



***Facility Study
For
Generation Interconnection
Request
GEN-2006-040***

SPP Tariff Studies

(#GEN-2006-040)

November 2008

Executive Summary

<OMITTED TEXT> (Customer) has requested a Facility Study under the Southwest Power Pool Open Access Transmission Tariff (OATT) for interconnecting a 108 MW wind powered generation facility in Thomas County, Kansas to the transmission system of Sunflower Electric Power Corporation (SUNC). The wind powered generation facility studied was proposed to comprise of seventy-two (72) Acciona 1.5 MW wind turbines. The original requested in-service date for the facility is August 31, 2008. The wind powered generation facility will interconnect into the existing Sunflower Mingo 345/115kV substation on the 115kV bus.

The generation facility was studied to interconnect into the Mingo 115kV bus. This requires the addition of a breaker-and-a-half position and line terminal to be added at Mingo. The cost of adding these facilities at the Mingo substation is approximately \$1,550,760.

1. Introduction

<OMITTED TEXT> (Customer) has requested a Facility Study under the Southwest Power Pool Open Access Transmission Tariff (OATT) for interconnecting a 108 MW wind powered generation facility in Thomas County, Kansas to the transmission system of Sunflower Electric Power Corporation (SUNC). The wind powered generation facility studied was proposed to comprise of seventy-two (72) Acciona 1.5 MW wind turbines. The original requested in-service date for the facility is August 31, 2008. The wind powered generation facility will interconnect into the existing Sunflower Mingo 345/115kV substation on the 115kV bus.

2. Interconnection Facilities and Network Upgrades

All required interconnection facilities are tabulated in Table 12 and are shown in Figure 1.

- 2.1. **Sunflower Mingo 345/115 kV Substation** - The Customer will be interconnecting into the Sunflower Mingo 345/115kV substation.

A new 115kV line terminal to Mingo substation will need to be added. The Mingo substation is set up as a breaker-and-a-half bus scheme. The addition of a line terminal will include the installation of two (2) 115kV circuit breakers, associated disconnect switches, steel structures, foundations, ground grid, relaying, metering, and all associated and miscellaneous equipment.

The substation work will be constructed owned and maintained by Sunflower. The substation will be constructed using applicable Sunflower engineering and construction standards.

The costs for the substation work is estimated below

- Add a 115kV line terminal to Mingo substation. This work will include the addition of two (2) 115kV circuit breakers, associated 115kV disconnect switches, steel structures, foundations, ground grid, relaying, metering, and all associated and miscellaneous equipment.

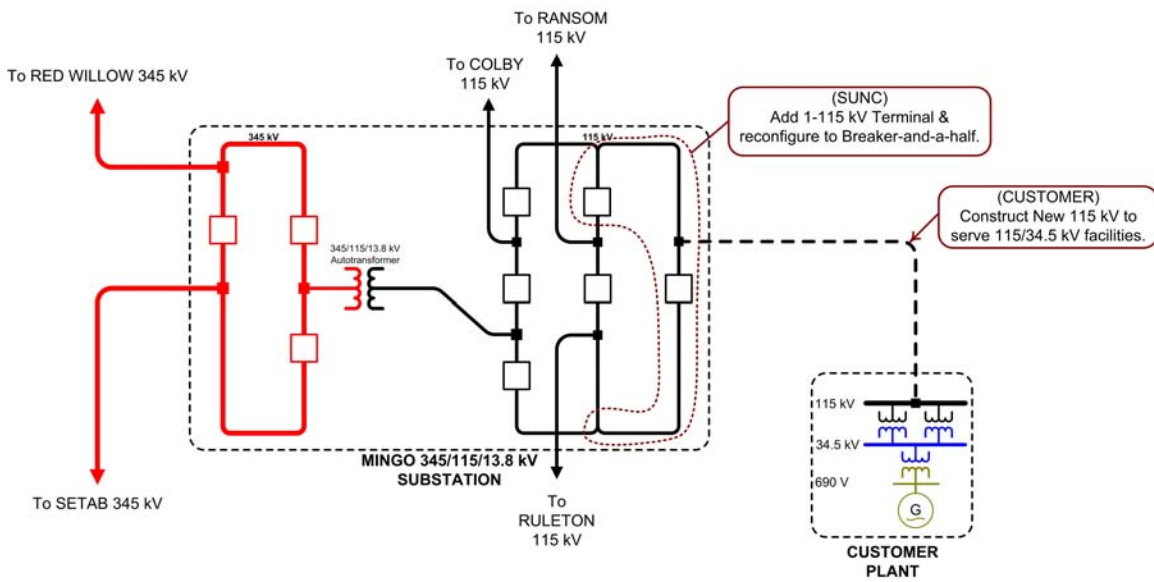
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| Subtotal | \$ 1,550,760 |
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| Total Interconnection Facilities and Network Upgrades | \$1,550,760 |
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Table 1: Required Interconnection Facilities

| Project | Description | Estimated Cost |
|---------|---|--------------------|
| 1 | Add 115kV line terminal to Mingo Substation | \$1,550,760 |
| | Total: | \$1,550,760 |

Figure 1. One-Line of Mingo Substation



3. Short Circuit Study

Sunflower has indicated that no Sunflower facilities will be affected due to short circuit contribution by the interconnection of GEN-2006-040.

4. Conclusion

The cost to interconnect the GEN-2006-040 generation interconnection request for 108MW is estimated by this Facility Study to cost approximately \$1,550,760.