

***Generator Interconnection
Queue #P25
Mendota 34.5kV
(1 MW Energy / .2 MW Capacity)***

Feasibility / Impact Study Report

**March 2007
DOCS#410363**

General

FPC Services, Inc. has proposed the construction and interconnection of the P25 Mendota 34.5 kV generating project consisting of 1 MW of wind generation. The proposed plant consists of 1 – 1 MW Clipper wind turbine generator located in West Brooklyn, Lee County, Illinois. The wind farm interconnection is via the construction of a new radial 34.5 kV connection from the new P25 generating project to the previously proposed West Brooklyn L12_CE23 / N23 / N24 / N25 interconnection to the Mendota 34.5 kV substation (TSS 139).

Direct Connection Requirements

Scope of Direct Connection Work

It is proposed that the P25 - 1 MW project, will be interconnected to the 34 kV distribution system as shown in **Figure #1**. Since connection is to a non-jurisdictional distribution facility, all direct connection work will be performed via an interconnection agreement between FPC Services, Inc. and ComEd.

Revenue Metering and SCADA Requirements

PJM Requirements: The **P25 project** will be required to install equipment needed to provide revenue metering (KWH, KVARH) and real time data (KW, KVAR) for the **P25 project's** generating resource. See PJM Manuals M-01 and M-14D.

ComEd Requirements: The **P25 project** will be responsible for the installation of equipment to provide bi-directional revenue metering (KWH, KVARH) and real time data (KW, KVAR,) for the **P25 project's** generating resource. See ComEd's Applicable Standards available on the ComED website at the attached link:

http://www.exeloncorp.com/ourcompanies/comed/comedbiz/energy_rates/our_rates_and_prices.htm

Network Impacts

P25 was studied as an injection into the **34.5 bus at Mendota 34.5 kV substation (TSS139)**. Project **#P25** was evaluated for compliance with reliability criteria for summer peak conditions in 2010. Potential network impacts are as follows:

Generator Deliverability

No problem identified.

Multiple Facility Contingency

No problem identified.

Contribution to Previously Identified Overloads

None

Contribution to Previously Identified System Reinforcements

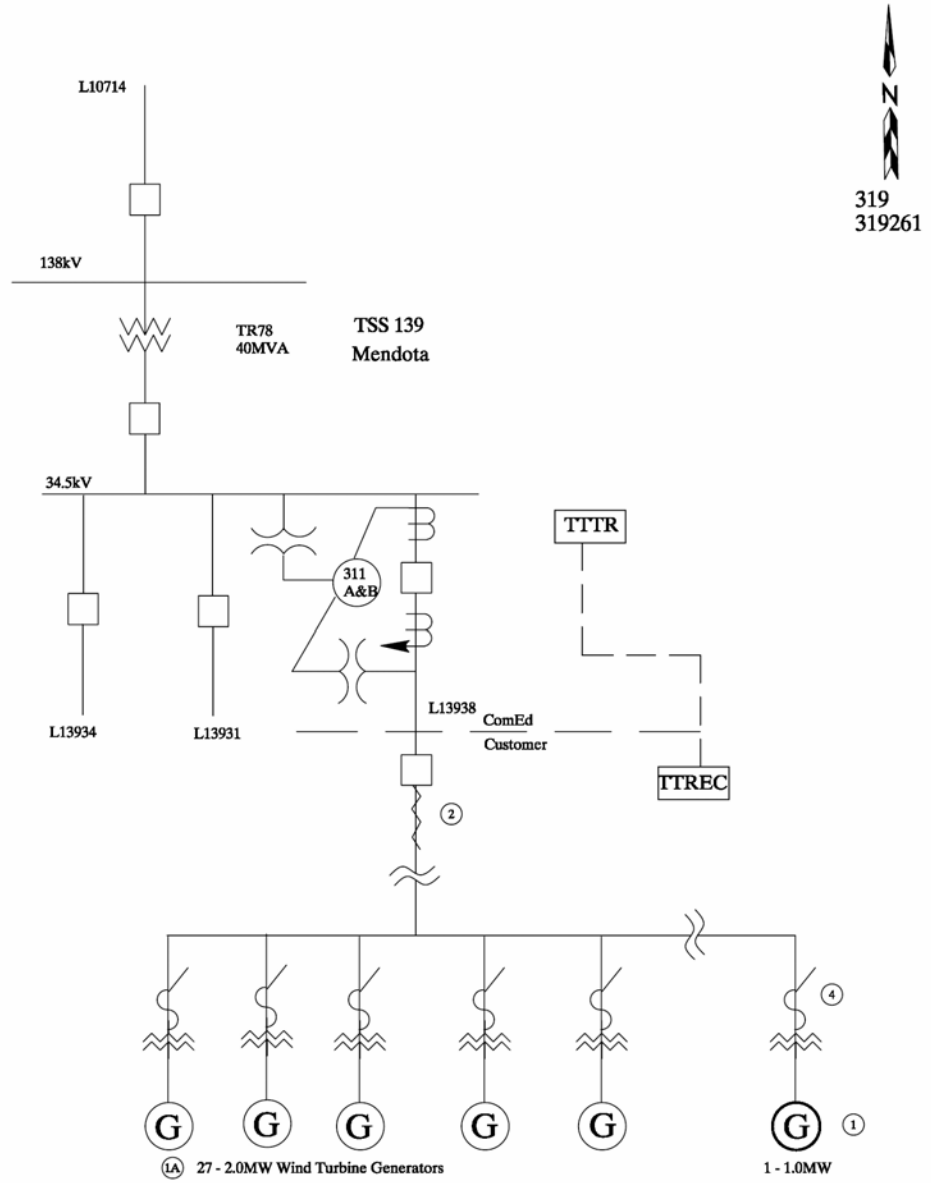
None

Short Circuit

No identified problems.

Stability Analysis

No analysis required.



PD # 7P061412

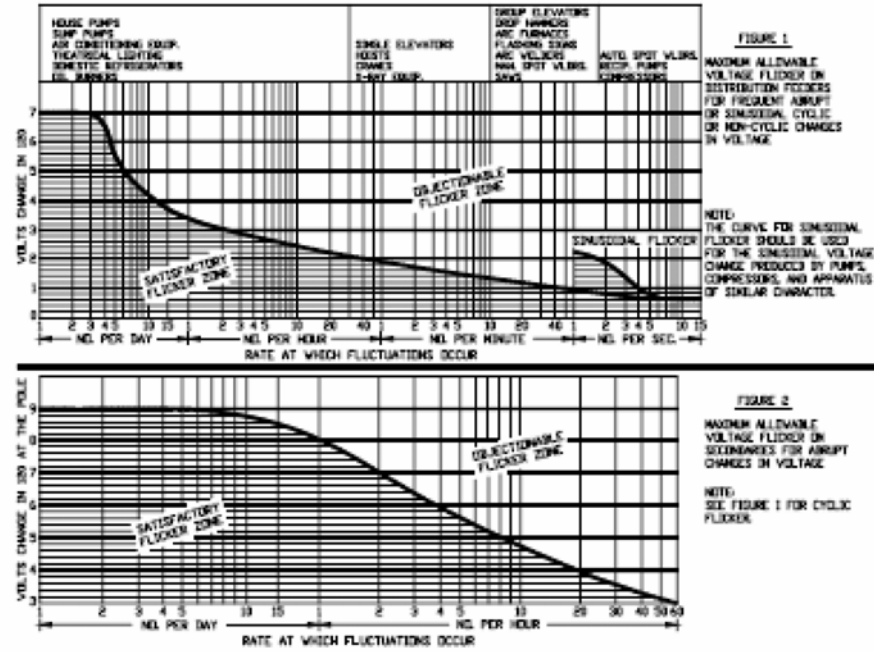
~NOTES~

- ① Customer is installing 1 - 1000kW @ .90 pf Wind Turbine generator.
- ①A Refer to PD 7P031401 for additional generation.
- ② Metering to be coordinated with system meter department and shall include registration of output.
- 3 Total Customer generation (Notes 1 and 1A) on line L13938 shall not exceed 54MW (May 1-Oct 31) or 55 MW (Nov 1-Apr 30).
- ④ Customer to connect generator to 34kV line L13938 built on PD 7P031401.
- 5 Minimum load at TSS139 is 6500kVA.
- 6 Maximum available fault current at TSS139 is 5200A 3-phase symmetrical at 34.5kV. With TR78 out of service, 675A 3-phase symmetrical at 34.5kV.
- 7 Customer to pay for all required work.
- 8 Customer's operation must conform to ComEd voltage flicker limitations (Page 2). If customer's operation causes objectionable flicker, the customer will be responsible for all costs to remedy the condition.
- 9 The customer's generating equipment at this facility shall not cause ComEd system voltage excursions outside the range of 95 % to 105% of nominal. The customer shall correct the power factor of the generating facility such that unity power factor is maintained and measured at the point of the interconnection with ComEd.
- 10 Customer must limit output below 17MW when TR78 at TSS139 is out of service.

Revision Description		
Date	Revision	By
PROJECT DIAGRAM EED DISTRIBUTION CAPACITY PLANNING		
GSG Connect Wind Generator - West Brooklyn 1MW TSS139 Mendota Que P25		
Planner:	Mueller/ LiPetri	Date: 08/08/06
PD#:	7P061412	
Region:	NORTHWEST	ITN: NA
Reply to SER#:	N/A	Planning Area: N18
Project ID#:	TBD	ROY: NA
Service Date:	04/01/07	Page: 1 of 2
Manager:	Fohn M. Prueitt	Date: 10/04/2006

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Manager:	John M. Prueitt	Date: 10/04/2006