

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

PCN 2

In the Matter of

TILLAMOOK PEOPLE'S UTILITY
DISTRICT,

Petition for Certificate of Public Convenience
and Necessity.

ORDER

DISPOSITION: PETITION GRANTED

I. INTRODUCTION

On October 6, 2017, the Tillamook People's Utility District (TPUD), in accordance with ORS 758.015, filed a petition for a certificate of public convenience and necessity (CPCN) in order to construct an overhead transmission line. TPUD, as a consumer-owned utility, must petition this Commission for a CPCN if the construction of the transmission project will likely involve the condemnation of land or an interest therein.¹

Under these circumstances, the Commission is tasked with several requirements. These include holding a public hearing and conducting its own investigation to determine the necessity, safety, practicability, and public interest of the corresponding proposal. The issuance by the Commission of a CPCN is considered "conclusive evidence" that the project is necessary for public convenience. The CPCN is then employed as such in any subsequent eminent domain proceeding(s). In this order, we grant TPUD's petition based on the results of our investigation.

II. BACKGROUND

A. Factual Background

TPUD's proposed project is an 8.6 mile overhead transmission line extending from Tillamook to about a mile north of Netarts. The transmission line would originate from a breaker in the Tillamook Substation owned by the Bonneville Power Administration

¹ See ORS 758.015(2)

(BPA) and run to the proposed new Oceanside Substation to be constructed and owned by TPUD.

TPUD states that the 115 kilovolt (kV) line is needed in order to provide all customer classes with reliable service:

The Transmission Line is needed to adequately provide reliable service to existing and new customer loads in large portions of Tillamook PUD's service territory, and is most critical for customers in the coastal areas around Netarts and Oceanside. The area to be served directly by the Transmission Line is currently served from a 14-mile radial 24.9 kV line sourced from Tillamook PUD's Wilson River Substation. The customers who will benefit from the Transmission Line are diverse and include residential, small commercial, large commercial, industrial, water and sewer Districts, and irrigation uses.²

TPUD describes the current 14-mile-long radial line as being in poor condition, which has subjected its customers to more frequent outages:

The existing 24.9 kV line is aging, has limited capacity and poor reliability, and has subjected Tillamook PUD customers to long outages of increased frequency. In part because of the load growth Tillamook PUD has and continues to experience in coastal areas, reliability issues on the existing 24.9 kV line are expected to increase and if a solution is not forthcoming, a moratorium will have to be imposed on new electric connections. The Transmission Line will increase overall system reliability and ensure that Tillamook PUD can adequately serve its existing and future customers.³

TPUD noted that a two-mile stretch of the existing line was more than 50 years old. The project was approved by the TPUD Board of Directors in a meeting held on December 31, 2016.

B. Procedural Background

1. 2017 Public Meeting and Interventions

TPUD filed its petition, along with testimony and exhibits, on October 6, 2017. A public meeting and prehearing conference was held on November 14, 2017, at Tillamook Bay Community College. At the public meeting, TPUD emphasized that the transmission line will provide improved reliability and safety and increase system capacity. Citizens in the

² TPUD/100, Simmons/2-3.

³ TPUD/100, Simmons/2-3.

area expressed concerns about the project that included the effects of the project on humans, cattle, and fish, TPUD's N-1 calculations, and the proximity of the proposed lines to barns and other structures.

Petitions to intervene were submitted at that time by Ben Hathaway, David Mast, Doris Mast, Eric L. Peterson, and Bryce Smith. The petitions were granted on November 16, 2017. Subsequent petitions to intervene by Don Aufdermauer (Aufdermauer Farms), Todd A. Josi (New Age Carwash), Oregon Farm Bureau Federation, Kurt Mizze (Tilla-Bay Farms), Kristi Sherer, Oregon Coast Alliance, and the Oregon Dairy Farmers Association were granted on December 12, 2017.

2. *Testimony and Exhibits*

On or before February 7, 2018, TPUD and several intervenors filed opening testimony and exhibits: Aufdermauer Farms; Doris Mast; David Mast; Tilla-Bay Farms, Inc.; Eric and Loretta Peterson; Commission Staff; Kristi Sherer; Oregon Coast Alliance (ORCA); and a joint filing by Oregon Farm Bureau Federation (OFB) and the Oregon Dairy Farmers Association (ODFA).

On March 2, 2018, reply testimony was filed by TPUD, Tilla-Bay Farms, Doris Mast, David Mast, ORCA, and Commission Staff. Only three parties filed cross-exam statements on March 16, 2018 (ORCA, Staff, and TPUD).

3. *Modification of the Hearing Date*

In April of 2018, Staff requested a modified procedural schedule, based on TPUD's pending permit application with Tillamook County Planning Commission. Staff noted that the County's decision on the land use permit was due on July 13, 2018. Because the permitting could potentially change the project's route, Staff recommended that the hearing be moved to the end of July or the beginning of August 2018. Only TPUD opposed this move, stating the two approval processes were independent and there was no need to delay the hearing. The motion was approved. During August 2018, TPUD noted that the county approved the land-use permit on July 22, 2018. The hearing was reset and held on November 1, 2018.

4. *Hearing*

A hearing was held on November 1, 2018, at the Port of Tillamook Bay. TPUD's witnesses were Todd Simmons and KC Fagen. The witnesses were cross-examined by David Mast, Staff, and Commissioners. The testimony of TPUD's witnesses raised questions regarding certain calculations contained in the petition, and the witnesses were unable to answer various questions pertaining to actual system capacity and forecasted

load growth, comparisons between options three and four, and the cost of elements for the overall proposal.⁴

5. *Additional Information Requested Post-Hearing by the Commission*

After determining that further information was needed to reach a decision in this docket, we directed the ALJ to issue a bench request for additional information. This request consisted of a series of questions regarding system capacity and comparing the two most viable options proposed by the TPUD, which are discussed in the sections below. As part of the bench request, the ALJ also reopened the record to allow TPUD to file testimony and exhibits meant to address the bench request, and to allow other parties to submit rebuttal testimony.

TPUD filed responses to the bench requests on December 17, 2018. Reply testimony from parties was filed by January 17, 2019, and TPUD filed rebuttal testimony on January 28, 2019. TPUD's opening brief was filed on February 22, 2019, followed by parties' reply briefs on March 12, 2019. Cross-replies were filed on March 26, 2019; TPUD's closing brief was filed on April 2, 2019.

The additional testimony and briefing provided us an opportunity to thoroughly review and explore all issues associated with the TPUD petition. We appreciate the hard work and dedicated effort put forth by TPUD and all intervenors to present additional information and perspectives.

III. DISCUSSION

A. Legal Standard

1. *Petition*

The statutory standard is listed in ORS 758.015: *Certificate of public convenience and necessity*, which states in part:

When any person, * * * or any transmission company, proposes to construct an overhead transmission line which will necessitate a condemnation of land or an interest therein, it shall petition the Public Utility Commission for a certificate of public convenience and necessity setting forth a detailed description and the purpose of the proposed transmission line, the estimated cost, the route to be followed, the availability of alternate routes, a description of other transmission lines connecting the same areas, and such other information in such form as the

⁴ Tr. at 24-39, and 40-62 (Nov 1, 2018).

commission may reasonably require in determining the public convenience and necessity.⁵

The statute imposes certain requirements to be completed by the Commission prior to granting a CPCN:

The commission shall give notice and hold a public hearing on such petition. The commission, in addition to considering facts presented at such hearing, shall make the commission's own investigation to determine the necessity, safety, practicability and justification in the public interest for the proposed transmission line and shall enter an order accordingly. * * * In any proceeding for condemnation, a certified copy of such order shall be conclusive evidence that the transmission line for which the land is required is a public use and necessary for public convenience.⁶

In this case, we provided notice and conducted an investigation with a public hearing, and based on our review issue of the record in this case issue this comprehensive order.

2. *Oregon Administrative Rules*

OAR 860-025-0030 provides a list of items required to be submitted within a petition for a CPCN. These items include a description of the proposed line, which must contain information that "should be in sufficient detail to enable a full understanding of the public convenience, necessity and justification in the public interest for the proposed transmission line and the benefits to be derived therefrom, and to enable a determination of its safety and practicability." Maps of the service area, the proposed route and alternative routes, descriptions of land to be condemned, costs and financial feasibility, explanations of alternative routes, and statements and supporting data regarding alternative routes.⁷

In addition, the rule provides an outline for actions by the Commission as an approval of such a petition. These actions include adopting findings that:

Assure the proposed transmission project complies with Statewide Planning Goals and is compatible with the acknowledged comprehensive plan(s) and land use regulations of each local government where the project is to be located.⁸

⁵ See ORS 758.015(1)-(4).

⁶ *Id.*

⁷ See OAR 860-025-0030(1)(b)(c)(A) to (G)(e)(g).

⁸ See OAR 860-025-0030(2).

The rule also requires that our findings must be based on the hearing record.⁹

3. *Previous Decisions*

In two previous cases, this Commission defined the terms necessity, safety, practicability, and justification as follows:

"Necessity" means "great or absolute need." In turn, "need" means "a lack of something requisite, desirable, or useful." Thus, to establish the necessity of a project, the petitioner must demonstrate that Oregonians will forego something desirable and useful without it.

"Safety" means "the condition of being safe, freedom from being exposed to danger; exemption from hurt, injury, or loss. To establish the safety of a project, petitioner must show that the project will be constructed, operated, and maintained in a manner that protects the public from danger.

"Practicability" means "the quality or state of being practicable...." "Practicable," in turn, means "possible to practice or perform; capable of being put into practice, done, or accomplished.... To establish the practicability of the project, the petitioner must show the project is feasible and will be effectively and efficiently constructed.

"Justification" means "the act of or instance of justifying...." "Justify," in turn, means "to prove or show to be valid, sound, or continuing to fact or reason.... Thus, to show that a project is justified, the petitioner must show sufficient reason for the project to be built. To make this determination, we consider the public benefits and costs of the project. Where possible, we rely on benefits and costs that can be quantified in economic terms."¹⁰

In these previous cases, we relied on the plain, natural, and ordinary meanings of these terms.¹¹

We review and apply these same standards of necessity, safety, practicability, and justification in the sections below. This discussion is organized by presenting necessity and justification together because they encompass intertwined issues relating to the project rationale. Safety and practicability are discussed separately.

⁹ See OAR 860-025-0030(3).

¹⁰ See, *In the Matter of Umatilla Electric Cooperative Petition for Certification of Public Convenience and Necessity*, Docket No. PCN 1, Order No. 17-111 (Mar 21, 2017); and *In the Matter of PacifiCorp dba Pacific Power*, Docket No. UM 1495, Order No. 11-366 (Sep 22, 2011).

¹¹ *Umatilla Petition for PCN*, Order No. 17-111 (Mar 21, 2017) at 4.

IV. NECESSITY, SAFETY, PRACTICABILITY, AND JUSTIFICATION

At the outset, we must clarify our role in determining whether TPUD has met these requirements set out in statute and rule. In its petition, TPUD explained that it considered four separate options to address the stated issues of reliability, capacity, and load growth. Option 1 was to make no changes to the system (“do nothing”). Option 2 was the installation of a redundant, 24.9 kV feeder between Oceanside and Netarts and rebuilding feeder 51 (along with some system improvements addressing voltage and loading issues). Option 3 consisted of the modifications in Option 2 plus an upgrade to one of the Wilson River Substation Transformers (Option 3). Finally, Option 4 was the addition of the transmission line as proposed in this petition (Option 4).¹²

TPUD further explained that Option 3 and 4 were identified as viable options. Option 3 was a viable choice because it provided 12 megavolt amperes (MVA) of additional capacity, 13 years of expected longevity with a total cost between \$5.5 and \$6 million. In addition, Option 3 was labeled as “good” with regard to reliability.¹³ Option 4 was the second viable choice because it provided 33 MVA of additional capacity, 33 years of expected longevity, and a listed cost in the range of \$9.5 to \$10 million. Option 4 was labeled “excellent” with regard to reliability, because it was listed as providing 33 years of expected longevity.¹⁴ TPUD states that Option 4 “provides the lowest cost per unit of capacity (MVA) and has the life expectancy of 33 years (2.8 times [Option 3]).”¹⁵

The intervening parties generally question the necessity of the proposed transmission line. As the case developed, they also advocated for Option 3, as discussed below.

In determining the public convenience and necessity, it is important to note that our task is not to decide between these two options or other potential alternatives. The petition requested the power to employ eminent domain in order to construct Option 4. Our task is therefore to decide whether the request to construct the transmission line was necessary, safe, practicable, justified and in the public interest. In our review, Option 3 serves as an alternative that may help us weigh whether or not Option 4 meets the statutory standard.

A. Necessity and Justification

In this case, as in previous cases, the categories of necessity and justification contained similar or overlapping arguments. Thus, we present our review of these two elements within the same section below.

¹² TPUD/200, Fagen/5-6.

¹³ TPUD/204, Fagen/3.

¹⁴ TPUD/204, Fagen/3.

¹⁵ *Id.*

1. TPUD's Overall Position Regarding Necessity

In its opening petition and consistently throughout the case record, TPUD states the proposed transmission line is required to supplement the existing 24.9 kV line to provide more reliable service to a portion of its service territory. Through various exhibits and the testimony of its chief witness, KC Fagen, TPUD asserted that the transmission line:

Is necessary to adequately provide safe and reliable service to existing and new customer loads in large portions of TPUD's service territory, and the line is most critical for customers in and around the coastal communities of Netarts and Oceanside. The customers who will directly benefit from the Transmission Line are diverse and include residential, small commercial, large commercial, industrial, water and sewer Districts, and irrigation uses. Without the Transmission Line, Oregonians living, working, and visiting the Netarts and Oceanside communities will forgo reliable electrical service.¹⁶

TPUD further states that the existing 24.9 kV line is aging, has limited capacity, reliability, and has subjected Tillamook PUD customers to outages of increased frequency. In part because of the load growth Tillamook PUD has experienced and continues to experience in coastal areas, reliability issues on the existing 24.9 kV line. TPUD states that reliability issues are expected to increase.

TPUD summarized that the line was necessary to: (1) reduce high loading on existing facilities; (2) increase electrical system capacity in the central Tillamook Valley to support ongoing growth in the area (load growth); (3) improve service reliability; and (4) replace aging infrastructure in the City of Tillamook, Netarts, Oceanside, and the surrounding areas. While other options TPUD explored, such as rebuilding feeder 51 and building a second, redundant 24.9kV distribution feeder to serve the area, can address some of these issues, TPUD asserted that only the transmission line will address all of them over the appropriate planning horizon.

2. Parties' Positions on Necessity

a. Ensuring Reliability in an N-1 Event

Doris Mast's testimony focused on TPUD witness KC Fagen's testimony regarding system reliability during an N-1 scenario (distribution system operation minus its largest capacity component). TPUD stated that when TPUD removes the second existing transformer at the Wilson substation for an N-1 scenario simulation, using system loads from 2016, TPUD's scenario shows that the system is 96 percent loaded and thus close to

¹⁶ TPUD Opening Post Hearing Brief at 4 (Feb 22, 2019), (citing TPUD/100, Simmons/3).

total operational capacity.¹⁷ Doris Mast calculated an alternative scenario, in which she employed numbers from various TPUD board reports, which showed only a 64 percent loading under the same scenario, indicating the system has sufficient capability (and thus reliability) to handle an N-1 scenario.¹⁸

TPUD took issue with Doris Mast's N-1 conclusions, and noted the differences between TPUD's calculations and Doris Mast's numbers. Despite the fact that both sets of N-1 calculations employed TPUD 2016 system load data, Doris Mast used the 2016 system peak of 119 megawatt (MW), while TPUD employed the all-time system peak of 130 MW in 2009. TPUD states that, when calculating an N-1 scenario, it is "more accurate to use the actual system peak reflected on today's electric system rather than simply taking a snap shot of the peak in the prior year."¹⁹

In her N-1 calculation, Doris Mast employed winter capacity ratings for TPUD's transformers obtained from various TPUD Board reports, while TPUD used the "nameplate capacity" for each transformer. TPUD's witness KC Fagen stated that he had no "clear understanding of how the winter capacities were developed * * *." He further stated that he called "about a dozen utilities to confirm what capacities they use for planning purposes and the vast majority replied that they only use the manufacturers' nameplate capacity."²⁰

Staff agreed with the TPUD N-1 assessment, concluding that TPUD has followed utility best practices with its analyses in applying nameplate capacity and planning for actual peak usage rather than average demand. Further, Staff noted its agreement that a recently installed new transformer would provide only a short-term reprieve from TPUD's immediate need for capacity in an N-1 event.²¹

In its opening brief, TPUD asserts that "even after adding capacity by increasing the Wilson T1 transformer size, TPUD's system in the central Tillamook Valley can accommodate between only eight and seventeen years of additional load growth before it will no longer be able to serve customer loads under N-1 conditions, with the lower end of that range being more likely."²² Staff agreed, noting that the transmission line project will accommodate load growth for approximately 38 to 48 years. Staff finds the timeframe of 17 years is unlikely, as it is based on an assumption of zero peak load growth, and a shorter timeframe will necessitate planning for upgrades in the near future.

¹⁷ Doris Mast/100, 1.

¹⁸ *Id.* at 2.

¹⁹ TPUD/300, Fagen/6.

²⁰ *Id.*

²¹ Staff/500 Hanhan/3-5; TPUD/400, Fagen/4. The new transformer added about 12 MW of capacity.

²² TPUD Opening Post Hearing Brief at 7-8; TPUD/400, Fagen/4.

Doris Mast next opined that the proposed transmission line, in the event of an outage, would require the deployment of power from the coastal areas back to Tillamook, using the aging feeder. By doing so, Doris Mast concludes, “TPUD has shifted the reliability problem from a population of 1,650 people where 40% of the residents are on seasonal meters to a larger population of 10,000 full time residents with critical load.”²³

TPUD states that not all 10,000 residents in the central Tillamook Valley would be serviced by the new Oceanside Substation during an outage of one of the Wilson transformers “WT-1” or “WT-2”. In the event of an outage of either WT-1 or WT-2, the other Wilson transformer would still be in service and loads could also be transferred to the Trask and Garibaldi substations, as well as the new Oceanside substation. TPUD concludes that the evidence shows that the transmission line is the best option to enhance reliability and benefits for both communities.

TPUD also pointed out that low voltage issues would continue to plague the current distribution system operation during an N-1 event. In contrast, when the transmission line and Oceanside Substation are added to the N-1 analysis (assuming Wilson T2 is out of service), there are no system performance issues, and there are no overloaded conductors or low voltage problems.²⁴

TPUD acknowledges that while Doris Mast is correct that Feeder 51 would be used to serve customers on the west side of Tillamook in the event either WT-1 or WT-2 fails, the other Wilson transformer would still be in service and loads can be transferred to other substations. Accordingly, the increased capacity from the transmission line will improve reliability in the area more than any other alternative. TPUD reiterated that it would rebuild the aging sections of Feeder 51 (discussed below) with only minimal interruption to customers, which is not possible in the absence of the transmission line.

b. Outages in the Netarts/Oceanside/Whiskey Creek Areas

Doris Mast observed in her original testimony that the system outage charts provided by TPUD appeared to contain several questionable assertions. First, that total system hours out shown on the TPUD exhibits were 39 hours and 29 minutes, yet TPUD Exhibit 212 shows feeder 51 alone totaling 805 hours out (between 2011 and 2016). Next, Doris Mast asserts that causes of customer hours out shows that about 65 percent of the outages

²³ Doris Mast Reply Brief at 3-4 (Mar 12, 2019).

²⁴ TPUD further noted that with the proposed transformer, about 15 MVA will be transferred from the Trask and Wilson substation to the Oceanside substation, including 11 MVA from the Oceanside/Netarts customers and another 4 MVA using the rebuilt W51 feeder tie to pick up customers in the area southwest of the City of Tillamook and on the western fringes of the City of Tillamook. TPUD argues that this resolves the low voltage conditions and overloaded conductors without the use of voltage-booster stations and without having to rebuild existing ties feeders between the Trask and Wilson substations, and the entire load can be served.

were caused by traffic accidents (vehicles hitting poles) and wind damage (tree limbs causing downed wires due to high winds). Doris Mast recommended the possibility of minimizing or preventing these types of outages (and thus increasing system reliability) through guardrail and other protections, and better management of the forest right-of-ways.²⁵

Don Aufdermauer notes that the amount of outages for customers in Netarts and Oceanside is a matter of hours (as opposed to days). He also asserts that year-round residents in these areas have not “voiced concern” about the outages, also noting that several of the meters are seasonal. Don Aufdermauer characterized this case as being about occasional inconvenience, versus the dramatic effect of taking private property and erecting a transmission line: “Although reliable power for everyone is important and necessary, there are far less [customers] in the Oceanside/Netarts area that would be effected [by] an occasional outage than by the vast amount drastically effected by having the actual lines/poles on or going over their property.”²⁶

TPUD replied to these reliability/outage assertions and concerns by first noting that the units being used by Doris Mast were different and not comparable to TPUD’s calculations. TPUD explained that the board reports show the system average interruption duration index (“SAIDI”) statistics, whereas and the statistics TPUD provided in exhibits are outages by customer hours out. The SAIDI is the customer hours out, but divided by the total number of customers in Tillamook PUD’s service territory.²⁷

TPUD next noted that in most situations the Oregon Department of Transportation (ODOT) does not allow a third party to use guardrails to protect their facilities within ODOT right of way.²⁸ Finally, in response to Don Aufdermauer’s concern about private property, TPUD noted, “Tillamook PUD has made very concerted efforts to reduce such impacts. For example, we adjusted the route to follow more existing rights of way within 1,000 feet of the original route proposed by the Citizens Advisory Group. This removed six pole structures from the middle of production farm fields.”²⁹

Staff noted that the transmission line project allows for a looped system that would provide redundancy and allow sections of line to be taken out of service for maintenance or repair without disruption to all customers on the line.³⁰ TPUD’s witness KC Fagen pointed out at the hearing in November 2018 that transmission lines experience far less outages per mile than a distribution line; the proposed transmission line will increase the

²⁵ Doris Mast/100, 2-3.

²⁶ Don Aufdermauer Testimony at 2-3(Jan 12, 2018).

²⁷ TPUD/300, Fagen/7.

²⁸ TPUD/300, Fagen/7-8.

²⁹ *Id.* 15-16.

³⁰ Staff Reply Brief at 4 (Mar 12, 2019) (citing Staff/200 Hanhan at 10).

potential feeders to Netarts/Oceanside to three, and therefore fewer customers will experience an outage in this area, as the configuration divides the customers into three smaller groups.³¹

3. *TPUD's Overall Position Regarding Justification*

In addition to ongoing and future reliability issues, TPUD presented capacity concerns and potential load growth as justification for the transmission line. TPUD stated in its initial testimony that the Wilson River substation was approaching capacity. To demonstrate this, TPUD noted that the electric load for the transformers in peak winter conditions was approaching capacity. TPUD also stated that the “ability to transfer loads to the adjoining substations has exceeded the capacity of the system elements to carry the additional load.”³² The transmission line would “allow TPUD to transfer 11 MW of load to the [proposed] new Oceanside substation * * *.”³³ This would allow continued development and growth in coastal areas. TPUD noted that it chose the transmission line option because it provided the lowest cost per unit of capacity coupled with the longest life expectancy.

After the hearing, TPUD provided additional information that demonstrated that the transmission line would provide additional room for load growth (and reliable service) for 38 to 48 years.³⁴ The updated cost of the transmission line was estimated to be approximately \$14,649,517. In contrast, the updated cost of Option 3, which was estimated by TPUD to have a life expectancy of 8 to 17 years, was \$10,045,444.

4. *Parties' Positions on Justification*

Intervenor David Mast disagreed with TPUD's capacity presentation and conclusions. David Mast stated that TPUD's actual load growth in the TPUD system from 2012-2017 is less than 0.45 percent. David Mast further states that TPUD's load growth estimate in its 2019 budget was 0.5 percent.³⁵ David Mast argued that Option 4 provided additional capacity that was unnecessary and, therefore, that the larger price tag was not justified.

Doris Mast also pointed out that TPUD's stated load growth of 0.9259 percent is based on starting at the system peak of 2009 and adding growth to each year at that percentage.³⁶ This is in part how the “life expectancies” of the various options were

³¹ Tr. at 75-76 (Nov 1, 2018).

³² TPUD/200, Fagen/5.

³³ Id.

³⁴ TPUD/400, Fagen/32.

³⁵ David Mast/300, 6.

³⁶ TPUD/401, Fagen/1.

calculated.³⁷ Doris Mast estimates that TPUD's current system capacity will last much longer and therefore the transmission line is unnecessary.

David Mast notes that one of TPUD's largest customers, the Tillamook Creamery, has a 4 MW boiler capable of running on natural gas. David Mast asserts this decreases demand (and therefore decreases TPUD's need for increased capacity).³⁸

TPUD responded to several of these concerns. TPUD noted that future load calculations using the peak were not commenced with the 2009 Wilson substation load, but rather with the Tillamook Valley overall peak load. TPUD extrapolated a 2018 peak load – beginning with the 2009 peak load - and calculated load capacity that would be needed in future years for the central part of TPUD's service area.³⁹ TPUD stated that the system capacity is not interconnected in such a way as to supply system-wide capacity, and therefore Doris Mast's overall capacity estimate was incorrect.⁴⁰

TPUD also noted that the load from the creamery has "little impact" on TPUD's peak loads, because the creamery is "contractually obligated to switch from electric to an alternative source from 7 a.m. to 10 a.m. Monday through Saturday, which is when [TPUD's system] peaks." TPUD disagreed with removing the creamery from the load calculation for this reason.⁴¹ In its reply brief, Staff added that TPUD is the provider of last resort for the creamery, and therefore TPUD's decision to include that load in its growth projections for peak demand was appropriate.⁴²

5. *Commission Resolution on Necessity and Justification*

We find that TPUD has satisfied the elements of necessity, justification and the corresponding public interest.

TPUD's N-1 scenario information is sufficient to show the transmission line is necessary, justified and in the public interest. Discussions surrounding the N-1 scenario focused on which peak load to utilize in the calculation, nameplate capacity of the transformers, additional capacity to be added and the routing during an N-1 event. We note that the case intervenors provided significant, relevant and impressive scrutiny of these issues, as presented above. In response, TPUD provided sufficient, additional information that addressed intervenors' concerns.

³⁷ Doris Mast/300, 5

³⁸ David Mast/100, 2.

³⁹ TPUD/500, Fagen/5-6.

⁴⁰ *Id.* at 7.

⁴¹ TPUD/500, Fagen/11.

⁴² Staff Reply Brief at 5 (citing Staff/400 Hanhan/12-13).

Regarding the peak load, we agree with TPUD and Staff that the all-time peak was reasonable as an input for the N-1 calculation. The purpose of the N-1 analysis is to evaluate system reliability under stressed conditions, and we regard a peak load that TPUD actually experienced in 2009 as a reasonably credible contingency case here. Regarding equipment capacity, TPUD witness Fagen explained that he attempted to understand where the winter capacity of the transformers came from, but could find nothing that justified the information. TPUD reasonably relied on nameplate capacity, as many other utilities do. Thus, TPUD had already scrutinized information regarding transformer capacity similar to Intervenor Doris Mast's efforts, and we conclude that TPUD relied on the most credible information for the N-1 calculations and transformer capacity.

We also agree with TPUD and Staff that the future capacity of the system is limited, and will be eventually be inadequate. Load growth and future capacity were the most contested issues in this case, with estimates of sufficient, future capacity associated with the existing system ranging from eight years to thirty-eight years.⁴³ Staff noted that it would likely take between 3 and 4 years to construct the line, and we observe that the design and permitting processes have spanned several additional years. If capacity growth materialized at the lower end of the range, TPUD would have insufficient time to design a new solution to accommodate load growth before running into potential system reliability issues. TPUD justified the proposed line as a more cost-efficient way than the Option 3 alternative for it to ensure the long-term reliability of its system. We agree with Staff that "from a longevity and economic standpoint, major system upgrades with a useful life of less than 10 years is not a best practice."⁴⁴ Therefore, we agree that from a reliability standpoint, the proposed transmission line is necessary to address reliability concerns and justified because it provides greater capacity, more cost-efficiently to ensure reliability and accommodate future load growth.

Finally, we are convinced that the transmission line is justified because it will provide more reliable routing options to minimize system performance issues in an outage event. As noted above, TPUD pointed out that, in the event of a transformer outage, a second transformer is present. Loads could be transferred to other system transformers, and the transmission line would eliminate low-voltage and other performance issues, which currently plague the existing feeder. We agree with TPUD witness KC Fagen that the transmission line will experience fewer outages per mile, increase the potential feeders to the Oceanside/Netarts area to three, and will allow TPUD to rebuild the aging feeder efficiently and without extended interruption. Therefore, we find the record provides a sufficient reliability justification for the proposed transmission line. We conclude that the transmission system is necessary, justified and in the public interest.

⁴³ See TPUD/400 Fagen3 and Doris Mast/300 at 3, respectively.

⁴⁴ Staff/500 Hanhan/4-5.

B. Safety

1. TPUD's Overall Position Regarding Safety

In its petition, TPUD states that the proposed line will “satisfy the Commission’s safety criterion” and that the line “will be constructed, operated, and maintained to meet or exceed all applicable National Electrical Code Safety Code standards, as well as all applicable federal state and local laws, regulations and ordinances.” In TPUD’s testimony, KC Fagen noted that the proposed line was designed by “registered professional engineers” and added that the design met all appropriate industry standards “including the [United States Department of Agriculture Rural Utilities Service] requirements.”⁴⁵

a. Parties' Positions on Safety

The parties questioned the issue of stray voltage and several posed the possibility that the transmission line, running through a wooded area, could potentially create a fire hazard. Doris Mast stated, “Putting a transmission line through the center of Stimson forest will create a fire hazard due to the steep terrain with high coastal winds.” Doris Mast further noted that any associated evacuation may be more difficult due to recent landslides.⁴⁶

Staff addressed the issue of stray voltage and of safety in general, stating that no concerns were raised among Staff after reviewing TPUD’s electromagnetic frequency calculations. Staff also noted that a number of related safety concerns were considered and addressed in TPUD’s Borrower’s Environmental Report for the 2013-2016 construction work plan, and in its conditional use permit application to Tillamook County. The County’s final decision adopts a number of Conditions of Approval to ensure compliance with applicable standards and requirements.⁴⁷

TPUD addressed the issue of fire hazards in its closing brief. TPUD reiterated its commitment to construct and operate the line safely. TPUD stated that there was no evidence that transmission lines were more dangerous than distribution lines. Further, TPUD noted that the line had been “Designed by registered professional engineers to address the location of the line, steep terrain, and high costal winds. The design will also meet appropriate industry standards as well as all state and local requirements regarding safety, clearances, strength, and design.”⁴⁸ Finally, TPUD noted that it will abide by the National Electric Safety Code standards, State of Oregon requirements and the United States Department of Agriculture—Rural Utilities Service.⁴⁹

⁴⁵ TPUD/200, Fagen 11.

⁴⁶ Doris Mast Cross-Answering Brief at 8 (Mar 26, 2019).

⁴⁷ Staff Reply Brief at 6 (citing TPUD/413, Fagen/3, 28-41).

⁴⁸ TPUD Closing Brief at 14-15 (Apr 2, 2019), echoing TPUD/200 Fagen/11.

⁴⁹ *Id.*

b. Commission Resolution on Safety

Operating the electric distribution system safely is paramount to the public interest. We agree with Staff that TPUD has a record of safe system operation, is committed to use the relevant and most recent safety standards to build, operate, and maintain the proposed line, and is bound to the conditions of the County's land use approval. Therefore, we find that the safety considerations have been adequately addressed by TPUD and satisfied by the record in this case. We encourage TPUD to employ emerging best practices for wildfire prevention in construction and operation of the line.

C. Practicability

a. TPUD's Overall Position on Practicability

The focus of much of this case when considering practicability centered on potential alternative options. TPUD stated that it chose the best option out of several it considered. TPUD noted that it collaborated with the community and its leaders to develop a route that is practicable and that would have the least impact on the community within its service territory.⁵⁰ TPUD further noted that the route was shorter than the two lines in Option 3 because it employed existing BPA infrastructure to determine the starting point and to alleviate capacity concerns existing at other points in its system.⁵¹

Several of the questions at the hearing focused on a comparison of Option 3 versus Option 4. Because Option 3 was presented as feasible, did not require eminent domain, and was estimated to be about half of the cost of the proposed transmission line, the Commission and intervenors evaluated Option 3 carefully during and after the hearing.

In its response to Commission bench requests, TPUD noted that the redundant feeders in Option 3 would still travel longer distances before reaching a majority of customers in the coastal areas as opposed to Option 4. TPUD also stated that both proposed Option 3 feeders traveled through several miles of heavily forested areas and along roadways. TPUD pointed out that the proposed route for the redundant Option 3 feeder was a designated environmentally sensitive area, raising concern that Tillamook County could potentially deny a permit for the route. In contrast, TPUD obtained the necessary permitting from Tillamook County during the pendency of this case.⁵² Finally, TPUD

⁵⁰ TPUD/100, Simmons/5.

⁵¹ *Id.*

⁵² TPUD/500, Fagen/17 (Jan 28, 2019). The permitting by Tillamook County was upheld on appeal at both the Land Use Board of Appeals and the Oregon Court of Appeals (See correspondence from Tommy Brooks dated June, 20, 2019).

noted that both Option 3 feeders would consist solely of overhead lines, while parts of the transmission line are underground.⁵³

b. Parties' Positions on Practicability

Several parties advocated for Option 3 after the hearing, because it would provide comparable reliability, alleviate some capacity concerns, and require no eminent domain. The Option 3 price was originally estimated at approximately half the cost of Option 4.⁵⁴ Post-hearing, TPUD noted the revised Option 3 estimate was just over \$10 million and the revised Option 4 cost was \$14.6 million.⁵⁵

David Mast noted that Option 4 provided additional, unneeded capacity and, therefore, the lower cost of Option 3 was the better choice.⁵⁶ Doris Mast noted that a “skillful reconfiguration” of properly conducted feeders and a rebuild of feeder 51 (essentially Option 3) were more “sensible” choices.⁵⁷ Don Aufdermauer noted that Option 3 did not require eminent domain.⁵⁸ Kurt Mizee of Tilla-Bay Farms suggested a route that included Option 3 and for which he stated had “landowner support.”⁵⁹

TPUD acknowledged that rebuilding feeder 51 (part of Option 3) would provide some relief from reliability concerns and equipment loading. But TPUD also noted that this rebuild could not be performed without “several, long, extended outages” to 1,800 customers in the coastal areas.⁶⁰ TPUD stated that rebuilding feeder 51 would not add capacity and that it would still require voltage-boosting equipment. TPUD noted that a voltage booster station was merely a “band-aid” and not a long-term solution to reliability issues.⁶¹

Staff reiterated that the redundant line and a rebuilt feeder 51 (both part of Option 3) would still have to carry the load to customers that were several miles away. Staff stated that, from a reliability perspective, a 115 kV transmission line “is better suited to covering such a distance.”⁶² Finally, Staff opined that, if the improvements took several years to construct, the “cushion” between completion of Option 3 and the need for new upgrades could be less than 10 years.⁶³

⁵³ TPUD/400, Fagen/21-22.

⁵⁴ See TPUD/204, Fagen/3.

⁵⁵ TPUD/417, Fagen/4-5.

⁵⁶ See David Mast/300, 12.

⁵⁷ See Doris Mast/300, 9.

⁵⁸ See Don Aufdermauer/200, Aufdermauer/2.

⁵⁹ See Tilla-Bay Farms /200, Mizee/3.

⁶⁰ TPUD/500, Fagen/2.

⁶¹ *Id.* at 2-3.

⁶² Staff/500, Hanhan/3-4.

⁶³ *Id.* at 4-5.

c. Commission Resolution on Practicability

All parties, including TPUD, view both Options 3 and 4 as viable alternatives, though TPUD notes potential permitting challenges with Option 3. Our review of the petition in accordance with the law requires us to decide whether the proposed transmission line identified in Option 4 and presented in the petition is necessary, safe, practicable, justified and in the public interest.

While we do not agree with all of TPUD's assertions, we are charged with investigating the utility's request and deciding whether the project is warranted based on the factors presented in the law. For instance, we disagree that rebuilding feeder 51 could only be performed under conditions of "long, extended outages," as there are likely several ways to provide power temporarily during a reconstruction process. Nonetheless, we agree with Staff that the transmission line in Option 4 is better suited to carry the load several miles to where it is needed. In addition, because of the uncertainty of the load forecast, it is unclear that any other proposed alternative would provide a long-term solution to TPUD's reliability problems. Finally, we note that the project has been approved by Tillamook County and upheld twice on appeal. Thus, TPUD has already obtained the necessary land use permitting required to construct the line, and demonstrated its feasibility.

For these reasons, we agree that Option 4, the transmission line, is an effective and efficient way to address reliability concerns, and therefore practicable and in the public interest for TPUD to improve delivery of electric service for its current and future customers.

V. LAND USE FINDINGS

In order to approve a Certificate of Public Convenience and Necessity, we must find the proposed project complies with the Statewide Land Use Planning Goals and is compatible with the relevant local government's acknowledged comprehensive plans and land use regulations.⁶⁴

We find that TPUD has satisfied this obligation through an acknowledgement by the City of Tillamook that the use is permitted and no specific approval is required and by obtaining land use approval from Tillamook County.⁶⁵ TPUD's proposed project required a conditional use permit and a development permit from Tillamook County. TPUD received approval from the Tillamook County Board of Commissioners on August 29, 2018. The Court of Appeals affirmed the Land Use Board of Appeals decision on June 19, 2019, which upheld Tillamook County's land use permits for the project.

⁶⁴ See OAR 860-025-0030(2).

⁶⁵ TPUD/100, Simmons/6.

Therefore, we find that TPUD has demonstrated compliance with the Statewide Land Use Planning Goals and compatibility with all relevant local government plans and regulations.

VI. CONCLUSION

We express our gratitude and admiration for the hard work by intervenors in this case. Utility issues are complex and difficult to understand. TPUD's customers nonetheless provided relevant, meaningful analysis that challenged TPUD to improve its analysis and make a better case. Intervenor testimony was well developed, compelling, and required TPUD to provide additional explanations that assisted us in identifying real gaps in TPUD's initial presentation. We thank the intervenors for being a part of this case and caring about their communities enough to devote substantial time and energy to engage in this proceeding. Although we conclude that TPUD met the legal standard we are required to apply, we also acknowledge that intervenors' presentation of evidence made this a close case and a difficult decision.

We approve TPUD's petition. We find that the TPUD has met the legal requirements under ORS 758.015 and OAR 860-025-0030(2) for granting a certificate of public convenience and necessity for the proposed line.

VII. ORDER

IT IS ORDERED that the Tillamook People's Utility District is granted a Certificate of Public Convenience and Necessity to construct an 8.6 mile overhead transmission line from the Bonneville Power Administration's Tillamook Substation to a new Oceanside substation to be constructed by Tillamook People's Utility District.

Made, entered, and effective Sep 10 2019.



Megan W. Decker
Chair



Stephen M. Bloom
Commissioner



Commissioner Tawney, *dissenting*:

I cannot agree with the majority that Tillamook People's Utility District (TPUD) met its burden for the approval of this petition. I agree that reliability and safety are foundational elements of delivering electric service to customers, and that the public benefit created by the electric infrastructure can outweigh the individual impacts of that infrastructure. But in this case, the approval of this petition, and thereby providing for the condemnation of private land, requires meeting a burden that I do not think was met—despite what I believe were TPUD's sincere and good faith efforts to so.

My uncertainty lies in the inability of TPUD to substantiate the necessity of the project to meet load growth, capacity, and regional reliability concerns with the clarity required to settle the uncertainty surrounding these issues. The narrow reliability improvements that can be tied to the project, in turn, appear to be marginal.

Capacity need as described by the N-1 analysis - As stated in Doris Mast's reply testimony, the assertions of need rest on TPUD's historic 2009 peak as year zero, and predicted system load growth at 0.9259 percent each year.⁶⁶ The record contains much debate about the appropriate rate of peak load growth to apply, ranging from 0.25 percent in Mr. Mast's testimony to 0.9 percent in TPUD's responses to the Commission's bench request.⁶⁷ I appreciate the degree of effort TPUD put into modeling the distribution system as it would appear if the 2009 peak load grew at 0.9 percent a year through 2018 in order to evaluate the N-1 contingency. However, that modeled peak loading on the system is poorly supported by actual usage in the intervening decade and hotly debated in the record.⁶⁸ Peak load since 2009 has ranged from approximately 4 percent less than the 2009 peak to 20 percent less than the 2009 peak. Peak load has never exceeded 50 percent — 131 megawatts (MW) — of the total system nameplate capacity of 261.5 MW. Total system load growth, as opposed to peak load growth, has ranged from 3 percent above 2009 to 2 percent below 2009.⁶⁹ These historical bands of usage are both remarkably different from the peak load estimated in 2018 for the N-1 analysis, which is more than 8.7 percent higher than the 2009 actual peak load. More specific to the area in question, the four substations' (Trask, Garibaldi, Wilson 1 and Wilson 2) collective peak in 2009 was 58 percent of the capacity of the 4 substations and only 83 percent of the collective capacity in an N-1 event.⁷⁰

⁶⁶ Doris Mast/300, 5.

⁶⁷ David Mast/400 at 6 (March 11, 2019) and TPUD/400, Fagen/4 (December 17, 2018), respectively.

⁶⁸ See, e.g., David Mast/400 at 6-7.

⁶⁹ David Mast/300, Chart on page 1.

⁷⁰ David Mast/300, Chart on page 2.

My concerns about whether the proposed, additional capacity is justified through the N-1 analysis stem from this use of the historic high and then applying the higher, but disputed, rate of peak load growth to arrive at the 2018 and 2026 modeled system peaks as the basis for evaluating the impacts of an N-1 event.⁷¹ The observed low-voltage and other issues in the N-1 analysis presume a system loading in 2026 that is more than 18 percent larger than system peak has actually been since 2009.⁷²

Even accepting TPUD's role as the Tillamook Creamery's provider of last resort and assuming it is appropriate that the Creamery's boiler load remain in the N-1 analysis, the modeled growth of peak demand in the service territory does not appear to be supported by either current patterns of consumption or analysis of actual peak loads since 2009. This creates uncertainty as to the necessity of the transmission line in order to address reliability issues through the west side of the valley.

Reliability on Feeder 51 Specifically – I acknowledge that customers at the end of the current line, in Oceanside for example, experience outages, and that greater impacts accrue to customers that rely on a single line during an outage. I also recognize that tourism is crucial to the local economy, and am not persuaded by arguments that a lower level of service is appropriate for these part-time residents. However, the data underlying TPUD's outage charts raises questions on how much more reliability a transmission line would provide. A substantial portion (23 percent of the total outage hours over 6 years) of the poor performance of feeder 51 is a single extended outage from a vehicle accident in 2011 that appears to have impacted the entire feeder (1800 customers). The proposed transmission line appears to have the ability to mitigate—but not eliminate—the impact of a similar incident. That is a material improvement for customers in Oceanside, and is in the end the only substantiated public benefit I find to weigh against the right to condemnation.

The majority and Staff are correct to point out more general benefits of looped systems, additional capacity, and redundancy and the improved resilience of transmission engineering. I also acknowledge the challenges of building electric infrastructure quickly enough should growth prove to be substantial. There are certainly cases where the public good—even though difficult to quantify and predict—provided by electric infrastructure can justify the exercise of eminent domain.

In this case, however, the general benefits alluded to by TPUD and Staff and the marginal reliability improvement for a portion of a community does not in my opinion justify this transmission line and allowing TPUD to exercise eminent domain. I am unable to

⁷¹ Doris Mast/300 at 5-6.

⁷² TPUD/400, Fagen/12-13.

support this project by granting a Certificate of Public Convenience and Necessity, I respectfully dissent.



Letha Tawney

Letha Tawney
Commissioner

A party may request rehearing or reconsideration of this order under ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Court of Appeals in compliance with ORS 183.480 through 183.484.