PJM Generator Interconnection Request Feasibility Study Report

Queue Position U4-006
Mendota 138 kV

October 2009
DOCS No. 564619-v1

General

The Interconnection Customer (IC), BioPro Mendota IL, LLC has proposed a 20 MW Capacity generating unit located in the Mendota Business Park, Mendota, Illinois. The proposed in-service date for the generation is the fourth quarter of 2010.

This Generation Interconnection Feasibility Study assesses the practicality and cost of incorporating the proposed 20 MW generator into the Commonwealth Edison Company (ComEd) system. In accordance with the process set forth in PJM's Manual 14B, *PJM Regional Planning Process*, the study was limited to load flow analyses of probable contingencies. ComEd has provided preliminary estimates of the type, scope, cost, and lead time for construction of facilities. If the IC elects to pursue the System Impact Study, a more comprehensive analysis will be performed.

Direct Connection Requirements

Outlined below is the Transmission Owner's cost estimate for the material and labor to design and construct the attachment facility for the interconnection of this generator onto the Commonwealth Edison 138kV transmission line at the proposed point of interconnection.

Qty	Description	Cost
	Tap Line	$ 150,000
	Sub Grading	$ 200,000
	Expand Control Building	$ 250,000
1	Circuit Breaker	$ 500,000
	Sub Total: Sub Station	$1,100,000
2 ends	Relay Protection	$458,000
	SCADA	$235,000
	RTU	$62,500
	Sub Total: Relay and Protection	$755,000
	Metering Optical Sub-Total: Metering	$145,000
	Grand Total with Metering	**$2,000,000**

Note: This Estimate is an "Order of Magnitude" cost estimate only, since it is not supported by engineering analysis and is based only on a one-line electrical diagram of the project. Accordingly, this estimate is not a guaranty of the maximum amount payable by developer hereunder and the actual costs of ComEd's work may differ significantly from this estimate. Developer will be responsible for paying all actual costs of ComEd's work.

Network Impacts

The queue project U4-006 was studied as a 20MW (capacity) injection into the ComEd system at the Mendota 138kV facility. U4-006 was evaluated for compliance with reliability criteria for summer peak conditions in 2012. Potential network impacts were as follows:

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

No problems identified.

Multiple Facility Contingency
(Double Circuit Tower Line contingencies only for the full energy output. Stuck breaker and bus fault contingencies will be performed for the Impact Study)

No problems identified.

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)

1. The overload of the ComEd-owned 'Haumesser Road (Q57) to West DeKalb tap 138kV line 11323' is caused by a tower outage of the Byron – Lee County and the Byron – Nelson 345kV transmission lines. This project loads this line from 165.15% to 169.4% (DC power flow) of its emergency rating (261MVA). This project contributes approximately 11.1MW to this thermal violation. The Impact Study for this project will define the cost allocation, if any, for this generation project. Rough estimates to eliminate the overload by rebuilding 5.1 miles of 138kV line 11323 are around $9.9 million.

2. The Waterman tap to Waterman Bus 2 is caused by a tower contingency of 'Silver Lake to Cherry Valley 345kV line 15616 and Glidden to Cherry Valley 138kV line 15627'. This project loads this line from 153.82% to 158.48% (DC power flow) of its emergency rating (215MVA). This contingency is an outage of the Cherry Valley – U3-021 345kV line, the Cherry Valley – W. Dekalb 138kV line, the Glidden – Waterman 138kV line, the W. Dekalb – Glidden 138kV line, and the W. Dekalb T – W. Dekalb 138kV transmission line. This project contributes approximately 10.0MW to this thermal violation. The Impact Study for this project will define the cost allocation, if any, for this generation project. Rough estimates to eliminate the overload are around $0.65 million.

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

None.

Contribution to Previously Identified System Reinforcements

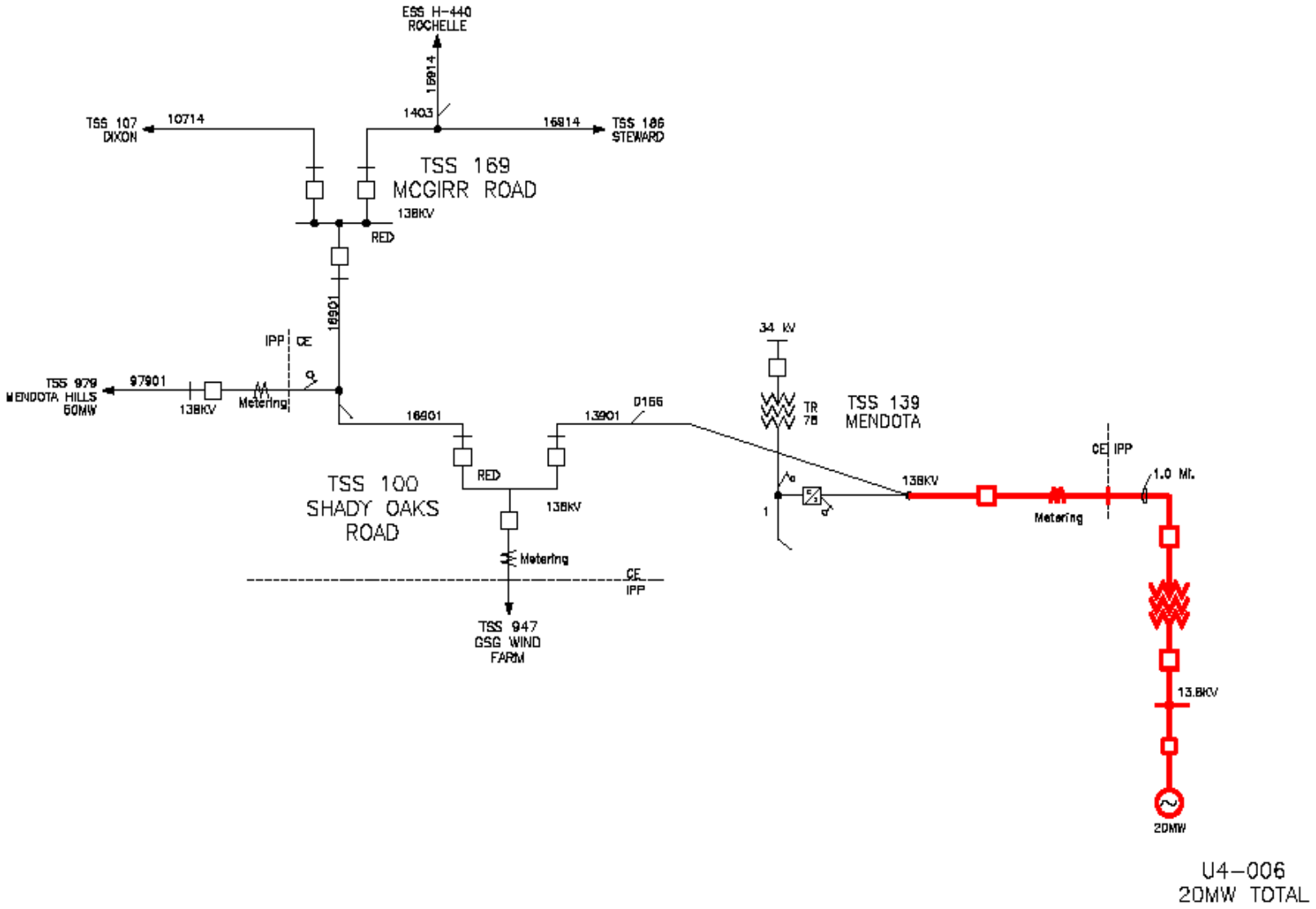
(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which will be calculated and reported for the Impact Study)

To be determined in System Impact Study.

Short Circuit

Not required.

Figure 1. Single Line Diagram



#U4-006 – 138kV
Generation Interconnection

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Short Circuit

Not required.

PJM Generator Interconnection Request Feasibility Study Report - PJM Web Version

Queue Position U4-006
Mendota 138 kV

April 30, 2009
DOCS No. 538545-v1

General

The Interconnection Customer (IC) has proposed a 20 MW Capacity generating unit located in the Mendota, Illinois. The proposed in-service date for the generation is the fourth quarter of 2010.

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