BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE WOOD RIVER VALLEY.	))))))	**CASE NO. IPC-E-16-28**

DIRECT TESTIMONY OF MICHAEL MORRISON

IDAHO PUBLIC UTILITIES COMMISSION

MAY 5, 2017

Q. Please state your name and address for the record.

A. My name is Mike Morrison. My business address is 472 West Washington Street, Boise, Idaho.

Q. By whom are you employed and in what capacity?

A. I am employed by the Idaho Public Utilities Commission (Commission) as a Staff Engineer.

Q. Please give a brief description of your educational background and experience.

A. I received a Bachelor of Science degree in Chemical Engineering from the University of Southern California in 1983, a Master of Science degree in Mechanical Engineering from the University of Idaho in 2002, and a Doctor of Philosophy in Geophysics with a Civil Engineering emphasis from Boise State University in 2014. I have been a registered professional engineer in Idaho since 1998. I attended the Electrical Utility Basic Practical Regulatory Program offered by New Mexico State University's Center for Public Utilities.

Between 1988 and 2009, I held a number of engineering positions at Micron Technology, Inc. From 1990 through 1996, I was also a facilities engineer in the Idaho Army National Guard. In that capacity, I oversaw the design, construction, repair, and maintenance of facilities and roads at Gowen Field, the National

Guard's Orchard Training Range, and other National Guard facilities in Southern Idaho.

I began work at the Idaho Public Utilities Commission in 2014.

Q. What is the purpose of your testimony?

A. I will discuss the costs and benefits of the Company's proposed redundant line, and the need for a parallel line to facilitate repairs on the existing line. I will also discuss the Company's proposed Overhead Distribution base case, and its preferred alternative Underground Transmission route.

I will conclude with a brief discussion of the Company's analysis of proposed alternatives to a second transmission line, such as local generation, electrical storage, and microgrids.

Q. Please summarize your testimony.

A. Currently, the communities of Ketchum, Sun Valley, and Elkhorn (North Wood River Valley) are served by a single 138 kV transmission line originating at the Company's Wood River Valley substation near Hailey, and terminating at the Company's Ketchum substation. The Company is seeking a Commission order granting a Certificate of Public Convenience and Necessity (CPCN) to construct a second 138 kV transmission line connecting the same two substations. The Company states that a

second, redundant line is necessary in order to provide reliable service to the North Wood River Valley, and that it is also needed to facilitate reconstruction of the existing 138 kV transmission line without interrupting service to the North Wood River Valley.

The questions before the Commission are: 1) Is a second line needed? 2) If so, what facilities are necessary? 3) What costs should be borne by the general body of Idaho Power rate payers?

The Company has not provided compelling evidence that the benefits of a fully redundant line justify the $30 million dollar cost proposed for this project. Nevertheless, a second line will be necessary to facilitate repair of the existing transmission line.

I will show that much of the cost of the Company's preferred route would be incurred providing aesthetic benefits to the City of Ketchum. I do not believe that it would be appropriate for the incremental costs of providing these benefits to be passed-on to the general body of Idaho Power rate payers. Therefore, I will recommend that the Commission direct the Company to install a temporary Overhead Transmission Line as necessary to facilitate repair of the existing transmission line. In the event that the Commission determines that a second line is needed, then I recommend

that an Overhead Transmission route through the City of Ketchum be considered the base case. The City of Ketchum and other affected cities/counties should be prepared to provide the incremental difference in cost required to place those facilities underground.

Idaho Code § 50-2503 provides a mechanism whereby an Idaho municipality may establish a Local Improvement District (LID) in order to pay for the incremental costs of undergrounding electrical transmission and distribution lines. Alternatively, the Company may establish a surcharge for customers in the areas benefitting from underground transmission and distribution lines.

Q. In its application, the Company stated that it has been planning a second transmission line in the North Valley since 1973. Application at 6. What is the historical background of transmission in the North Wood River Valley?

A. The existing line connecting the Wood River Substation to the Ketchum substation is actually the northern end of a 72 mile line connecting the King substation near Hagerman to the North Wood River Valley. This project was completed in 1962 (Exhibit 101).

In 1973, construction of the first 500 MW unit at the Jim Bridger power plant was behind schedule, and

the Company was concerned that it might not have sufficient generating resources to meet projected demand for summer 1974. The Commission granted the Company CPCN No. 272, which authorized the Company to construct a 50 MW generating station near Hailey, and a second 138 kV Overhead Transmission line connecting the Wood River substation in Hailey to the Ketchum substation. The proposed route for this line was similar to that proposed in the present case (Exhibit 102). In the 1973 case, the Company's cost estimate for this second line was $385,000 (Exhibit 101 at 2).

In 1989, the Company completed a second line to the Wood River Substation, and determined that a back-up generator was no longer needed. It sold the generator in 1992 (Exhibit 103 at 2).

The Company never constructed a second 138 kV line from the Wood River substation to Ketchum. In 1995, at the Company's request, the Commission cancelled CPCN No. 272. Order No. 26107.

Q. What reasons did the Company give for requesting that the Commission remove its authority to construct a second 138 kV Wood River-Ketchum transmission line in 1995?

A. The Company gave two reasons: 1) The Company performed an extensive reassessment and concluded that

the line was not needed, either to meet projected load growth or to improve reliability. 2) The Company indicated that it had considerable difficulty obtaining the necessary permits and rights-of-way for the project. In particular, the Company indicated that there was difficulty finding an aesthetically acceptable route through downtown Ketchum (Exhibit 103 at 3 and 4).

Q. What has prompted the Company to seek a new CPCN for a redundant Wood River-Ketchum line?

A. In its response to Staff Production Request No. 16, the Company stated that its pursuit of a redundant transmission line was prompted by "(1) recommendation of the 2007 Community Advisory Committee, (2) increased age of the existing transmission line which requires replacement of a substantial portion of the structures, (3) avoidance of construction and then removal of a temporary line to facilitate reconstruction of the existing line, and (4) increased fire hazard as evidenced by recent fire activity."

Q. How was the Wood River Valley Community Advisory Committee (CAC) involved in the Company's planning process?

A. The Company created a number of CACs throughout its service territory in order to obtain local guidance in identifying and planning improvements and additions to

the Company's transmission and substation infrastructure. On pages 7 and 8 of its application, the Company explains that it began creating CACs in response to Commission guidance in the 2004 City of Eagle Case (Case No. IPC-E-04-04).

Starting in 2007, the Company began seeking formal input for its Wood River Valley transmission projects via the Wood River Valley CAC. The Wood River Valley CAC assisted the Company's development of the Wood River Electrical Plan submitted as Company Exhibit No. 2.

The Wood River Valley CAC meeting minutes, the Wood River Valley Electrical Plan, and related documents indicate that the Company went to great lengths to make a good faith effort to consider the needs and sensibilities of communities in the Wood River Valley in the development of this plan. Further, I should note that the redundant Wood River-Ketchum line proposed in this case is just one part of the overall Wood River Valley Electrical Plan, and that there seems to be general agreement by the Company and local communities on most other elements of the plan.

Q. You state that there seems to be general agreement on most other elements of the plan. Did the CAC, or do the communities in general, agree with the need for a redundant line in the North Wood River Valley

and the Company's plan of service as described in the Application?

A. On issues regarding redundant service to the North Wood River Valley, there is considerable disagreement, and many of the viewpoints expressed on this particular topic are mutually exclusive. Some residents do not agree that any redundant service is needed. Some residents agree that redundant service is needed, but disagree about the exact route chosen by the Company. Some residents want the Company to consider local generation, electrical storage, and microgrids in lieu of a redundant transmission line. Throughout the CAC process, the Company supported community efforts to explore each of these options. I will discuss the Company's analysis of these options later in my testimony.

A continuing point of disagreement was the need and cost of undergrounding transmission facilities in the City of Ketchum. I will discuss the costs of underground transmission facilities later in my testimony. Prior to July, 2015 the Company had consistently reminded CAC participants that local residents would need to pay for the incremental costs of undergrounding (Application, Exhibit No. 2, at 13). In a July 6, 2015 letter, the Company announced its adoption of the much more expensive

Overhead Distribution option as a base case (Exhibit 104), thus justifying a more costly underground transmission option and greatly decreasing the need for local communities to fund the incremental costs of undergrounding in the Ketchum area.

REDUNDANCY AND RELIABILITY

Q. What are the benefits and costs of a fully redundant line in the North Wood River Valley?

A. A redundant line is one method that the Company can use to improve system reliability. In practice, both the original and the redundant line would operate simultaneously, so that in the event that one line experiences an outage, the remaining line would continue serving load. Customers would see little or no interruption in service.

Full redundancy comes at a high cost because it requires the Company to fully duplicate the existing transmission line. Furthermore, the benefits of a redundant line are only realized when the existing line is out-of-service. Since 1995, the Wood River-Ketchum line has experienced a total of 5 sustained unplanned outages, with durations of between 5 and 126 minutes. Had the Company's proposed second line been in service over that time period, it would only have provided a very small benefit for its $30 million cost (Exhibit No. 105

and Exhibit No. 106).

As stated by Company Witness Angell (Angell Direct at 21), the existing Hailey to Ketchum 138 kV transmission has an unplanned sustained outage rate of 1.23 events per year per 100 miles. This compares favorably with Idaho Power's system-wide 138 kV transmission average of 1.89 unplanned sustained outages per year per 100 miles.

It is likely that this excellent reliability record is due, in large part, to the Company's pro-active efforts to mitigate the risks of unplanned outages due to fire, avalanche, weather, and other unplanned hazards.

Q. Would a second line eliminate all risk of a power outage in the North Wood River Valley?

A. No. Since 1995, the longest sustained outage experienced by residents of the North Wood River Valley was a 700 minute interruption on December 24, 2009. The Company explained that this outage was due to loss of electrical supply when both transmission lines serving the Wood River substation were out-of-service due to inclement weather. In other words, both redundant lines feeding the Wood River substation failed simultaneously.

Because this incident occurred on lines feeding the Wood River substation, the Company's proposed Wood River-Ketchum line would not have mitigated the December

24, 2009 outage. Further, as discussed above, historically the existing Wood River-Ketchum line has an excellent reliability record. In short, a second Wood River-Ketchum line is a very expensive means to achieve a relatively small reliability improvement.

Q. Did the Company submit a risk assessment of the existing line in this case?

A. Not in this case; however, it submitted a comprehensive risk assessment in 1995 in support of its request to withdraw its previous CPCN (No. 272). Key portions of this assessment were performed by external evaluators, including Energy Data Management, Inc. of Colorado, Power Engineers Inc. of Hailey, and Osmose, Inc. of New York. Additional portions of the assessment were performed by Idaho Power. The assessment concluded that the risks posed by avalanches, fires, and other unplanned events were low, and that the Company's maintenance and emergency management plans would be able to quickly repair the damage caused by such events.

Q. Have any key findings of the Company's risk assessment changed since 1995?

A. The Company provided no evidence that its assessment of risks due to environmental factors such as avalanche or fire had changed since its comprehensive 1995 survey, and so the need for a fully redundant line

does not appear to have changed since then.

Of course, the existing transmission line is 22 years older than it was in 1995; however, the Company has an aggressive preventive maintenance program in the North Wood River Valley. The Company regularly inspects the line, and schedules maintenance or replacement of damaged poles and other equipment as necessary to preclude potential hazards. Some portions of this line have already been replaced. As we will discuss later, there will eventually be a very real need for a temporary line that could facilitate reconstruction of the existing line; however, the costs of such a line are substantially less than the costs of a permanent, partially underground line providing full redundancy.

Q. Is it correct to say that there is no need for a fully redundant line in the North Wood River Valley?

A. Not at all. In the present case, the Company bears the burden of proof to show that the benefits of a second Wood River-Ketchum line justify a $30 million cost that will be borne by Idaho Power's general body of rate payers. I do not believe that the Company has met this burden.

There are, however, a number of hazards that the Company did not explore. For example, the Company's 1995 risk assessment assumed a 50 year hazard. That is,

it analyzed hazards that have a 2% or greater likelihood of occurring in any particular year. The Company did not evaluate the impacts of rare, but potentially catastrophic events such as sabotage, plane crashes, or earthquakes. Such events have a very low probability, but might remove the line from service for several days. If such an event were to occur in mid-winter, the consequences could be very severe for the residents of the North Wood River Valley. The Company provided no information indicating that it would not be able to repair damage from such an event in a timely manner (Exhibit 107).

RECONSTRUCTING THE EXISTING LINE

Q. Why do you believe that a second line will be necessary to facilitate reconstruction of the existing line?

A. As I indicated earlier, the number of unplanned outages along this section of line is quite low, so there is little justification for a fully redundant line. Nevertheless, the existing line is nearing the end of its useful operating life, so there will eventually be a need to rebuild it.

Along some portions of this line, woodpeckers pose a substantial threat to the integrity of the existing wood poles, and the Company has already replaced

some woodpecker-damaged wooden poles with metal poles. Angell Direct at 21. When replacement is necessary, the Company takes special care to minimize disruption to its North Wood River Valley customers: The scheduled outage is advertised in local media, preparatory work is done ahead of time, needed materials are pre-positioned, and three crews are used to move power lines from old wooden poles to new metal poles. Notwithstanding the extra effort, this work has typically required a scheduled outage of nearly 8 hours per transfer. As the line ages, we can expect the frequency of such outages to increase.

The Company estimates that 40 such planned outages will be necessary to fully rebuild the existing line. Angell Direct at 22.

Q. What is the useful life of the existing line?

A. The existing line traverses a region with cold winters and warm dry summers. These conditions are not conducive to fungal rots that afflict wooden power poles in other parts of the country. Under these conditions, it is reasonable to expect wooden poles to have a useful life of 70 or 80 years. The existing line was completed 55 years ago, so major components of the line are within 15 to 25 years of the end of their useful lives.

Q. Why is the cost of a temporary line, constructed to facilitate repair of the existing line,

less than the cost of a fully redundant line?

A. The Company's proposed redundant line would be able to support a demand of 120 MW, so that the line could support the Company's current and projected winter peak. It is likely that most repair work on the existing line would be performed during the summer, when peak loads are much smaller. The Historic Summer Peak Line Loading for the North Wood River Valley is only 26 MW, so a temporary line constructed to facilitate repairs could be much smaller than a fully redundant line. Application, Exhibit No. 2 at 34.

According to the Company, full replacement of the line conductor would require 6 to 12 weeks. Application at 16. The Company considered installing a temporary line to facilitate replacement, but rejected it because it "would almost assuredly be deemed a visual impact by North Valley customers." The proposed temporary line would "be placed in road right-of-way, mostly along Highway 75, to minimize private property impact and right-of-way costs." Application at 16-17.

Although I appreciate the Company's deference to the aesthetic sensitivities of its North Wood River Valley customers, I don't believe that the visual impact and inconvenience of a temporary line justifies the $30 million permanent alternatives proposed by the Company.

THE COMPANY'S BASE CASE AND PREFERRED ROUTES

Q. What is a base case system?

A. A base case system represents the minimum cost system needed to meet a particular need. Typically, only base case system costs are included in the Company's rate base, and thus only base case costs will be borne by the Company's rate payers. Costs incurred in excess of base case costs should be borne by the parties causing them to be incurred.

Because of their relatively low cost, overhead transmission systems are almost always used to establish the transmission system base case. The Commission recognized this in Commission Order No. 29634 (Case No. IPC-E-04-04) when it stated, "Aerial transmission lines are the most cost-effective construction method and represent 99% of all transmission lines in the nation." (Exhibit No. 108).

Municipalities that mandate underground transmission or distribution lines are generally responsible for paying the difference between the cost of the underground system and the base case transmission system. The Idaho State Legislature provided a means for doing so via *Idaho Code* § 50-2503 (Underground Conversion of Utilities) when it conferred on counties and municipalities the power to create Local Improvement

Districts (LIDs). This mechanism allows those who benefit from undergrounding to pay for it without burdening other ratepayers.

Q. Briefly describe the four transmission routes presented in the Company's application.

A. The Company describes four options: Overhead Transmission, Underground Transmission, Overhead Distribution, and Underground Distribution. All four options use the same common overhead transmission pathway from the Wood River substation in Hailey, along State Highway 75, to a point that is just south of Ketchum. After that point, the four options diverge. The Overhead Transmission option remains above ground until reaching the Ketchum substation. The Underground Transmission option follows essentially the same path, but does so underground.

Both the Overhead and Underground **Distribution** options require construction of a new substation south of Ketchum on the west side of Highway 75. From this point, both options would tie into the 12.5 kV distribution grid in order to avoid a direct transmission route through downtown Ketchum. The Underground Distribution option is the most expensive of the four options, and I concur with the Company's decision to rule it out as a viable option.

Q. If the Commission were to accept the Company's

argument for a fully redundant line, which of these options should the Commission adopt as a base case, and what is its cost?

A. I recommend that the Commission adopt, as its base case, the Overhead Transmission line route through the Ketchum Downtown District, as described on pages 18 and 19 of the Company's application.

The Company estimates that an Overhead Transmission route through downtown Ketchum would cost $18.5 million (Exhibit No. 109). The Company cautions that, unlike estimates for its proposed Overhead Distribution and Underground Transmission routes, this estimate does not include potential right-of-way costs. For reference, the Company included $1,000,000 and $600,000 in right-of-way costs, respectively, in its cost estimates for its proposed Overhead Distribution and Underground Transmission routes. Application, Exhibit No. 7.

Q. The Company concluded that the Overhead Transmission option is not viable, and thus did not choose it as the base case. Application at 18-20; Angell Direct at 29-31. Do you agree with the Company's analysis regarding the viability of this option?

A. I disagree with the Company's decision to exclude Overhead Transmission as a base case option. As

I will discuss, the Company's proposed Overhead Distribution base case would cost about $30 million, or $11.5 million more than the cost of an Overhead Transmission route. On page 19 of its application, the Company discusses challenges to an Overhead Transmission line route through the Ketchum downtown district. These challenges include the city's grid of streets, sidewalks, and zero setback buildings. In its response to Staff Production Request No. 14, the Company indicated that it could install poles primarily in the public right-of-way through downtown Ketchum by using either Triangular (TR) or Tangent Angle (TA) configured poles in the downtown Ketchum area (Exhibit No. 110). Using either of these options, the Company could still need to obtain overhead easements. The Company also indicated that it had explored a Davit Arm structure that could avoid transmission line overhead and clearance requirements through the downtown Ketchum district. The primary objection to the Davit Arm structure is its visual appearance. The Company states, "Idaho Power does not believe the Davit Arm design would be a viable option for the overhead transmission line route through the Downtown District because the North Valley customers, in particular Ketchum customers, would strongly oppose this option based on its visual impacts alone." (Exhibit No.

110).

In other words, the Company has explored Overhead Transmission options that are technically feasible, and that may not require easements. The Company rejected these options because of local aesthetic concerns.

The Idaho State legislature anticipated that some communities might prefer undergrounding their utilities and provided a mechanism for them to do so via *Idaho Code* § 50-2503.

Q. What is the Company's proposed base case?

A. The Company refers to its proposed base case as the Overhead Distribution route. The Overhead Distribution route requires construction of a new substation on the west side of Highway 75 near Owl Rock road. Angell Direct at 27. This substation would provide power to the existing distribution grids in Ketchum and Elkhorn via five overhead distribution circuits. The substation would receive power from the new common route transmission line along State Highway 75. The Company estimates that the cost of the Overhead Distribution route would be between $29.1 and $31.1 million. Application at 22. The Company has rounded this to $30 million.

Q. Why do you believe this base case to be

inappropriate?

A. The Company's Overhead Distribution route is considerably more expensive, and it won't provide the same benefit as a redundant Overhead Transmission line.

As stated in the Company's application, this configuration provides only 60 MW of backup service for existing customers. Given the existing line's 120 MW rating, the Overhead Distribution route does not provide a fully redundant electrical path. Given the Company's 2007 peak load of 63 MW, it is possible that the Overhead Distribution route would be unable to meet the needs of the North Wood River Valley.

In its application (at 22), the Company explains that the Overhead Distribution route will not decrease the frequency of outage events, but could decrease their duration. In the event that the Wood River-Ketchum transmission line were to fail, the Company would need to activate distribution ties in order to switch its power source from the Ketchum substation to the new substation near Owl Rock Road. To decrease switching time, the Company proposes automated ties controlled from its dispatch center in Boise. Although the Company has extensive experience using manually controlled ties, my understanding is that it has never used remotely controlled automated ties. The Company

explained that customers might still experience sustained outages, even if switching were automated. Adelman Direct at 15. Given the existing Wood River-Ketchum transmission line's excellent reliability record, it is difficult to see how the Overhead Distribution route would provide North Wood River Valley residents any noticeable reliability improvement.

The Company has stated that the Overhead Distribution option is consistent with the Company's standard practice of providing redundant electrical service to an area; however, given that this option will rely on remotely automated ties, which have not been used by the Company, the alternative does not seem to represent a standard Company practice.

The Overhead Distribution route would permit the Company to rebuild the existing transmission line without interrupting service to its North Wood River Valley customers; however, as discussed earlier, there are much less expensive ways to accomplish this.

In short, the Company's proposed base case appears to be an inadequate, non-standard alternative used to justify the high cost of its preferred route.

Q. What is the Company's preferred alternative route?

A. The Company submitted three variants of an

Underground Transmission route that differ only in the point at which they transition from Overhead Transmission to Underground Transmission. The transition point for the Company's preferred route is near the intersection of Elkhorn Road and Highway 75 just before entering the City of Ketchum ("TP1"). At an estimated cost of $30 million, this is the least expensive of the three Underground Transmission variants evaluated by the Company.

The Company argues that since its preferred route is no more expensive than its base case, that the Commission should approve its preferred Underground Transmission route in a CPCN.

As I noted earlier, the Company's proposed Overhead Distribution "base case" does not provide the same level of redundancy as other options, and so it should not be considered a base case.

More importantly, both the Company's proposed base case and its preferred route cost $11.5 million more than the far more standard practice of using Overhead Transmission.

Q. What are some other problems with the Underground Transmission option?

A. The Company's analysis did not compare the full lifecycle costs of Underground and Overhead Transmission; however, the Company estimates the lifespan of an

Overhead Transmission line to be 70 to 80 years, while the lifespans of underground transmission lines are typically 30 to 40 years. Furthermore, although the Company did not provide replacement cost estimates for either option, the replacement costs of underground transmission lines are expected to be substantially higher than the replacement costs of overhead transmission lines. In short, the Underground Transmission option would last half as long and cost much more to replace than the Overhead Transmission option. Of course, these costs would eventually become part of rate base and be borne by Idaho Power's general body of rate payers (Exhibit No. 111).

Furthermore, in its response to Staff Production Request No. 6, the Company estimates that annual operations and maintenance (O & M) costs for its Underground Transmission option would be twice that of a comparable Overhead Transmission option ($26,558 vs. $13,124). Again, these incremental costs would be passed on to Idaho Power's general body of rate payers (Exhibit No. 111).

Of considerable concern is the Company's lack of experience repairing underground transmission lines. In the event that major repairs are needed, the Company has stated that it would use qualified contractors to

effect repairs; however, the Company does not currently maintain a list of qualified contractors. Based on my own research, I determined that there are no such contractors in Idaho or in the Pacific Northwest. Based on my research, it appears that the nearest contractors capable of making major repairs are in Los Angeles and Chicago (Exhibit No. 112).

LOCAL GENERATION AND DISTRIBUTION OPTIONS

Q. What other redundancy options were evaluated?

A. Starting in 2007, the Company began seeking formal input for its Wood River Valley transmission projects via the Wood River Valley Community Advisory Committee (CAC). CAC members requested that the Company evaluate various local generation and storage options as alternatives to a redundant line. These options included diesel generation, gas turbine generation, biomass generation, solar generation, and battery back-up. The Company determined that the costs of each of these options exceeded the costs of the Company's proposed transmission line. I concur with the Company's assessment. Furthermore, as I noted earlier, there is no compelling case for redundancy.

CONCLUSIONS AND RECOMMENDATIONS

Q. Please summarize your conclusions and recommendations.

A. The Company is proposing a project that would add $30 million to its rate base, and this cost would eventually be borne by the general body of Idaho Power customers in the form of increased rates. When contemplating such projects, the burden is on the Company to show that its proposal is necessary, and that it represents the least expensive means for providing reliable electric power to its customers.

The residents of the North Wood River Valley already benefit from very reliable power, and the Company provided no evidence that in the event of a rare catastrophic event, it would be unable to restore power in a timely manner. In short, the Company has not demonstrated that a second Wood River-Ketchum line would provide a significant reliability benefit to the North Wood River Valley.

As I mentioned earlier, the Company has instituted a proactive preventive maintenance program, so most of the poles, transformers, and conductors of the existing Wood River-Ketchum transmission line are in excellent condition. Nevertheless, the line is nearing its 55th year, and we should anticipate that it will be necessary to renovate the line in a few years. In order to preclude numerous prolonged outages during renovation, I recommend that the Commission direct the Company to

install a temporary Overhead Transmission Line as necessary to facilitate repair of the existing transmission line.

If the Commission determines that a second transmission line is necessary, then I recommend that the Commission order the Company to consider the Overhead Transmission route through downtown Ketchum as the base case for determining the cost to be borne by the Company's general body of rate payers, and that any additional costs of undergrounding be funded locally.

Q. Does that conclude your testimony?

A. Yes, it does.

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

APPLICATION OF IDAHO POWER COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY) CASE NO U-1006-89 APPLICATION

COMES NOW, Idaho Power Company, Applicant herein, and respectfully shows the Commission as follows:

I

Idaho Power Company (Applicant) is a corporation incorporated under the laws of the State of Maine on May 6, 1915 and duly qualified to transact business as a foreign corporation in the States of Idaho, Oregon, Nevada and Wyoming. Applicant is engaged in the business of generating, purchasing, transmitting and distributing electrical energy. Applicant's principal place of business is situated in Boise, Idaho, and its address is 1220 Idaho Street, Boise, Idaho, P O Box 70, 83721.

II

Applicant proposes to construct and install a 50 megawatt combustion turbine generator and related facilities for the generation of electric power and energy, said plant to be located adjacent to Idaho's Wood River Substation located between the cities of Hailey and Ketchum, Blaine County, Idaho.

A map showing the location of the proposed plant, related facilities and a description of the land owned or being purchased by the Applicant is attached hereto as Exhibit "A." Applicant will file a rezoning application with the Blaine County Planning and Zoning Commission for the plant site.

III

The combustion turbine generating plant will have a nominal capacity of 50,000 KW and is planned to be in commercial operation about May, 1974.

Exhibit No. 101
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The combustion turbine generating unit will utilize oil or natural gas, depending upon the availability of either supply. Idaho is negotiating with oil and gas suppliers for supplies sufficient to meet the operating needs of said unit.

The generating plant will be designed, constructed and operated to meet air quality standards pursuant to the applicable laws, rules and regulations of the State of Idaho and of the United States. Applicant will file an application with the State of Idaho Department of Environmental and Community Services for a new industrial air emission permit. The generating plant will not compete directly with any other public utility, since the power and energy will be used to supply loads on the Applicant's system.

IV

Applicant also proposes to rebuild and convert its existing 46 KV transmission line extending from the Wood River Substation to a point near Gimlet to 138 KV transmission capacity with distribution underbuild and to convert and rebuild the existing distribution line extending from Gimlet to the Ketchum Substation to 138 KV transmission capacity with distribution underbuild. This rebuild and conversion will utilize existing private, highway and street right of way. A map showing the lines proposed to be rebuilt and converted is attached hereto as Exhibit "B."

V

The estimated cost of the proposed generating facilities, including the turbine generating unit, substation facilities, oil storage tanks and other related facilities is estimated to be about $5,500,000. The estimated cost of converting and rebuilding the existing transmission and distribution lines to 138 KV is estimated to be about $385,000.

VI

It is estimated that the energy output of said combustion turbine generating unit at 23 percent annual load factor will be approximately 100,000,000 kilowatt hours per year and that the estimated annual operating expense (excluding fuel) for the plant will be approximately $75,000.

VII

It is proposed to finance the new construction by the use of internally-generated cash, the issuance of either stocks or bonds, or both, as may from time to time be approved by this Commission.

VIII

Attached as Exhibit "C" is a statement showing the financial condition of Applicant, which statement is by this reference incorporated as a part of this application in compliance with Rule 15 of the Rules of Practice and Procedure of this Commission.

IX

Certified copies of Idaho's Restated Articles of Incorporation, as amended, and By-laws of Idaho, as amended, are on file with this Commission as part of Case No U-1006-80.

X

Applicant alleges that there will be an urgent and continuing need for power supplied from the combustion turbine unit in order to supply the requirements of Applicant's system commencing in June, 1974.

Applicant proposes to use the combustion turbine generating unit to supply both peaking power and energy during the months

of June, July, August and September, 1974. In these months, due to the Company's very large irrigation and air conditioning load, the Company will need additional power and energy in order to supply this load. The first unit of the Jim Bridger steam electric generating plant was scheduled for production in June, 1974. However, this schedule, due to labor turnover and harsh winter weather, has now been delayed for three to six months. With this delay additional energy sources must be obtained by the Company and the output of the 50,000 kilowatt combustion turbine will assist in remedying this deficiency and assist the Company in meeting its large summer load requirements for irrigation, air conditioning and other uses. With the current energy deficiency in the Pacific Northwest, there are no reasonable alternatives for obtaining this amount of power and energy.

In addition, after the Jim Bridger unit commences generation, any failure or shutdown of the Jim Bridger unit will require the Company to obtain replacement energy. This combustion turbine generating unit will be available to supply a portion of this replacement energy.

XI

Applicant further alleges that reliable service to the Bellevue, Hailey, Ketchum and Sun Valley areas will be greatly enhanced by the alternative source of supply obtained by placement of this generating unit in the area and construction of the 138 KV transmission line from the Wood River Substation to the Ketchum Substation. At the present time this entire area is served by one 138 KV transmission line extending from the King Substation in the Hagerman Valley to the Ketchum Substation, a distance of approximately 72 miles. This line in many places traverses high desert and mountainous terrain subject to storms,

snow, avalanches, slides and fires. Due to the location of the line, outages could occur at any time and such outages could last for many hours. The load in the Hailey-Ketchum area, as of last winter's peak, was in excess of 31,000 kilowatts and this load has been steadily increasing with the construction of Elkhorn and other developments. It is estimated that this load could increase to a peak in the winter of 1973/1974 of 40,000 kilowatts. The majority of the homes and businesses in this area are heated by electricity and any extended outage could have a very detrimental effect on the area due to frozen pipes, extreme cold and other difficulties that occur in buildings and to people from a failure of their heating sources.

XII

Applicant for the foregoing reasons alleges that construction and operation of the combustion turbine generating plant at the Wood River Substation site and the rebuild and conversion of existing 46 KV transmission and distribution lines to a 138 KV transmission line will materially contribute to the energy requirements for the Company's entire system, will provide an alternative source of supply to the Bellevue, Hailey, Ketchum and Sun Valley area, and will greatly improve reliability of service to this area. The overall result of this construction will be in the public interest and the present and future public convenience and necessity require that this application be granted.

WHEREFORE, Applicant respectfully requests that this Commission enter its order herein granting to Applicant a Certificate of Public Convenience and Necessity authorizing the construction, operation and maintenance of the combustion turbine

generating unit and related facilities and the conversion and rebuilding of the 138 KV transmission line, as described in the foregoing application.

DATED this 24th day of October, 1973.

IDAHO POWER COMPANY

By _____
Albert Carlsen
President

/s/ James E Bruce
Attorney for Applicant

STATE OF IDAHO)
) ss
County of Ada)

ALBERT CARLSEN, being first duly sworn, deposes and says that he is the President of IDAHO POWER COMPANY, the Applicant named in the foregoing application; that he has read the said application, including the Exhibits thereto, and knows the contents thereof; and that the same are true to the best of his knowledge and belief.

_____
Albert Carlsen

Subscribed and sworn to before me this 24th day of October, 1973.

/s/ Mary L Morton
Notary Public for Idaho
Residing at Boise, Idaho
My Commission expires April 1, 1976

(NOTARIAL SEAL)

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION)
OF IDAHO POWER COMPANY FOR A)
CERTIFICATE OF PUBLIC CONVENIENCE) CASE NO. U-1006-89
AND NECESSITY.....) ORDER NO. 11315

On October 31, 1973, the Commission received an application from the Idaho Power Company (Applicant) requesting a Certificate of Public Convenience and Necessity for the construction and installation of a 50 megawatt (50,000 kilowatts) combustion turbine generator and related facilities at Applicant's Wood River Substation near Hailey, Idaho, and the conversion and rebuild of the present 46KV transmission and distribution lines from the Wood River Substation to the Ketchum Substation to 138KV transmission line.

On November 7, 1973, the Commission issued its Notice of Hearing setting the matter for Hearing at the Grange Hall, Hailey, Idaho, commencing at 9:00 A.M., Thursday, December 6, 1973, at which time and place the Hearing was held before Commissioners Ralph H. Wickberg and Robert Lenaghen, and the following appearances were entered:

JAMES E. BRUCE, Vice-President, Secretary and General Counsel, and THOMAS G. NELSON, Attorney at Law, appearing for the firm of Parry, Robertson, Daly & Larson, First National Bank Building, Twin Falls, Idaho, appearing for the Applicant.

JOHN S. CHAPMAN, Attorney at Law, Idaho Building, Boise, Idaho, appearing for Dorothy Jean Chapman, Protestant.

K. D. SMITH, Assistant Director, Idaho Public Utilities Commission, 472 W. Washington St., Boise, Idaho, appearing for the Commission.

Applicant proposes to construct and install a 50 megawatt combustion turbine generator and related facilities for the generation of electrical power and energy. The plant will be located adjacent to Applicant's Wood River Substation situated between the cities of Hailey and Ketchum, Blaine County, Idaho.

The combustion turbine will be a General Electric model Series 7000, simple cycle turbine. In the simple cycle, air is drawn into the axial flow compressor and discharged into the combustion chamber at high pressure. Energy is

added in the combustion chamber where liquid or gaseous fuel is burned to produce high temperature gas. These high temperature gases are expanded through the turbine, which converts the thermal energy into mechanical energy of rotation. The unit will be 32.25 feet at the highest point, 116.75 feet long and 61.52 feet wide. It is a modular type construction and will not have any open running parts. All the operations will be housed in a structure which will be painted a neutral color to blend it into its surroundings.

There will be a fuel supply tank located on the property, but some distance away from the turbine to store the fuel supply for the turbine. The tank will be 32 feet high with a maximum diameter of 106 feet capable of storing 50,000 barrels of oil. An earth dike will surround the tank and will encompass an area that will contain all of the oil in the event of a leak. The ground will have an impervious barrier to prevent any escape of the oil into the ground.

The turbine will be so constructed and installed that at 400 feet the sound level will be 47 decibels (dba) and 44 dba at 600 feet, which will produce approximately the same sound pressure level that existed at the site on September 10, 1973. At the present time there are no residents within 400 feet of the turbine and only 3 residences within 600 feet. The noise level from the operations of the turbine will not be noticeable at these residences.

To determine the effect that running the turbine would have on the air quality in the area the Applicant had the General Electric Company to make a study on what would occur. The study was of the magnitude of ground level concentration of combustion products that might be expected from operation of the unit. The methods used in the study were those approved by the Environmental Protection Agency and included Holland Plume Rise Formula and Pasquel's Atmospheric Diffusion Formula and weather information obtained from the United States Forest Service offices in Boise, Hailey and Ketchum. Using the worst one-hour period that could occur to compute the ground level concentration, the study found that the highest concentration of any substance is less than 1% of the concentration permitted by the Idaho standards. There would be no significant deterioration of the air quality in the area resulting from the operation of the combustion turbine, either with natural gas or No. 2 heating fuel.

The Applicant anticipates a shortage of power on the system during the months of June, July, August and September, 1974, due to the delay of the first 500 megawatt unit of the Jim Bridger Steam Electric Generating Station now under construction in Wyoming. The first unit of Jim Bridger was scheduled for production in June, 1974. However, this schedule, due to labor turnover and harsh winter weather, has been delayed for 3 to 6 months. In these months, the Applicant, due to the very large irrigation and air-conditioning load, will need additional power and energy to supply these loads. With the delay of Jim Bridger additional energy sources must be obtained by Applicant and the output of the 50 megawatt combustion turbine will aid in remedying this deficit and assist the Applicant in maintaining its large summer load requirements.

Service to the Hailey-Ketchum-Sun Valley area is presently being supplied by a 46KV line from Shoshone to Hailey, which does not have the capacity to serve the entire load in the area, and a single 138KV line running 72 miles from the King Substation near Hagerman to the Wood River Substation. The residents in the Hailey-Ketchum area are primarily dependent on the operation of the 138KV line. The 138KV line transverses high desert and mountainous terrain, subject to storms, snow, avalanches, slides, fire and icing conditions. Although the operating experience with the 138KV line since its construction in 1962 has been especially good, the passage of time and corresponding deterioration of plant will contribute to a substantial outage sometime in the future. The winter load in the Hailey-Ketchum area is very high due primarily to the large amount of electric heat used and any prolonged outage of the electric supply especially in the winter months could cause great hardship.

The combustion turbine generator will be used to supply energy to the Applicant's system for the summer of 1974 and until completion of the Jim Bridger Plant, but it will remain at this location to provide increased security of service in the Hailey-Ketchum-Sun Valley area and as reserve capacity after the Jim Bridger Plant is completed and in operation. The Applicant investigated alternate methods for increased electric reliability in the Hailey-Ketchum area. One method considered was the construction of an additional 138KV transmission line extending from

the Hunt Substation hear Eden northerly across the desert and mountains to the Silver Creek area, across the Silver Creek area to Gannett and then northerly to Ketchum. The Applicant encountered a number of problems to this proposal, primarily the right-of-way. The Applicant contacted many individual landowners on the possibility of obtaining right-of-way and found that these individuals did not desire to grant such right-of-way across their property. Such a transmission line would cross a substantial portion of federal lands and obtaining right-of-way across these lands presented serious problems.

Applicant also requests authority to rebuild and convert its existing 46KV transmission line extending from the Wood River Substation to a point near Gimlet to 138KV transmission capacity with distribution underbuild and to convert and rebuild the existing distribution line extending from Gimlet to the Ketchum Substation to 138KV transmission capacity with distribution rebuild. The rebuild will be on a pole for pole basis; that is, a new pole will be located next to an old pole and upon completion of the new line all the old poles will be removed. The length of the new pole will be higher than the present poles and a curved type wooden mast arm will be used to carry the conductors and the distribution lines will be located on the new poles at a point below the transmission line. The rebuild will be done on the present right-of-way and no additional right-of-way will be required.

The Applicant maintains that it is necessary to have an additional 138KV transmission line into the Ketchum-Sun Valley area for the reason that since the present 138KV transmission line was constructed, the load on the Ketchum Substation has increased from 2,664 kilowatts to 20,924 kilowatts, and with the present building and expansion going on in the Sun Valley, Elkhorn and Ketchum area, the load will continue to increase. All of the present load is served on the existing 138KV line that extends from the Wood River Substation to the Ketchum Substation on the east side of the Big Wood River Valley to the east fork of the Big Wood River, at which point it crosses along and over the east side of the mountains that lie adjacent to the valley floor. This section of the line is particularly vulnerable to snow, mud or road slides and is in a difficult area to

reach with ground transportation. As a result of the large increases in load and the line outage possibility it is prudent to provide an alternate source of power to the Ketchum Substation.

The attorney for the protestant questioned the necessity of the construction and rebuild of the present 46KV transmission and distribution lines from the Wood River Substation to the Ketchum Substation to 138KV capacity. The primary concern appears to be the effect the rebuild of the line to higher poles would have on the environment of the valley. He further questions whether or not there was an alternate route that could be utilized either for additional transmission line or the possibility of placing the proposed line on the present 138KV structures.

It was his concern that whether or not the operation of the combustion turbine would cause a substantial deterioration in the air quality in the valley, especially during periods of low wind velocity.

We have given careful consideration to the effect on the area of constructing a combustion turbine generator and the rebuild and construction of the present 46KV lines and distribution lines to 138KV capacity. We are of the opinion that if the proposed 138KV line were to be placed in another area the land use impact, which is the primary consideration, would be much greater on the total valley impact than in using some route other than the highway. The present plan would replace the present lines and would not add additional poles and wires in the valley. But placing the proposed line on the present 138KV structures would not meet the purposes for which the line is designed and that is an additional power source to Ketchum Substation by an alternate supply of power so that in the case of the loss of the present 138KV line then you would not lose the entire electrical supply to the Ketchum-Sun Valley area. The record is clear that the emission from turbine would, when compared to the National Ambient Air Quality Standards, be less than 1% of the standards and would be far below the "no significant" deterioration level in all categories to which these standards apply and would be lower than the minimum requirements of the State of Idaho and the Environmental Protection Agency.

We conclude that the benefits to be derived from the installation and operation of the combustion turbine generator at this site are greater than any detrimental effect that might be made on the environment of the area. If the unit is not installed on the proposed site and a major interruption should happen, harm to the public would occur by the loss of electrical energy for space heating, the pumping of water for fire fighting and other purposes and the general disruption of activities that follow loss of electrical service for an extended period of time. We would not be fulfilling our regulatory obligations if we did not take action to approve an alternate source of electrical power for the Hailey-Ketchum-Sun Valley area to guard against the extended power outages that would occur if the 138KV transmission line were lost. It appears that the installation of the combustion turbine generator and the proposed construction and rebuild of the present 46KV transmission and distribution line to 138KV capacity is the most reasonable method to provide security at this time.

F I N D I N G S

I.

THAT Idaho Power Company is a corporation organized and existing under and by virtue of the laws of the State of Maine and is duly authorized to transact business in the State of Idaho and is engaged as a public utility in furnishing electric service in the State of Idaho and in the states of Nevada and Oregon with its principal office in Boise, Idaho.

II.

THAT Applicant has filed with this Commission an application requesting a Certificate of Public Convenience and Necessity for the construction and installation of a 50 megawatt combustion turbine generator and related facilities adjacent to its Wood River Substation near Hailey, Idaho, and the conversion and rebuilding of the present 46KV transmission line and distribution lines from the Wood River Substation to the Ketchum Substation to 138KV capacity.

III.

THAT electric service is provided to the Hailey-Ketchum-Sun Valley area by a single 138KV transmission line extending for 72 miles from the King

Substation near Hagerman to the Wood River Substation near Hailey, Idaho.

IV.

THAT the 138KV transmission line traverses high desert and mountainous terrain subject to storms, snow, avalanches, fires and icing conditions.

V.

THAT the operating service of this line has been exceptionally good, but the passage of time and corresponding plant deterioration will contribute to a substantial outage sometime in the future.

VI.

THAT the Hailey-Ketchum-Sun Valley area has a very high winter load due primarily to electric heat and any prolonged electrical outage in the winter-time would cause great hardship.

VII.

THAT the construction and installation of a 50 megawatt combustion turbine generator at the Wood River Substation would provide increased security to the Hailey-Ketchum-Sun Valley area and alleviate any hardship that could be caused by a prolonged electrical outage.

VIII.

THAT the construction of an additional transmission line from the Hunt Substation to the Hailey-Ketchum-Sun Valley area to provide increased reliability is not feasible at this time.

IX.

THAT the rebuild and conversion of existing 46KV transmission and distribution lines to 138KV capacity between the Wood River Substation and the Ketchum Substation is required for increased security in the Ketchum-Sun Valley area.

X.

THAT the noise resulting from the operation of the combustion turbine will not be of sufficient pressure level to cause any hardship to the present residents of the immediate area.

XI.

THAT the combustion turbine will be designed, constructed and operated in such a manner as to meet the air quality standards pursuant to the applicable laws, rules and regulations of the State of Idaho and of the United States.

XII.

THAT a Certificate of Public Convenience and Necessity for the construction and installation of a 50 megawatt combustion turbine generator and related facilities at Applicant's Wood River Substation and the rebuild and conversion of the present 46KV transmission and distribution lines from the Wood River Substation to the Ketchum Substation is in the public interest and a Certificate of Public Convenience and Necessity should be issued.

O R D E R

IT IS THEREFORE ORDERED that a Certificate of Public Convenience and Necessity should be, and the same is, hereby granted to Idaho Power Company for the construction and operation of a 50 megawatt combustion turbine generator and related facilities at the Wood River Substation near Hailey and the conversion and rebuild of the present 46KV transmission and distribution lines from the Wood River Substation to the Ketchum Substation to 138KV transmission line.

DONE by Order of the Idaho Public Utilities Commission in Boise, Idaho, this 6th day of February, 1974.

Ralph H. Winkberg
COMMISSIONER

Robert Smith
COMMISSIONER

ATTEST:

Marilyn L. Bowman
SECRETARY

Note: Commissioner Nock did not participate in this order.

REL:eh

CONCURRING STATEMENT BY COMMISSIONER RALPH H. WICKBERG

My personal attitude toward authorizing a gas turbine power plant to serve emergency electric power to the Sun Valley-Ketchum-Hailey area is one of ambivalence.

It is easy for me to understand that many people who reside in the area would like to avoid the construction of additional electric facilities whether they be power plants or higher poles for transmission purposes.

My personal observation is that commercial and residential developments now taking place require a firm and secure electric power supply to avoid the possibility of serious economic and personal discomfort that would come about as the result of a major electric power outage.

Idaho law clearly requires the serving utility (Idaho Power Co.) and the Idaho Public Utilities Commission to use reasonable diligence in providing an excellent and reliable electric system to all consumers and areas. The testimony and uncontroverted facts of this case prove conclusively, to me, that the present electric transmission system serving the Hailey-Ketchum-Sun Valley area is deficient from reliability criteria.

I believe that this Commission would be derelict in not recognizing that a present hazard exists to the health, comfort and safety of the residents of Hailey-Ketchum-Sun Valley. This Commission has before it a reasonable plan to eliminate much of the risk of a serious electric power outage to this area.

The construction of the proposed gas turbine north of Hailey and the reconstruction of the transmission line to Ketchum, is, in my opinion, beneficial and necessary.

I concur,

Ralph H. Wickberg
COMMISSIONER

ATTEST:

Marilyn L. Fournier
SECRETARY

Exhibit No. 102
Case No. IPC-E-16-28
M. Morrison, Staff
05/05/17 Page 9 of 11

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION)
OF IDAHO POWER COMPANY FOR A)
CERTIFICATE OF PUBLIC CONVENIENCE) CASE NO. U-1006-89
AND NECESSITY.....)
) CERTIFICATE NO. 272

IT IS HEREBY CERTIFIED that public convenience and necessity requires and will require Idaho Power Company to construct and operate a 50 megawatt combustion turbine generator and related facilities at the Wood River Substation near Hailey, Idaho, for the furnishing of electrical energy to the public and the conversion and rebuild of the present 46KV transmission line from the Wood River Substation near Hailey to Gimlet and the reconstruction of the present distribution lines from Gimlet to the Ketchum Substation to 138KV transmission line capacity; to exercise all rights and privileges which have been granted to said Idaho Power Company, its successors and assigns by any franchise or permit conferred or hereafter conferred upon said Idaho Power Company, its successors and assigns by any city or village or by any county or by the State of Idaho or by any political subdivision thereof.

This certificate is predicated upon and issued pursuant to the findings and order of this Commission, the same being Order No. 11315 in the above entitled matter made and entered on this 6th day of February, 1974.

DATED at Boise, Idaho, this 6th day of February, 1974.

Ralph N. Nicholas
COMMISSIONER

Robert Lamphere
COMMISSIONER

(SEAL)

ATTEST:

Marilyn L. Bowers
SECRETARY

Note: Commissioner Nock did not participate in this certificate.

REL:eh

Exhibit No. 102
Case No. IPC-E-16-28
M. Morrison, Staff
05/05/17 Page 10 of 11

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY.....

CERTIFICATE OF MAILING OF

ORDER NO. 11315 and Cert. No. 272

CASE NO. U-1006-89

STATE OF IDAHO)
) ss
COUNTY OF ADA)

I hereby certify that I am employed as a secretary in the Office of the Secretary, I.P.U.C., and that on the 7th day of FEBRUARY, 1974, I served Order No. 11315 and Certificate No. 272 in the above entitled matter, pursuant to directions and instructions of The Secretary, on each of the following:

Name	Address
James E. Bruce, Vice-President and Secretary Idaho Power Company (5 Cert - 10 Conformed)	Box 70, Boise, Idaho 83707
Thomas G. Nelson, Attorney at Law Parry, Robertson, Daly & Larson	First National Bank Building, Twin Falls 83301
John S. Chapman, Attorney at Law	Idaho Building, Boise, Idaho
Hood River Journal	Hailey, Idaho 83333
Hailey Times	Hailey, Idaho 83333
City Council	Hailey, Idaho 83333
City Council	Ketchum, Idaho 83333
Board of County Commissioners, Blaine County	County Courthouse, Hailey, Idaho 83333
KTFI Radio	241 Main Ave. W. Twin Falls 83301

by depositing in the United States Mail, true copy thereof for each, enclosed in a sealed envelope, with postage prepaid, addressed to each of them respectively at his respective place of address, and that there is regular mail service to each of said addresses.

WITNESS my hand and seal of said Commission at Boise, Idaho, this 7th day of February, 1974.

Evelyn V. Hollibaugh
OFFICE OF SECRETARY

Exhibit No. 102
Case No. IPC-E-16-28
M. Morrison, Staff
05/05/17 Page 11 of 11

LARRY D. RIPLEY
PATRICK A. HARRINGTON
Idaho Power Company
P. O. Box 70
Boise, Idaho 83707
(208) 388-2674

Attorneys for Idaho Power Company

Street Address for Express Mail:

1221 West Idaho Street
Boise, Idaho 83702

FAX Telephone No.: (208) 388-6936

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY FOR AN AMENDMENT TO CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY, CERTIFICATE NO. 272	CASE NO. IPC-E-95-6 APPLICATION FOR AN AMENDMENT TO CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY NO. 272

On October 31, 1973, Idaho Power filed an application with the Commission (which was designated Case No. U-1006-89) requesting a Certificate of Public Convenience and Necessity for the construction and installation of a 50 megawatt (MW) combustion turbine generator and related facilities at the Company's Wood River Substation near Hailey, Idaho, and the conversion and rebuild of the 46 kV transmission and distribution lines from the Wood River Substation to the Ketchum Substation to a 138 kV transmission line. The Commission approved the Company's application in its

Order No. 11315 and issued Certificate of Public Convenience and Necessity No. 272 (see Exhibit 1). The Company is hereby requesting an amendment to Certificate No. 272 relating to the proposed Wood River Ketchum 138 kV transmission line that was approved therein.

The Company's primary concern in its 1973 application (Case No. U-1006-89) was to provide back-up facilities for the two transmission lines which extended service to the Company's two substations in Hailey. At that time, Idaho Power provided service to Hailey through a 46 kV line from the Shoshone Substation to the Hailey Substation, and through a 138 kV line from the King Substation near Hagerman to the Wood River Substation near Hailey. The 46 kV Shoshone-Hailey line had insufficient capacity to serve the entire load in the area, and an outage on the 138 kV King-Wood River line (which is 72 miles long and, as described in Order No. 11315, "traverses high desert and mountainous terrain, subject to storms, snow, avalanches, slides, fire and icing conditions") would affect the entire Hailey-Ketchum-Sun Valley area. Accordingly, pursuant to the Commission's authorization in Order No. 11315 and Certificate No. 272, the Company built and installed the combustion turbine generator (the Hailey Turbine) at the Wood River Substation. The Hailey Turbine made back-up service available in the event of an outage on the King-Wood River line. In 1989, Idaho Power completed construction of a new 138 kV transmission line extending from the Midpoint Substation to the Silver Substation to the Hailey Substation. This line completed the Company's capacity and reliability upgrade of electric service to Hailey, and allowed the Company to eventually dispose of

the Hailey Turbine, as approved by the Commission's Order No. 24676 in Case No. IPC-E-92-9 dated January 27, 1993 (see Exhibit 2).

Idaho Power's application in Case No. U-1006-89 also addressed the Company's request for authority to construct electric facilities extending north of Hailey to serve the Ketchum-Sun Valley area. The Company proposed a new 138 kV transmission line from the Wood River Substation to the Ketchum Substation to provide back-up service for the existing Wood River-Ketchum 138 kV transmission line which runs along the east end of the Wood River Valley. However, after the issuance of the Commission's Order No. 11315 and Certificate No. 272, Idaho Power was unable to obtain the necessary right-of-way for the additional 138 kV Wood River-Ketchum transmission line. The proposed new 138 kV line was intended to follow a portion of an existing 46 kV line route from the Wood River Substation to the Gimlet area, but also required right-of-way through the city of Ketchum. In the meantime, the Company began the difficult and protracted process of obtaining the necessary easements, licenses and permits for its Midpoint-Silver-Hailey transmission line referenced above. Faced with continuing right-of-way obstacles in extending a new 138 kV line north of Hailey, the Company has continued to rely upon its existing Wood River-Ketchum 138 kV line for service to the Ketchum-Sun Valley area.

Idaho Power recently performed an extensive reassessment of the feasibility and need for an additional 138 kV transmission line from the Wood River Substation to the Ketchum Substation. This study included a review of both the capacity requirements and the reliability requirements for Idaho Power's electric service to the Ketchum-Sun Valley area.

Idaho Power's current projections of electric demand in the Ketchum-Sun Valley area indicate that the existing Wood River-Ketchum 138 kV transmission line has sufficient capacity to meet the area's electric needs for the foreseeable future. The 138 kV line's capacity ranges from approximately 120-130 MW in the winter to approximately 90 MW during the summer (power lines are able to carry more electricity in colder conditions). By comparison, the actual winter peak load on the transmission line was 55.5 MW for 1994-1995, and projected winter peak loads are estimated at 73 MW for 2005-2006 and 110 MW for 2030-2035. Summer peak loads on the transmission line are projected to stay well below the 90 MW capacity of the line over the same planning period. Idaho Power will continue to monitor its load growth projections and make modifications where necessary. However, based on current projections, there is presently no need for a new 138 kV transmission line to provide additional electrical capacity to the Ketchum-Sun Valley area.

Idaho Power has also thoroughly reviewed the reliability of its electrical service to the Ketchum-Sun Valley area. The Wood River-Ketchum 138 kV transmission line has had an excellent record of reliability since its construction in 1962. Nonetheless, the Company has taken a number of steps to further improve the reliability of the line, including the following:

1. Structural Assessment - Energy Data Management, Inc. of Colorado has performed a field inspection and structural analysis of the poles, cross-arms, insulators, conductors and other components of the transmission line. This study confirmed that the transmission line structures are in good condition and are in

conformance with applicable National Electrical Safety Code standards. Structures and cross-arms identified in the study as needing work were repaired.

2. Electrical Assessment - Energy Data Management and Power Engineers of Hailey have analyzed the historical performance of the transmission line, including outages and lightning-related incidents. The transmission line was determined to have an excellent outage history, with only two unplanned outages in the past fourteen years, for a total duration of only three minutes. The electrical assessment was based upon Idaho Power's records and did not include any brief outages which may not have been recorded for the line over the years.

3. Fire Protection - Osmose, Inc. of New York has coated the transmission poles with Fire-Guard protectant, which is designed to protect the poles through three fires.

4. Avalanche Study - Power Engineers and Energy Data Management have reviewed the probabilities and severities of avalanches in the vicinity of the transmission line and calculated the resulting pole strength requirements. All structures were determined to have adequate strength to withstand a 50-year recurrence avalanche.

5. Conductor Assessment - Idaho Power performed visual inspections of several spans of the transmission line wires which were removed in connection with the rerouting of a one-mile segment of the line in 1994.

6. Maintenance Plan - Idaho Power has developed an enhanced maintenance plan to repair and replace power line components as needed.

7. Emergency Action Plan - Idaho Power has prepared a detailed, comprehensive emergency action plan to facilitate a rapid and effective response to a service outage or other emergency regarding the power line. The plan includes detailed maps and directions for access to structures, specific guidelines for structure replacements, and contact lists for internal and external communications (e.g. law enforcement, hospitals, etc.). Materials are stored in Hailey to facilitate the rapid restoration of service in the event of an unplanned line outage.

Idaho Power has also recently completed an extensive public participation process regarding the possible construction of a second 138 kV transmission line from the Wood River Substation to the Ketchum Substation. The Company's process included meetings before the Ketchum and Sun Valley City Councils, as well as before the Blaine County Board of Commissioners. Idaho Power also presented a proposal to construct the new transmission line to a Community Advisory Committee whose members are listed on the Committee list attached hereto as Exhibit 3. In addition, Idaho Power held a public open house at Ketchum City Hall (with invitations sent to over 8,000 Idaho Power customers in northern Blaine County) to provide information regarding the proposed transmission line and to receive public comments.

At the conclusion of Idaho Power's public participation process, the Company carefully evaluated the input received from the area's public officials and citizens. The overwhelming response from the parties commenting was that, despite the unavoidable risk of an outage to the existing transmission line, the proposed transmission line should not be built. The reasons for public opposition to the line included the difficulty of finding

an acceptable route for the transmission line, aesthetic impacts, health and safety concerns, and excessive cost of burying part or all of the line. (The newspaper articles attached as Exhibit 4 provide additional information regarding public input on the line).

Based on Idaho Power's extensive review of the proposal to construct a 138 kV transmission line from the Wood River Substation to the Ketchum Substation, and in light of the public comments received regarding the line, the Company has concluded that the project is not feasible at this time. Idaho Power will continue to monitor the condition of the existing Wood River-Ketchum transmission line, the increase in load growth in the Ketchum-Sun Valley area, and the feasibility of obtaining the required right-of-way and public permits for a second 138 kV line.

Communications with reference to this Application should be sent to the following:

Larry D. Ripley
Attorney
Idaho Power Company
P. O. Box 70
Boise, Idaho 83707

Patrick A. Harrington
Attorney
Idaho Power Company
P. O. Box 70
Boise, Idaho 83707

WHEREFORE, the Company requests an Amendment to Certificate of Public Convenience and Necessity, Certificate No. 272, to remove the authority for the construction of a second Wood River-Ketchum 138 kV transmission line from Certificate of Public Convenience and Necessity, Certificate No. 272, as authorized by the Commission in U-1006-89, Order No. 11315.

DATED at Boise, Idaho, this 2nd day of June, 1995.

LARRY D. RIPLEY
PATRICK A. HARRINGTON

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 2nd day of June, 1995, I caused a true and correct copy of the foregoing Application For An Amendment To Certificate of Public Convenience and Necessity No. 272 to be delivered to the following:

Blaine County Commissioners
Len Harlig, Chairman
Box 400
Hailey, ID 83333

Blaine County Planning & Zoning
Linda Harvik, Administrator
Box 149
Hailey, ID 83333

Hailey City Council
Steve Kearns, Mayor
Box 945
Hailey, ID 83333

Hailey Planning & Zoning
Mick Williams, Chairman
Box 945
Hailey, ID 83333

Ketchum City Council
Guy Coles, Mayor
Box 2315
Ketchum, ID 83340

Ketchum Planning & Zoning
Sam Flora, Administrator
Box 2315
Ketchum, ID 83340

Sun Valley City Council
Tom Praggastis, Mayor
Box 416
Sun Valley, ID 83353

Sun Valley Planning & Zoning
Jim McLaughlin, Chairman
Box 416
Sun Valley, ID 83353

LARRY D. RIPLEY

IDAHO POWER®
An IDACORP Company

July 6, 2015

Wood River Community Advisory Committee (CAC) Member

Subject: Wood River to Ketchum Redundant Transmission Line Update

Dear Wood River CAC Member:

In the continued effort to improve the service reliability to the northern portion of the Wood River Valley, a team of Idaho Power employees recently completed a thorough review of construction options and their associated costs to provide redundant power in the north valley. The overall outcome of this review is that Idaho Power will pursue the development of a fully redundant 138 kV transmission line from Hailey to Ketchum (the project). The project is the same as the CAC's initial recommendation in the Wood River Electrical Plan for an overhead 138 kV transmission line (on new steel poles with distribution underbuild) from Hailey to the St. Luke's Hospital area, then underground to the Ketchum substation. The only difference in the project from the initial CAC recommendation is that the underground routing will now follow SH 75 instead of the bike path. An additional outcome of this assessment is a significant overall cost reduction to the community for the net expense of the underground transmission portion of the project. The following changes led to this result:

- The underground transmission cost estimate decreased by using a smaller cable size and selecting a highway route with placement of the cable in conduits attached to the new highway bridge,
- The substation with underground distribution cost estimate increased due to additional substation site preparation and additional asphalt repaving costs,
- The substation with underground distribution cost (as discussed at the last CAC meeting) is now estimated to exceed the underground transmission option.
- The north valley constraints would force an overhead line on a set of common towers with the existing line across Dollar Mountain. The common line outage exposure of this configuration is inconsistent with the project purpose of providing a fully redundant system. This configuration, combined with the likely requirement to condemn properties near Ketchum substation to span into the existing substation, remove this configuration option from consideration as a viable construction method.
- The substation and overhead distribution construction method should be used as the reference base cost when determining the incremental cost to be funded by the local community, which requires underground facilities.
- Similar to the King – Wood River line, the existing line is due for replacement based on the age and condition. Without a redundant transmission line, a temporary line would

need to be built to avoid excessive sustained outages during construction of a new line. Idaho Power proposes to reduce the local community funding by the portion of the temporary line that could not be salvaged following its removal.

Therefore, later this summer, Idaho Power will apply for the permits required to construct the project with a reduced community cost based on adjustments described above. The incremental cost to be funded by the local community, based on the conceptual design, ranges from $1.5 to $1.9 million. Mike Pepper, Adam Richins and I will be meeting with the Blaine County Commissioners and the mayors of Ketchum and SunValley to discuss the funding requirements and options as soon as possible.

Please keep this information confidential until after Idaho Power publicly announces the project. You are welcome to contact me at 208-388-2701 or dangell@idahopower if you have questions or wish to discuss this project update.

Sincerely,

David M Angell

David M Angell
Manager, Customer Operations Planning

cc: Adam Richins
Mike Pepper, KMP Planning

Exhibit No. 104
Case No. IPC-E-16-28
M. Morrison, Staff
05/05/17 Page 2 of 2

REQUEST FOR PRODUCTION NO. 2: The Company's Application provides at page 2 that "The North Valley is currently supplied by a single-source radial line that has experienced sustained outages line events, which Idaho Power forecasts to increase in frequency." With regard to this statement please respond to the following requests:

A.) Please provide a map of the North Valley, including its electrical system.

B) Please define the term "sustained outage line events."

C) Please provide a complete list of the "experienced sustained outage line events" for the line referred to. Include the duration, cause, remediation efforts and results, and cost for the same.

D) When the line in question experiences a "sustained outage" event, please explain what electrical service is available to the North Valley. Provide an electrical map showing the source and routes for said residual electrical service.

E) Please provide copies of all "forecasts" referred to in the quoted passage from the Company's Application. For each forecast please identify the individual(s) who prepared the same and provide all workpapers and supporting documentation used in the preparation of each forecast.

RESPONSE TO REQUEST FOR PRODUCTION NO. 2:

A) A map of the existing transmission line is provided as Attachment 1 and a map of the distribution facilities is provided as Attachment 2 on the enclosed CD.

B) The term "sustained outage line events" can be defined as an interruption in service lasting more than five minutes due to line conductor, insulator, or structure failures. These have multiple causes, including vandalism, inclement weather, wood decay, woodpecker damage, avalanche, fire, or micro-burst wind events:

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M. Morrison, Staff
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C) When an outage occurs, a restoration crew will identify the cause and restore service. Idaho Power does not typically track the costs of individual line events. The following table provides the rest of the requested outage information.

Date	Duration (minutes)	Cause
5/31/1995	104	Maintenance
8/14/1998	5	Unknown
1/1/2004	10	Weather
10/11/2004	108	Maintenance – Repair Vandalism Damage
2/18/2005	58	Equipment Failure
12/24/2009	700	Weather
9/27/2011	342	Maintenance
6/4/2014	46	Equipment Failure - Broken Cross Arms
8/12/2014	126	Lightning
10/13/2015	465	Maintenance - Repair Woodpecker Damage

D) There is one distribution circuit tie switch to an adjacent circuit, HALY-15 fed from the Hailey substation, available to the North Valley (please see Attachment 2).

E) The "forecast to increase in frequency" is based upon the fact that the line was built in 1962 and its components are aging. When looking to the future, the Company applies industry knowledge that equipment failure rates increase with age. Please see the Direct Testimony of David M. Angell, pp. 20-21.

> Q. Has Idaho Power estimated the potential for future sustained outages in the North Valley?
>
> A. Yes. Historically, this particular line has had a relatively good service record for reliability. This was one of the reasons that the previously issued CPCN was withdrawn in 1995. However, this line, built in 1962, has not aged well and now requires complete reconstruction. Idaho Power estimates that without any significant changes to the existing North Valley transmission line, the expectation could be that the current configuration will result in an average duration of sustained outages of more than 209 minutes per year.

The 209 minutes of sustained outage per year was estimated for outages caused by a loss of 138 kilovolt ("kV") transmission north of the Wood River substation, using Idaho Power system average data for 138 kV transmission lines and historical Wood River-Ketchum 138 kV line performance, which is better than the Idaho Power system average for 138 kV transmission lines.

The response to this Request is sponsored by David Angell, Customer Operations Planning Manager, Idaho Power Company.

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05/05/17

REQUEST FOR PRODUCTION NO. 37: In Request No. 2(C), Idaho Power was asked to provide a complete list of "experienced sustained outage line events" for the line referred to, which line was identified as "as a single-source radial line" that currently serves the North Valley. The response identifies, inter alia, a 700-minute outage on 12/24/2009. The response to Request No. 13 provides a list of "all recorded outages on the Wood River-Ketchum 138kV line 433 from 1995 to present". The referenced list does not include the 700-minute outage that was included in response to Request No. 2 (C). Please reconcile this apparent discrepancy.

RESPONSE TO REQUEST FOR PRODUCTION NO. 37: The 700-minute outage on December 24, 2009, was a sustained outage of the line due to the loss of electric supply when both transmission lines serving the Wood River substation were out of service due to inclement weather. This 700-minute outage was inadvertently not listed in the Company's response to Kiki Leslie A. Tidwell's Request for Production No. 13.

The response to this Request is sponsored by David Angell, Transmission and Distribution Planning Manager, Idaho Power Company.

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Case No. IPC-E-16-28
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REQUEST FOR PRODUCTION NO. 13: At page 4 of the Application the Company asserts that, "This line's access limitations may result in extended outages . . . caused by, among other things, vandalism, inclement weather, wood decay, woodpecker damage, avalanche, fire and micro-burst wind events." Please provide the duration, cost of response/repair and the date of each extended outage on this line caused by:

(a) vandalism

(b) inclement weather

(c) wood decay

(d) woodpecker damage

(e) avalanche

(f) fire

(g) micro-burst wind events

Please explain in detail, including itemized costs, and provide copies of all studies and documentation all of the measures the Company has taken to anticipate and prevent the above listed causes of outages on the identified line.

RESPONSE TO REQUEST FOR PRODUCTION NO. 13: The following table (Attachment 1) lists for a through g all recorded outages on the Wood River-Ketchum 138 kV Line 433 from 1995 to present.

Off	On	Duration_ Minutes	Type	Cause	Comments
5/31/1995 3:02:00 PM	5/31/1995 4:46:00 PM	104	Sustained	Maintenance	
6/17/1997 5:53:00 PM	6/17/1997 5:53:00 PM	0	Momentary	Weather	
7/30/1998 6:40:00 PM	7/30/1998 6:44:00 PM	4	Momentary	Weather	
8/14/1998 3:08:00 PM	8/14/1998 3:13:00 PM	5	Momentary	Unknown	
1/1/2004 5:44:00 PM	1/1/2004 5:54:00 PM	10	Sustained	Weather	
10/11/2004 12:04:00 AM	10/11/2004 1:52:00 AM	108	Sustained	Vandalism	
2/18/2005 6:58:00 PM	2/18/2005 7:56:00 PM	58	Sustained	Equipment Failure	
9/27/2011 12:04:00 AM	9/27/2011 5:53:00 AM	349	Sustained	Maintenance	27340452 Str. & Xarm Repair
7/15/2014 4:28:00 PM	7/15/2014 4:28:00 PM	0	Momentary	Equipment Failure	
8/12/2014 5:35:00 PM	8/12/2014 7:41:00 PM	126	Sustained	Weather	
10/13/2015 11:00:00 PM	10/14/2015 6:45:00 AM	465	Sustained	Maintenance	27439191 Woodpecker Repair

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Provided as Attachments 2 and 3 on the enclosed CD are the summaries of costs for the two identified work orders, 27340452 and 27439191, respectively.

The response to this Request is sponsored by Tris Yerrington, Transmission Design Leader, Idaho Power Company.

Exhibit No. 107
Case No. IPC-E-16-28
M. Morrison, Staff
05/05/17

Office of the Secretary
Service Date
November 19, 2004

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IDAHO POWER COMPANY,	)	
	)	**CASE NO. IPC-E-04-4**
Complainant,	)	
	)	
v.	)	
	)	
CITY OF EAGLE, IDAHO,	)	**ORDER NO. 29634**
	)	
Respondent.	)	
	)	

On February 11, 2004, Idaho Power Company filed a Complaint against the City of Eagle requesting that the Commission authorize the utility to construct a new 138-kV transmission line from the Eagle substation to a new substation in Star, Idaho by either of two proposed routes. Idaho Power filed its Complaint after the City had denied two Idaho Power applications for conditional use permits (CUPs) seeking permission to build the line. The Commission held a prehearing conference attended by counsel for the City, Idaho Power and the Commission Staff. Based upon the agreement of the parties, the Commission set this matter for hearing.

On September 9, 2004, the Commission held a technical hearing followed by a public hearing. At the public hearing two members of the Eagle City Council asked the Commission to consider an alternative route for the new transmission line. The Commission directed the parties to explore the alternative and report their findings to the Commission. On November 16, 2004, the parties filed a Joint Motion requesting the Commission approve a Settlement Stipulation that included an agreed to alignment for the transmission line. The parties maintain that the Stipulation is in the public interest and urge the Commission to approve the comprehensive settlement without further delay. Based upon our review of the record and the terms of the Settlement Stipulation, the Commission approves the Settlement resolving this case.

BACKGROUND

A. The Complaint

The events leading up to Idaho Power's complaint are set out in Order No. 29444 but the pertinent points are summarized here. Beginning in December 2000, Idaho Power sought

approval of two different conditional use permits (CUPs) to construct a new 138-kV transmission line[1] through the City of Eagle from near the existing Eagle substation to a new substation located east of Star. In its initial CUP request, the Company sought an exception to the City's zoning ordinance that limits the height of utility poles to 35 feet. Eagle Ord. § 8-2A-6(A)(7)(a). Idaho Power initially proposed that the new line follow an existing 69-kV transmission line along State Street to the Star substation. After the City's Planning and Zoning Commission (P&Z) recommended denial of the CUP in early 2001, Idaho Power formed a Community Advisory Committee (CAC or Committee) at the suggestion of the Eagle City Council to look at other routes.

Idaho Power and the CAC held a number of open houses and evaluated as many as 16 different routes for the new transmission line. The Committee initially recommended that the new transmission line be constructed underground through the City. When the CAC learned that burying the lines would cost approximately $5-6 million more than an overhead line and that Idaho Power would insist that the additional costs be borne by the City's customers, the CAC concluded that this was not a viable option under these conditions. The Committee subsequently recommended a route that would generally follow the Eagle By-pass designated as State Highway 44.

In September 2002, Idaho Power filed another CUP requesting authority to build the new transmission line along the Committee's recommended By-pass route using steel poles with heights ranging from 70-85 feet. Idaho Power Exh. 3 at 2. In September 2003, P&Z recommended the City deny the second CUP. Subsequent meetings between Idaho Power and City officials in early 2004 examined six routing alternatives but no agreement was reached. In February 2004, Idaho Power filed the present complaint. In March 2004, the City Council denied Idaho Power's 2002 CUP to build the line along the By-pass route.

B. Procedural History

Given the unique nature of this case, the Commission scheduled a prehearing conference so the parties could discuss and recommend to the Commission how this matter should be processed. Order No. 29444. Idaho Power, the City, and the Commission Staff proposed that the Commission schedule a technical hearing to receive testimony from the

[1] The 138-kV transmission "line" is actually made up of three conductor lines and a "shield" line at the top of the pole that protects the three conductors from a lightning strike.

parties' witnesses and a public hearing to take testimony from members of the public. Based upon the agreement of the parties, the Commission set this matter for hearing. Order No. 29465. On June 29, 2004, Eagle River LLC (the developer of a large property parcel located on the southeast corner of Eagle Road and the By-pass) requested to intervene. In Order No. 29543, the Commission granted Eagle River intervenor status.

At the technical hearing, all the parties presented witnesses and supporting exhibits.[2] Idaho Power presented two witnesses that addressed the need for the new line, its two alternative proposed routes (State Street and the By-pass), and the disadvantages of burying the transmission line. The Commission Staff generally supported the Company's position. The City presented three witnesses that asserted the new line was not necessary and that an aerial line would decrease property values. They contended that if a new line was necessary, the line should be buried. They also argued the additional cost of burying the line should be recovered from all Idaho Power ratepayers, not just from Eagle customers. Eagle River's witness testified that if the new transmission line was built along the By-pass, it would be detrimental to the value of Eagle River's development.

At the public hearing, the Commission received testimony from 17 witnesses including two members of the Eagle City Council. In their testimony, the Council members urged the Commission to evaluate an alternative route that would follow a southwesterly direction through Eagle's Central Business District to the By-pass west of the Eagle Road intersection. Tr. at 438; City Exh. 106. They testified this alternative alignment avoids the City's residential areas and would, therefore, not adversely affect residential property values. They also suggested that the alternative alignment would not adversely affect commercial property values along the By-pass. Finally, this new alignment would preserve scenic views along State Street, Jackson Square, and the gateway intersection of the By-pass and Eagle Road. Tr. at 437, 508.

Based upon this testimony, the Commission directed the parties to examine the alternative alignment and advise the Commission whether such an alignment presents a reasonable alternative to either the State Street or By-pass routes. On September 22, 2004, the parties advised the Commission that they were looking at two alternatives commonly referred to

[2] Just prior to the technical hearing, the City filed a Motion for the Commission to dismiss Idaho Power's complaint. Given the parties' Settlement Stipulation, we need not address the issues raised in that Motion.

as: (1) the Alley-Eagle Road route; and (2) the Second Street-Plaza route. On November 16, 2004, the parties filed a Settlement Stipulation agreeing to the Alley-Eagle Road aerial alignment.

THE PROPOSED SETTLEMENT

All the parties agreed with the Settlement Stipulation. In their Stipulation, the parties agreed that the alignment for the 138-kV transmission line should follow the Alley-Eagle Road route. More specifically, the new line would cross State Street and enter the Eagle substation. From the southern portion of the Eagle substation, the line would follow the alley south of State Street to Eagle Road. From the corner of the alleyway and Eagle Road, the line would extend south on the east side of Eagle Road past Plaza Street. The line would then cross Eagle Road and continue along the northern portion of property developed by Zamzow's at the northwest corner of Eagle Road and the By-pass. The line would cross the By-pass and continue westward along the south side of the By-pass to the City limits and on to the Star substation. The proposed alignment is illustrated in Exhibit 1 to the Settlement Stipulation.

Existing poles in the alleyway and on the east side of Eagle Road will be removed and replaced with wood or "corten" poles.[3] The new pole in the rear of the substation, and the poles along the alleyway to Eagle Road will be the minimum height necessary to meet safety clearance requirements. IDAPA 31.11.01.101. The corner pole at the alley and Eagle Road shall be a corten pole because this pole must accommodate the existing overhead distribution lines and facilities, as well as non-Idaho Power aerial lines (cable and telephone) in the alleyway. These poles will not exceed 84 feet in height. Stipulation at ¶¶ 3-5.

The parties agree that the existing aerial distribution circuit located on the east side of Eagle Road will be removed and buried. The parties also intend that non-Idaho Power facilities along the east side of Eagle Road will be removed and buried. *Id.* at ¶ 8. Burying the distribution line will allow Idaho Power to use shorter poles for the transmission lines. In particular, the height of the wood poles on Eagle Road will decrease from the alleyway to a height of 63 feet above grade at the southernly point where the transmission line will cross Eagle Road. This latter wood pole will be stabilized with guy-wires. *Id.* at ¶ 5.

Once the line crosses Eagle Road, one corten pole not exceeding 63 feet in height will be located on the Zamzow easement generally in the center of the northern property line.

[3] A "corten" pole is a multi-faceted steel pole made of a material that has the appearance of wood.

This corten pole is needed for strength and will have a maximum base diameter of 48 inches. The line will cross the By-pass and continue westerly on wood poles not exceeding 64.5 feet in height. *Id.* at ¶¶ 6-7.

The parties have agreed that the cost of burying the distribution line on the east side of Eagle Road will be paid by the City. The cost is estimated to be approximately $300,000. *Id.* at ¶ 9. The City further agrees to pay Idaho Power either the Company's estimated work order cost or the actual cost of burying the distribution line (which will not be determined until completion of the project). The City and Idaho Power agree that the total estimated cost at this time for burying the distribution line (including an interest rate of 7.8% over a term of approximately three years) is about $342,206. *Id.* at ¶¶ 9-10.

To pay for the cost of burying the distribution line, Idaho Power consents and the City agrees to an increase in Idaho Power's franchise fee for electric service from one percent (1%) to three percent (3%). *Id.* at ¶¶ 11-13; *Idaho Code* § 50-329A(1)(a). Beginning on or about April 1, 2005, the City agrees to pay at least two-thirds (66.67%) of its franchise fee each quarter to Idaho Power for burying the distribution line. *Id.* at ¶ 13. The parties further agree that the 3% franchise fee will remain in place at the City's request until December 31, 2010. Once the cost of burying the distribution line on Eagle Road is reimbursed, the City may use subsequent franchise fees to defray the cost of burying additional Idaho Power distribution lines within the City. *Id.* at ¶ 11. The City agrees to take all actions necessary to reduce the franchise fee from 3% to 1% effective December 31, 2010. *Id.* at ¶ 12.

The parties assert the Settlement is a reasonable resolution of the complaint and is in the public interest. *Id.* § V. More specifically, the parties note that on November 8, 2004, the City convened a public hearing for the purpose of reviewing and taking public comments on the proposed alignment agreed to by the parties in Exhibit 1. Following the public hearing, the City Council voted to approve the proposed aerial alignment. *Id.* at § II.

The parties recommend the Commission accept this Stipulation without material change or condition and without further delay. If the Commission adopts the Stipulation without material change no party shall attempt to further litigate or appeal the issues resolved by this Stipulation. *Id.* § III.

COMMISSION FINDINGS AND DISCUSSION

The Commission is not bound by any settlement stipulation reached by the parties. Pursuant to our Rule 276, the Commission will independently review this settlement proposal to determine whether the settlement is just, fair and reasonable, and in the public interest, or otherwise in accordance with law and regulatory policy. The Commission may accept the settlement, reject the settlement, or add additional conditions under which the settlement will be accepted. IDAPA 31.01.01.276.

After reviewing the evidence produced at our technical hearing, the public comments and the terms of the Stipulation, the Commission adopts the Settlement Stipulation. We find the proposed Settlement, including the alignment of the transmission line and the burial of one distribution line, is fair and reasonable, and in the public interest. The approved alignment is shown in Attachment 1 to this Order. The Commission further finds that the terms of the Settlement represent a reasonable resolution of this dispute.

The advantages to the City of the stipulated alignment over the By-pass route or the State Street route are numerous. First, the new alignment places the transmission line away from residential areas of the City – a concern expressed at our public hearing. Second, the line avoids areas identified by the City as scenic view corridors, most notably the eastern side of the By-pass, the intersection of the By-pass and Eagle Road, and the Jackson Square area of State Street. Third, the agreement to bury the distribution line on the east side of Eagle Road allows the Company to utilize shorter poles, thereby further preserving scenic views. Utilizing a new pathway on the south side of the By-pass unencumbered with existing utility facilities also allows the Company to use shorter 63-foot poles. Finally, the Stipulation provides for the burial of other existing distribution lines in the City through 2010.

We further find that although the City presented conflicting testimony, there is substantial and competent evidence that construction of the subject transmission line is necessary to serve western Ada County. Although the City challenged the need to construct this line, we find Idaho Power witness David Sikes' testimony persuasive. In particular, he testified that the existing 69-kV line currently supplying the Lansing and Star substations is inadequate to reliably serve the projected load during the summer of 2005. Tr. at 525. On rebuttal, he noted that loads in August 2004 were approaching critical levels. He argued that it was imperative that this

transmission line upgrade be made "to assure service reliability and to prevent the potential occurrence of outages during the summer of 2005." *Id.*

We further find that upgrading the existing transmission line is not just a short-term, temporary solution. As Mr. Sikes explained, there was confusion about what "temporary" means in the realm of transmission planning. He explained that completing this line will serve two primary purposes. First, this line will supply increased voltage support and capacity to the new Star substation. Extending the 138-kV transmission line from the Eagle substation to the Star substation "is the lowest cost and most expedient solution to provide that near-term need." Tr. at 549. In this particular case, the "temporary" need for this line is immediate and intended to satisfy the Company's transmission requirements for at least 10 years. Second, this line will serve as a secondary source of power for the City of Eagle by creating a redundant supply loop. Tr. at 550-51. Consequently, this line will improve the reliability of electric service to the entire Eagle area. Providing reliable service and avoiding outages is in the public interest.

We also find that the Settlement Stipulation is consistent with the intent of the Underground Conversion of Utilities Law, *Idaho Code* § 50-2503. This section authorizes cities to convert overhead electric facilities to underground locations. Here the costs of burying distribution lines are being recovered from Eagle residents pursuant to local decisions and actions.

Although this process has been difficult and contentious at times, this case is another example of the importance of a public hearing. In particular, it was the testimony received at a public hearing that precipitated investigation of the new alignment proposed in the Stipulation. We appreciate the efforts and contributions of the parties in reaching this settlement. We commend Idaho Power for its willingness to work with and be responsive to the communities it serves.

Finally, we note that this case should serve as a reminder to utilities that they should monitor and participate in local land use planning activities. In particular, *Idaho Code* § 67-6508(h) requires that city and county comprehensive plans consider and identify "utility transmission corridors" and other public facilities. For purposes of transmission planning, utilities must advise local governments that the construction of electric transmission lines normally entails tall poles and structures. We also encourage cities and counties to be realistic in designating transmission corridors within their areas. It may not be enough to simply designate

that public streets and road right-of-ways will serve as transmission corridors. Aerial transmission lines are the most cost-effective construction method and represent 99% of all transmission line miles in the nation. Tr. at 305.

ORDER

IT IS HEREBY ORDERED that the parties' Joint Motion to Adopt the Settlement Stipulation is granted. The Commission adopts and approves the Settlement Stipulation.

THIS IS A FINAL ORDER. Any person interested in this Order (or in issues finally decided by this Order) or in interlocutory Orders previously issued in this Case No. IPC-E-04-4 may petition for reconsideration within twenty-one (21) days of the service date of this Order with regard to any matter decided in this Order or in interlocutory Orders previously issued in this Case No. IPC-E-04-4. Within seven (7) days after any person has petitioned for reconsideration, any other person may cross-petition for reconsideration. See *Idaho Code* § 61-626.

DONE by Order of the Idaho Public Utilities Commission at Boise, Idaho this 19th day of November 2004.

PAUL KJELLANDER, PRESIDENT

MARSHA H. SMITH, COMMISSIONER

DENNIS S. HANSEN, COMMISSIONER

ATTEST:

Jean D. Jewell
Commission Secretary

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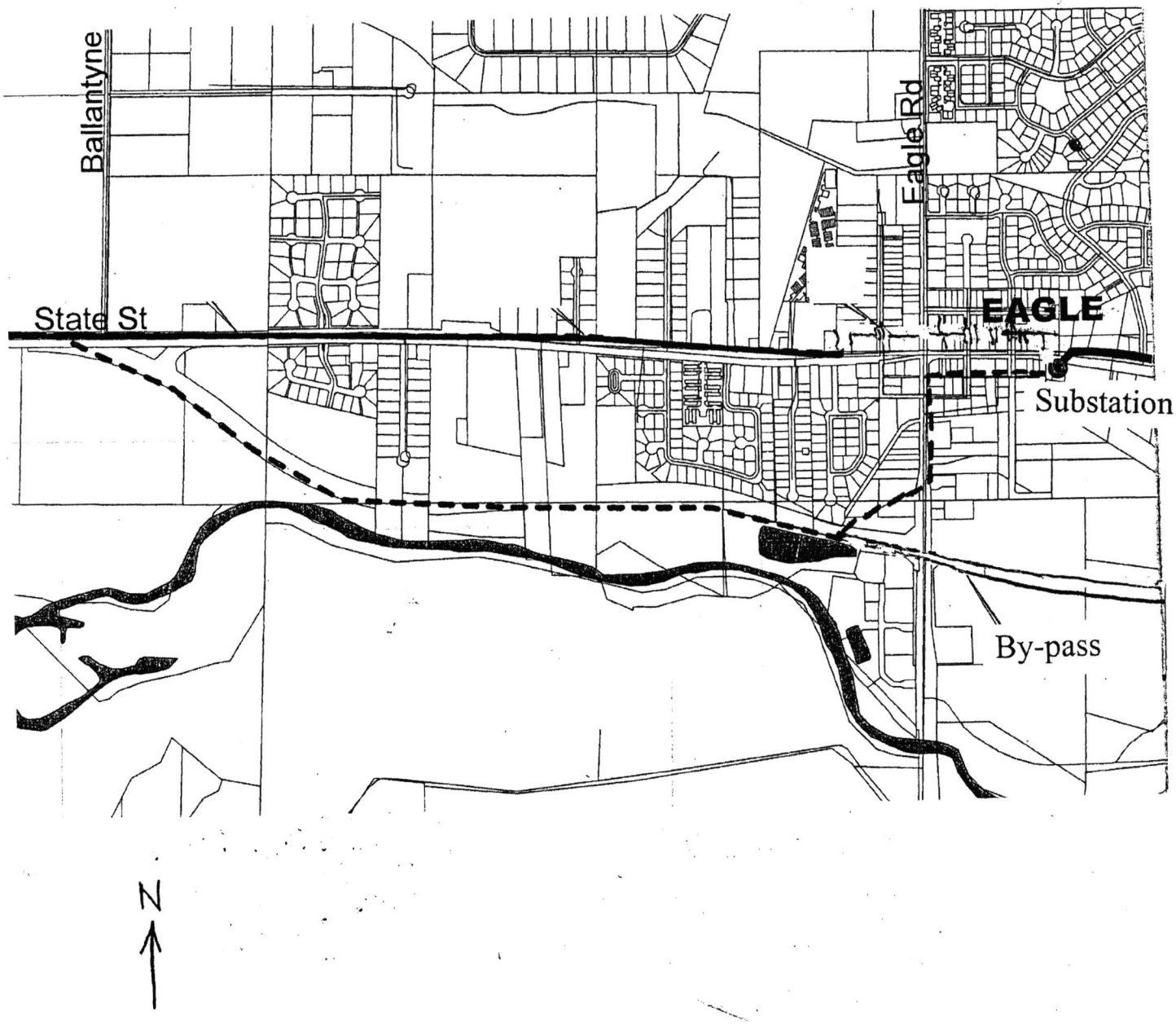

ATTACHMENT 1
ORDER NO. 29634
CASE NO. IPC-E-04-4

Exhibit No. 108
Case No. IPC-E-16-28
M. Morrison, Staff
05/05/17

REQUEST NO. 1: The Application indicates that the Company determined that the Overhead Transmission options are not viable. Application at 19-20, Angell Direct at 29-31. For the Dollar Mountain route, this determination was based on likely opposition, lack of redundancy, and need for condemnation. Angell Direct at 29. For the Downtown District route, this determination was based on likely opposition, likely failure to receive permitting from the City of Ketchum, and on geographical constraints, and likely need for significant condemnation of private property. Application at 19-20, Angell Direct at 30-31. The Application indicates that the Overhead Distribution option is now considered the base case option. Application at 21-22.

a) Please provide additional detail regarding the determinations that the Overhead Transmission options are not viable and why and how they were made. Please include any documentation of the decisions and any information, studies or analysis on which the determinations were based.

b) When were the Overhead Transmission options determined to not be viable? Please provide any documentation.

c) Please provide the Company's criteria for deciding that condemnation of private property makes a project unviable and how were such criteria applied here. Have these same criteria been applied to other Idaho Power projects?

d) Please provide the Company's criteria for determining that visual impact and local customer opposition makes a project unviable and how were such criteria applied here. Have these same criteria been applied to other Idaho Power projects?

e) Please provide details and documentation regarding when and why the Overhead Distribution option became the base case option, including any studies or analyses.

Exhibit No. 109
Case No. IPC-E-16-28
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f) Please describe and provide documentation of the differences between the Overhead Transmission and Overhead Distribution options described in the Application at 19-22, including but not limited to any differences in cost, feasibility/viability, required equipment, and reliability.

g) Has the Company's proposed base case using Overhead Distribution ties been the subject of either the Company's Community Advisory Committee (CAC) process, or any other public forum? If so, please provide a summary of the proceedings and meeting minutes.

RESPONSE TO REQUEST NO. 1:

a) The viability of constructing a second overhead transmission line between the Wood River and Ketchum substations came into question at the beginning of the Idaho Power 2007 CAC process. Two of the three CAC mapping groups only proposed underground transmission options within the Ketchum city limits. The third mapping group proposed underground contingent on funding. The Downtown route was initially deemed not viable at that time and reaffirmed in 2011. In the summer of 2016, Idaho Power performed a second review of that route. At that time, for reasons noted in Idaho Power's Application, Idaho Power determined that it was not a viable route. Please also see the additional discussion and materials provided in response to subparts b through f of this Request.

Based on the discussions during public meetings in 2014, CAC members and Idaho Power became increasingly concerned about the viability of the Dollar Mountain route. The routing investigation of that option resulted in the joining of the two transmission lines on single towers across Dollar Mountain. Idaho Power's Planning Department determined that placing the two transmission circuits on common towers

across Dollar Mountain was not acceptable because a common tower section of the overhead transmission across the top of Dollar Mountain presents the North Valley with continued exposure to sustained outages for tower or hardware failures. This common circuit outage exposure does not meet the project purpose.

b) In the summer of 2015, after a review by Idaho Power's Planning Department, Idaho Power determined that double circuiting the transmission line across Dollar Mountain was not acceptable as described in the Company's response to Staff's Request No. 1.a.

The Downtown route was initially deemed not viable during the original meetings of the CAC in 2007 and reaffirmed in 2011. In the summer of 2016, Idaho Power performed an additional review of that route. At that time, for reasons noted in Idaho Power's Application, Idaho Power determined that it was not a viable route.

c) Idaho Power generally attempts to avoid condemnation by taking part in negotiated resolutions, to the extent possible. Given the myriad of potential legal and public relations issues involved in condemnation, it is not practical to have a one-size fits all criteria. That said, Idaho Power typically reviews the following considerations when evaluating the potential impacts of condemnation on a transmission line route: the size and scope of required condemnation, the cost of condemnation, the time frame related to condemnation proceedings, the impact to landowners, the impact to customer satisfaction, the impact on local project support and permitting approvals, environmental issues, and alternatives to condemnation. In this case, Idaho Power believed that the cost to condemn property in downtown Ketchum could be significant given property values. In addition, Idaho Power was advised by the CAC and other members of the community that the legal proceedings for such action would be significant because

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residents and public officials were adamantly against having transmission lines through downtown Ketchum. Finally, the cities of Ketchum and Sun Valley have ordinances that require new transmission facilities to be located underground. While any one of these factors (by themselves) may not prevent condemnation, when reviewed in totality, Idaho Power believed that other options were preferred.

d) Like with condemnation, the determination of whether visual impacts preclude a project requires a case-by-case analysis. No single set of criteria is used for this evaluation. Visual impacts alone generally do not prevent a project from being built. However, visual impacts—coupled with condemnation issues, restricting ordinances, and congested valley conditions—can lead Idaho Power to move away from a particular option. In this case, when these issues were reviewed in totality, the CAC and Idaho Power determined that the Downtown route would likely not be built.

e) The Overhead Distribution option became the base case option in a letter sent on July 6, 2015, to the Wood River CAC members. Please see Attachment 1 provided on the enclosed CD. The letter states that the Overhead Distribution option should be used as the reference base cost when determining the incremental cost to be funded by the local community.

The analysis performed to determine that the Overhead Distribution option was the base case option was included in the testimonies of Company witnesses Angell at 29 and Adelman at 18.

The Company has typically relied on redundant overhead transmission for full redundancy of service. The other traditional construction practice that the Company utilizes to provide redundancy of service is overhead distribution. The Company regularly installs tie switches between distribution circuits to provide alternate service to

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restore customers during substation and circuit outages. The Overhead Distribution option was determined to be more viable than overhead transmission and was used as the base cost.

f) The Overhead Transmission option estimate is $18.5 million, not including any right-of-way costs. Please see Attachment 2 provided on the enclosed CD. The Overhead Distribution option estimates range between $29.1 million to $31.1 million. Please see Attachments 3-6 provided on the enclosed CD, which include cost estimates for the projects that encompass the Overhead Distribution option and supporting notes.

Idaho Power's Application (p. 19) references the feasibility/viability problems with an Overhead Transmission route, either across Dollar Mountain or through the Ketchum downtown district. Generally, the Dollar Mountain option does not meet the intended purpose, providing a fully redundant line, while the downtown route has constructability challenges with zero setback buildings and tight geographical constraints. The feasibility/viability of the Overhead Distribution option is described in the Company's Application (pp. 21-22) and is a traditional and standard construction.

The required equipment is the same for the Common Route (Angell Direct p. 25). From this point, the required equipment is substantially different between the two options. An Overhead Transmission option, similar to Underground Transmission, requires switches and terminals within the Ketchum substation. The Overhead Distribution option requires a new substation, explained in the Application (p. 21), including transformers, metalclad, getaway feeders, a control building, and visual/sound screening.

Reliability is discussed in detail in Adelman Direct (pp. 6-9). A transmission alternative, overhead or underground, provides up to 120 megawatts ("MW") of

capacity, while a distribution alternative provides 60 MW of capacity. A transmission alternative is fully redundant and customers would likely not experience sustained outage for loss of a transmission line. A distribution alternative may have some interruption in service caused by a transmission line; customers may experience short sustained outages while the distribution circuits are switched.

g) Yes. The Overhead Distribution option was first presented as an alternative at the October 2, 2014, CAC meeting (please see Attachments 7 [meeting results rather than meeting minutes] and 8 provided on the enclosed CD). The CAC did not select this option as the preferred alternative, but it was identified as a feasible alternative for further evaluation.

The Overhead Distribution option was presented again as background information in the October 30, 2014, CAC meeting to compare with the Underground Distribution option (please see Attachment 9 [meeting notes] provided on the enclosed CD).

In a July 2015 letter to the CAC, the Overhead Distribution construction method was mentioned as the base case when determining the incremental costs to be funded by the local community (please see Attachment 1 provided on the enclosed CD).

The response to this Request is sponsored by Dave Angell, Customer Operations Planning Manager, Idaho Power Company.

REQUEST NO. 14: On page 19 of its Application, the Company explains that the overhead transmission line route through the Ketchum Downtown District would depend upon the condemnation of private property. Please provide the Company's estimates of condemnation costs of the Overhead Transmission line route through the Ketchum Downtown District.

RESPONSE TO REQUEST NO. 14: As stated in the Company's Application, "Neither of the two possible route options for an Overhead Transmission construction configuration [Dollar Mountain or Downtown District] provides a viable solution for redundant electric service to the North Valley." Application at 20. As further explained on pages 18-19 of the Application:

> The North Valley exhibits several transmission siting obstacles for overhead access to the existing Ketchum substation. First, the North Valley is congested due to numerous residences and businesses sited in a valley less than one mile wide with mountains of steep slope and narrow roadways. This would force an overhead transmission line either through the downtown district of Ketchum or over the top of Dollar Mountain and spanning down over existing homes near the substation. . . .
>
> The line route across Dollar Mountain would be limited to a double circuit on common tower configuration with the existing 138 kV transmission line from Elkhorn substation to Ketchum substation. This common tower construction has a high probability of resulting in the simultaneous loss of both transmission circuits should a failure occur, resulting in North Valley customer outages for the Line Events. This fact alone defeats the purpose and need of constructing a redundant source of energy to improve the reliability of service, and is therefore not a viable option. Additionally, condemnation of private property may be required to enter the Ketchum substation overhead from Dollar Mountain. Finally, North Valley customers would likely strongly oppose this option due to the visual impacts. This option would not provide an independent and fully redundant transmission source to the

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Ketchum substations nor meet the purpose and need where the other options discussed below would.

The Overhead Transmission line route through the Ketchum downtown district would have significant challenges. The challenges include the fact that the City of Ketchum is set up with a grid of streets, sidewalks, and zero setback buildings. Options that exist for construction of overhead transmission include placing the poles in the sidewalks, the edge of streets, and overhanging the wires over the streets, constructing tall enough structures to span the wires over the tops of buildings, and utilizing side streets. Because of the very tight geographical constraints, this option would likely be dependent upon and require condemnation of private property in order to pass through downtown Ketchum with an overhead line to the Ketchum substation. Again, North Valley customers, in particular Ketchum customers, would strongly oppose this option on visual impacts alone.

However, Idaho Power has made some preliminary assessments of the potential costs to be incurred in providing redundant electric service to the North Valley through an overhead transmission option. The Overhead Transmission line route through the Ketchum Downtown District would be located primarily in the public road right-of-way, with the steel transmission poles located at the outer edge of the right-of-way. If Idaho Power were to use its TR (triangular) configuration for the 138 kV transmission line that is proposed for other overhead portions of the transmission line (please see Attachment 1 provided on the enclosed CD), one of the transmission line insulators (approximately five feet long) and the transmission line conductor attached at the end of the insulator would extend out over the adjacent private property. This would require Idaho Power to obtain an overhang easement over the private property for the insulator and conductor along the length of the transmission line.

As an alternative to the TR configuration, Idaho Power could employ a TA (tangent angle) transmission line configuration where all three transmission line

insulators and conductors are placed on the road side of the power line (please see Attachment 1). The TA poles (approximately 60 feet tall) are roughly 10 feet taller than TR poles (approximately 50 feet tall) in order to provide sufficient spacing for the three insulators and conductors on the same side of the pole. However, even with all three insulators extending to the road side of the pole, the TA configuration could still require overhang easements on the adjacent private property because there would not be enough horizontal clearance from the conductors to a building constructed at the edge of the adjacent private property (which would be possible with the zero setback requirements in the Ketchum Downtown District).

Idaho Power has also reviewed engineering options for avoiding the transmission line overhang and clearance requirements through the Ketchum Downtown District. Idaho Power could add three cross-arms to make a modified TA configuration called a "Davit Arm" structure in order to extend the three conductors further out into the road right-of-way (please see Attachment 1). The Davit Arms would be approximately 12 feet long and each arm would have six-foot long insulators attached at the end of the arm (to guide the energized conductor wire away from the end of the arm). In some cases this would cause the 12-foot arm plus the six-foot insulator extending directly out from the arm to create a combined horizontal extension arm of 18 feet. This Davit Arm configuration would eliminate the need for overhang easements or clearance space with respect to the adjacent private property. However, the Davit Arm design is visually more intrusive than the TR or TA designs as shown on Attachment 1. A photograph of the Davit Arm configuration is also shown on Attachment 2 provided on the enclosed CD. Idaho Power does not believe the Davit Arm design would be a viable option for the overhead transmission line route through the Downtown District because the North

Valley customers, in particular Ketchum customers, would strongly oppose this option based on its visual impacts alone. Additionally, the placement of so many non-standard structures in such close proximity to roads and zero setback buildings is simply not a viable routing solution.

Idaho Power has not determined how many overhang easements on private property would be required for the overhead transmission line route through the Ketchum Downtown District under a TR or TA transmission line configuration. This determination would require survey, design, and engineering of the route to establish the specific locations of the transmission poles within the road right-of-way (or potentially in some cases, outside road right-of-way), followed by an assessment of the overhang and clearance impacts of the transmission line on the adjacent private property. However, Idaho Power did identify the private parcels adjacent to the overhead transmission line route through the Ketchum Downtown District that could possibly require overhang easements. A list of those parcels and their respective assessed values are provided on the enclosed CD as Attachments 3 and 4.

Of the 20 properties identified in Attachments 3 and 4 related to the Downtown District route, the assessed values range from a low of approximately $13,000 to a high of approximately $2.6 million. Four of the 20 identified properties show a zero-assessed value because they are Church-owned properties. The approximate total assessed value of the remaining 16 properties exceeds $19.4 million. The estimated value of the undeveloped land across Dollar Mountain is approximately $10/square foot. One approximation for estimating the value of an easement is 50 percent of the market value for the portion of the parcel required for the right-of-way. Under this approximation, the estimated 100 foot wide easement cost for the two-mile portion across Dollar Mountain

is $5,420,000. The last span of line required of the Dollar Mountain route that enters the Ketchum substation crosses four parcels in a developed residential subdivision in Sun Valley. These parcels have a combined assessed market value of $7,311,248.

Idaho Power is unable to determine at this time what the easement valuation would be for overhang easements crossing the parcels listed on Attachments 3 and 4 for the Downtown District route, and is unable to determine at this time what the valuation of possible condemnation of required right-of-way would be valued at for either the Downtown District route or the Dollar Mountain route. Relevant factors would include the width of the easement strip, the existence of buildings or other improvements within the easement strip, and the "severance" impact on the remainder of the private parcel adjacent to the easement strip. Property owners could seek much higher levels of compensation for the Idaho Power transmission line easements in a condemnation proceeding. Condemnation damages are typically calculated based on the value of the owner's property before and after the condemnation taking. This includes the diminution in value to the easement strip and also any "severance" damages to the remainder of the owner's property outside of the easement. In addition, the property owner would seek to recover his or her legal expenses from Idaho Power for the condemnation proceeding, which may or may not be recoverable depending on the amount of the condemnation award compared to Idaho Power's final offer for the easement acquisition. Idaho Power would also incur its own outside legal counsel expenses for representation in the condemnation proceedings. Added to the potential cost and liability of construction of transmission lines and structures in such close proximity to tall buildings and other improvements upon the real property impacted thereby, is the potential for claims of inverse condemnation, which could be very costly.

Based on these multiple variables, Idaho Power cannot provide a meaningful estimate of the cost of condemnation for either the Downtown District or the Dollar Mountain route. However, based upon the nature of the structures and improvements that exist on the parcels through downtown Ketchum and around the Ketchum substation, as well as the very high assessed property values of the same, combined with an unknown future but potentially costly liability associated with inverse condemnation claims, the practicalities of actually obtaining the required easements, by condemnation or otherwise, could be extremely costly and is simply not reasonable and prudent.

Because a more precise estimate of potential easement costs would require significant additional work, cost, and evaluation (as stated above, this would require among other things survey, design, and engineering of the route to establish the specific locations of the transmission poles followed by an assessment of the overhang and clearance impacts of the transmission line on the adjacent private property) and because both overhead route options were determined to not be viable solutions for redundant electric service to the North Valley, no further investigation of these costs was done. The additional unknown costs of possible condemnation would not be known with more certainty until the Company was at the point of actually pursuing condemnation. Furthermore, the extent of exposure to possible claims of inverse condemnation would be an additional potentially very costly liability moving forward after such a line were constructed.

The response to this Request is sponsored by Dave Angell, Transmission and Distribution Planning Manager, Idaho Power Company.

REQUEST NO. 6: Has the Company compared the lifecycle costs of maintaining the proposed TP1 Underground Transmission System and the Overhead Transmission system described on page 19 of the Company's Application? If so please provide such information.

RESPONSE TO REQUEST NO. 6: The annual operations and maintenance costs, expressed in 2016 dollars, for Underground Transmission and Overhead Transmission are $26,558 and $13,124, respectively. An overhead transmission line typically has a lifespan of 70 to 80 years, while underground transmission lines of the proposed design have only been around for 30 to 40 years and have not typically reached end of life. Therefore, a full maintenance lifecycle cost analysis including the replacement of the asset has not been completed.

The response to this Request is sponsored by Dave Angell, Customer Operations Planning Manager, Idaho Power Company.

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REQUEST NO. 5: In his direct testimony, Mr. Adelman indicates that Idaho Power has no experience with underground transmission lines, and that in the event of a cable failure, the Company would use contractors with underground transmission experience (Adelman Direct at 7).

a) Please provide a list of qualified contractors and where they are located.

b) Does the Company plan to enter into agreements with these companies to ensure that service is available when required? Please describe the type of agreement and services required.

RESPONSE TO REQUEST NO. 5:

a) Idaho Power does not currently have a list of qualified contractors.

b) Idaho Power would select a cable manufacturer and use a contractor that is certified by that manufacturer to install, splice, and terminate its specific cable. Idaho Power will specify a warranty or agreement with the selected manufacturer so that, in case of a failure, the manufacturer would supply a qualified contractor to make the repair.

The response to this Request is sponsored by Ryan Adelman, Customer Operations Projects Manager, Idaho Power Company.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 5th DAY OF MAY 2017, SERVED THE FOREGOING **DIRECT TESTIMONY OF MICHAEL MORRISON** IN CASE NO. IPC-E-16-28, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE FOLLOWING:

DONOVAN E WALKER
LEAD COUNSEL
IDAHO POWER COMPANY
PO BOX 70
BOISE ID 83707-0070
E-mail: dwalker@idahopower.com
dockets@idahopower.com

TIM TATUM
VP REGULATORY AFFAIRS
IDAHO POWER COMPANY
PO BOX 70
BOISE ID 83707-0070
E-mail: ttatum@idahopower.com

PETER J RICHARDSON
RICHARDSON ADAMS PLLC
515 N 27TH STREET
BOISE ID 83702
E-mail: peter@richardsonadams.com

KIKI LESLIE A TIDWELL
300 LET`ER BUCK ROAD
HAILEY ID 83333
E-mail: ktinsv@cox.net

MATTHEW A JOHNSON
Wm. F GIGRAY
WHITE PETERSON GIGRAY
& NICHOLS PA
5700 E FRANKLIN RD STE 200
NAMPA ID 83687
E-mail: mjohnson@whitepeterson.com

LAURA MIDGLEY
231 VALLEY CLUB DR
HAILEY ID 83333
E-mail: midgley2215@gmail.com

BENJAMIN J OTTO
ID CONSERVATION LEAGUE
710 N 6TH STREET
BOISE ID 83702
E-mail: botto@idahoconservation.org

KELSEY JAE NUNEZ
KELSEY JAE NUNEZ LLC
920 N CLOVER DR
BOISE ID 83703
E-mail: kelsey@kelseyjaenunez.com

E-MAIL ONLY
SIERRA CLUB
ZACK WATERMAN
zack.waterman@sierraclub.org

MICHAEL HECKLER
3606 N PROSPECT WAY
GARDEN CITY ID 83714
E-mail: Michael.p.heckler@gmail.com

COXCOM LLC
C/O C TOM ARKOOSH
ARKOOSH LAW OFFICES
PO BOX 2900
BOISE ID 83701
E-mail: tom.arkoosh@arkoosh.com

SECRETARY

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