



***Facility Study
For
Generation Interconnection
Request
GEN-2010-036***

***SPP Generation
Interconnection***

(#GEN-2010-036)

July 2011

Summary

Westar Energy (Westar) performed a detailed Facility Study at the request of Southwest Power Pool (SPP) for Generation Interconnection request GEN-2010-036. The interconnection of the 4.6 MW generation facility located in Douglas County, Kansas is in the control area of the Westar Energy, Inc (WRI) transmission network. 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.

The requested in-service date of the generating facility is September 1, 2012.

Interconnection Customer Interconnection Facilities

The Interconnection Customer will be responsible for the 12 kV facilities from its generation facility substation to the Point of Interconnection (POI), the existing 6th Street 115/12 kV substation in Douglas County, KS.

Transmission Owner Interconnection Facilities and Non-Shared Network Upgrades

Per the following Facility Study, the Interconnection Customer is responsible for **\$204,600** of Transmission Owner Interconnection Facilities and non-shared network upgrades.

Shared Network Upgrades

The interconnection customer was studied within the DISIS-2010-002 Impact Study. At this time, the Interconnection Customer is allocated **\$0** of the costs 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.



**Generation Interconnection Facilities
Study**

For

**Generation Interconnection Request
SPP-GEN-2010-036**

May 11, 2011

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 the interconnection customer for 4.6 MW of hydro-powered generation in Douglas County, Kansas, to the transmission system of Westar Energy, Inc (WRI). The proposed interconnection is on the WRI distribution system at the existing 6th Street 115 kV substation to the new 12kV switchgear in Lawrence. Prior to this were completed both a Feasibility Study and a System Impact Study. The requested in-service date of the generating facility is September 1, 2012.

Project Location and Existing Facilities

The project is located in Douglas County in north east Kansas. The interconnection will be at the existing 6th Street 115 kV substation to the new 12 kV switchgear. The substation will connect to Customer facilities at 12 kV. Figure 1 shows the Regional Transmission Facilities and Figure 2 shows the transmission facilities in the local area as well as the service areas of other utilities at the point of interconnection. The proposed project is within the Westar Energy service area.

Interconnection Facilities

Interconnection to the WRI transmission system will be on the existing 6th Street 115 kV substation to the new 12 kV switchgear. One set of metering is required for each generation connection to the new (Power House #2) and the existing (Power House #1) generation interconnection customer.

12 kV Interconnection Revenue Metering

The metering department will install revenue metering in the new 12 kV switchgear. Metering data will be transmitted to Westar Interconnection Customer's 6th Street 115 kV substation via OPGW fiber.

\$ 19,100

12 kV Substation (no metering or customer equipment included)

The estimated cost is for upgrading the 12 kV underground cables from breaker 12-42 to existing 12 kV distribution bus and removing the existing 12-2.4 kV step up transformer. New conduit will be installed from the control building to the existing 12 kV distribution breaker to accommodate fiber data channels for the new relay scheme to the substation. This estimate includes updated relaying between Westar and the new 12 kV switchgear.

\$185,500

\$185,500 12 kV Substation Stand Alone Network Upgrades

\$ 19,100 12 kV Interconnection Revenue Metering

\$204,600

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 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.

10 weeks	Engineering Time
20 weeks	Procurement Time
4 weeks	Construction Time
34 weeks	Total

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

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

Figure 1 – Westar Energy Regional Transmission

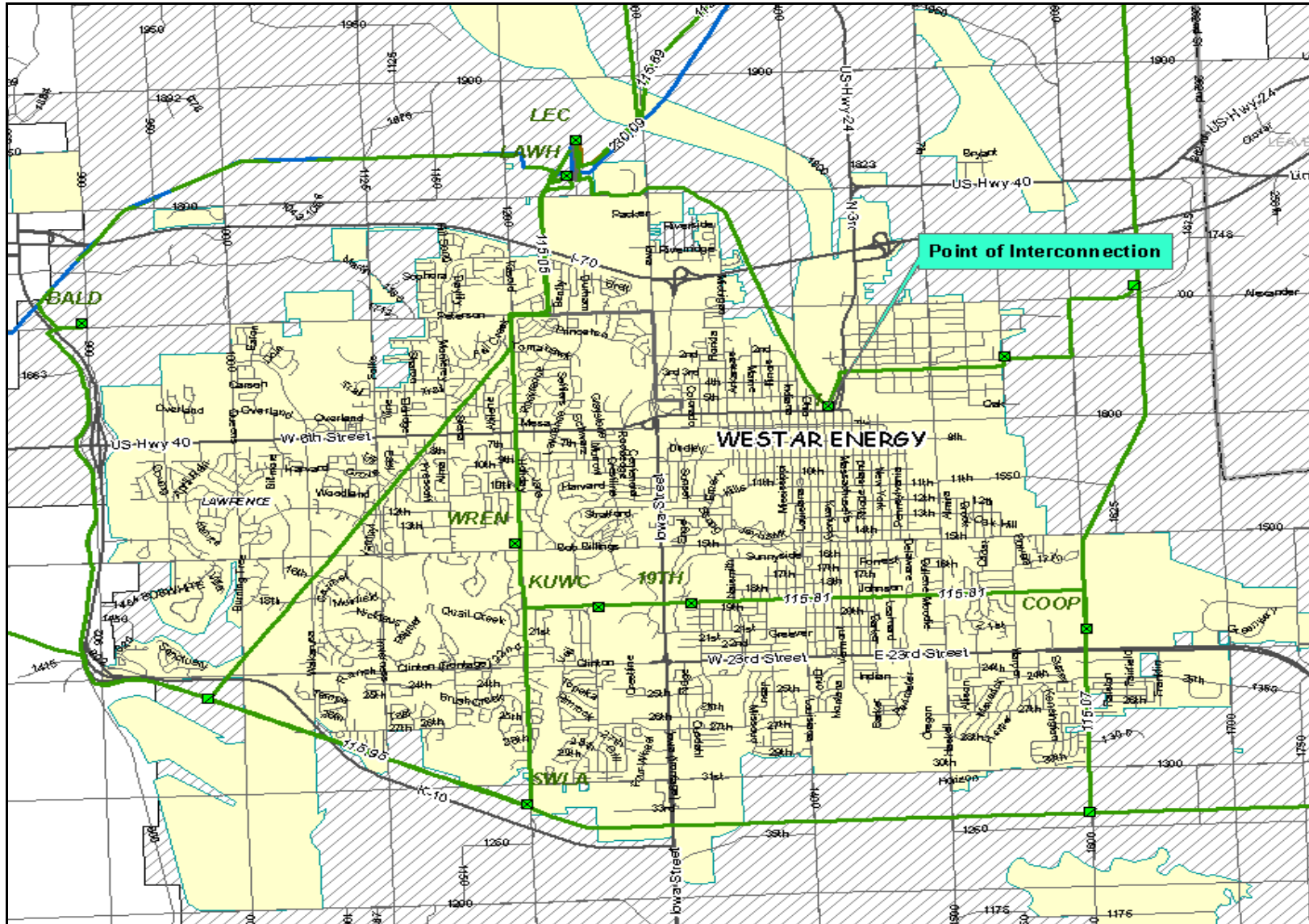
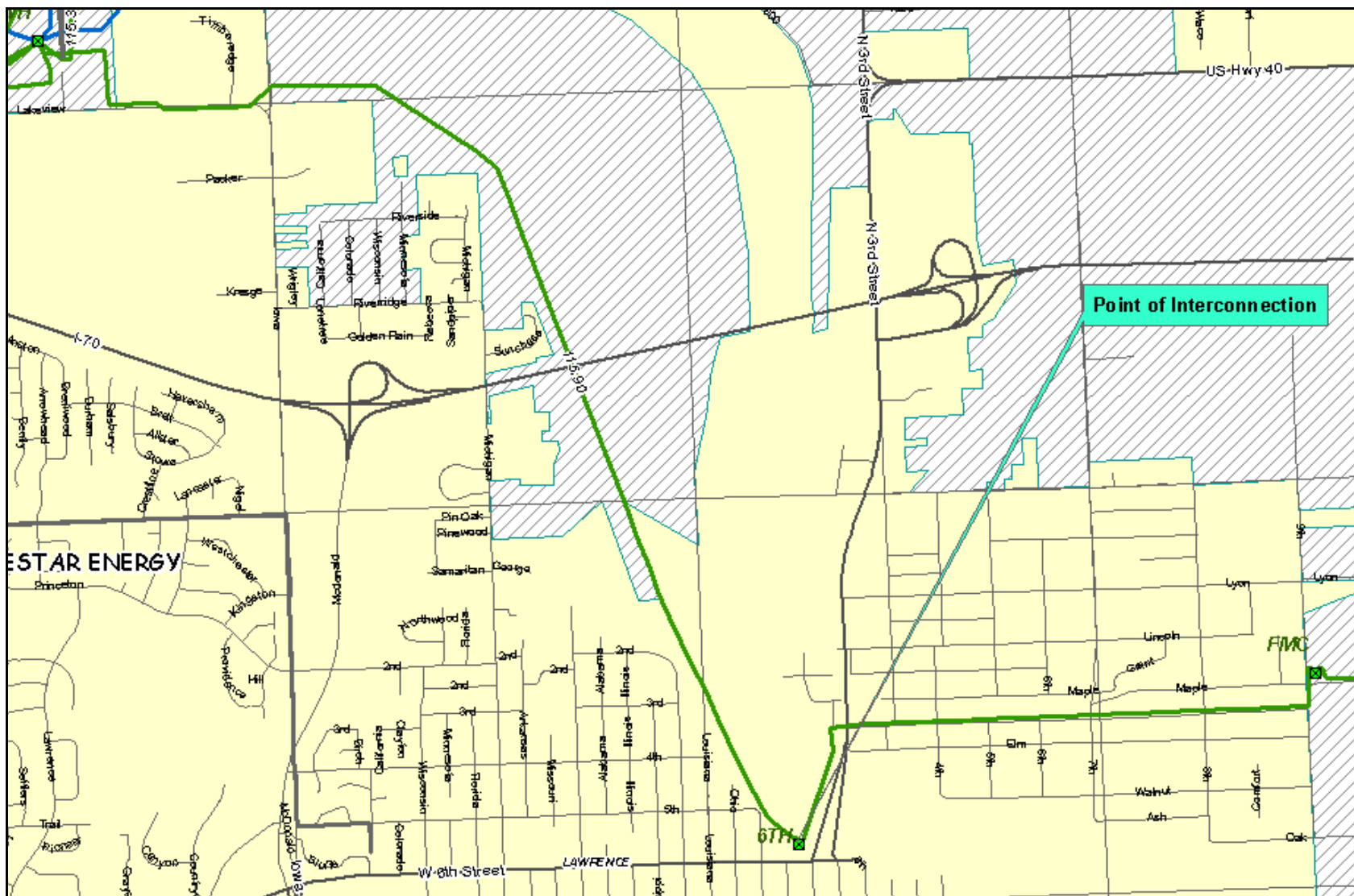


Figure 2 – Westar Energy Local Area Transmission



The proposed project is within the Westar Energy service area.

Figure 3 – Interconnection Substation One-Line

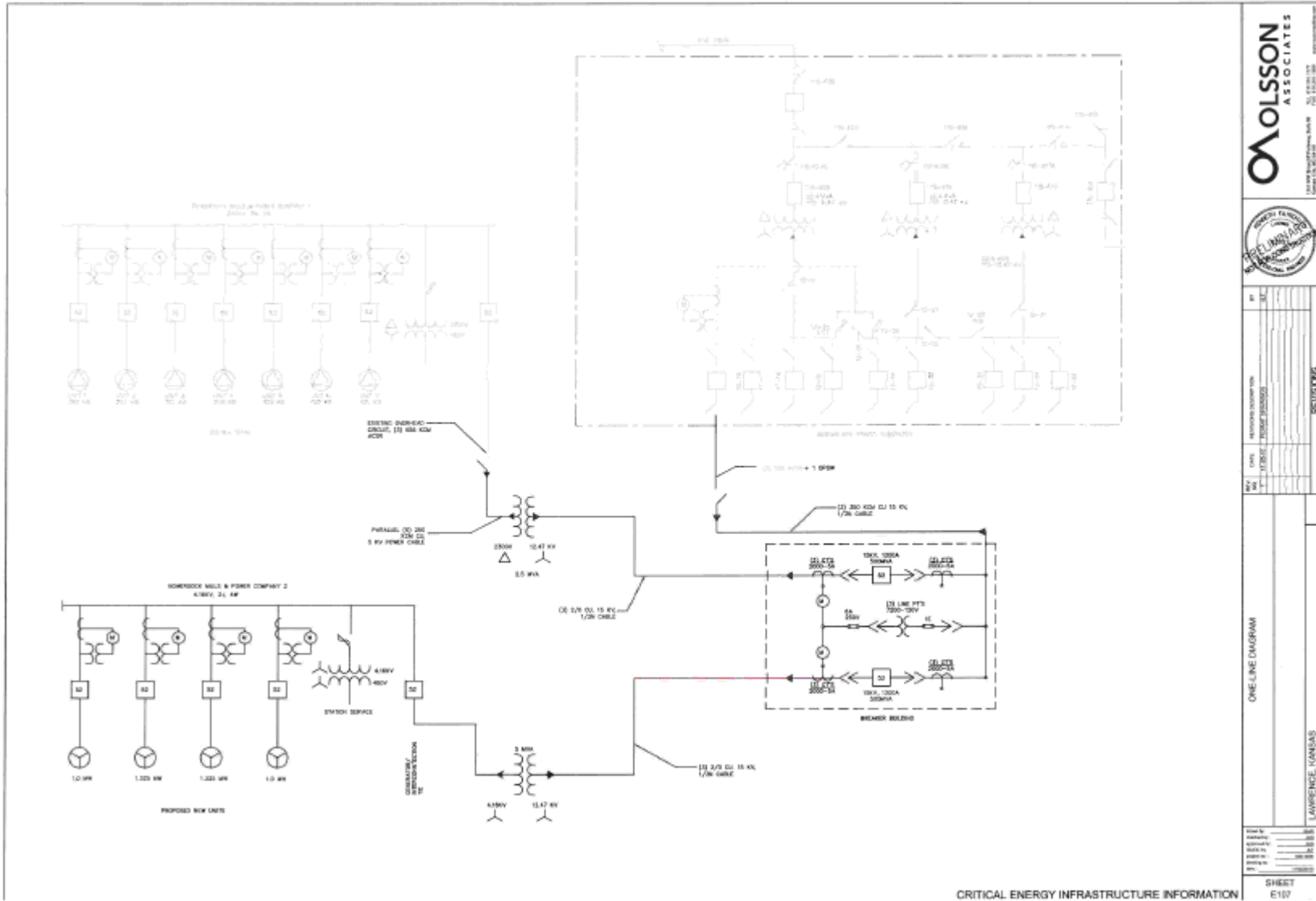


Figure 4 – Substation Layout

