

## **Poncha Junction 115/230 kV Transformer**

## Public Service Company of Colorado Transmission Construction Project

**Name of the project:**

Poncha Junction 115/230 kV Transformer

**Function of the project:**

The project consists of installing a new 280 MVA, 115/230 kV auto-transformer at the existing Public Service Company Poncha Junction Substation. The transformer will connect to Public Service's 115 kV Poncha Junction Bus. Approximately 1 mile of single-circuit 230 kV transmission would be built between the high side of the transformer and the 230 kV bus at the Western Area Power Administration's Poncha Substation. The transmission would consist of single-circuit 230kV structures, and will require new right-of-way acquisition. The new transformer and related equipment will be installed in the existing Substation. This project will provide a transmission contract path for Public Service to utilize solar power generation in the San Luis Valley. Please refer to Attachment F for the orientation map of the project.

**Estimated cost of the project:**

\$8.4 million

**Manner in which the project is expected to be financed:**

2010-2014 approved capital budget

**Projected date for the start of construction of the project:**

June 2011

**Estimated date of completion of the project:**

May 31, 2013

**Estimated in-service date of the project:**

May 31, 2013

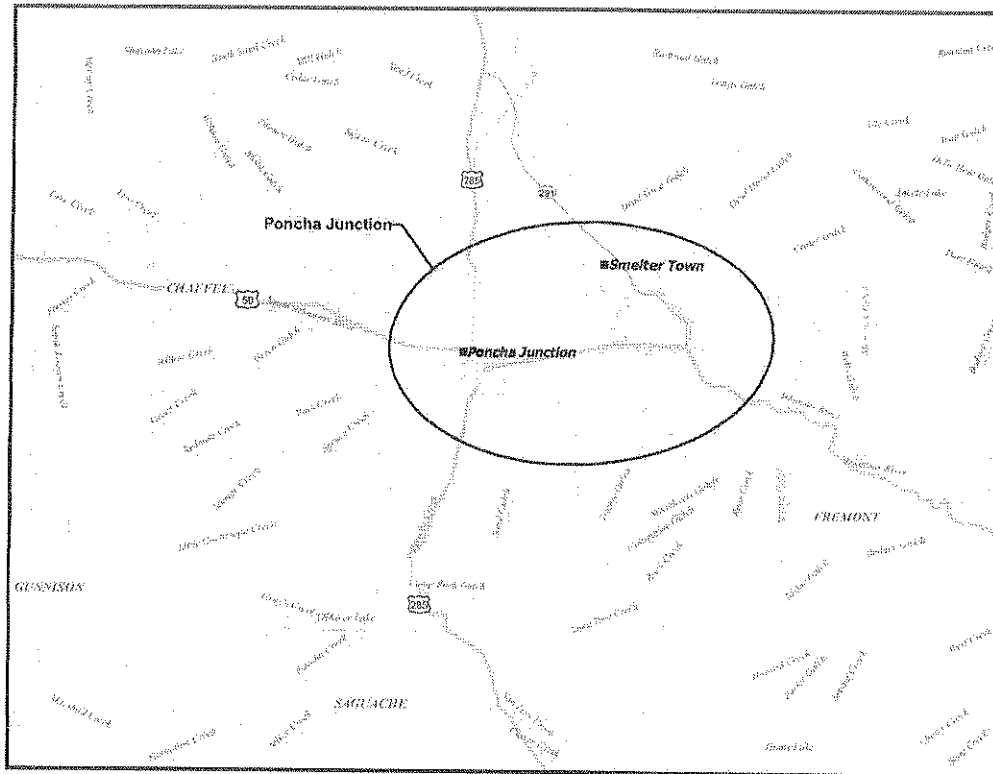
**Proposed general location:**

The proposed transformer will be located in the existing Public Service Poncha Junction Substation in southern Colorado.

**Prudent avoidance measures being evaluated for transmission facilities:**

The prudent avoidance measure on this project is the application of reverse phasing. The individual phases will typically have currents flow into the substation tap in one direction, and out of the substation tap in the opposite direction. This provides the desired reverse phasing and reduction in EMF. Audible noise issues are being addressed through the application of modeling techniques in the "Enviro" modeling program, and/or using different design techniques. Audible noise issues are also being addressed through the proper handling of conductor and hardware to avoid abrasions or damage that may cause corona noise. Transmission Engineering has designed the project to limit the noise from the transmission line to 50 d(B)A or less.

Attachment F



Location of the Poncha Junction 115/230 kV Transformer