



**Generation Interconnection
Feasibility Study Report
for
Queue Project AF1-072
ROCKY ROAD
17.2 MW Capacity / 17.2 MW Energy**

January, 2020

1 General

The Interconnection Customer (IC) has proposed an uprate to an existing natural gas generating facility located in Kane County, Illinois. This project requested an increase to the installed capability of 17.2 MWs with 17.2 MWs being recognized by PJM as Capacity. The proposed in-service date for this project was August 1, 2019. This study does not imply a TO commitment to this in-service date.

Queue Number	AF1-072
Project Name	ROCKY ROAD
State	Illinois
County	Kane
Transmission Owner	ComEd
MFO	410.8
MWE	17.2
MWC	17.2
Fuel	Natural Gas
Basecase Study Year	2023

1.1 Point of Interconnection

AF1-072 will interconnect with the ComEd transmission system at the Rocky Road 138kV substation 138 kV bus.

1.2 Cost Summary

The AF1-072 project will be responsible for the following costs:

Description	Total Cost
Attachment Facilities	\$0
Direct Connection Network Upgrade	\$0
Non Direct Connection Network Upgrades	\$0
Total Costs	\$0

In addition, the AF1-072 project may be responsible for a contribution to the following costs

Description	Total Cost
System Upgrades	\$0

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

2 Transmission Owner Scope of Work

In order to accommodate interconnection of AF1-072, there will be no electrical changes to the generators, transformers, etc., as shown in the one-line diagram below. Therefore, no Direct Connection Network Upgrade cost is anticipated.

3 Attachment Facilities

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

Description	Total Cost
Total Attachment Facility Costs	\$0

4 Direct Connection Cost Estimate

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

Description	Total Cost
Total Direct Connection Facility Costs	\$0

5 Non-Direct Connection Cost Estimate

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

Description	Total Cost
Total Non-Direct Connection Facility Costs	\$0

6 Schedule

There is no Transmission Owner scope of work.

7 Transmission Owner Analysis

In order to accommodate interconnection of AF1-072, there will be no electrical changes to the generators, transformers, etc., as shown in the one-line diagram below. Therefore, no Direct Connection Network Upgrade cost is anticipated.

8 Interconnection Customer Requirements

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

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

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

9 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.

10 Network Impacts

The Queue Project AF1-072 was evaluated as a 17.2 MW (Capacity 17.2 MW) injection at the Rocky Road 138kV substation in the ComEd area. Project AF1-072 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF1-072 was studied with a commercial probability of 0.53. Potential network impacts were as follows:

Summer Peak Load Flow

11 Generation Deliverability

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

None

12 Multiple Facility Contingency

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

None

13 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)

None

14 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.

None

15 System Reinforcements

None

16 Flow Gate Details

The following indices contain additional information about each flowgate presented in the body of the report. For each index, a description of the flowgate and its contingency was included for convenience. However, the intent of the appendix section is to provide more information on which projects/generators have contributions to the flowgate in question. Although this information is not used "as is" for cost allocation purposes, it can be used to gauge 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.

None

Affected Systems

17 Affected Systems

17.1 LG&E

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

17.2 MISO

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

17.3 TVA

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

17.4 Duke Energy Progress

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

17.5 NYISO

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

Short Circuit

18 Short Circuit

The following Breakers are overdutied:

None