Facility Study for Generation Interconnection Request GEN – 2005 – 013

SPP Tariff Studies
(#GEN-2005-013)

June 2006

Summary

Westar Energy performed the following Study at the request of the Southwest Power Pool (SPP) for Generation Interconnection request Gen-2005-013. The request for interconnection was placed with SPP in accordance SPP's Open Access Transmission Tariff, which covers new generation interconnections on SPP's transmission system.

Pursuant to the tariff, Westar Energy was asked to perform a detailed Facility Study of the generation interconnection request to satisfy the Facility Study Agreement executed by the requesting customer and SPP.

Generation Interconnection Facilities Study

For

Generation Interconnection Request SPP-GEN-2005-013

May 26, 2006

Introduction

This report summarizes the results of a Generation Interconnection Facilities Study performed for the Southwest Power Pool (SPP) by Westar Energy, Inc. (WR) to evaluate a generation interconnection request by [Omitted Text] for 201 MW of wind-powered generation in Elk County, Kansas, to the transmission system of Kansas Gas and Electric Company, a subsidiary of Westar Energy, Inc. The proposed interconnection is on the WR transmission system approximately 9 miles east-southeast of the existing Latham 345 kV substation on the Neosho – Rose Hill 345 kV line. Prior to this were completed both a Feasibility Study and a System Impact Study. The requested in-service date of the generating facility is November 1, 2007. It is not possible for Westar Energy to have the required facilities in service by the requested in-service date under the Standard Option of the Standardized Large Generator Interconnection Agreement.

Project Location and Existing Facilities

The project is located near Howard, Kansas, in Elk County approximately 9 miles east-southeast of the existing Latham Substation on the Neosho – Rose Hill 345 kV transmission line. The WR 345 kV transmission line crosses the property of the proposed development. The interconnection will be effected at a new 345 kV ring-bus substation approximately 9 miles east-southeast of the existing Latham Substation. The substation will connect to Customer facilities at 345 kV. Customer will construct, own, operate, and maintain approximately 6,800 feet of 345 kV transmission to the project substation. Figure 1 shows the Westar Energy regional transmission facilities and Figure 2 shows the Westar Energy transmission facilities in the local area as well as the service areas of other utilities at the point of interconnection. The proposed project is not within the Westar Energy service area.

Interconnection Facilities

Interconnection to the WR transmission system will be by way of a new 345 kV three position ring-bus switching station on the existing Latham – Neosho 345 kV transmission line. The new substation terminal will look southwest towards Customer's facilities. Construction of this new substation terminal requires 10 acres of additional land adjacent to the existing transmission line right-of-way.

345 kV Ring Bus Substation

The estimated cost is for three (3) 345 kV breakers, six (6) 345 kV switches, three (3) 345 kV motor operated switches, six (6) 345 kV CCVTs, three (3) 345 kV wave traps, six (6) 345 kV, new redundant primary relaying, relaying setting changes and trap tuning at Latham and Neosho, three (3) 345 kV full tension deadend structures, and all associated site, yard and conduit work. This estimate include all equipment inside the substation fence up to the Point of Change of Ownership.

$5,020,000

345 kV Interconnection Metering

The estimated cost is for three (3) 345 kV VTs, three (3) 345 kV CTs, and revenue interconnection metering plus all associated site, yard and conduit work.

$ 270,000

345 kV Transmission Line Work

The estimated cost is for steel turning structures to connect the existing Latham – Neosho 345 kV transmission line into the interconnection substation plus associated foundations and labor. The existing transmission line is equipped with optical shield wire for communications.

$475,000

The total cost estimate for Transmission Owner Interconnection Facilities (Interconnection Metering) and Stand Alone Network Upgrades (345 kV Ring-bus Substation and Transmission Line Work) is:

$5,020,000 345 kV Ring-bus Substation
$ 270,000 345 kV Interconnection Metering
$ 475,000 345 kV Transmission Line Work
$5,765,000

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 escalations in materials are very significant and the accuracy of this estimate at the time of actual construction cannot be assured.

The following approximate time lines for the project are based on WR's engineering time, average procurement time, and good weather during construction. The amount of time per task may change if consultants are hired to perform this work.

16 weeks	Engineering Time
24 weeks	Procurement Time
24 weeks	Construction Time
68 weeks Total	

The design and material ordering will only commence following execution of the Southwest Power Pool Standardized Large Generation Interconnection Agreement.

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

Figure 1 – Westar Energy Regional Transmission

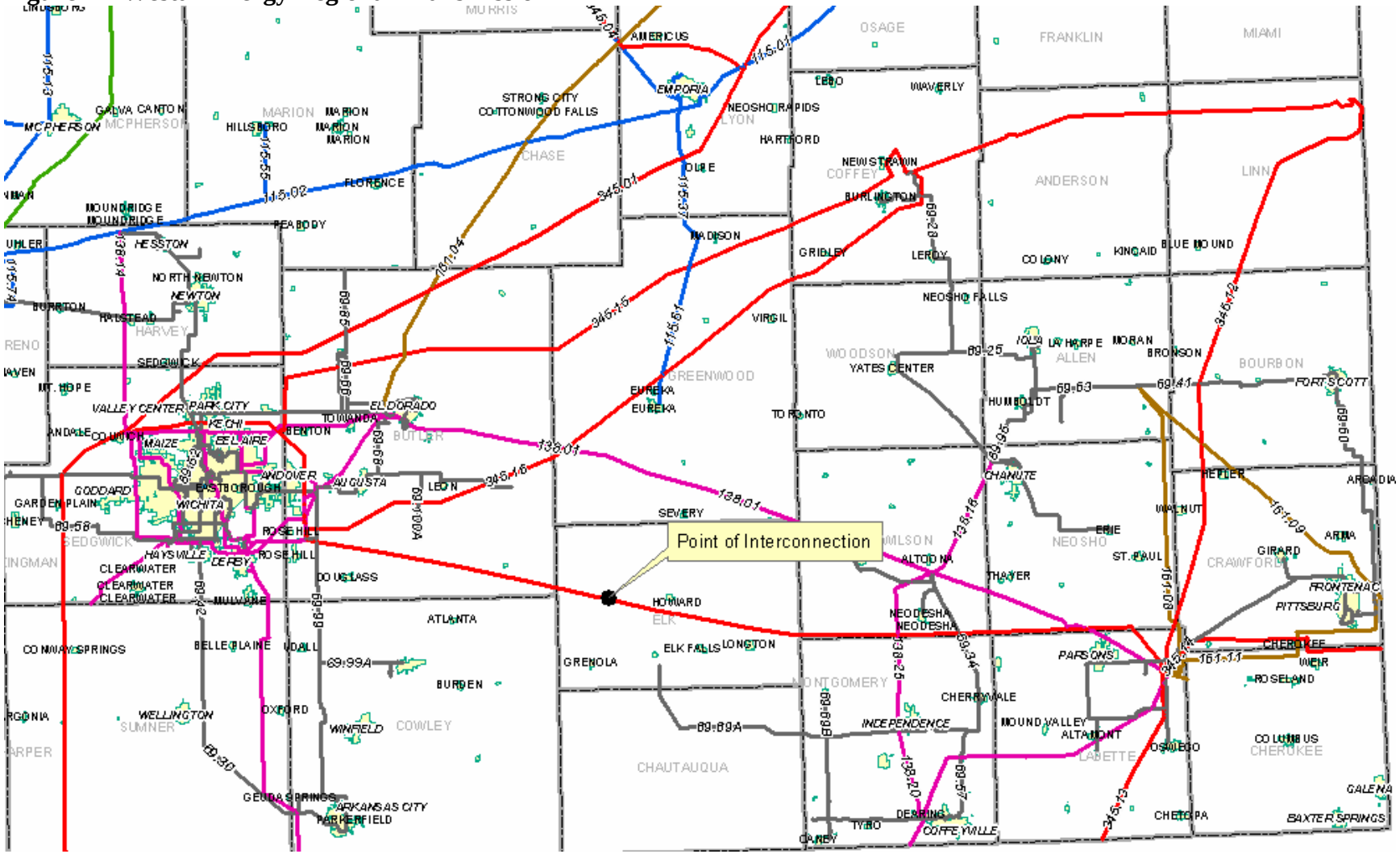
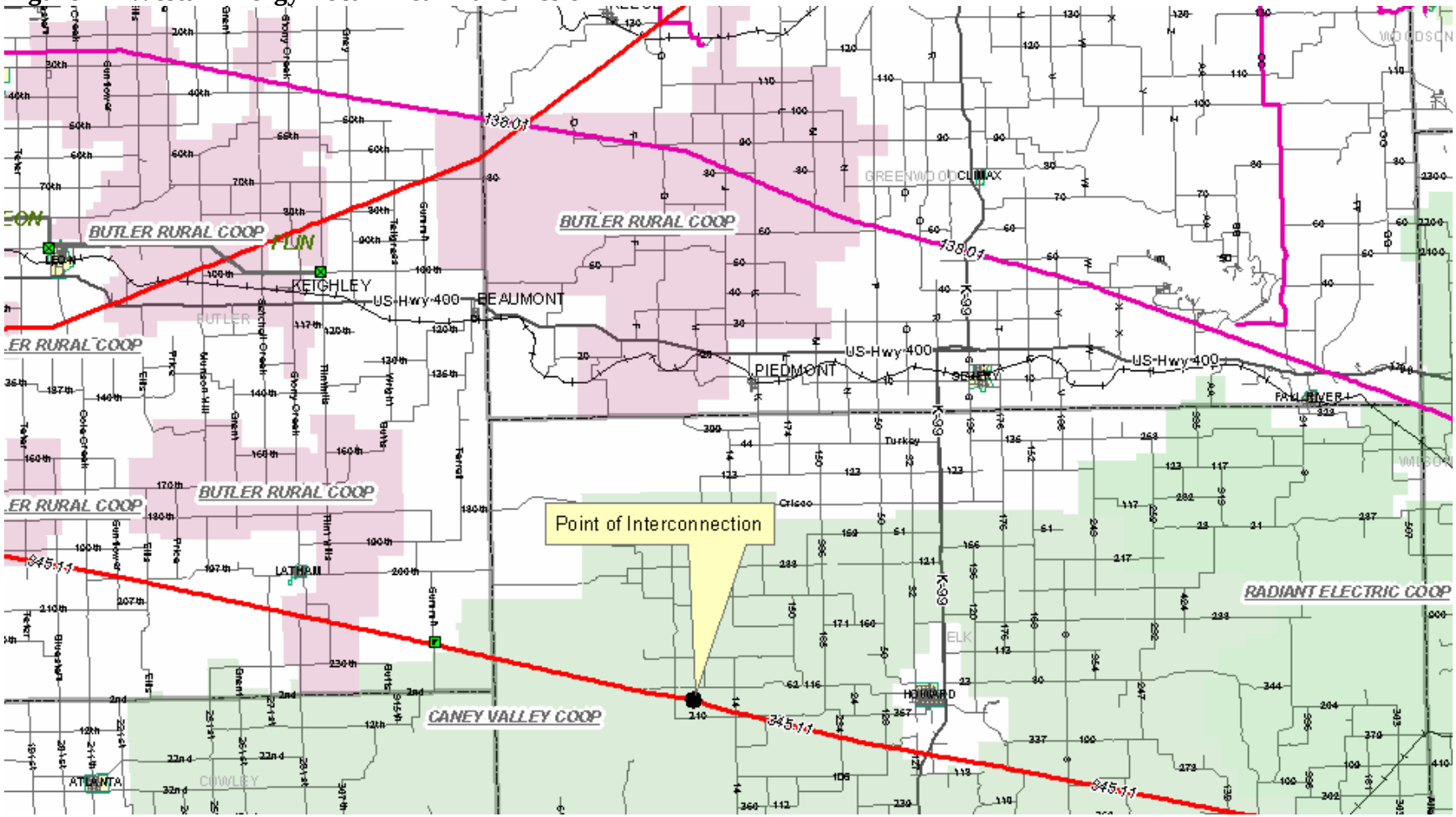


Figure 2 – Westar Energy Local Area Transmission



The shaded areas show the other utility service areas with their names.

Figure 3 – Interconnection Substation One-Line