



# The Frontier Line

## *A Transmission Project for the American West*

### Summary

The Governors of California, Nevada, Utah and Wyoming – Arnold Schwarzenegger (R-CA), Kenny Guinn (R-NV), Jon Huntsman, Jr. (R-UT) and Dave Freudenthal (D-WY), – are working together to spearhead the development of a new interstate high-voltage electric transmission line across the Western U.S., originating in Wyoming and with terminal connections in Utah, Nevada and California. The proposed project grew out of extensive work done by a wide range of stakeholders and technical experts as part of the Rocky Mountain Area Transmission Study (RMATS).

Such a line would allow the wheeling of both clean coal and renewable-generated power from the Intermountain West to consumers in Utah, Nevada and California. Annual consumer and generator benefits for the Rocky Mountain region range between \$926 million to \$1.7 billion. California consumers also stand to benefit by \$325 million to nearly \$400 million annually. In addition to these financial benefits, the project will:

- Strengthen the reliability of the West's transmission system;
- Better protect consumers from energy shortages and price spikes;
- Encourage a broader, diversified energy portfolio;
- Reduce reliance on foreign energy imports and enhance domestic energy security; and
- Encourage new technologies that can accelerate the development of renewable energy generation and reduce the cost of controlling emissions from the West's vast fossil fuel resource base.

### Why This Line Is Needed

- ☑ Demand for electricity in high-population states in the West is projected to grow significantly in the coming decades. However, siting generation near load is increasingly difficult and costly. Tapping into abundant and relatively low-cost fossil and renewable resources in the Intermountain West will help keep the West's economy growing and will reduce price pressures on consumers.
- ☑ California faces a significant need for new generation. Using a historic growth rate of 2% per year, California must add 1,000 MW of new capacity each year, *net of retirements*, into the foreseeable future. The Frontier Line transmission project will help meet that need.
- ☑ As a region, the West has seen load growth of more than 60 percent in last 20 years, but high-voltage transmission has expanded less than 20 percent. This

project will increase reliability and ease transmission bottlenecks throughout the region.

- ☑ This transmission line also will help arbitrage hydro conditions and fuel price volatility, mitigate potential market power abuse, better insure against catastrophic events like blackouts, and enable new markets for clean energy resources.

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## About The Project

Connecting Wyoming, Utah, Nevada and California, the Frontier Line is expected to serve major load centers such as Salt Lake City, Reno, Las Vegas, Southern and Northern California. The line is expected to leverage the development of up to 6000 megawatts of wind power and 6000 megawatts of clean coal power – a combination that will help diversify the energy generation base of the West and provide greater protection against prices spikes in any one energy resource.

According to a detailed analysis conducted by the Rocky Mountain Area Transmission Study (RMATS), the **estimated annual benefit** to mountain states in the West of such a line is between **\$926 million to \$1.7 billion**. The **estimated annual benefits** to California alone range from **\$325 million to \$400 million**. The estimated total cost of a project like this was estimated by the RMATS study to be approximately \$3.3 billion. *Therefore, consumers in the West are expected to reap greater benefits from this line over its costs in only a few years.*

The total investment value of the Frontier line is expected to range between \$3.5 - \$5 billion in transmission assets and \$10 – \$15 billion in generation assets.

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## Project Status

This project is in the pre-feasibility stage but is moving rapidly along multiple tracks:

- The Governors of California, Nevada, Utah and Wyoming have agreed on a Memorandum of Understanding to publicly signal their commitment to this effort and to designate staff and resources to a **Frontier Line Task Force**.
- Preliminary briefings have been provided to key government agencies and regulators at the state and federal levels and in the U.S. Congress.
- Preliminary analysis is being done to identify potential business models, financing options, state and federal regulatory hurdles and siting paths.
- Wyoming has recently taken steps to facilitate major transmission expansions by forming the Wyoming Infrastructure Authority (WIA) - a state instrumentality with \$1 billion in bonding authority.
- The California ISO has agreed to provide technical support.
- Early outreach has been done to political leaders from both political parties at the state and federal levels.
- Early reaction from the business community has been very positive.

## History

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The genesis of this proposed project was the Rocky Mountain Area Transmission Study (RMATS), which was launched in August 2003 by Governors Dave Freudenthal (WY) and Michael Leavitt (UT). The RMATS team spent more than a year evaluating potential transmission alternatives within the Rocky Mountain region. The RMATS process recommended (1) three discreet transmission projects within the RMAT footprint and (2) several possible projects for longer-term development to enable export of generation. This proposed project grew out of those discussions.

## Energy Diversity

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Given the Frontier Line's ability to leverage the development of significant amounts of new renewable and clean coal generation, it is likely will become a critical focus of "Clean and Diversified Energy Initiative for the West," which was launched by Western governors last year under the auspices of the Western Governors' Association. This line is seen by many observers as critical driver for new renewable and clean coal technologies. By bringing more of these next-generation energy technologies online, the Frontier Line can further diversify the West's energy resource base and insulate the region, and the nation, from recurrences of energy supply crises such as that which occurred in 2000-2001.

## For more information

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