Grand Coulee-Bell

500-kV Transmission Line Project (Eastern Washington Reinforcement)

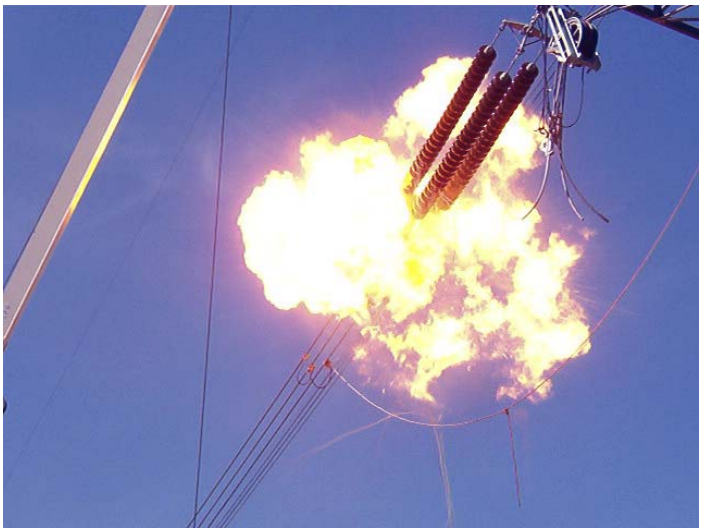
The Bonneville Power Administration (BPA) is in the process of building new transmission infrastructure projects to improve the distribution of power to meet existing and future power needs. The Grand-Coulee Bell project is needed so power can continue to reliably move from existing generation sources east of Spokane, Wash. to the west. This is one of several critical projects BPA has planned to solve power reliability problems in the Northwest.

Project Description

The Grand Coulee-Bell 500-kilovolt transmission line project will replace approximately 84 miles of an existing 115-kV wood pole transmission line with a new, higher capacity 500-kV steel lattice line. The line will run from BPA's Bell Substation near Spokane to Grand Coulee Dam and is scheduled to be completed and energized by December 2004.

Implosive Fitting Device

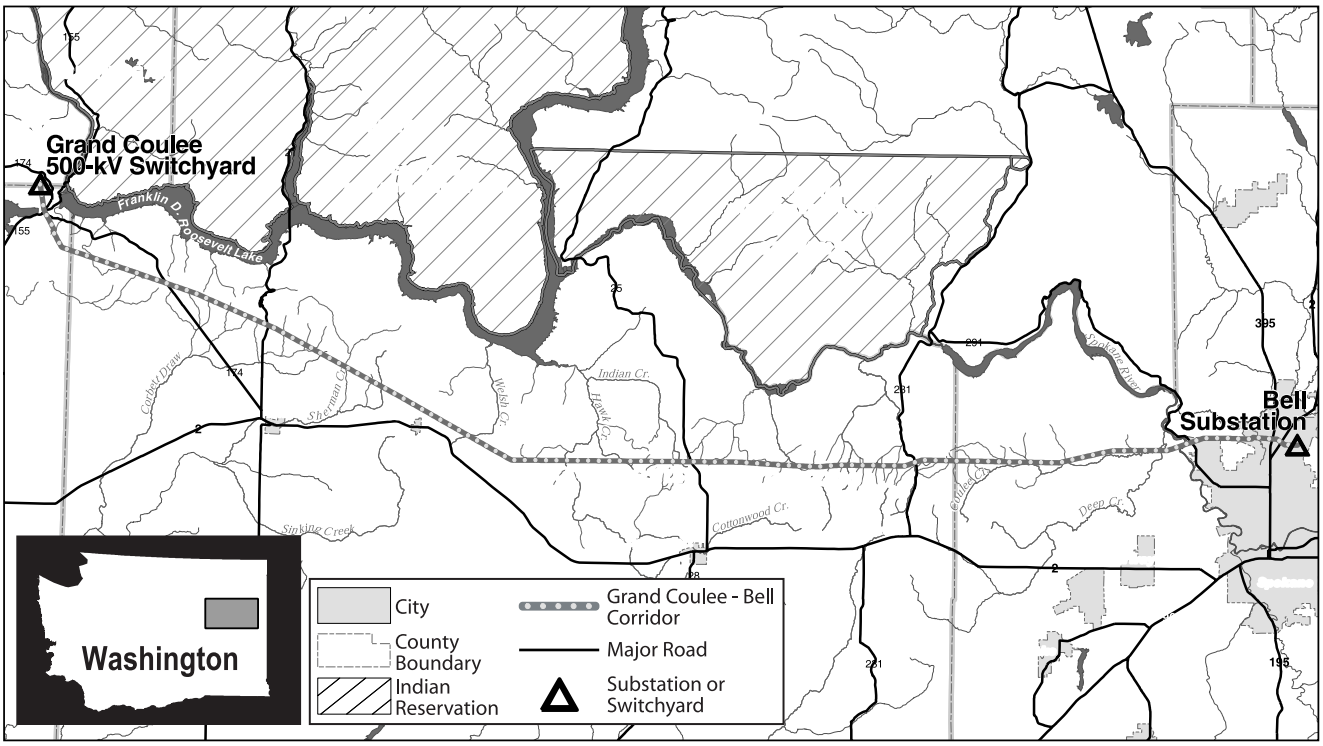
The major effort to start stringing conductor (wire) between the towers has begun. This phase of construction involves detonating several implosive devices at each point were the lengths of wire are connected to one another. The Xeconex implosive fittings use the technology of High Energy Metalworking to replace conventional hydraulic compressed fittings for high voltage transmission lines. The connectors are completely metallic fitting, void free, and uniformly smooth and straight.



The explosive primer cord is set off, imploding the tube tight around the conductor with a loud bang and some smoke. This forms a very uniform, strong, and electrically efficient connection between the two lengths of wire.

A small charge, specifically engineered for each connector, supplies the energy to complete the installation in less than 1/10,000 of a second, replacing the work of a 100 ton press. This implosive fitting technique produces a superior electrical and mechanical connection. The detonations pose no danger to property or land. Recognizing the extremely dry conditions this summer, the contractor will take additional fire prevention and suppression precautions.

More than 750,000 connectors have been successfully installed across the world, each requiring less installation time and cost than hydraulic fittings.



This map shows the route for a new 500-kV transmission line, primarily on existing right-of-way.

What the Community Can Expect

The local community will hear a number of loud explosions (implosions) during the day, accompanied by small amounts of smoke as construction crews periodically use the implosive fitting. The community should not be alarmed if the loud explosions are heard for several days within the construction zone. The contractor will be coordinating this work in advance with adjacent landowners and local law enforcement officials. However, farm animals and pets that may be disturbed by the noise may need to be moved.

Implosive fittings will be used periodically in the Spokane area between August and November.

For More Information

For more information on the project or implosive fittings please contact us toll free 1-888-276-7790. Project information is also posted on the BPA's Transmission Business Line Web site at http://www.transmission.bpa.gov/PlanProj/Transmission_Projects/.