CUP Application Narrative
North Wood River Valley 138kV Transmission Line Project

Idaho Power is pleased to file this narrative as an attachment to our Conditional Use Permit ("CUP") Application. This CUP would provide authorization for Idaho Power to construct, maintain, and operate a 138-kilovolt (kV) electrical transmission line connecting our Wood River Substation to our Ketchum Substation (the "Transmission Line").

About Idaho Power

Idaho Power is a regulated utility that services 24,000 square miles in Idaho and Oregon. Idaho Power strives to provide reliable, fair-priced energy. With 17 hydroelectric projects as the core of Idaho Power's generation resource, Idaho Power's residential, business, and agricultural customers pay among the nation's lowest rates for electricity.

Idaho Power is also committed to the protection of natural resources, including managing the land and rivers in areas we serve. Through strategic operation and continued commitment to emission control technology, our electric generation portfolio is among the lowest carbon-emitting in the nation. Idaho Power has reduced our carbon footprint over the last ten years, and continues to explore ways to continue such reductions, including retiring coal plants and continuing to support energy efficiency programs.

Local Customer Base

Idaho Power serves approximately 9,200 customers in north Blaine County (North Wood River Valley to Galena Summit) with ongoing growth in both commercial/recreational and residential customer accounts. The peak winter load for this area has reached 64 megawatts (MW), which is an excessive load to be served by a single, radial transmission line power source. Idaho Power's internal planning standards call for the installation of a second transmission line power source when a customer base peak load reaches 40 MW.

Project Purpose and Need

The North Wood River Valley, in Blaine County, is currently served by a single 138kV wood pole transmission line – the Wood River-Elkhorn-Ketchum transmission line ("Existing Transmission Line"). The proposed Transmission Line will increase electric reliability to the area and reduce the risk of a long-term power outage. In addition, it will enable Idaho Power to rebuild the Existing Transmission Line without requiring extended scheduled power outages to north Blaine County. Without the Transmission Line, an extended outage on the Existing Transmission Line could impact the safety and security of residents and visitors, and result in damage to to businesses, residences, and other properties. The Transmission Line will also allow Idaho Power to perform maintenance on either line without requiring customer outages.

P.O. Box 70 (83707)
1221 W. Idaho St.
Boise, ID 83702

Existing Transmission Line Considerations

An outage on the Existing Transmission Line will result in a complete loss of Idaho Power electrical service to all customers served by the Elkhorn and Ketchum Substations, including the Sun Valley and Ketchum area, extending south to East Fork Road and north to Galena. This area is exposed to significant risk of extended power outages due to the following issues associated with the Existing Transmission Line:

1. **Deteriorating Condition:** The Existing Transmission Line was installed in 1962 and needs to be rebuilt. The line has suffered deterioration due to age, wood decay, harsh winter conditions and woodpecker damage. Idaho Power has done its best to maintain the Existing Transmission Line, and the line has had a good performance record over the years. However, past performance is no assurance of future reliability for power lines. The Existing Transmission Line is aging and subject to an increased risk of failure.

2. **Exposure to Extreme Conditions:** The Existing Transmission Line is exposed several possible outage events, including vandalism, snow storms, ice build-up, woodpecker damage, avalanche, fire, and micro-burst wind events. Several of these outage events would pose direct health and safety risks in Blaine County, which would be significantly magnified by a simultaneous loss of power.

3. **Difficult Access:** Access to repair the Existing Transmission Line is impeded by residential development, rough terrain, and aged construction roads in many areas. The mountainous terrain limits vehicle access, impedes equipment set-up, and contributes to avalanche threats. The Existing Transmission Line's access limitations may result in extended outages for line conductor, insulator, or structure failures, especially during winter conditions.

Taken together, the risks mentioned above create a serious outage exposure for the 9,200 Idaho Power customers in Blaine County. An outage during severe winter conditions could last for days or even weeks as Idaho Power works to establish access for its heavy vehicles and equipment in the rough, mountainous terrain. In the meantime, the outage could cause serious property damage and jeopardize essential services and public health and safety.

Need for a New Transmission Line

The number of customers and size of the load served by the Existing Transmission Line, as well as the outage risks to this line, require the installation of the new Wood River-Ketchum 138kV transmission line to provide a second power source to north Blaine County. Each transmission line would have sufficient capacity to serve north Blaine County in the event of an outage on the other line, greatly increasing the service reliability in the area. The Transmission Line would also be much easier to access than the Existing Transmission Line, allowing for a quicker response time for line outages in most conditions. In addition, installation of the Transmission Line would allow Idaho Power to de-energize the Existing Transmission Line to make necessary repairs and upgrades to this line safely and efficiently without outages to customers.

Idaho Public Utility Commission Certificate for Public Convenience and Necessity

After an extensive hearing process, the Idaho Public Utilities Commission ("IPUC") approved Idaho Power's application for a Certificate of Convenience and Necessity for the Transmission Line ("CPCN") on September 15, 2017. The CPCN approves the Transmission Line along the route proposed by Idaho Power, which is described below (the "Transmission Line Route"). The CPCN confirms that Transmission Line redundancy is needed to provide adequate and reliable service to the North Valley, and to promote public health, safety and convenience of the area.

Project Description

Idaho Power's Transmission Line Route would extend approximately 12 miles from Idaho Power's Wood River Substation, north and adjacent to Hailey city limits, to Idaho Power's Ketchum Substation, within Sun Valley city limits ("The Project"). The first 10 miles of the Transmission Line Route would be located within the jurisdiction of Blaine County, primarily along Buttercup Road and Highway 75, before the Transmission Line Route continues north for approximately two additional miles into the city limits of Ketchum and Sun Valley.

Wood River Electrical Plan Community Advisory Committee

Idaho Power has undertaken an extensive public outreach effort in the County and surrounding areas over the past 10 years to gain community input and direction regarding the Project. The Wood River Electrical Plan Community Advisory Committee ("CAC") was formed in 2007 (with local customers, elected officials, stakeholders and advocacy groups) and developed the Wood River Electrical Plan ("WREP"), which serves as a guide to Idaho Power's infrastructure planning in the Wood River Valley.

The original WREP recommended in favor of the Project, as did subsequent updates to the WREP. In addition to its WREP activities, Idaho Power also addressed the design and routing for the Project in numerous public meetings with homeowners, neighborhood associations, and several property owners and groups, and in presentations to various civic and governmental groups.

Idaho Power and the CAC explored numerous potential routes for the Transmission Line and selected the Transmission Line Route as the preferred route. This route runs primarily along Buttercup Road and Highway 75 from Hailey to Ketchum and Sun Valley, and allows for the replacement of existing power lines. There were no acceptable alternative routes identified by the CAC to the east or west of the Transmission Line Route, largely because of the narrow valley, the mountainous topography west of the highway and the topography, homes, trees, river crossings and proximity to the Existing Power Line east of the highway. In addition, a different route would add a new power line corridor to the Valley without replacing the existing power line along Buttercup Road and Highway 75.

Project Route Location

Idaho Power's Transmission Line Route would run overhead from the Wood River Substation to a point near the intersection of Elkhorn Road and Highway 75, where the Transmission Line would transition underground for the remaining two miles of the route to the Ketchum Substation.

For sake of clarity, the Project is divided into five segments, based on either existing utility routes or roadways. The following table ("Table 1") provides a brief description of each segment, with segment length and average increase in pole height (compared to the existing Idaho Power poles).

Table 1. Proposed Transmission Line Segments for Blaine County jurisdiction

Line Segment	Length and # Poles	Approximate Height Increase	General Description
Segment 1: Wood River Station east to Buttercup Road	0.5 miles, 8 poles	No change at 60 feet (TA pole)	Rebuild existing single-circuit (one line) transmission line to double-circuit (two lines) transmission line. Adds 3 wires.
Segment 2: Buttercup Road, W. Meadow Drive to Hwy-75	1.6 miles, 34 poles	9 feet; 38.5 feet to 47.5 feet (TR pole)	Rebuild existing single-circuit distribution line to add transmission line on top. Includes Cox Communication installation.

Segment 3: Buttercup Road, Hwy-75 to East Fork Road	2.9 miles, 56 poles	4.5 feet; 47.5 feet to 52 feet (TA pole)	Rebuild existing double-circuit distribution lines to add transmission line on top. Includes Cox Communication installation.
Segment 4: Hwy-75 from East Fork Road to Hospital Drive	3.2 miles, 64 poles	14.5 feet; 48 feet to 56.5 feet (TA pole)	Rebuild existing single-circuit distribution line to add transmission line on top. Includes Cox Communication installation.
Segment 5: Hospital Drive along bike path to Elkhorn Road	1.1 miles, 21 poles	New poles at 47.5 feet (TA pole)	New transmission with no existing distribution lines or other utilities. Install transition structure near Elkhorn Road.

While the new Transmission Line poles are modestly taller than the existing poles, the incremental impact of the Transmission Line will be reduced because the new Transmission Line poles will replace the existing power line poles for most of the overhead Transmission Line Route. Idaho Power will be using the shortest poles possible for the Transmission Line. It initially appeared that taller poles would be needed to allow the attachment of Cox Communications cables on Segments 2, 3 and 4, but Idaho Power has developed a plan with Cox to allow the Cox attachments on the shorter Transmission Line poles.

Segment 1 of the Transmission Line consists of rebuilding a half mile of the existing Silver-Hailey 138kV transmission line extending from the Wood River Station along West Meadow Drive Road to Buttercup Road. The existing line is built on 61 feet tall poles, and the new Transmission line would utilize the same height poles, but would increase the number of insulators and conductor wires from three per pole to six per pole.

Segment 2 of the Transmission Line cover a total of 1.6 miles along Buttercup Road, from near West Meadow Drive to Highway-75. Idaho Power would rebuild the existing single-circuit distribution line to add three transmission insulators and wires on poles that are 9 feet taller.

Segment 3 of the Transmission Line cover a total of 2.9 miles, continuing the line along Buttercup Road to East Fork Road. Idaho Power would rebuild the existing double-circuit distribution line to add three transmission insulators and wires. To minimize pole height increases, the two distribution line circuits will no longer be "stacked" on separate crossarms, and will now be on a single, wider, crossarm. The new pole height increase for the Transmission Line is now 5 feet (versus 10 feet in our original CUP application), and provides a more consistent look along Buttercup Road.

Segment 4 of the Transmission Line covers the 3.2 mile stretch primarily along Highway 75, from East Fork Road to Hospital Drive. Idaho Power would rebuild the existing single-circuit distribution line to add three transmission insulators and wires. The Transmission Line will cross from the east side of the Highway to the west side of the Highway as it travels north. The Transmission Line is designed for "TA" pole structures in this area due to the curvature of the highway, limited right-of-way width, and maintaining visual consistency of the line, along Highway-75.

Segment 5 of the Transmission Line covers the 1.1 mile stretch between Hospital Drive and Elkhorn Road. The route is proposed along the east side of Hospital Drive and then follows the bike path to an overhead-underground transition structure at Elkhorn Road. There is currently no overhead distribution line along Segment 5, so the new Transmission Line poles would not replace existing poles. The new Transmission Poles would be 47.5 feet tall through Segment 5 and would be "micro-sited" unobtrusively away from Highway-75.

Please refer to Tab 4 in the Application Package for detailed Project location information.

Project Design Features

Idaho Power has proposed to use a variety of steel poles to accommodate the existing electrical distribution, communication, and cable utilities along the project route, using the shortest poles possible in each case. Pole heights are described in Table 1. Idaho Power will remove the existing poles and move existing utilities to the new transmission poles. Steel poles with a "weathered" finish are proposed. Poles are typically spaced approximately 300-ft apart, and are proposed in existing easements or along public road ROW.

Please refer to Tab 5 in the Application Package for detailed Project pole illustrations.

Conclusion

Idaho Power looks forward to presenting this application to the Blaine County Planning and Zoning Commission for approval. We suggest the first public hearing be held in an open workshop format, to fully review the Project request and to go over some of the pole configuration and micro-siting options for the Transmission Line. The Project will provide a critical redundant energy source to the North Valley with a low-profile design and Idaho Power looks forward to working with the County for approval of the Project.