

California Geothermal Energy Collaborative
Transmission Planning Issues of Interest to Geothermal Development

Monthly Briefing Update: **April 2006**

1. CAISO-South Regional Transmission Planning Process (CS RTP-2006)

In April, the CAISO initiated a new process to evaluate the need for, and effect of, proposed transmission projects on the statewide grid. This process studies, simultaneously, all of the generation and transmission projects that have applied for permits in the southern half of the state. This enables the ISO to understand the interactions among different combinations of projects, in terms of power flows, reliability, system losses and the cost of power at each of the buses on the grid.

The study now underway includes the Imperial Valley – San Diego 500 kV project (known as the Imperial Irrigation District/Citizens Energy Green Path Southwest-SDG&E Sunrise Powerlink projects); the LEAPS (Lake Elsinore Advanced Pumped Storage) transmission project to connect the SDG&E and SCE systems in northern San Diego County/southern Orange County; and the Tehachapi transmission necessary to export 4,500 MW of wind power from that region. For geothermal, the study will assume that 2,000 MW of new generation is added in the Imperial Valley, consistent with the plan of the Imperial Valley Study Group and the CEC Renewable Resources Development Report. The study will look at the effects of the combined renewables generation/transmission on the state and WECC grids for the years 2010 and 2015.

Transmission planners from each of the involved utilities and the ISO are scheduled to complete power flow and production cost modeling of the combined projects by September 2006. The study is intended to provide the basis for determining the “need” for any and all components of the proposed transmission. The CPUC has delegated major aspects of “need determination” to the CAISO. This study is the first instance of this delegation.

The CAISO will hold periodic public meetings throughout the summer, open to all stakeholders and the public, to review the progress of its CS RTP study. The dates of these meetings will be announced on the CAISO website (www.caiso.com). Interested parties can also call CGEC transmission consultant Dave Olsen (contact information below) for updates on the study process and the stakeholder meetings.

- 2. Los Angeles Department of Water and Power (LADWP).** LADWP has been advancing the LA Green Path, a 500 kV transmission project, through the WECC path rating process. As originally proposed, this project was to connect the LADWP system to the Imperial Irrigation District system at a new Indian Hills substation on the proposed Palo Verde-Devers #2 line, and extend 100 miles north to a new Upland substation. LADWP has said that this connection to the IID system would enable it to access 400 MW of Imperial Valley geothermal power.

In April, however, LADWP informed the WECC that it proposed to change its plan of service for the LA Green Path. The new plan of service would not connect the IID and LADWP systems, and instead would extend a new 500 kV line from the Devers substation (near Palm Springs) to Victorville. This will require geothermal (and other renewables) projects in Imperial County seeking to sell to LADWP and/or other SCPA cities to seek transmission across the IID system to Devers. There is about 200 MW of capacity available across the northern portion of the IID system to Devers. IID has proposed upgrading the southern portion of its system to support the export of renewables to the north at Devers, and to the west across the proposed IID/Citizens Green Path-Southwest and Sunrise Powerlink.

3. **CDEAC Transmission Recommendations.** The Transmission Task Force of the Western Governors Association Clean and Diversified Energy Advisory Committee (CDEAC) has released draft recommendations for the transmission-related actions necessary to support adding 30,000 MW of clean energy to the western grid. The Task Force report is available at: www.westgov.org/wga/initiatives/cdeac/transmission.htm. The Governors are expected to act on these recommendations at the next WGA meeting, June 11-13 in Sedona, AZ.

In anticipation of the Governors' action, Implementation Teams are now being formed to put the recommendations into practice. The teams include representatives of all renewable energy technologies, geothermal specifically included, along with participants from state public utility commissions, utilities, environmental and consumer groups and other stakeholders. The teams are organized around two major issue areas: Using More of the Grid (access to, and more efficient use of existing transmission facilities); and Expanding the Grid (identifying and approving the new facilities necessary to support the overall 30 GW clean energy goal). The teams will begin work in June. Given the difficulty of the policy changes involved, the teams are expected to continue for at least two years.

Former state public utility commissioners Ron Lehr (Colorado), Roger Hamilton (Oregon) and Bob Anderson (Montana) are coordinating the formation and work of these teams. People interested in serving on them can also call CGEC transmission consultant Dave Olsen for information on this effort.

4. **I.05-09-005, Renewables-Transmission.** On April 25, ALJ Julie Halligan of the CPUC issued a Draft Decision on the cost recovery provisions of Public Utilities Code Section 399.25. This decision specifies which facilities are potentially eligible for backstop financing provided by this section of the Code. The IOUs need the certainty that they will be able to recover any costs which are not included under FERC-jurisdictional transmission rates in retail distribution rates if they are to proceed with development of major components of the transmission to access renewable resource areas across the state.

This draft decision is issued in the CPUC Renewables-Transmission Proceeding I.05-09-005. Comments on the decision are due May 15, and Reply Comments are due May 22.

- 5. New Frontier Power Summit, April 17-19, San Diego.** This conference provided status reports on many of the major proposed transmission projects across the west, including the Frontier Line, TransWest Express, Sierra Pacific/Southwest Intertie, and the Imperial Valley-San Diego 500 kV facilities. Key points made by several speakers, and that appear to represent the sense of the meeting:
- Because California is serious about its CO₂ goals, the coal industry will have to develop technology having IGCC emissions characteristics plus sequestration, if it is to have any chance of selling to west coast markets.
 - The Frontier Line can accordingly be configured to be a vehicle for transmitting large amounts of renewables to California/Arizona (as well as coal for other markets).
 - A transmission development strategy for the west should focus first on smaller, shorter distance projects to access renewables in each state, rather than very large scale, long-distance interstate projects. Renewables projects can be built much more quickly than either coal or large transmission projects; accessing this potential can supply needed generation until advanced coal technologies are proven.
 - The list of renewables-only transmission projects is growing rapidly. This list includes several lines in Texas; in southwest Minnesota; Lamar in Colorado; the Sagebrush Line in California. The Tehachapi projects will also be wind only. TransElect reported to the Wyoming Infrastructure Authority that the Tot 3 upgrade from Wyoming to Denver could be justified solely to carry wind power; if coal were to be added later, that might only make the project better.
 - All transmission planning should be based around an open stakeholder process, to identify concerns and potential opposition early, in order to create the foundation for the broadest possible support later.

The seven Frontier Line footprint utilities (Utah Power; Rocky Mountain Power; Sierra Pacific; Nevada Power; PG&E, SCE and SDG&E) will participate in a 12-month feasibility study of the line. The sense of the meeting was that this feasibility study effort should also include a stakeholder involvement process.

Presentations given at the conference, along with the agenda, participant list and related documents are available at <http://www.frontierline.org/>.

Monthly Briefing Updates are a service of the California Geothermal Energy Collaborative. For more information on the issues and programs discussed here, contact:

David Olsen, California Geothermal Energy Collaborative
olsen@avenuecable.com
805-653-6881