



***Facility Study
For
Generation Interconnection
Request
GEN-2007-011***

SPP Tariff Studies

(#GEN-2007-011)

March 2009

Executive Summary

<OMITTED TEXT> (Customer) has requested a Facility Study under the Southwest Power Pool Open Access Transmission Tariff for the purpose of interconnecting 135MW of generation into the transmission facilities of Sunflower Electric Power Corporation (SUNC) in Hamilton County, Kansas. The originally proposed in-service date of the generation is November 1, 2008.

The proposed method of interconnection is to add a new 115 kV circuit breaker and line terminal at the existing Syracuse switching station, owned by SUNC. The total cost of the interconnection facilities for this interconnection request is approximately \$750,000.

The Impact Study has determined that the customer will need to be able to provide unity power factor at the point of interconnection for any system configuration. The Customer will determine the needed setting for the turbines to hold the required voltage schedule at the point of interconnection without the addition of external capacitor banks while maintaining acceptable voltages at its generator terminals. If the voltage schedule cannot be maintained, then the capacitor banks will be required.

The Acciona Wind Turbine Generators (AW1500) that the Customer is proposing for its windfarm will comply with FERC Order #661A Low Voltage Ride Through provisions.

1. Introduction

<OMITTED TEXT> (Customer) has requested a Facility Study under the Southwest Power Pool Open Access Transmission Tariff for the purpose of interconnecting 135MW of generation into the transmission facilities of Sunflower Electric Power Corporation (SUNC) in Hamilton County, Kansas. The originally proposed in-service date of the generation is November 1, 2008.

2. Interconnection Facilities

Figure 1 shows the interconnection facilities for this project, and Figure 2 shows the location of the Syracuse Substation. The next two subsections describe the interconnection facilities and the Customer facilities and their estimated costs.

2.1. Syracuse Substation

Table 1 shows the required interconnection facilities and the estimated cost for those facilities. The interconnection facilities will be constructed using the applicable SUNC engineering and construction standards. The Customer will be responsible for the costs as shown in Table 1.

Table 1: Required Interconnection Facilities

Facility	ESTIMATED COST (2008 DOLLARS)
SUNC – (1) 115 kV breaker and terminal for GEN-2007-011 at Syracuse Switching Station.	\$750,000
Total	\$750,000

2.2. Other Network Facilities

As indicated in the Feasibility Study for GEN-2007-011, certain thermal overloads occur for the addition of the interconnection request. These overload constraints will be mitigated when the Customer requests transmission service through the SPP OASIS. In the event the Customer does not request long term transmission service, one or more flowgates will be established to mitigate the effects of the constraints.

2.3. Customer Facilities

Table 2 shows direct assignment facilities for which the Customer is responsible. These facilities include the Generating Facility and its 115/34.5kV substation which will contain its 115/34.5kV transformer and wind turbine collector feeders.

The Acciona Wind Turbine Generators (AW1500) that the Customer is proposing for its windfarm will comply with FERC Order #661A Low Voltage Ride Through provisions.

The Customer will determine the needed setting for the turbines to hold the required voltage schedule at the point of interconnection without the addition of external capacitor banks while maintaining acceptable voltages at its generator terminals. If the voltage schedule cannot be maintained, then the capacitor banks will be required.

The cost of the direct assignment facilities is to be determined by the Customer.

Table 2: Direct Assignment Facilities

Facility	ESTIMATED COST (2008 DOLLARS)
CUSTOMER – (1) 115/34.5 kV Customer collector substation facilities.	*
CUSTOMER – (1) 115 kV transmission line from Customer collector substation to the Syracuse switching station.	*
CUSTOMER – Right-of-Way for all Customer facilities.	*
Total	*

Note: *Estimates of cost to be determined by the Customer

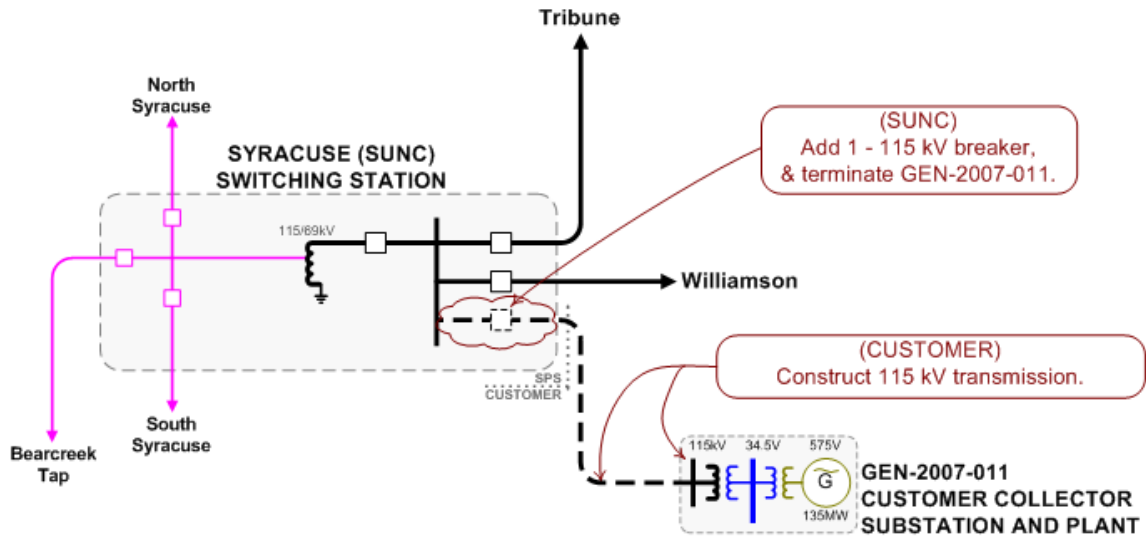


Figure 1: Interconnection Facilities for GEN-2007-011

3. Short Circuit Study

SUNC has indicated that no SUNC facilities will be affected due to short circuit contribution by the interconnection of GEN-2007-011.

4. Conclusion

The cost to interconnect the GEN-2007-011 generation interconnection request for 135MW is estimated by this Facility Study to be \$750,000. The Customer will determine the needed setting for the turbines to hold the required voltage schedule at the point of interconnection without the addition of external capacitor banks while maintaining acceptable voltages at its generator terminals. If the voltage schedule cannot be maintained, then the capacitor banks will be required. The Acciona Wind Turbine Generators (AW1500) that the Customer is proposing for its windfarm will comply with FERC Order #661A Low Voltage Ride Through provisions.

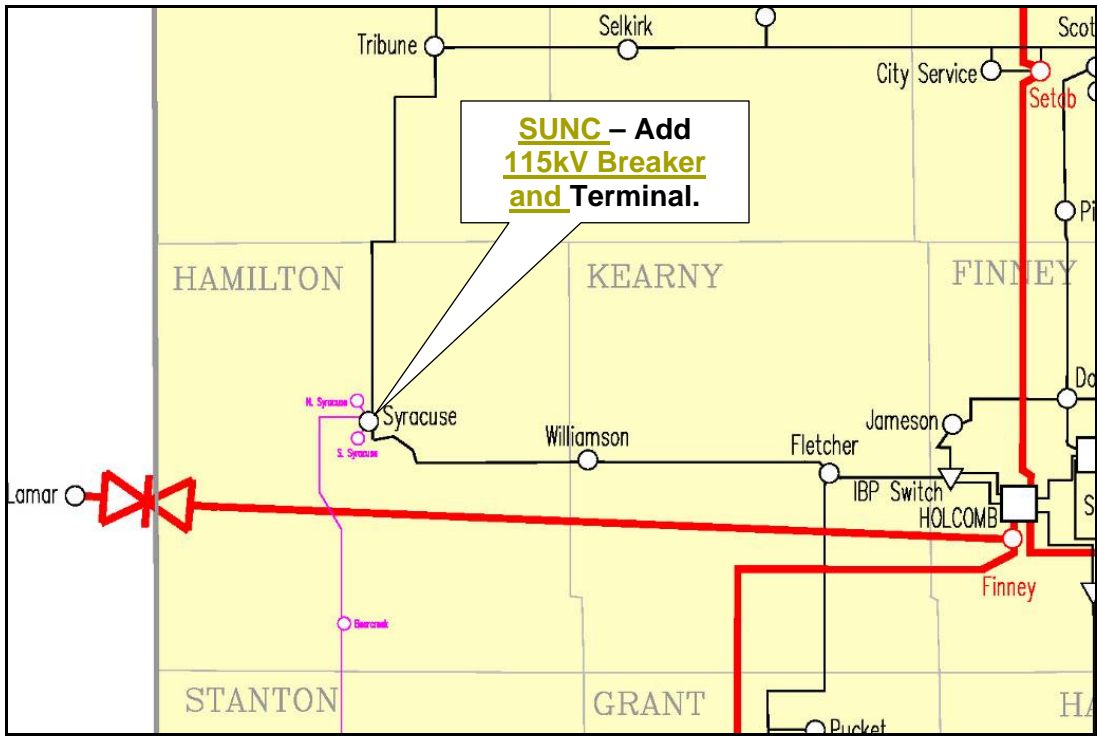


Figure 2: Map of the Local Area