

State of the System

Electrical Needs in the Wood River Valley

The Need

Transmission lines move high voltage energy from where it's generated to lower-voltage distribution lines and then to where the electricity is used in our homes, schools and businesses. The primary need to implement powerline projects within the *Wood River Electrical Plan* is to improve reliability and reduce the risk of long, unplanned outages. The existing system meets current demands for electricity until there is an outage on one of the transmission lines. The Hailey-to-Ketchum transmission line project is designed to provide a second transmission source to the North Valley to minimize the outage risk.

Installing multiple transmission lines and improving the existing lines will dramatically improve reliability of the overall system for both the Hailey and Ketchum areas. Having two transmission lines also will significantly improve public safety in the North Valley. Although a second line will add capacity to support future growth in the Wood River Valley, the primary need for the line is to improve reliability of the system.

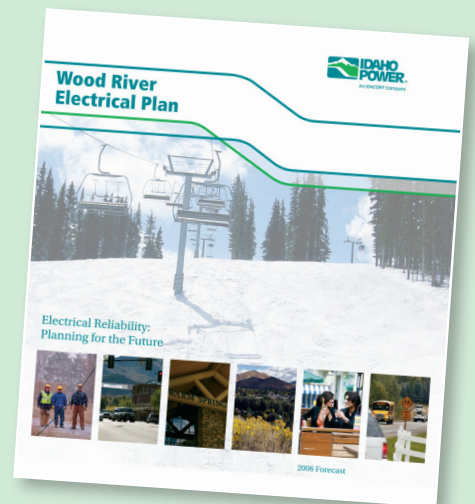


Actions that could be taken to address demand such as conservation and alternative generation will support future growth, but these measures do not address the primary problem of electric service reliability.

The Projects

A local Community Advisory Committee (CAC) worked together with Idaho Power staff in 2006 and 2007 to draft the *Wood River Electrical Plan*. This is a long-term plan for building electrical infrastructure, continuing demand side management and other actions to meet current and future electrical needs. The plan includes recommendations for the North and South valleys. Based on the CAC's recommendations, Idaho Power is pursuing concurrent construction and maintenance projects for portions of the Wood River Valley.

In the plan, the CAC's top priority project is a second line between Hailey and Ketchum. Idaho Power recognizes that improved reliability in the North Valley is related to the condition of the system in the South Valley. Therefore, Idaho Power is planning improvements to infrastructure in the South Valley and also pursuing development of the additional line between Hailey and Ketchum.



You can find a copy of the plan at www.idahopower.com/woodriver.



Rugged country and challenging weather including heavy snow, fog, ice, wildfires, thunderstorms and micro-bursts can delay restoration, similar to the situation during Christmas 2009.

Background and Conditions

Idaho Power provides electric service to the Wood River Valley from Midpoint Substation (south of Shoshone) and King Substation (north of Hagerman). These two lines meet just north of Hailey and then a single transmission line proceeds north to Ketchum (see map on next page).

As a local utility we are concerned about electric service reliability in the Wood River Valley. Idaho Power has identified two areas to make improvements to the line:

- 1) North Valley, from Hailey north to Ketchum and Sun Valley, and
- 2) South Valley, from Shoshone north to Carey, Bellevue and Hailey.

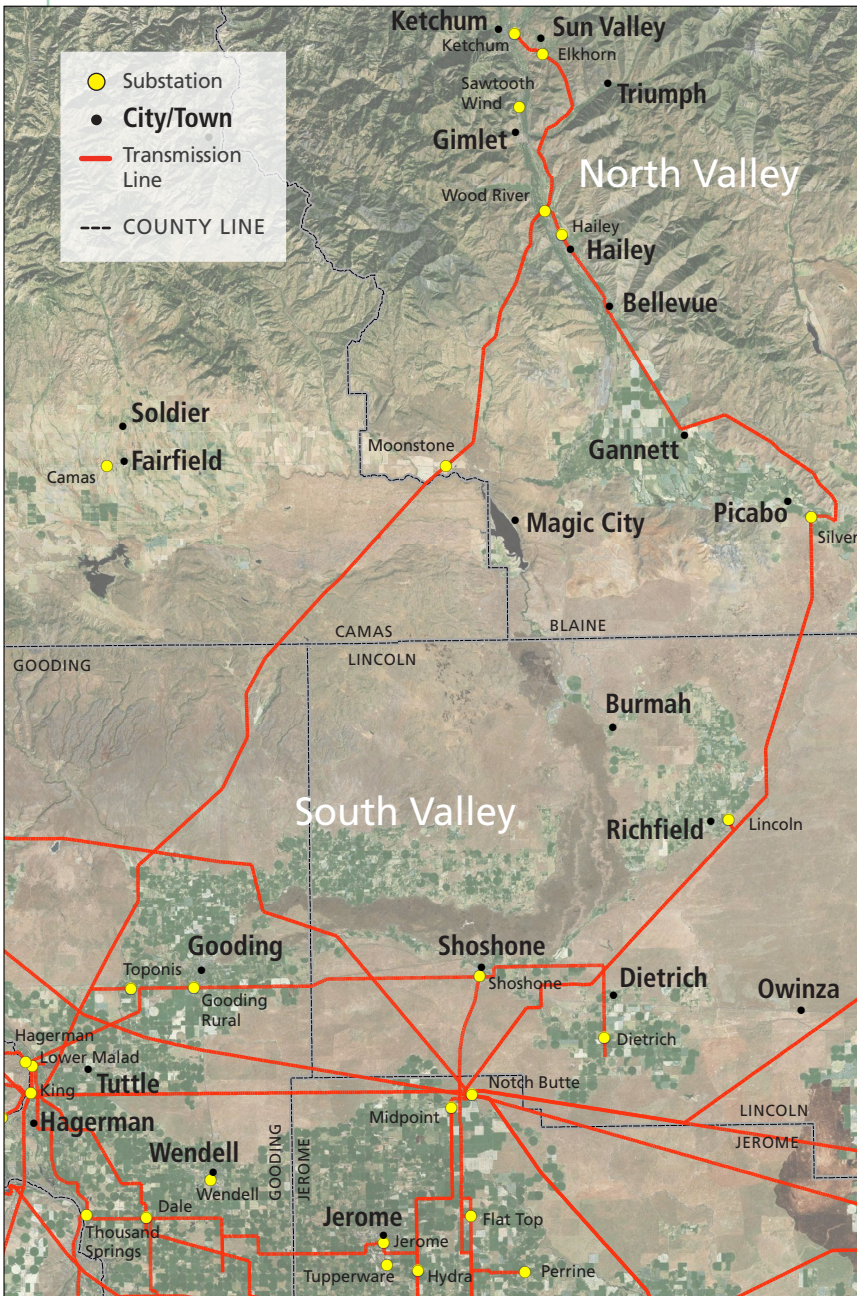
Because Ketchum is served by only one transmission line from Hailey, an outage on the existing line results in no power to the North Valley area until the line is restored. That's why a second, back-up line is crucial.

Many residents recall the 2009 Christmas outage. That weather-related outage was in the South Valley area and was caused by losing both transmission lines that serve Hailey. There has been a significant amount of maintenance on those lines since that outage to increase reliability.

The Christmas outage involved two simultaneous line outages in the South Valley, which is unusual. Normally the second line provides back up service, although in the extreme cold, the entire valley cannot be served. An outage on the single line serving the North Valley could result in a similar large-scale outage.

Potential Issues

North and South Valleys



The North Valley transmission line is aging, which increases the risk of failure and requires more maintenance outages. The existing line between Hailey and Ketchum is a wood-pole line. A fire could destroy significant sections of electric line and leave the communities without power for days, or even weeks, given the difficult terrain. Idaho Power completed a six-hour planned outage to conduct necessary maintenance in September 2011. Planned outages are predictable, and Idaho Power notifies customers prior to the outage. An unplanned outage is different.

Unplanned outages are not predictable; the failure point must be identified, and then the line crews must access and solve the problem. If the failure is in rugged terrain, or it occurs during bad weather, the outage may be prolonged. A prolonged outage is inconvenient and presents a real safety risk to the community. Often, line failures occur during bad weather, which further increases the safety risks and can impact businesses.

Idaho Power and the CAC members are concerned that a multi-day outage would have a negative impact on residents' and business' safety. Having no electric service during sub-zero temperatures would put people in danger. Safety is a core value at Idaho Power, and the company makes this a high priority.

Successes In Similar Situations:

Idaho Power built a similar second transmission line into McCall in 2007. Until then, McCall often experienced outages on the one transmission line serving the area—even emergency rotational outages during a winter storm. Idaho Power worked

successfully with McCall residents and the city to construct a new 138-kilovolt overhead line into the city. Today, McCall enjoys significantly improved electric reliability making the community safer and supporting businesses in the area.



Overhead And Underground Power Lines

Idaho Power's standard practice is to utilize overhead transmission lines to provide the most cost-effective service to our customers. Underground transmission lines are much more expensive and complicated to install and maintain.

Customers requesting an underground transmission line are required to pay the increased cost of that line as compared with an overhead transmission line. This policy ensures that the customers benefitting from the underground line bear the additional cost of the line, rather than Idaho Power's customers as a whole.

Idaho Power has been analyzing options and feasibility for both overhead and underground construction of the Hailey-to-Ketchum line. Costs to bury a transmission line are typically 10 times the cost of overhead construction. However, Idaho law allows cities and counties to form local improvement districts to pay for underground transmission lines through property assessments within a Local Improvement District area.

For more information, visit:
www.idahopower.com/woodriver



Working Together

Idaho Power appreciates the work of the Community Advisory Committee (CAC) and local communities to identify different options for improving the transmission system in the Wood River Valley. The projects identified in the *Wood River Electrical Plan* are a priority for Idaho Power. These projects are also a priority for the local community as identified through two years of work with the CAC. Idaho Power seeks your help to identify the best alternative to increase electric service reliability and enhance customer safety in the North Valley.

