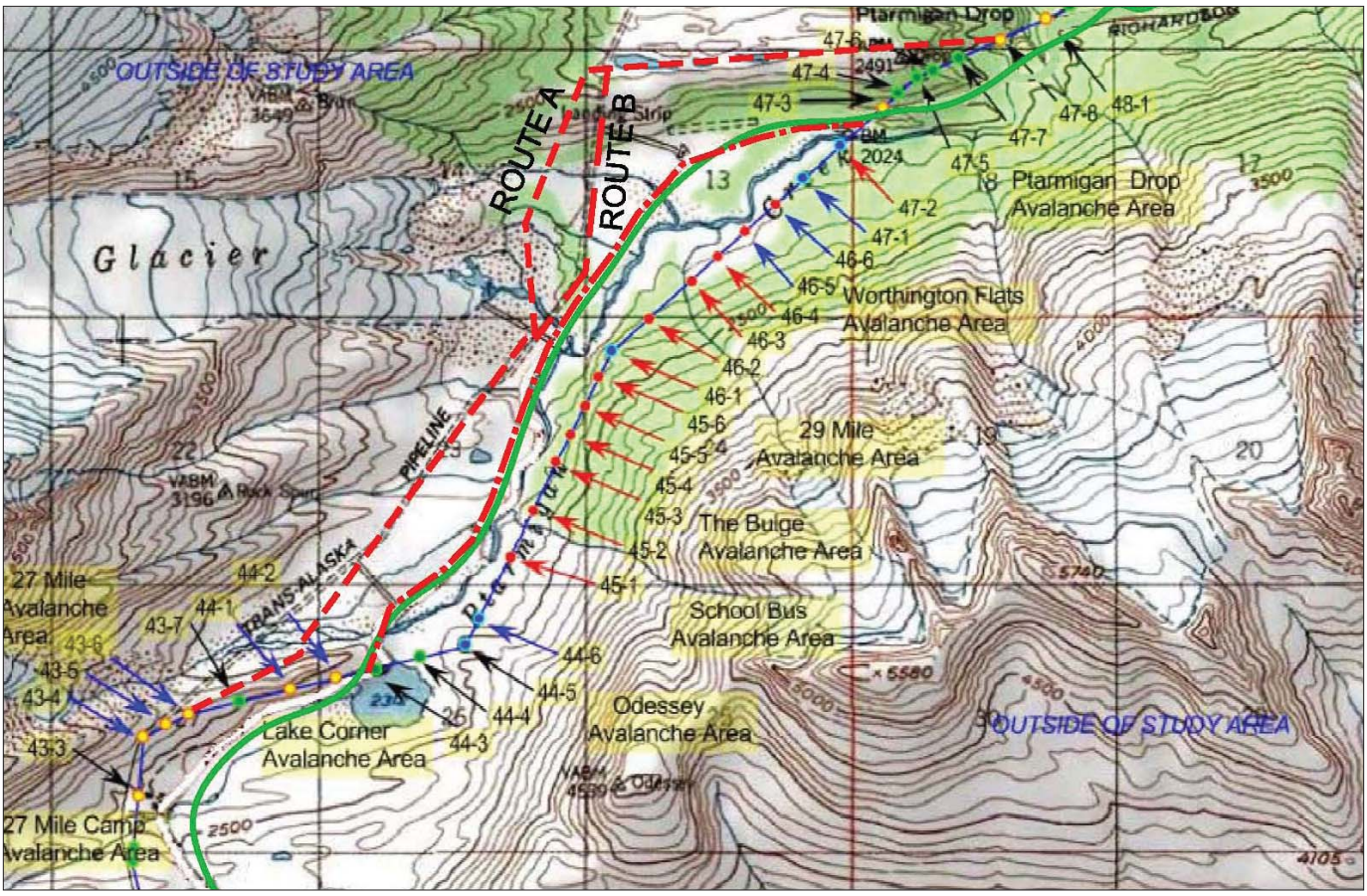
Transmission Line in the Trouble Zone



Many CVEA member-owners know that CVEA is now the sole owner of the 106-mile long transmission line interconnecting the Valdez District with the Copper Basin District. But, do you know there is a four-mile section traversing the Thompson Pass area that is at risk of significant damage and failure due to avalanche activity throughout the winter months?

Since 1988, CVEA's members have been affected by five major avalanche events that resulted in extended outages on the transmission line. Four of the five events have occurred since 2000. Each of the last three events destroyed single structures, causing repair costs ranging from $205,000 - $340,000 per event.

In addition, when the transmission line is not operable, the Glennallen Diesel Plant is the only plant providing power to the members in the Copper Basin District. This impacts CVEA's ability to fully utilize the Solomon Gulch hydroelectric resource as the cheapest form of energy for all members.

What also may not be known to CVEA's members is that the power flow on the transmission line is not always from the Valdez District to the Copper Basin District. CVEA's generation dispatch model includes scenarios when the Glennallen Diesel Plant is providing power to the Valdez District. While this scenario does not occur often, it is a real life situation and allows CVEA to perform maintenance on Valdez-based generators that, without the transmission line, would compromise our ability to deliver all of the energy requirements to the Valdez District.

Left, routing map of the Thompson Pass area. This clearly demonstrates that the CVEA transmission line and towers are currently in the avalanche trouble zone. Above, a rendering of the Thompson Pass area showing option 2A; the proposed route west of the Richardson Highway. Courtesy Dryden & LaRue, Inc.

In 2010, CVEA commissioned Dryden & LaRue, Inc. to review, analyze, and recommend avalanche mitigation alternatives for the transmission line traversing the Thompson Pass area. The study carefully considered reliability, lifetime costs, environmental effects, and permitting difficulties for nine different alternatives; including relocating or burying the line, avalanche forecasting and control, or the use of external protection structures and reinforcing particular existing structures. From the nine alternatives studied, two were identified as the preferred options.

Both of the options will meet CVEA's goal of getting the transmission line out of the avalanche trouble zone. They will also produce projects that are economically feasible, easily accessible, and minimize the safety risks for CVEA personnel.

The first option would relocate the line west of the Richardson Highway along a similar path as the trans-Alaskan pipeline. This option removes 100% of the risk of an avalanche damaging structures or placing CVEA personnel in danger. The structures would be similar to the existing structures in Thompson Pass and the route is being designed to utilize the landscape as much as possible to minimize the impact to the scenic view shed.

The second option would relocate the line along the path of the highway corridor, including routes on both the inside and outside edges of the DOT right of way. This option does not move the transmission line entirely out of the expected avalanche flow zone. However, any structure located in the avalanche flow zone will be designed to withstand any expected forces should an avalanche flow cross the road.

The cost of these two options vary from $2.7 to $3.3 million and includes materials, labor, retirement of the existing line, permitting, engineering, construction, construction management, and administration of the project.

With preferred options selected, the next step is to launch a detailed routing and permitting effort. The final mitigation study has been provided to the three state agencies that have land rights through the relocation paths; Department of Natural Resources (DNR), Department of Transportation and Public Facilities (DOT), and the Department of Parks and Outdoor Recreation (DPOR).

CVEA personnel and consultants will be meeting with representatives from all three agencies prior to submitting permit applications. Once applications are submitted, the state agencies assume full responsibility in the decision making process, scheduling of public meetings, and dissemination of information to the general public.

CVEA will be actively soliciting support from our membership during the public meetings and may ask for letters of support from our members that cannot attend.

Once complete, this project will allow us to go into winter with a renewed level of confidence that the transmission line will be out of harm's way when snow pack conditions deteriorate to the point of failure and a major avalanche occurs.

The choice of our preferred alternative goes back to CVEA's mission statement, which is to provide exceptional customer service through safe, reliable, cost-effective electric service and programs. According to Chris Botulinski, CVEA Manager of Transmission and Distribution, "Now that CVEA is the owner of the transmission line, we have the means to move it into a path that will increase our reliability and greatly reduce the safety risk to our personnel. This is the right thing to do for CVEA, its employees and member-owners." ■