AC1-185 1	1.07
927541	AC1-185 2	1.07
927551	AC1-185 3	1.07
927561	AC1-185 4	1.07
927571	AC1-185 5	1.07
927581	AC1-185 6	1.07
927591	AC1-185 7	1.07
927601	AC1-185 8	1.07
930481	AB1-089	139.39
932881	AC2-115 1	4.92

Bus #	Bus	MW Impact
932891	AC2-115 2	4.92
932921	AC2-116	1.72
933341	AC2-147 C	1.24
933342	AC2-147 E	2.03
933911	AD1-013 C	1.54
933912	AD1-013 E	2.45
934401	AD1-064 C O1	6.69
934402	AD1-064 E O1	31.32
934431	AD1-067 C	0.11
934432	AD1-067 E	0.47
934651	AD1-096 C	1.62
934652	AD1-096 E	2.64
934701	AD1-098 C O1	5.94
934702	AD1-098 E O1	4.33
934971	AD1-129 C	1.29
934972	AD1-129 E	0.86
936791	AD2-102 C	24.0
936792	AD2-102 E	23.05
937001	AD2-134 C	2.31
937002	AD2-134 E	9.53
937311	AD2-172 C	4.45
937312	AD2-172 E	6.15
937531	AD2-214 C	4.54
937532	AD2-214 E	2.14
938861	AE1-114 C O1	5.61
938862	AE1-114 E O1	21.44
939051	AE1-134 1	1.56
939061	AE1-134 2	1.56
939691	AE1-199	1.99
939921	AE1-228 C O1	8.3
939922	AE1-228 E O1	5.53
940501	AE2-035 C	4.45
940502	AE2-035 E	6.15
940881	AE2-077 C	6.3
940882	AE2-077 E	10.28
941131	AE2-107 C	5.18
941132	AE2-107 E	3.45
950081	J384	2.65
950101	J390	84.68
950142	J395 E	9.12
952431	J760	5.35
952511	J584 C	1.07
952512	J584 E	5.79
953111	J807 C	0.6
953112	J807 E	3.25
953681	J818	14.3
953691	J819 C	1.5
953692	J819 E	8.14
953901	J850	21.07
954001	J864	4.44
BLUEG	BLUEG	1.85
CANNELTON	CANNELTON	0.03

Bus #	Bus	MW Impact
CARR	CARR	0.18
CATAWBA	CATAWBA	0.01
CBM-S1	CBM-S1	1.41
CBM-W1	CBM-W1	17.68
CBM-W2	CBM-W2	24.24
ELMERSMITH	ELMERSMITH	0.01
G-007	G-007	0.49
GIBSON	GIBSON	0.04
HAMLET	HAMLET	0.04
MEC	MEC	27.43
O-066	O-066	3.16
RENSSELAER	RENSSELAER	0.14
TILTON	TILTON	0.13
TRIMBLE	TRIMBLE	0.22
WEC	WEC	0.43

Affected Systems

18 Affected Systems

18.1 LG&E

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

18.2 MISO

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

18.3 TVA

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

18.4 Duke Energy Progress

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

18.5 NYISO

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

Contingency Name	Contingency Definition
Base Case	
COMED_P4_144-45-BT6-8__	CONTINGENCY 'COMED_P4_144-45-BT6-8__' TRIP BRANCH FROM BUS 934400 TO BUS 270916 CKT 1 / AD1-064 TAP 345 WAYNE ; B 345 /* CONTINGENCY LINE ADDED FOR AE1 BUILD TRIP BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / ELEC JUNC; B 345 WAYNE ; B 345 TRIP BRANCH FROM BUS 270916 TO BUS 270917 CKT 1 / WAYNE ; B 345 WAYNE ; R 345 END
COMED_P1-2_345-L0626__B-R-C	CONTINGENCY 'COMED_P1-2_345-L0626__B-R-C' TRIP BRANCH FROM BUS 934400 TO BUS 270916 CKT 1 / AD1-064 TAP 345 WAYNE ; B 345 END
COMED_P4_144-45-BT6-7__	CONTINGENCY 'COMED_P4_144-45-BT6-7__' TRIP BRANCH FROM BUS 270730 TO BUS 270916 CKT 1 / ELEC JUNC; B 345 WAYNE ; B 345 TRIP BRANCH FROM BUS 270916 TO BUS 270917 CKT 1 / WAYNE ; B 345 WAYNE ; R 345 TRIP BRANCH FROM BUS 270916 TO BUS 270900 CKT 1 / WAYNE ; B 345 TOLLWAY ; B 345 DISCONNECT BUS 275228 / WAYNE ;1M 138 END

Short Circuit

19 Short Circuit

No issues identified.