

***Generator Interconnection
Queue #P24
Mendota - Steward 34.5kV
(2.5 MW Energy / .5 MW Capacity)***

Feasibility / Impact Study Report

**March 2007
DOCS#410361**

General

FPC Services, Inc. has proposed the construction and interconnection of the P24 Mendota 34.5 kV generating project consisting of 2.5 MW of wind generation. The proposed plant consists of 1 – 2.5 MW Clipper wind turbine generator located in Paw Paw, Lee County, Illinois. The wind farm interconnection is via the construction of a new radial 34.5 kV connection from the new P24 generating project to the 34.5 kV line between Mendota (TSS139) and Steward (SS312), between Steward (SS312) and the tap to Paw Paw (DC H-59).

Direct Connection Requirements

Scope of Direct Connection Work

It is proposed that the P24 - 2.5 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 **P24 project** will be required to install equipment needed to provide revenue metering (KWH, KVARH) and real time data (KW, KVAR) for the **P24 project's** generating resource. See PJM Manuals M-01 and M-14D.

ComEd Requirements: The **P24 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 **P24 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

P24 was studied as an injection into the 34.5kV line between Mendota (TSS139) and Steward (SS312), between Steward (SS312) and the tap to Paw Paw (DC H-59). Project **#P24** 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.

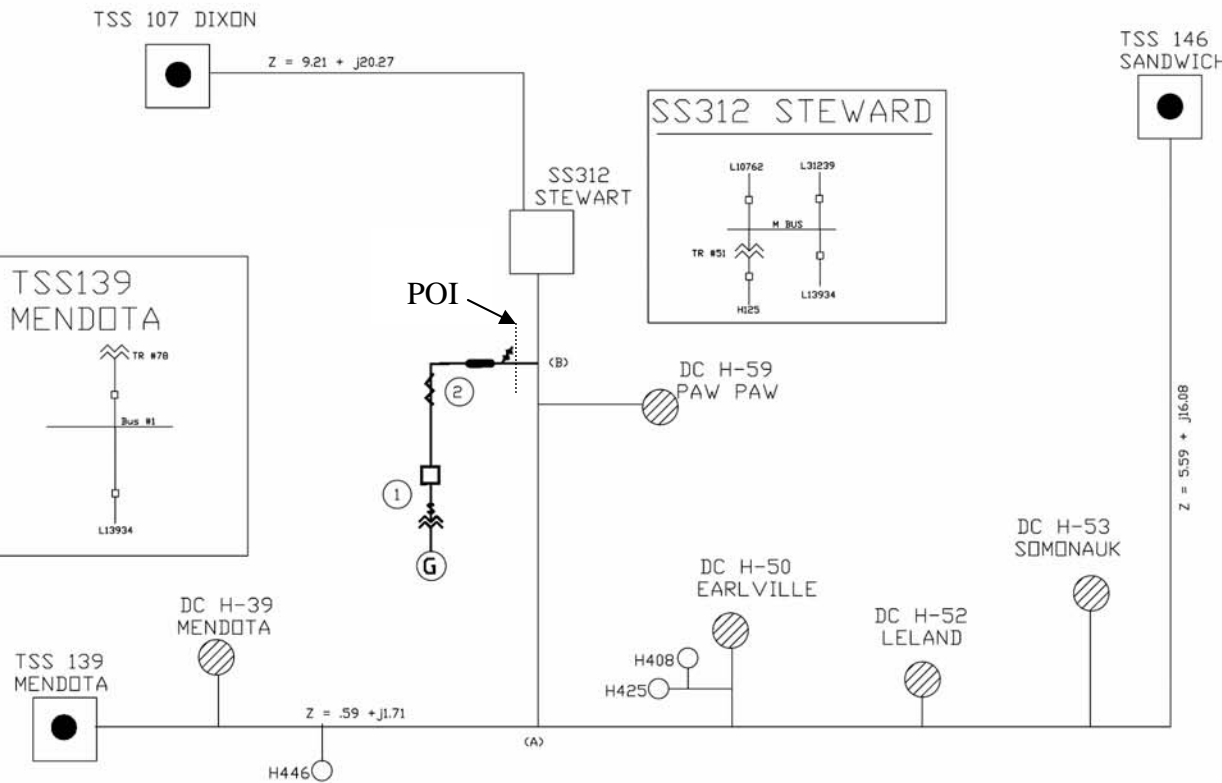
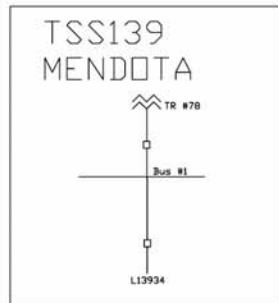
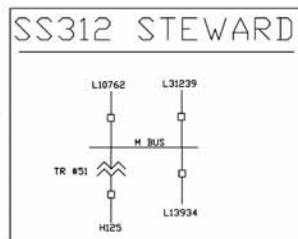
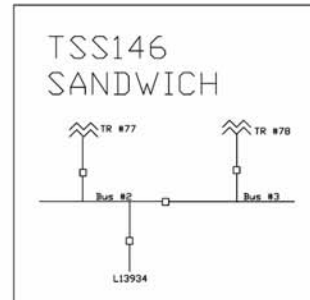
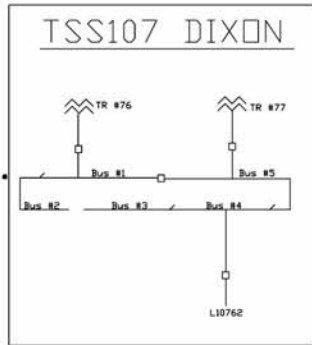
Stability Analysis

No analysis required.

PD # 7P061411

NOTES:

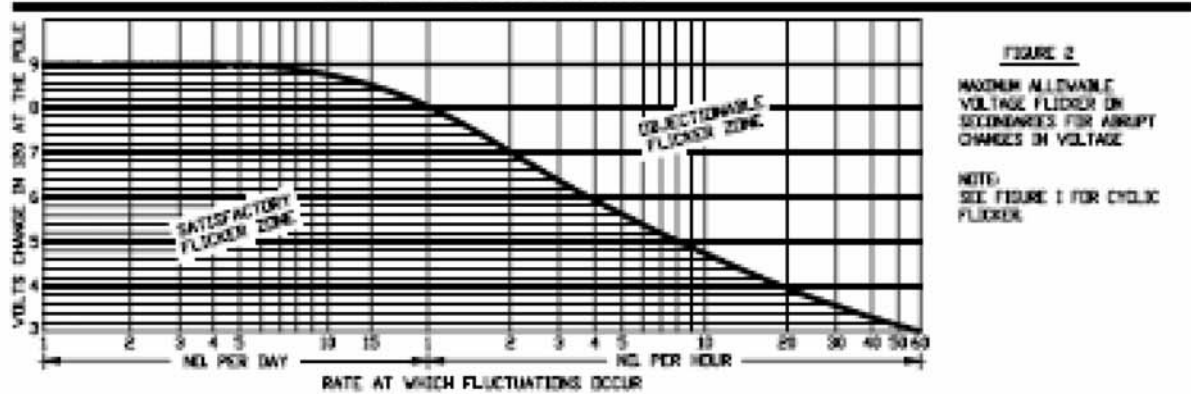
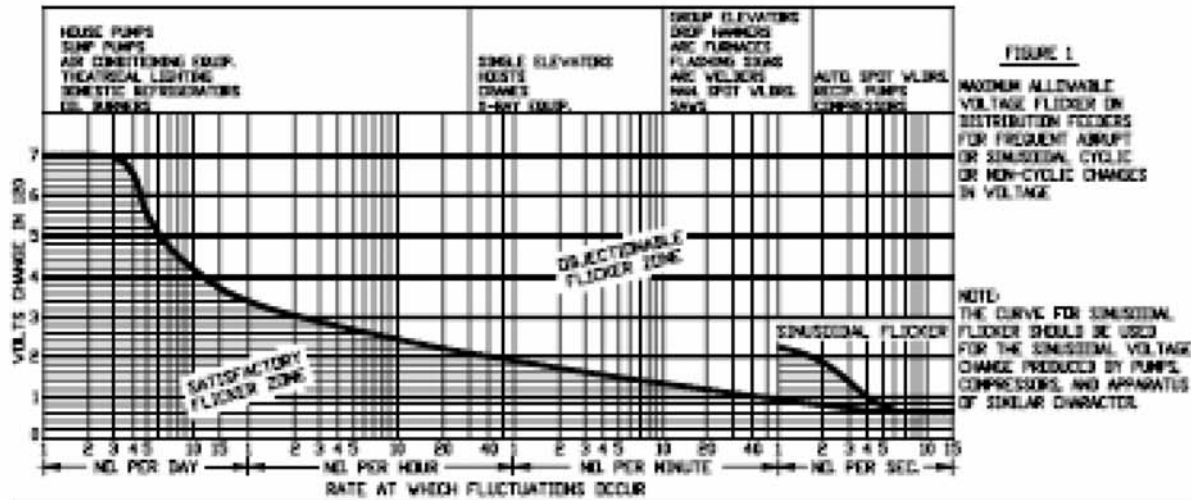
- ① CUSTOMER IS INSTALLING 1 -2500KW WIND TURBINE GENERATOR
- ② METERING TO BE COORDINATED WITH SYSTEM METER DEPT. AND SHALL INCLUDE REGISTRATION OF GENERATOR OUTPUT.
- 3 MINIMUM LINE LOAD ON L13934 IS 3600 KVA AT TSS139.
- 4 LINE IMPEDANCE VALUES FOR 34 KV LINE L13934 ARE:
FROM SS 312 TO CUSTOMER TAP POINT (B) $Z=6.70 + j8.20$
FROM POINT (A) TO CUSTOMER TAP POINT (B) $Z=4.45 + j6.34$
IMPEDANCE VALUES INDICATED ARE FOR PRESENT LINE CONFIGURATION
COMED SYSTEM IS SUBJECT TO CHANGE AT ANY TIME DEEMED
NECESSARY BY COMED AND WITHOUT NOTICE TO CUSTOMER.
- 5 MAXIMUM AVAILABLE FAULT CURRENT IS 1870 A 3 PHASE SYM @
34.5KV AT CUSTOMER TAP POINT (B)
- 6 BACKUP IMPEDANCE IS:
AT SS312 = $j26.07$
AT TSS146 = $j2.10$
AT TSS139 = $j4.71$
- 7 CUSTOMER IS RESPONSIBLE FOR ALL COSTS RELATED TO REQUIRED WORK.
- 8 CUSTOMERS OPERATION MUST CONFORM TO COMED VOLTAGE LIMITATIONS
(SEE ATTACHED PG 3) IF CUSTOMERS OPERATION CAUSES
OBJECTIONABLE FLICKER, THE CUSTOMER WILL BE RESPONSIBLE FOR ALL
COSTS TO REMEDY THE CONDITION.



Date	Revision	Revision Description	By
PROJECT DIAGRAM EED DISTRIBUTION CAPACITY PLANNING			
GSG 2.5MW WIND GENERATION INTERCONNECTION PAW PAW, II			
Planner: D. LIPETRI		Date: 6/9/2006	
D. MUELLER			
PD#: 7P061411	Program Code: 86		
Region: NORTHWEST	ITN: TBD		
Reply to SER#: N/A	Planning Area: N18		
Project ID#: TBD	RDY: N/A		
Service Date: 12/31/06	Page: 1 of 2		
Manager: J. Prueitt	Date: 10/4/06		



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