



Source: SPPC, Alturas EIR, 1995.

LEGEND

- IPP DC
- 345 kV LINE
- 230 kV LINE
- 161 kV & below
- - - Falcon-Gonder Project

Figure 1-5
**Eastern Nevada-Northern Utah
Transmission System**

1.4.2 PRIMARY OBJECTIVES AND DESIGN

PRIMARY OBJECTIVES

In addition to improving the utilization of existing facilities, the Falcon to Gonder project would increase SPPC's import capability by 260 MW for its entire system by strengthening SPPC's eastern interconnection with PacifiCorp and the Los Angeles Department of Water and Power (LADWP). The project would also improve access to markets in Utah, the Desert Southwest, and other markets throughout the WSCC region. Because northern Nevada's weather conditions differ from those of these regions, each region experiences its peak demand and peak capacity at different times of the year – meaning opportunities for power exchanges with other utilities are greater.

PROJECT DESIGN

The new Falcon to Gonder transmission path would provide SPPC with an interface with the PacifiCorp and LADWP control areas (see Figure 1-5). The path includes two 230 kV transmission lines – the Gonder-Pavant 230 kV and the Gonder-IPP 230 kV line. Built in 1975, the Gonder-Pavant line is co-owned by SPPC and PacifiCorp. The line's ownership is divided at the border between Nevada and Utah. The Gonder-IPP line, constructed in 1986, is owned by a consortium of utilities, which also own the IPP. LADWP is the operator of the IPP.

The Gonder substation, near Ely, Nevada, is owned by Mt. Wheeler Power (Mt. Wheeler). It was built under an agreement between SPPC and Mt. Wheeler to supply power to Mt. Wheeler and import power into SPPC's system. SPPC owns the voltage control equipment (230 kV and 13.8 kV reactors, circuit switchers, and vacuum switches) and operates the transmission interconnection for both parties. All other equipment is owned and operated by Mt. Wheeler or the IPP. Both substations are located in SPPC's control area.

There are three major components of the proposed Falcon to Gonder project:

- 345 kV transmission line
- Falcon substation expansion
- Gonder substation expansion

The Falcon substation was selected as one end of the transmission line because it already contains 345 kV facilities and is located close to the Carlin Trend mining area. In 1994, SPPC constructed the Valmy-

Falcon 345 kV line to provide voltage support to serve load growth in the Carlin Trend mining area. The Falcon to Gonder project would provide more voltage support and another 345 kV source to the area. Ending the line at the Falcon substation would also improve the use of 36 miles of existing 345 kV line that connects the Falcon substation with the Valmy generating station. A location at or near the Gonder substation was chosen for the other terminus because it is at SPPC's easterly boundary and an existing interconnection point with PacifiCorp's and IPP's control areas. SPPC proposes to add two 345/230 kV 300 MVA transformers to the Gonder substation's existing facilities.

Initial technical and economic studies evaluated the import capability improvement of operating the line at 230 kV versus 345 kV. The import improvement was approximately 30 MW greater operating at 345 kV than at 230 kV. The voltage support provided to the Carlin Trend area would also be greater at the 345 kV voltage level. The 345 kV voltage level increases opportunities for wheeling power with other utilities.