

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF
COLORADO**

DOCKET NO. 07M-446E

IN THE MATTER OF PUBLIC SERVICE COMPANY OF COLORADO'S SENATE BILL
07-100 DESIGNATION OF ENERGY RESOURCE ZONES AND TRANSMISSION
PLANNING REPORT.

These comments are provided in accordance with Public Utilities Commission ("PUC") Decision C07-0971 regarding the SB 100 Transmission Planning Report submitted on October 31, 2007 by Public Service Company of Colorado ("PSCo" or "Xcel"). In that report, Xcel designated four resource zones with Zone 1 (NE Colorado) getting the most attention, followed by Zones 2 (East Central Colorado) and Zone 3 (SE Colorado). Zone 4, the San Luis Valley was provided with relatively very little attention in terms of transmission development.

The purpose of this document is to communicate SkyFuel's interest in the San Luis Valley as a potential site for large-scale concentrating solar thermal power (CSP) plants, convey SkyFuel's support for accelerating development of new transmission from the San Luis Valley, and provide an overview of the economic case for CSP relative to other renewables.

SkyFuel Inc. ("SkyFuel") is currently reviewing the attributes of multiple sites in the San Luis Valley for CSP plants having collective ratings in excess of 1000 MW. SkyFuel participated in public meetings the week of December 3, 2007 with county officials and interested members of the public. In response to these meetings, The *Pueblo Chieftain* ran two stories about SkyFuel on December 7, 2007.

Transmission is one critical element necessary for the development of large-scale solar thermal in the San Luis Valley. It is quite clear from SB100 that new transmission from the San Luis Valley is needed to accommodate development of large scale CSP on the order of 1000's of MW as SkyFuel is considering. SkyFuel's technology cycle supports acceleration of new transmission development from the San Luis Valley to back-bone with an in-service date of 2011-2012. With the potential for CSP in the San Luis Valley, the market would likely support new transmission capacity from the San Luis Valley on the order of 2000MW by 2012, an order of magnitude greater than the 200 MW considered in SB 100.

In consideration of the economics of CSP, SkyFuel offers the following comments for the commission's consideration.

- In basic form, CSP produces electric power with a high degree of correlation with consumption of electric power. Thus CSP produces power during periods when power prices are high. The economics (cost) of CSP should be evaluated against daily and seasonal *peak* prices, not average prices.
- CSP has near-term potential for large-scale energy storage in a form that is ecologically benign and economically feasible using molten salt. Large-scale energy storage means that CSP plants will be dispatchable and can provide capacity contributions to the power system in the near-term. SkyFuel received in November 2007, a grant from the US Department of Energy to commercialize this technology. Near-term CSP plants deployed without energy storage could readily be integrated with molten-salt storage as the technology is commercialized.
- Other forms renewable energy that do not have energy storage or dispatch capability need to be integrated with equal amounts of other generation

resources to ensure resource adequacy, a fundamental tenant of system reliability. This model is particularly costly because it implies that for each MW of non-dispatchable resource that is installed an additional MW of conventional (i.e. fossil-fired or large hydro) resource must be deployed as well, with the conventional resource having a lower net capacity factor. The energy produced from the conventional resource will inevitably have higher prices as the owners of the conventional capacity seek minimum investment returns.

The CSP industry has proven the viability of large scale solar thermal plants with units operating since the mid-1980's. The industry is building on past experience to further reduce costs and increase benefits delivered through technology development (i.e. energy storage). The San Luis Valley has incredible potential for CSP to power the growing energy needs of Colorado if transmission can be developed in a timely way.

Respectfully submitted this 17th day of December, 2007,

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