Southwest Power Pool

Facility Study For Generation Interconnection Request GEN-2011-057

SPP Generation Interconnection Studies

(#GEN-2011-057)

October 2012

Summary

Westar Energy (WERE) performed a detailed Facility Study at the request of Southwest Power Pool (SPP) for Generation Interconnection request GEN-2011-057 (150.4MW/Wind) located in Sumner County, Kansas. The originally proposed in-service date was December, 2013, however SPP has proposed a new in-service date that will be after the assigned Interconnection Facilities Upgrades are completed. The request for interconnection was placed with SPP in accordance with SPP's Open Access Transmission Tariff, which covers new generation interconnections on SPP's transmission system.

Phases of Interconnection Service

It is not expected that interconnection service will require phases however, interconnection service will not be available until all interconnection facilities and network upgrades can be placed in service.

Interconnection Customer Interconnection Facilities

The Interconnection Customer will be responsible for all of the transmission facilities connecting the customer owned substation to the Point of Interconnection (POI), at the existing 138kV Creswell substation, which is owned and operated by Westar Energy (WERE). The Customer will also be responsible for any equipment located at the Customer substation necessary to maintain a power factor of 0.95 lagging (supplying vars) and 0.95 leading (absorbing vars) at the Point of Interconnection.

Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades

To allow interconnection the Transmission Owner will need to perform the following work at the Creswell substation – expand the substation, add an additional 138kV line terminal with two 138kV, 3000 Amp circuit breakers, and install additional miscellaneous equipment. In additional, the special protection settings will need to be adjusted at the Creswell Substation. At this time the Customer is responsible for $2,040,698 of Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades.

Shared Network Upgrades

The interconnection customer was studied within the DIS-2011-002 Impact Study. At this time, the Interconnection Customer is allocated $0 for Shared Network Upgrades. If higher queued interconnection customers withdraw from the queue, suspend or terminate their GIA, restudies will have to be conducted to determine the Interconnection Customers' allocation of Shared Network Upgrades. All studies have been conducted on the basis of higher queued interconnection requests and the upgrades associated with those higher queued interconnection requests being placed in service.

Other Network Upgrades
Certain Other Network Upgrades are not the cost responsibility of the Customer but will be required for full Interconnection Service. This Network Upgrade is:

1. Cleveland – Sooner 345kV CKT 1, assigned to SPP Balanced Portfolio Projects, Estimated In-Service of 12/31/2012

Depending upon the status of higher or equally queued customers, the Interconnection Customer's in-service date is at risk of being delayed or their Interconnection Service is at risk of being reduced until the in-service date of these Other Network Upgrades.

Conclusion
Interconnection Service for GEN-2011-057 will be delayed until the Transmission Owner Interconnection Facilities are constructed. The Customer is responsible for $2,040,698 of Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades. At this time, the Interconnection Customer is allocated $0 for Shared Network Upgrades. After all Interconnection Facilities and Network Upgrades have been placed into service, Interconnection Service for 150.4MW, as requested by GEN-2011-057, can be allowed. At this time the total allocation of costs of Interconnection Service for GEN-2011-057 are estimated at $2,040,698.

Generation Interconnection Facilities Study

For

Generation Interconnection Request SPP-GEN-2011-057

October 09, 2012

Introduction

This report summarizes the results of a Generation Interconnection Facilities Study performed for the Southwest Power Pool (SPP) by Westar Energy to evaluate a generation interconnection request by Wind Capital Group, LLC for 150 MW of wind-powered generation in Sumner County, Kansas, to the Westar Energy (WR) owned Creswell substation. The proposed interconnection is on the WR transmission system at the existing Creswell substation. System Impact Study has been completed for this project. The requested in-service date of the generating facility is December, 2013.

Project Location and Existing Facilities

The project is located in Sumner County in south central Kansas. The proposed interconnection is on the WR transmission system at the existing Creswell 138 kV substation. Figure 1 shows the Regional Transmission Facilities.

Interconnection Facilities

Interconnection to the WR transmission system will be by way of the Creswell substation. System Protection setting changes at Creswell will also be required.

138 kV Substation Work at Creswell

The estimated cost is for two (2) 138 kV 3000 Amp breakers, five (5) 138 kV 3000 Amp air break switches, one (1) motor operator for a 138kV 3000 Amp switch, three (3) CTs with high accuracy for metering, three (3) 138kV VTs, one (1) breaker control relay panel, one (1) line protection relay panel, and all associated site, yard and conduit work.

$1,894,360

138 kV Transmission Line Work

The estimated cost is for (3) single wood poles to relocate existing distribution lines. It also includes wire to terminate the Slate Creek-Creswell 138kV and relocate the existing distribution conductor.

$146,388

The total cost estimate for the Stand Alone Network Upgrades (138 kV Substation Work at Creswell and 138 kV Transmission Line Work) is:

$1,894,360 138 kV Substation Work at Creswell
$ 146,338 138 kV Transmission Line Work
$2,040,698

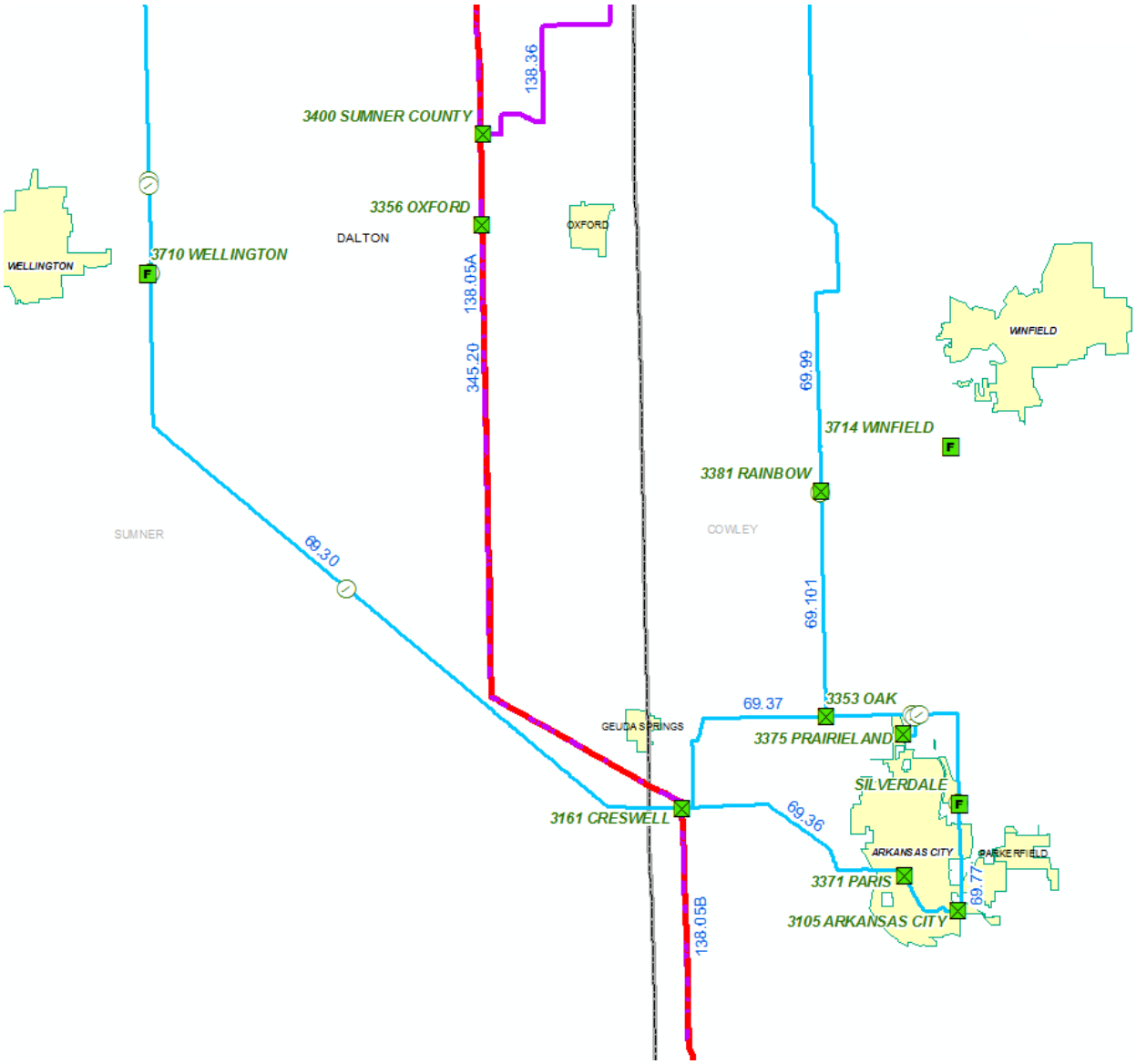
This estimate is accurate to +/- twenty (20) percent, based on current prices, in accordance with Attachment A of Appendix 4 of the Interconnection Facilities Study Agreement. However, recent cost fluctuations in materials are very significant and the accuracy of this estimate at the time of actual settings cannot be assured.

20 weeks Engineering Time

40 weeks Procurement Time
30 weeks Construction Time
90 weeks Total

Westar Energy also maintains its own Facility Connection Requirements, which may be found at (www.wr.com).

Figure 1 – Creswell Substation



The proposed interconnection project is at Creswell 138 kV substation.

Figure 2 – Creswell Substation Upgrades One-Line

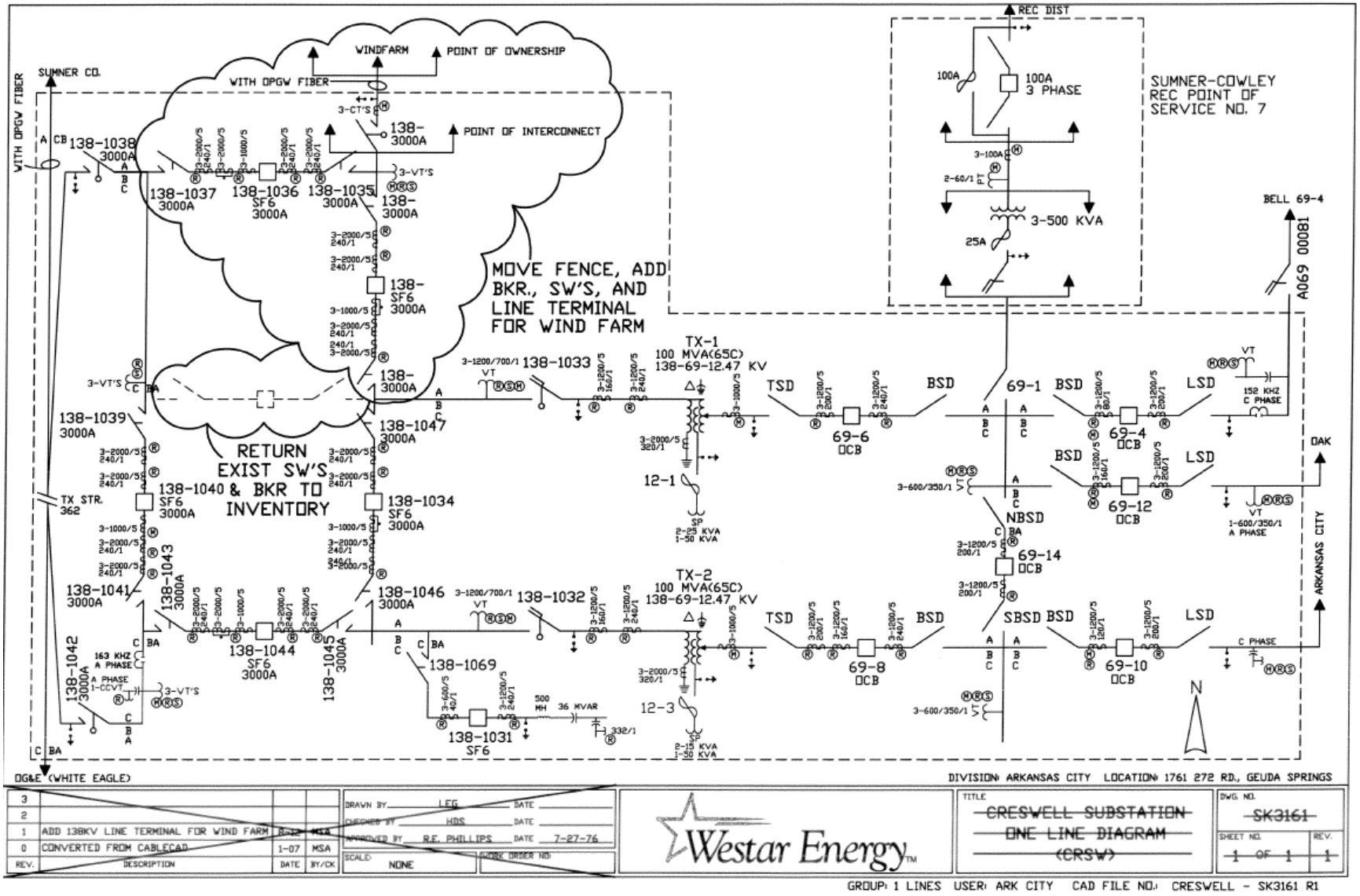


Figure 3 – Creswell Substation Upgrades Layout