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February 21, 2023

VIA ELECTRONIC FILING

Public Utility Commission of Oregon
Filing Center
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Re: Docket No. PCN 5 – In the Matter of Idaho Power Company’s Petition for Certificate of Public Convenience and Necessity.

Attention Filing Center:

Attached for filing in the above-referenced docket is Idaho Power Company’s Reply Testimony and Exhibit of Joseph Stippel (Idaho Power/1500-1501).

Please contact this office with any questions.

Thank you,

A handwritten signature in black ink that reads 'Alisha Till'.

Alisha Till
Paralegal

Attachments

DOCKET PCN 5 - CERTIFICATE OF SERVICE

I hereby certify that on February 21, 2023 Idaho Power Company's Reply Testimony of Joseph Stippel was served by USPS First Class Mail and Copy Center to said person(s) at his or her last-known address(es) as indicated below:

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DATED: February 21, 2023

/s/ Alisha Till

Alisha Till
Paralegal

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

DOCKET PCN 5

In the Matter of)
IDAHO POWER COMPANY'S)
PETITION FOR A CERTIFICATE OF)
PUBLIC CONVENIENCE AND)
NECESSITY.)
_____)

IDAHO POWER COMPANY

REPLY TESTIMONY

OF

JOSEPH STIPPEL

FEBRUARY 21, 2023

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- Idaho Power/1501: Letter from Mitch Colburn to BLM (July 10, 2015)

I. INTRODUCTION

Q. Please state your name, your place of employment, and your position.

A. My name is Joseph (or “Joe”) Stippel. I am employed by Idaho Power Company (“Idaho Power” or the “Company”) as a Principal Project Manager in the 500-kilovolt (“kV”) Projects Group. I am the current project manager for the Boardman to Hemingway Transmission Line Project (“B2H” or the “Project”).

Q. Please describe your educational and professional experience.

A. I have a Bachelor of Science in Civil Engineering from Gonzaga University and a Master of Engineering Management from the University of Idaho. I have worked for Idaho Power for seven years in a project management role. Before I worked at Idaho Power, I worked for POWER Engineers as a Civil/Structural Engineer in the Power Generation Group. I worked on several power generation projects as both a structural engineer and a project engineer.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to:

- Respond to the testimony of the STOP B2H Coalition (“STOP B2H”) and Greg Larkin, suggesting that, in selecting a route for B2H in Union County, Idaho Power should have decided on the Bureau of Land Management’s (“BLM”) preferred route (a variation on the Glass Hill Alternative)¹ instead of the Morgan Lake Alternative in order to avoid noise impacts.
- Explain why exceedances of the Oregon Department of Environmental Quality’s (“ODEQ”) ambient antidegradation standard, OAR 340-035-0035(1)(b)(B)(i), are unavoidable.

¹ In the Final Environmental Impact Statement, BLM refers to this route as the Glass Hill Variation S2-D2. See Idaho Power/611, Colburn/141, 194–95, 209 (Final Environmental Impact Statement, Chapter 2). For ease of reference and because most intervenors refer to it as the BLM environmentally preferred or Glass Hill Alternative, Idaho Power refers to it as the “Glass Hill Alternative” in this Reply Testimony.

- 1 • Respond to testimony by Timothy Proesch and Miranda-Aston Proesch arguing
2 that Idaho Power's cloud seeding program could increase the frequency of corona
3 noise from the transmission line.
- 4 • Respond to the testimony of John Williams, suggesting that, in selecting a route
5 for B2H in Union County, Idaho Power should have decided on the Glass Hill
6 Alternative instead of the Morgan Lake Alternative in order to avoid impacts to
7 historic, cultural, and archaeological resources (shortened to "cultural resources"
8 for the purpose of this testimony).
- 9 • Explain why Idaho Power is unable to move a transmission tower outside the
10 cultural resource polygon² for 8B2H-DM-52 (potential open campsite) identified on
11 Mr. Williams' property.
- 12 • Respond to testimony by Staff of the Public Utility Commission of Oregon
13 ("Commission") regarding undergrounding the transmission line, and related
14 ground disturbance impacts to cultural resources and financial implications.
- 15 • Respond to the testimony of Sam Myers regarding wind loading of the transmission
16 line towers.
- 17 • Respond to the testimony of Susan Geer regarding the Douglas clover (*Trifolium*
18 *douglasii*).

² A cultural resource polygon is the conservative area where the cultural resource is anticipated to be located and, if the cultural resource is listed on the National Register of Historic Places ("NRHP"), generally depicts the boundary of a site on the NRHP.

II. RESPONSES TO INTERVENORS' TESTIMONY

A. Response to STOP B2H and Greg Larkin – Avoiding Noise Sensitive Receptors

Q. STOP B2H and Mr. Larkin assert that the Glass Hill Alternative would have fewer noise exceedances than the Morgan Lake Alternative for which Idaho Power seeks a certificate for public convenience and necessity (“CPCN”).³ Please respond.

A. Although Idaho Power acknowledges that there appear to be fewer noise sensitive receptors (“NSRs”) along the Glass Hill Alternative, and therefore there may be fewer exceedances of ODEQ’s ambient antidegradation standard, the Company cannot know for sure whether this is the case because Idaho Power did not propose to construct the Glass Hill Alternative, and therefore did not study noise impacts for that route. However, it is important to note that, as discussed in Mark Bastasch’s testimony, there are only four anticipated NSR exceedances of the ambient antidegradation standard along the Morgan Lake Alternative, and three of the four anticipated NSR exceedances are at the threshold of compliance such that they are unlikely to occur due to Idaho Power’s conservative assumptions and modeling inputs—one is 2 dBA over the ambient antidegradation standard threshold and two are only 1 dBA over the threshold.⁴

Q. As further support for its view that the Morgan Lake Alternative should not have been selected, STOP B2H refers to a letter from Idaho Power to the BLM stating that it would be “untenable to propose locating a 500-kV transmission line within 1,200 feet of so many residences when a viable alternative exists that would avoid those impacts.”⁵ Please respond.

³ STOP B2H's Amended Testimony and Exhibits (STOP B2H/100, Kreider/12-13) (Feb. 1, 2023); Greg Larkin's Amended Opening Testimony and Exhibits (Greg Larkin/100, Larkin/20-21) (Feb. 1, 2023).

⁴ Idaho Power/1100, Bastasch/14-15, 15 n.62 (Feb. 21, 2023); *see also* Idaho Power’s Supplement to Petition for CPCN, Attachment 1 (Final Order) at 682 of 10603 (Oct. 7, 2022) [hereinafter, “Final Order”]; Idaho Power/1106, Bastasch/3-4 (Reanalysis of MP 11 Area – Morgan Lake Alternative).

⁵ STOP B2H/100, Kreider/12-13 (Feb. 1, 2023).

1 A. STOP B2H is taking the quote from Idaho Power's letter out of context, and in a misleading
2 way. Umatilla County requested that BLM consider a new alternative or route variation
3 running adjacent to Interstate 84 ("I-84") or the existing 230-kV transmission line through
4 Umatilla County to address agricultural impact concerns.⁶ In its response to BLM, Idaho
5 Power pointed out that the Energy Facility Siting Council ("EFSC") would likely not grant
6 a variance from ODEQ's ambient antidegradation standard because there are between
7 72 and 105 NSRs located within 1,200 feet of the I-84 and existing 230-kV transmission
8 line routes, a significant increase as compared to Idaho Power's preferred route in that
9 area.⁷ By way of comparison, along the Morgan Lake Alternative, there are only two NSRs
10 within that same distance (1200 ft).⁸

11 **Q. Did EFSC agree that Idaho Power was unable to avoid exceedances of ODEQ's**
12 **ambient antidegradation standard in selecting a route?**

13 A. Yes. In selecting a route, Idaho Power was required to balance a myriad of competing
14 constraints and opportunities, including but not limited to, state and federal regulations, as
15 well as agreements with counties and landowners. As detailed below, consideration of all
16 relevant factors resulted in Idaho Power's choice to build the Morgan Lake Alternative.
17 Idaho Power performed an NSR-by-NSR analysis to consider whether the B2H
18 transmission line could be moved to avoid exceedances of the ambient antidegradation
19 standard but found that it could not do so. EFSC agreed with Idaho Power's NSR-by-NSR
20 analysis, finding that a variance from the ambient antidegradation standard was justified.

21 Specifically, EFSC found that Idaho Power's ability to re-route the transmission
22 line away from an NSR or group of NSRs was constrained by other legal requirements
23 outside the Company's control, including:

⁶ Idaho Power/1501, Stippel/1 (Letter from Mitch Colburn to BLM (July 10, 2015)).

⁷ Idaho Power/1501, Stippel/6-7 (Letter from Mitch Colburn to BLM (July 10, 2015)).

⁸ Idaho Power's Supplement to Petition for CPCN, Attachment 1 (Final Order, Attachment X-4, Revised Tabulated Summary of Acoustic Modeling Results by Receptor Location) at 10557-58 of 10603.

- 1 • Federal land management agency requirements, including the federal land
- 2 management plans governing many of the federal lands in the analysis area;
- 3 • Input on route locations from local governments, counties, and landowners;
- 4 • The transmission line route on lands managed by BLM as issued in the BLM's
- 5 Record of Decision ("ROD");
- 6 • Western Electricity Coordinating Council Common Corridor Criteria and
- 7 prudent utility practice, including minimum separation distances from existing
- 8 transmission lines to ensure reliability of facilities;
- 9 • EFSC's Fish and Wildlife Habitat Standard, adopting the Oregon Department
- 10 of Fish and Wildlife's habitat mitigation policy, which does not permit siting of
- 11 an energy facility on lands designated Category 1 habitat and recommends
- 12 avoidance and minimizing impacts to Greater Sage Grouse habitat; and
- 13 • EFSC's Protected Area Standard, which does not permit siting of an energy
- 14 facility in certain protected areas, such as parks, scenic waterways, and wildlife
- 15 refuges, and certain federally designated areas, such as areas of critical
- 16 environmental concern, wilderness areas, wild and scenic rivers, BLM Class I
- 17 and U.S. Department of Agriculture, Forest Service Retention visual
- 18 management areas, national monuments, and National Wildlife Refuges
- 19 ("NWRs").⁹

20 EFSC concluded that the above listed constraints and obligations, as well as the

21 descriptions associated with the proposed transmission line location related to each

22 NSR,¹⁰ as special physical conditions and special circumstances justifying a variance.¹¹

23 Maps showing these siting constraints are provided in Exhibit X to the Application

⁹ Final Order at 704-05 of 10603.

¹⁰ Final Order at 697-701 of 10603.

¹¹ Final Order at 705 of 10603.

1 for Site Certificate (“ASC”), Figures X-4 through X-14.¹²

2 **B. Response to Timothy Proesch and Miranda Aston-Proesch – Cloud Seeding**

3 **Q. In their Opening Testimony, Timothy Proesch and Miranda Aston-Proesch state that**
4 **Idaho Power’s cloud seeding project will have a major impact on the corona noise**
5 **from B2H?¹³ Is that correct?**

6 A. No. I have confirmed that Idaho Power does not perform cloud seeding in Oregon. Idaho
7 Power cloud seeds the Payette and Boise Basins in Idaho, and East of those locations.
8 The dominant wind direction when the Company seeds are Westerly, meaning the seeding
9 effect is moved to the East into the Central Mountains. No cloud seeding is done when
10 the winds are from the East as the winds would push the seeding efforts out of the Central
11 Mountains. For these reasons, Idaho Power’s cloud seeding effort will not have any effect
12 on the precipitation or condensation in Oregon—which according to Mr. Bastasch’s
13 testimony is the main cause of corona noise.¹⁴

14 **C. Response to John Williams and Shawn Steinmetz – Avoiding Cultural Resources**

15 **Q. Mr. Williams argues that the Glass Hill Alternative would avoid the cultural**
16 **resources on his property and registered segments of the Oregon Trail?¹⁵ Is**
17 **Mr. Williams correct?**

18 A. While the selection of the Glass Hill Alternative would have avoided direct impacts to
19 cultural resources on Mr. Williams property—because that alternative is not routed over
20 his land—Mr. Ranzetta’s testimony explains that the Glass Hill Alternative might have

¹² Idaho Power/1103, Bastasch/34-52 (Idaho Power’s Response to Staff Data Request 26, Attachment 5, ASC, Exhibit X).

¹³ Timothy Proesch & Miranda Aston-Proesch Opening Testimony and Exhibits (Timothy Proesch & Miranda Aston-Proesch/100, Proesch & Aston-Proesch/5-6) (Jan. 17, 2023).

¹⁴ Idaho Power/1100, Bastasch/8-10 (Feb. 21, 2023).

¹⁵ Amended Opening Testimony and Exhibits of John C. Williams (John C. Williams/100, Williams/4) (Feb. 1, 2023).

1 resulted in indirect, visual impacts to cultural resources on Mr. Williams' property, including
2 Oregon Trail segments.¹⁶

3 Moreover, as discussed in Mr. Colburn's testimony, Idaho Power is aware that
4 there are other cultural resources that **would** be impacted if the Glass Hill Alternative were
5 constructed, and the Confederated Tribes of the Umatilla Indian Reservation's ("CTUIR")
6 specifically objected to the Glass Hill Alternative for that reason.¹⁷

7 **Q. Mr. Steinmetz testifies that maps shared with Mr. Williams, by Idaho Power,**
8 **concerning the placement of transmission towers show that "two archaeological**
9 **sites could be directly impacted by their construction, yet their [NRHP] eligibility**
10 **has not been completed. [Idaho Power] has indicated micro-siting will avoid known**
11 **sites, but it is unclear if that is the case at these locations."**¹⁸ **Is it correct that the**
12 **placement of the transmission towers on Mr. Williams' property will directly impact**
13 **cultural resources on Mr. Williams' property, and if so, can the transmission towers**
14 **be moved to avoid the cultural resources, if any?**

15 **A.** According to Stephen Anderson's testimony,¹⁹ only one resource, 8B2H-DM-52 (potential
16 open campsite), is anticipated to be directly impacted by the placement of a transmission
17 tower. As an initial matter, Recreation Condition 1 from EFSC's site certificate for B2H
18 requires that if the Morgan Lake Alternative is selected, Idaho Power must construct the
19 transmission line that would be visible from Morgan Lake Park—specifically between
20 Milepost ("MP") 5.0 to MP 8.0 of the Morgan Lake Alternative—using tower structures that
21 meet the following criteria: H-frames; tower heights no greater than 130 feet; and
22 weathered steel (or an equivalent coating) to better blend into the surrounding

¹⁶ Idaho Power/700, Ranzetta/38-40 (Feb. 21, 2023).

¹⁷ Idaho Power/600, Colburn/47-49 (Feb. 21, 2023); Idaho Power/606, Colburn/1 (Letter of Protest and Objection from CTUIR to BLM (Dec. 27, 2016)).

¹⁸ John C. Williams/101A, Steinmetz/2.

¹⁹ Idaho Power/800, Anderson/8-10 (Feb. 21, 2023).

1 environment.²⁰ The mandated H-frame transmission tower located at MP 6.2A is within
2 the cultural resource polygon for 8B2H-DM-52. Due to the height limitation, structures are
3 spaced closer together, when compared to the standard B2H lattice frame construction in
4 order to meet minimum vertical clearance requirements. This results in the H-frame
5 transmission tower located at MP 6.2A not being able to be moved to avoid 8B2H-DM-52.
6 Idaho Power went through numerous design modifications to avoid potential cultural sites
7 that were identified during cultural surface surveys. The Company's first mitigation action
8 was to avoid the site, if possible. When an impact could not be avoided for various
9 reasons, engineering constraints for example, then mitigation for that particular site is
10 developed in the Historical Properties Management Plan.

11 The second cultural resource that Idaho Power believes Mr. Steinmetz is referring
12 to is 8B2H-DM-47 (potential hunting blind), which is not directly impacted by the placement
13 of the transmission line towers but is located inside the Direct Analysis Area.²¹ Idaho
14 Power has agreed to move the access road further away from the cultural resource such
15 that the access road follows directly underneath the transmission line. Depending on how
16 much the engineers are able to move the access road, 8B2H-DM-47 may ultimately fall
17 outside the Direct Analysis Area.

18 The H-frame transmission towers located at MPs 5.3 and 5.4 completely span
19 35UN00695 (6B2H-MC-09), and do not directly impact the cultural resource.

20 ***D. Response to Staff – Undergrounding***

21 **Q. Commission Staff notes that certain intervenors “requested undergrounding of the**
22 **transmission line either wholly or in parts, especially around culturally and**

²⁰ Idaho Power's Supplement to Petition for CPCN, Attachment 1 (Final Order, Attachment 1, Site Certificate) at 781 of 10603 (Recreation Standard 1).

²¹ Note the Direct Analysis Area and Visual Assessment Analysis Area generally equate to the “Area of Potential Effects” or “APE” as used in the federal Section 106 process.

1 **historically sensitive areas, for instance, the National Historic Oregon Trail**
2 **Interpretative Center [“(NHOTIC”)”] near Baker City, Oregon.”²² Please respond.**

3 **A.** Mr. Ranzetta addresses the ground disturbance impacts of undergrounding B2H to
4 cultural resources in his testimony.²³ However, I would add that—based on the testimony
5 of Dennis Johnson during the EFSC proceeding—the Class 4 estimate concludes that
6 installing the 1.7-mile segment of the Project near NHOTIC underground would cost 27 to
7 55 times more than the estimated cost of constructing that segment as an overhead
8 transmission line.²⁴

9 ***E. Response to Sam Myers - Wind loading***

10 **Q. Please summarize the wind loading concerns raised in Mr. Myers’ testimony.**

11 **A.** Mr. Myers asserts that the proposed route for the Project through Morrow County travels
12 through a region with higher maximum winds, and the Project would experience lower
13 winds if the Company rerouted it four miles to the south.²⁵ Mr. Myers cites a Combined
14 Oregon Wind Map²⁶ for his assertion that structures like the Project towers “should be
15 designed for a maximum wind load speed of 130 [miles-per-hour (“mph”)] or more for
16 Morrow county” but the Project is “designed for 94-112 mph max wind load speeds.”²⁷
17 Finally, Mr. Myers asserts that “Idaho Power should be using a 300 year max wind event
18 possibility as a guide to designing towers[.]”²⁸

19 **Q. Is Mr. Myers’ concern valid?**

²² Staff/100, Pal/59 (Jan. 17, 2023).

²³ Idaho Power/700, Ranzetta/34-35 (Feb. 21, 2023).

²⁴ Idaho Power/705, Ranzetta/30-31 (Rebuttal Testimony of Dennis Johnson (Nov. 12, 2021));
Idaho Power/706, Ranzetta/18-19 (Class 4 Undergrounding Cost Estimate (Nov. 8, 2021)).

²⁵ Sam Myers' Amended Opening Testimony at 2 of 9 (Feb. 1, 2023).

²⁶ Sam Myers' Amended Opening Testimony at 3 of 9 (Feb. 1, 2023).

²⁷ Sam Myers' Amended Opening Testimony at 4 of 9 (Feb. 1, 2023).

²⁸ Sam Myers' Amended Opening Testimony at 4 of 9 (Feb. 1, 2023).

1 A. No, as I will discuss in detail below, Mr. Myers' concerns are unjustified because Idaho
2 Power has performed its due diligence and is exceeding all required code minimums with
3 engineering judgement.

4 **Q. Please describe the standards to which the Project has been designed.**

5 A. The Project was designed to comply with the following relevant standards and codes:
6 National Electrical Safety Code ("NESC 2017"),²⁹ American Society of Civil Engineers
7 ("ASCE") 7-22 Minimum Design Loads for Buildings ("ASCE 7"), ASCE Manual 74
8 Guidelines for Electrical Transmission Line Structural Loading ("ASCE Manual 74"), and
9 finally the Bonneville Power Administration ("BPA"), STD-DT-000035, "Transmission
10 Tower Loading Policy" ("BPA 35"). Constructing, operating, and maintaining transmission
11 lines in compliance with NESC 2017 is required by the Commission's safety and reporting
12 standards.³⁰ NESC 2017 references both ASCE 7 and ASCE Manual 74 to determine
13 loads on buildings and other structures. ASCE 7 specifies design wind speeds and general
14 calculation procedures. ASCE Manual 74 specifies procedures for transmission
15 structures, and NESC 2017 adopts ASCE Manual 74's approach. These criteria establish
16 the loads that most transmission lines in the country are designed to withstand and provide
17 guidance and standards for engineers to design their structures for all expected loading
18 scenarios.

19 **Q. How do the various engineering and design codes you referenced above govern**
20 **how engineers determine applicable design wind speeds for their projects?**

21 A. Each code referenced above provides wind maps, as well as ASCE 7's online hazard tool,

²⁹ Final Order at 61, 77 of 10603 (NESC).

³⁰ OAR 860-024-0010 ("Every Operator shall construct, operate, and maintain electrical supply and communication lines in compliance with the standards prescribed by the 2017 Edition of the National Electrical Safety Code approved April 26, 2016, by the American National Standards Institute"); *see also* Final Order at 111-12 of 10603. The NESC was further adopted as code in Oregon. OAR 918-305-0100(2)(b) ("Effective April 1, 2021, the 2021 Oregon Electrical Specialty Code consists of . . . [the] 2017 Edition of the IEEE C2-2017, National Electrical Safety Code (NESC)[.]").

1 to guide engineers in determining the design wind speed for their projects. The design
2 wind speeds' reference wind maps are generated from historical meteorological studies.
3 For Morrow County and Umatilla County, wind speeds calculated per code are:

- 4 • NESC 2017 – 85 mph
- 5 • ASCE Manual 74 – 85 mph
- 6 • ASCE 7 – 80 mph
- 7 • BPA 35 – 90 mph

8 The NESC 2017 and ASCE Manual 74 refer to ASCE 7's basic wind speed map
9 (figure 6.1), which separates the county into maximum wind zones. Umatilla County is
10 within the 85-mph zone. ASCE 7 also utilizes a web-based design tool to establish design
11 wind speeds for a site.³¹

12 **Q. Do design wind speeds take into account the frequency of weather events?**

13 A. Yes. The NESC mandates that the mean recurrence interval ("MRI")—i.e., how often a
14 weather event is likely to occur—is to be a minimum of 50 years. The design wind speeds
15 shown above are for an MRI of 50 years. ASCE 7 requires the engineer to select an
16 appropriate MRI and the online hazard tool provides several MRI design wind speeds.
17 Below is a sampling of the MRI values and associated design wind speeds.

- 18 • 50 year – 80 mph
- 19 • 100 year – 85 mph
- 20 • 300 year – 93 mph
- 21 • 700 year – 100 mph
- 22 • 10,000 year – 120 mph
- 23 • 100,000 year – 138 mph

24 **Q. Are design wind speeds the same as wind pressures for engineering design?**

³¹ The web-based design tool is available at the following link: <https://asce7hazardtool.online/>.

1 A. No, wind pressures are not the same as design wind speeds. Different pressures can be
2 the result of a single design wind speed.

3 **Q. How are wind pressures determined for a project then?**

4 A. All of the design wind speeds are defined as a three-second wind gust at 33 feet above
5 the ground. This wind speed must then be converted to a pressure that exerts itself on
6 the tower, wire, and other components. Pressure applied to the structure increases with
7 height. In this case, calculated pressure at 180 feet is approximately 30 percent higher
8 than the calculated base wind pressure.

9 From ASCE 7-22, multiple factors go into determining the wind pressure. These
10 include:

- 11 • Velocity-pressure coefficient of mass density of air for standard atmosphere;
- 12 • Vertical velocity pressure coefficient, greater than 1.0 for heights above 60 feet;
- 13 • Basic wind speed;
- 14 • Gust response factor at 1.0, which reduces with heights less than 33 feet;
- 15 • Occupancy Category II, which results in an importance factor of 1.0;
- 16 • Shape factor, 3.2 for lattice structures; and
- 17 • The area impacted by wind.

18 **Q. What tower design is being used for the Project?**

19 A. The tower construction design being used for B2H's lattice towers—which are the type of
20 towers being used in the vicinity of Myers' property—is a standardized tower construction
21 design that was developed by BPA. BPA has extensive experience with tower loading
22 specifically in the Pacific Northwest area for more than 100 years. The Project goes
23 beyond the minimum loading criteria as it uses BPA tower loading criteria.

24 **Q. What is the wind loading criteria used for the Project?**

25 A. In 1964, BPA performed a large meteorological study, encompassing the states of

1 Washington, Oregon, Idaho, and part of Montana to identify wind speeds. This study
2 informs BPA STD-DT-000035, which is applied throughout BPA's broad territory.

3 BPA STD-DT-000035 utilizes a maximum wind speed at 120 mph on the lattice
4 towers and 100 mph on the wire. B2H follows the BPA STD-DT-000035 for lattice tower
5 loading. This gives the project an MRI from ASCE 7 of between a 700- and 10,000-year
6 recurrence period for the area of interest in Morrow County and Umatilla County.

7 In summary, B2H has wind loading of 120 mph on lattice towers and 100 mph
8 loading in wire resulting in an MRI of between a 700- to 10,000-year recurrence period for
9 Umatilla County and Morrow County.

10 **Q. Do the engineering and design codes also include other loading factors besides**
11 **wind?**

12 A. Yes. The codes reflect various combinations of loading requirements to determine
13 scenarios that could be simultaneously applied to the structure. This would include taking
14 elements of wind, snow, ice, seismic, and temporary loadings, and combining them to
15 create potential scenarios or load combinations. Examples of load combinations could
16 include: loadings during construction on a nice day; windy operation during an ice-storm;
17 operation during a wind event when shedding of some wind could be prevented; a seismic
18 event; etc. These load combinations contemplate temporary, weather-related, and
19 structure loadings.

20 **Q. Does the design for B2H loading adequately address these various scenarios?**

21 A. Yes. The scenarios, or load combinations, developed for B2H are all in excess of the
22 code required minimums.

23 **Q. Based on the design standards applied for B2H, what is your conclusion regarding**
24 **Mr. Myers' concerns?**

25 A. The 100-year MRI in the vicinity of the Myers property is 85 mph (i.e., there is a one
26 percent chance that a three-second wind will exceed that value in a given year). The

1 chance for a 120-mph wind is a 10,000-year MRI. Nevertheless, B2H has wind loading of
2 120 mph on the lattice towers and 100 mph loading in wire resulting in an MRI of between
3 a 700- to 10,000-year recurrence period for Umatilla County and Morrow County. Based
4 on these design criteria, Mr. Myers' concerns are unjustified because Idaho Power has
5 performed its due diligence and is exceeding all required code minimums with engineering
6 judgement.

7 **Q. Mr. Myers asserts that a 300-year maximum wind event should be used to guide**
8 **tower design. How do you respond?**

9 A. I disagree with his assertion that a 300-year max wind event should be used to inform
10 lattice tower design. Balancing realistic load scenarios and designing to the code is what
11 engineers do every day. Codes protect the public and set the standard for appropriate
12 design. Idaho Power takes engineering reliability very seriously and is confident in the
13 design that is being brought forward for this critical piece of infrastructure that will be
14 designed to last in excess of a 100-year period with proper maintenance.

15 **F. *Response to Susan Geer – Douglas Clover (Trifolium Douglasii)***

16 **Q. Please summarize Susan Geer's testimony regarding Douglas clover.**

17 A. Ms. Geer asserts that the Rice Glass Hill parcel³² contains several occurrences of Douglas
18 clover (*Trifolium douglasii*), which is an Oregon Biodiversity Information Center ("ORBIC")
19 List 1 Species.³³ Ms. Geer notes that there is a large occurrence of the clover in a location
20 referred to as Winn Meadow, and the clover is highly concentrated in the moister parts of
21 the meadow.³⁴ Ms. Geer further questions whether Idaho Power's consultant, Tetra Tech,
22 Inc. ("Tetra Tech"), would have observed these occurrences because the timing for Tetra
23 Tech's surveys was before the clover was in bloom.³⁵

³² See Idaho Power/1402, Ottenlips/1.

³³ Susan Geer's Amended Opening Testimony (Susan Geer/100, Geer/11) (Feb. 1, 2023).

³⁴ Susan Geer/100, Geer/11 (Feb. 1, 2023).

³⁵ Susan Geer/100, Geer/11 (Feb. 1, 2023).

1 **Q. Is *Trifolium douglasii* protected as a threatened or endangered species by the State**
2 **of Oregon?**

3 A. No, my understanding is that it is not listed by the Oregon Department of Agriculture as a
4 threatened or endangered species,³⁶ and there is no requirement to avoid this species
5 under any applicable EFSC standard.

6 **Q. When Tetra Tech conducted surveys on the Rice Glass Hill parcel,³⁷ would Tetra**
7 **Tech have been surveying for Douglas clover?**

8 A. No. Because it is not a state-listed species and not required to be identified for possible
9 avoidance, Tetra Tech's survey would not have included *Trifolium douglasii*.

10 **Q. Even though no applicable EFSC standard requires avoidance of this species,**
11 **would Idaho Power make a reasonable accommodation to address Ms. Geer's**
12 **concern?**

13 A. Yes. Although no EFSC standard requires avoidance of *Trifolium douglasii*, if an impacted
14 landowner raises concerns regarding identified populations of *Trifolium douglasii* on their
15 property, Idaho Power is willing to take reasonable efforts to avoid impacting those
16 populations. If feasible, Idaho Power may also microsite the Project within the site
17 boundary to avoid impacts to the existing populations of *Trifolium douglasii* that a
18 landowner identifies. However, when attempting to avoid impacts to *Trifolium douglasii*,
19 Idaho Power will not re-route the Project beyond the site boundary or take any other
20 actions that may require the Company to seek an amendment to its site certificate.
21 Specifically, Idaho Power is willing to make the following commitment regarding the
22 *Trifolium douglasii*:

23 If a landowner identifies discrete populations of *Trifolium douglasii*,
24 commonly known as Douglas clover, within the segment of the
25 Project site located on the landowner's parcel, the certificate holder
26 will attempt to avoid direct impacts to the identified populations by

³⁶ See OAR 603-073-0070.

³⁷ See Idaho Power/1402, Ottenlips/1.

1 micro-siting Project features outside the boundaries of the
2 populations, if practicable. Nothing herein shall require the
3 certificate holder to site any Project features outside the site
4 boundary to comply with this condition.

5 **Q. Does this conclude your Reply Testimony?**

6 A. Yes.

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

Docket PCN 5

In the Matter of

IDAHO POWER COMPANY'S
PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE
AND NECESSITY

Letter from Mitch Colburn to BLM
(July 10, 2015)

February 21, 2023



Mitch Colburn
Engineering Leader
1221 W. Idaho Street
Boise, Idaho 83702
MColburn@idahopower.com

July 10, 2015

VIA ELECTRONIC MAIL

Tamara Gertsch, National Project Manager
Don Gonzalez, District Manager
Bureau of Land Management, Vale District Office
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TGertsch@blm.gov
DGonzale@blm.gov

Re: Preliminary Feasibility Analysis of Possible Interstate 84 and Co-Located 230-kV
Routes in Umatilla County
Boardman to Hemingway Transmission Line Project

Dear Tamara and Don,

In Umatilla County's comments on the Draft Environmental Impact Statement (EIS) for the Boardman to Hemingway Transmission Line Project (Project), the County requested that the Bureau of Land Management (BLM) consider a new alternative or route variation running adjacent to Interstate 84 (I-84) or the existing 230-kV transmission line through Umatilla County. We are writing to provide information regarding the feasibility and impacts of a possible I-84 corridor route. Specifically, we explain that the I-84/230 kV co-located route was specifically considered during scoping and that neither an I-84 or 230 kV co-located route were carried forward as a proposed or alternate route from the 2009-2010 community advisory site selection process. Based on the community advisory site selection process, the route was not carried forward due to increased impacts to agriculture and developed areas. The same constraints still apply, and therefore, the I-84 corridor does not present a reasonable alternative that BLM need consider in detail.

I. The I-84 Corridor Was Not Carried Forward During the Community Advisory Process

On December 19, 2007, Idaho Power submitted a right-of-way application to the BLM and the USFS. On September 12, 2008, the BLM published an NOI in the Federal Register, announcing the preparation of an EIS for the B2H Project. The NOI initiated a NEPA scoping

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period from September 12 through November 14, 2008. The transmission line route proposed in 2007 and presented to the public during the 2008 scoping period is shown below in Figure 1.

Idaho Power began the process of identifying a route for the Project when it submitted its right-of-way applications to the BLM and U.S. Forest Service on December 19, 2007. On September 12, 2008, BLM published in the Federal Register its notice of intent to prepare an EIS for the Project. The notice of intent initiated a National Environmental Policy Act (NEPA) scoping period from September 12 through November 14, 2008. The transmission line route proposed in 2007 and presented to the public during the 2008 scoping period is shown below in Figure 1. *See Revised Scoping Report, p. 7 (April 2011).*

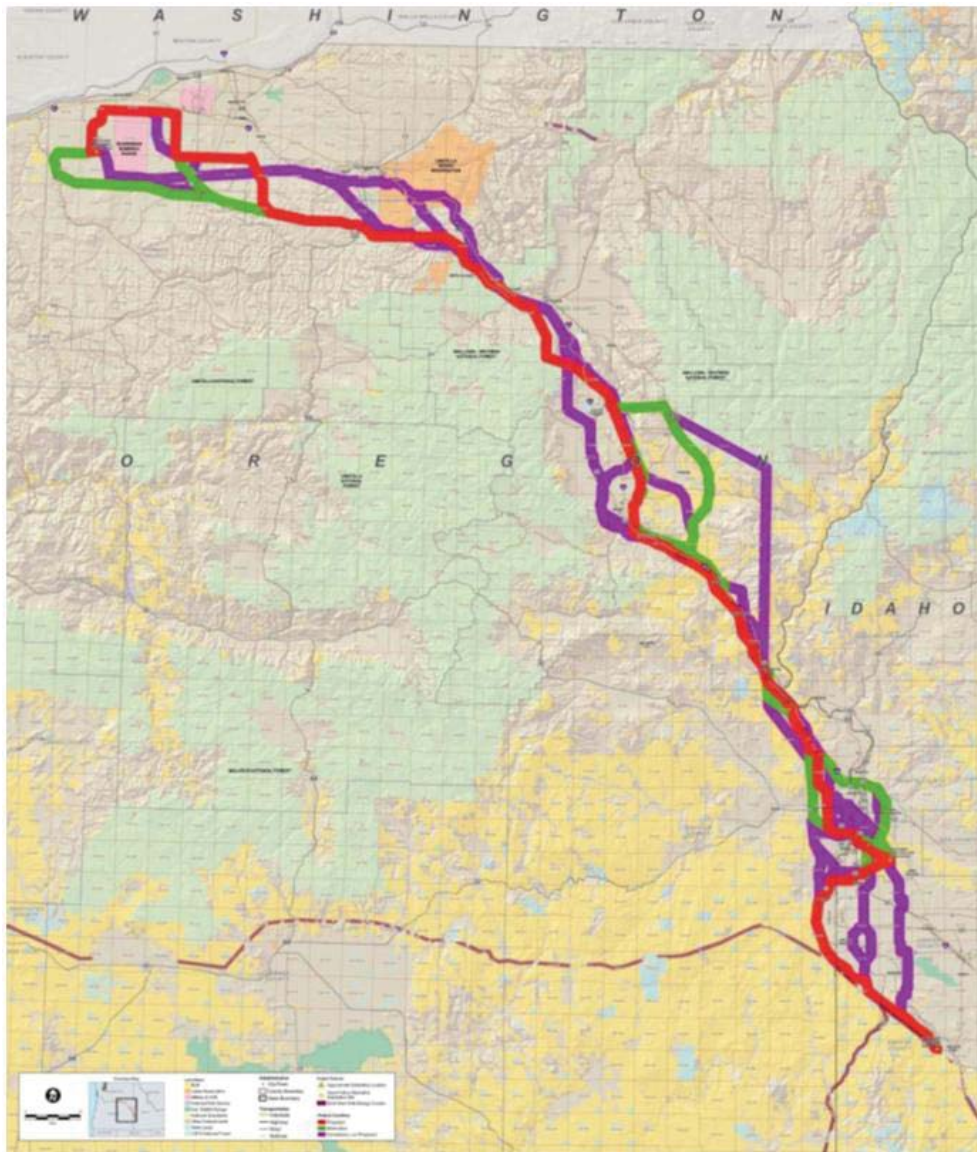


Figure 1: Boardman to Hemingway 2008 Proposed Route

Based on public feedback received during the scoping process, Idaho Power initiated in March 2009 the Community Advisory Process (CAP) to engage the affected communities to develop a revised proposed route. *See* CAP Final Report (Feb. 2011). Idaho Power established a broad study area between the two proposed termination points for the Project and established five Project Advisory Teams (PATs) representing five geographic areas within the study area. The PATs were comprised of residents, property owners, business leaders, local officials, and others from each county in the project area. For over a year, approximately 450 Project Advisory Team members worked to develop community criteria for each region that were used to evaluate possible routes. The community criteria were integrated with regulatory requirements to give a more holistic, community centered evaluation methodology for the line route. Once team members had a thorough understanding of the routing criteria and how these criteria would be applied, they worked with technical experts to recommend a proposed route and alternate routes for the transmission line. Routes not meeting the regulatory and community criteria were removed from consideration. Idaho Power presented the outcomes from the Project Advisory Team meetings to the public for review and comment. Comments submitted at the public meetings showed that the concerns of the general public were closely aligned with those of the Project Advisory Team members. Using the routes identified in the CAP mapping sessions, Idaho Power identified the proposed route considered in the Draft EIS.

Umatilla County was included in the study area considered by the North Project Advisory Team. Umatilla County officials were members of the North team. The team developed community siting criteria, seeking, among other things, opportunities to site the line in or near existing transportation and energy corridors and to avoid irrigated farmland, private residences, and urban areas. *See* CAP Final Report, App'x C, pp. 2, 3. Applying its siting criteria, the North team identified several proposed routes through Umatilla County. The routes considered by the Project Advisory Teams are shown below in Figure 2. *See* CAP Final Report, p. 23 (February 2011).

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Figure 2: Routes Developed by Community Advisory Process Project Advisory Teams

None of the North Project Advisory Team's proposed routes followed I-84 or the 230-kV line through Umatilla County. There was a section identified in Morrow County that followed I-84, however it wasn't carried forward in the NEPA process. That's not to say the North team didn't consider other routes adjacent to the interstate or 230-kV line. Indeed, the North team evaluated routes throughout its study area, which included the I-84 corridor through Umatilla County as well as Morrow County. *See id.*, p. 6. Further, Idaho Power presented routes paralleling the existing 230 kV line corridor in Umatilla County during the 2008 scoping process—routes that the North team found unacceptable. *See Figure 1, Revised Scoping Report, p. 7 (April 2011).*

Idaho Power's objective for the CAP process was to develop a range of possible routes that addressed community issues and concerns. With respect to Umatilla County, the North

Project Advisory Team defined community siting criteria relevant to the County's interests, considered siting opportunities along the I-84 and 230-kV corridors, and concluded that those routes did not satisfy the community's siting criteria. Because an I-84 or 230-kV route would be inconsistent with the North team's objectives for the siting of the Project in Umatilla County and Idaho Power's objectives for respecting the CAP routes where possible, the I-84 and 230-kV routes are not reasonable alternatives that BLM must consider in detail. *See Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1085 (9th Cir. 2013) ("An agency must look hard at the factors relevant to definition of purpose, which can include private goals, especially when the agency is determining whether to issue a permit or license."); *Env'tl. Law & Policy Ctr. v. U.S. Nuclear Regulatory Comm'n*, 470 F.3d 676, 684 (7th Cir. 2006) (in considering alternatives, the federal agency "may accord substantial weight to the preferences of the applicant and/or sponsor in the siting and design of the project.") (quoting *City of Grapevine v. Dep't of Transp.*, 17 F.3d 1502, 1506 (D.C. Cir. 1994)).

II. Each of The I-84 And 230-kV Routes Would Result In Greater Impacts To Irrigated Agriculture And Noise Sensitive Receptors

Generally, lands adjacent to interstate highways are more developed than areas farther from major transportation corridors. For example, interstates typically connect and go through urban areas. Outside of urban areas, residences, irrigated agriculture, industrial areas, and service facilities (e.g., gas stations) tend to be developed near interstate access points in order to take advantage of transportation opportunities. Accordingly, in general, a transmission line route along an interstate corridor greatly increases the number of people and number of developed farms and businesses that would be disturbed by the project.

Irrigated Agriculture

Umatilla County's primary justification for requesting BLM to consider an alternative route is to minimize or avoid impacts to agriculture. *See Umatilla County Comment Letter*, p. 5 (Mar. 8, 2015). However, a route adjacent to I-84 or the 230-kV power line would result in more impacts to agriculture. Specifically, the alternative routes would run near two or three concentrated feeding operations (CAFOs), whereas the preferred route would not be located near any CAFOs. Additionally, the I-84 or the 230-kV routes would impact 22 to 42 additional miles of irrigated agricultural lands when compared to the preferred route:

Comparison of Agricultural Impacts Between Idaho Power's Preferred Route and the Possible I-84 and 230-kV Routes

Feature	Preferred Route	Variation 1	Variation 2	Variation 3	Variation 4
Agriculture, CAFOs (# w/in 1,200 feet)	0	2	3	2	3
Agriculture, Pivot Irrigation (# w/in 1,200 feet)	47	87	69	89	71

Noise Sensitive Receptors

Umatilla County's comment also points to impacts to residences and other noise sensitive receptors (NSRs) in support of its proposed alternative routes. *See* Umatilla County Comment Letter, p. 6 (Mar. 8, 2015) (discussing impacts to a home and horse corral near McKay Creek). Nonetheless, the number of NSRs that possibly would be affected by the hypothetical alternative routes would increase substantially over the impacts of Idaho Power's preferred route. There are three NSRs located within 1,200 feet of the current preferred route. In striking contrast, there are between 72 and 105 NSRs located within 1,200 feet of the four I-84/230-kV routes:

Comparison of NSR Impacts Between Idaho Power's Preferred Route and the Possible I-84 and 230-kV Routes

Feature	Preferred Route	Variation 1	Variation 2	Variation 3	Variation 4
Residences/NSRs (# w/in 1,200 feet)	3	105	101	76	72

Umatilla County's current concerns regarding agriculture and NSR impacts were considered during the CAP process. Based on those considerations, among others, the North Project Advisory Team proposed multiple routes that did not follow I-84 or the 230-kV power line. The current analysis of irrigated agriculture and NSR impacts reiterates and confirms the findings of the CAP—an I-84 or 230-kV power line route through Umatilla County would result in substantially greater impacts than Idaho Power's preferred route. Accordingly, because the proposed routes would not be effective in meeting Umatilla County's objectives, the routes are not reasonable alternatives that BLM must consider in detail. *See Headwaters, Inc. v. BLM*, 914 F.2d 1174, 1180-81 (9th Cir.1990) ("Nor must an agency consider alternatives which are infeasible, ineffective, or inconsistent with the basic policy objectives for the management of the area.").

III. The Impacts To Noise Sensitive Receptors Possibly Would Make The I-84 And 230-kV Routes Unpermissible

In Exhibit X of an Oregon Energy Facility Siting Council's application for site certificate, an applicant must present substantial evidence that the proposed facility will comply with the Oregon Department of Environmental Quality's (ODEQ) noise control standards in Oregon Administrative Rule (OAR) 340-035-0035 (ODEQ Noise Rules). *See* OAR 345-021-0010(1)(x). For new commercial or industrial noise sources on a previously unused site, the ODEQ Noise Rules contain both a maximum permissible sound level (50 A-weighted decibels [dBA]) and an ambient antidegradation standard. The antidegradation standard prohibits a new industrial or commercial noise source located on a previously unused site from increasing "ambient" L50 statistical noise levels by more than 10 dBA at the appropriate measuring point of a "noise sensitive receptor" (NSR) as that term is defined in OAR 340-035-0015(38). The term "ambient noise" means all noise associated with a given environment; ambient noise is usually made up of composite of sounds from many sources near and far as described in OAR 345-035-0015(5). In order to demonstrate that the Project will comply with the ODEQ Noise Rules, and the antidegradation standard in particular, Idaho Power is required to identify all NSRs within the analysis area required by the Project Order, which is within one-half mile from the edge of the

site boundary (a 500 foot corridor for the transmission line component). For every location at which the Project cannot demonstrate compliance with ODEQ's noise antidegradation rule, IPC must request that the Council grant a variance pursuant to OAR 340-035-0100 on the basis that requiring the Project to strictly comply with the ODEQ Noise Rules is unreasonable and likely to make the Project unpermittable.

The noise studies Idaho Power has conducted to date indicate that NSRs closer than 1,200 feet from the Project centerline will likely exceed the 10 dBA criteria. The possible I-84 and 230-kV power line routes present a significant risk of noncompliance with ODEQ's Noise Rules. As discussed in Section II above, preliminary analysis indicates that locating the Project in any of the possible I-84/230-kV routes would result in a significant increase in the number of NSRs in close proximity to the transmission line. While it is not possible for Idaho Power to predict with certainty whether noise from the Project would increase noise levels at these NSRs by more than 10 dBA without both sound monitoring and modeling, there is a strong likelihood that any one of the possible I-84 or 230-kV power line routes would result in an unmanageable, if not unpermittable, number of exceedances.

From a public policy perspective, Idaho Power believes that it is untenable to propose locating a 500-kV transmission line within 1,200 feet of so many residences when a viable alternative (the preferred route) exists that would avoid those impacts. Moreover, EFSC possibly would not grant a variance from the ODEQ Noise Rules for these exceedances, both because of the sheer number of likely exceedances and because an alternative location with many fewer exceedances exists. See OAR 345-035-0100(1) (standard for a granting a variance). It is highly unlikely that Idaho Power could obtain a site certificate from the State of Oregon for the I-84 and 230-kV routes, and therefore, the routes are not reasonable alternatives. *See Headwaters, Inc.*, 914 F.2d at 1180-81.

IV. The Routes Crossing The Reservation Would Require A Short-Term Right-Of-Way That Would Be Inconsistent With Idaho Power's Project Objectives

Due to the high demand for transmission services, the high cost of building new transmission lines, and the intrinsic value of transmission rights-of-way, Idaho Power designs, constructs, and operates its transmission lines and substations with the objective that the facilities will be in service indefinitely. Idaho Power has never retired a bulk electric system transmission line. Indeed, industry wide, transmission line retirements are extremely rare, occurring only when a line is re-routed. Accordingly, when obtaining right-of-way authorizations for its transmission lines, Idaho Power seeks to obtain indefinite or long-term access rights.

On June 18, 2015, Idaho Power met with representatives from the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). The CTUIR representatives indicated that their policy is to issue right-of-way grants for a term of 20 years. A 20-year term does not meet Idaho Power's objectives because of the financial uncertainty associated with a potential renewal after the 20 year period and the possibility that CTUIR could deny a renewal of the right-of-way and force Idaho Power to take the affected portion of the line out of service, threatening Idaho

Power's intention that the Project remain in-service long-term if not indefinitely. Therefore, due to the inherent uncertainty associated with a 20 year right-of-way grant for a billion dollar investment, the possible I-84 and 230-kV co-located power line routes crossing the CTUIR should be eliminated from further consideration. *See Alaska Survival*, 705 F.3d at 1085; *Env'tl. Law & Policy Ctr.*, 470 F.3d at 684.

V. Conclusion

Idaho Power's objective is to construct the Project as an indefinite resource and to site the Project in a manner that minimizes, where possible, impacts to agriculture and residences. BLM should not consider, in detail, alternatives that, if adopted, would not be feasible or reasonable or would not fulfill the project objectives as defined by Idaho Power. Further, BLM should accord substantial weight to the preferences of Idaho Power, as the project proponent, in the siting and design of the proposed project. The I-84 and co-located 230-kV routes through Umatilla are not technically feasible or economically reasonable and do not meet Idaho Power's project objectives, and thus, BLM should not consider these routes in more detail.

Sincerely,

A handwritten signature in black ink, appearing to read "Mitch Colburn", written in a cursive style.

Mitch Colburn