

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON  
PCN-2**

In the Matter of the Petition of )  
 )  
TILLAMOOK PEOPLE’S UTILITY )  
DISTRICT )  
 )  
**PETITION FOR CERTIFICATE OF )  
PUBLIC CONVENIENCE )  
AND NECESSITY )**  
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**DAVID MAST - INTERVENOR CROSS ANSWERING**

March 26, 2019

## David Mast – Intervenor Cross Answering

### I. Introduction

In PCN-1, Umatilla Electric Cooperative had experienced a 70% growth in the last 5 years, with 17% occurring in the last year. In PCN-2, during the last 5 years, TPUD had a 1% decrease in average system purchases<sup>1</sup>. TPUD's own official 2012 forecast shows a future growth of only 0.45%<sup>2</sup>. Since 1973 TPUD's sales have increased 20 MW, during that period TPUD has added 105 MW of capacity to the system in the central valley. With the 105 MW TPUD has already added to the system<sup>3</sup>, TPUD already has the capacity to adequately provide service to existing and new loads in TPUD's central valley service territory without the need to build an additional substation and transmission line in the central valley.

The question then is, why the transmission line? The project began as a means to an end. A transmission line first surfaced in 2008 when in March General Manager Patrick Ashby spoke of the Oceanside transmission line and a Federal Energy Regulatory Commission permit to look into wave energy. This was followed up by a signing of Memorandum of Agreement with Principle Power November 6 of 2008. TPUD did a study with Oregon Wave Energy Trust and Bonneville Power that showed there was a need for an 115kv transmission line and substation from the headlands to the grid<sup>4</sup>.

After the state slowed its pursuit and ocean energy generally wasn't viewed in a positive light, TPUD changed their approach to reliability, and deny any ties to ocean energy. However, there isn't any denying the fact the fact if the OTL is approved, TPUD will have a substation right on the ocean and a transmission line to get the power directly to BPA. It is the perfect set up and would provide two things FERC said they needed, a substation and a transmission line<sup>5</sup>.

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<sup>1</sup> David Mast/300 p 9

<sup>2</sup> TPUD-Staff DR28-4 P 32

<sup>3</sup> David Mast/300 p 8

<sup>4</sup> Kurt Mizze/400 p 2

<sup>5</sup> Kristi Sherer 2/06/2018

This project has always been **A WANT IN SEARCH OF A NEED**<sup>6</sup>. TPUD had been using load growth as the reason for the need. When the 2012 – 2023 load forecast was presented to the TPUD board of directors at the June 12<sup>th</sup> 2012 board meeting, the board members were upset that the forecasted load was only 0.45%. Ed Jenkins, a board member demanded of Jim Martin the finance manager “did you get anything right?”. Then, Bob White, the power services manager, proposed using “the coldest day of the coldest month of the coldest year” (the highest coincident peak ever) to promote the justification of the transmission line and substation. Ever since the 2012 forecast, TPUD continues to use inflated growth projections to justify the project<sup>7</sup>. Since then TPUD has been manipulating the data, assumptions, and conclusions it has given to get a positive recommendation of the transmission line and substation project. The current TPUD’s staff’s 1st objective is to get the transmission line and substation in<sup>8</sup>.

## II. Discussion

### A. Necessity

The relevant necessity standard requires that Petitioner demonstrate that “Oregonians will forego something desirable and useful without” the project. Petitioner alleges that the project is necessary in order to “[i]ncrease reliability, accommodate load growth, and help replace aging infrastructure.” Aging infrastructure can be addressed by upgrading existing, outdated infrastructure. Upgrading existing infrastructure can, in turn, also increase reliability accommodate future growth.

In response to the question of “[h]as Tillamook PUD’s system experienced growth,” Staff responds that Petitioner alleges that “it is expecting load growth,” not that it has experienced such growth. Exhibit 200, Hanhan 8. This demonstrates that the project is speculative, not necessary. Staff conflates actual growth for projected growth, but the two are not the same<sup>9</sup>.

This project has always been to get a transmission line and substation in. It was 15 months after the CAG process that other options were even mentioned. For

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<sup>6</sup> Doris Mast/300 p 14

<sup>7</sup> David Mast/300 p 2 – 3, 6

<sup>8</sup> Don Aufdermauer/300 p 1

<sup>9</sup> Oregon Coast Alliance Response Testimony Sean Malone 3-02-2018 p 8 - 9

over 10 years TPUD has refused to rebuild feeder 51. They **WANT** the transmission line and substation and are willing to hold the residents of Netarts and Oceanside hostage until they get it. During this time period they have purchased new meters twice, remodeled the main office and added a new warehouse building. They want the line and are willing to even manipulate the numbers to make the project seem the best option. The application is based on data, assumptions and conclusions that are erroneous, the PUC must deny the petition.

I want to point out key issues that I have found with staff's reply brief. Below I will outline my concerns with the data, assumptions and conclusions.

The first is the statement, the substation and transmission line are needed because of the *increasing limited substation capacity of the transformers on the Wilson River*<sup>10</sup> This is an erroneous conclusion! The current capacity of the Wilson Rivers is 90 MW. The maximum coincident peak on Wilson 1 & 2 was only 70% of capacity and average load is only 33% of capacity.<sup>11</sup> TPUD sales are down 1 % in the last 5 years<sup>12</sup>. Since 2010 the coincident peaks and average loads of the Wilson 1 & 2 after 2009 are flat<sup>13</sup>. TPUD continues to try to show the need by doing things such as adjusting temperature ratings to reduce capacity<sup>14</sup>. TPUD staff has been manipulating the capacity numbers to make the need for this project look better.

In 2011, the capacity of Wilson T1 & T2 was 95 MW, in 2014, (just before the CAG kickoff meeting) the capacity was reduced to 84 MW (same transformers)<sup>15</sup>, in 2018 (just before TPUD went to the PUC) the capacity was further reduced to 78 MW (same transformers)<sup>16</sup>. Now with the new transformer at Wilson T1 the capacity is 90 MW (at least there is a new transformer). Even with the lowering of the capacities, the maximum load Wilson 1 & 2 is only 70% of capacity and average load is only 33% of capacity<sup>17</sup>.

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<sup>10</sup> Staff Reply Brief line 13

<sup>11</sup> David Mast/300 p 6

<sup>12</sup> David Mast/300 p 9

<sup>13</sup> David Mast/300 p 7

<sup>14</sup> Kristi Sherer 2/06/2018

<sup>15</sup> Doris Mast 1/10/2019 Exhibit Doris 4

<sup>16</sup> Doris Mast 1/10/2019 p 2 Exhibit Doris 4

<sup>17</sup> David Mast 300 p 1

In TPUD/401 longevity of alternatives, KC Fagen<sup>18</sup> erroneously assumes that Wilson 1 & 2 are already full at the 63.1 MW and that the only available capacity is from the 11.5 MW that the new substation adds. The new substation capacity is 90 MW, so there are 26.9 MW of available capacity, not the 11.5 MW that KC Fagen is assuming. From his own data, even with the flawed<sup>19</sup> 0.9259% load growth, it will take him 38 years just to go from 63.1 MW to reach the new nameplate capacity of 90 MW.

In the initial application, KC Fagen erroneously reported that option 3 had only a longevity of 13 years. After we showed the errors in his calculations<sup>20</sup>, he then, stated that the longevity was 19 years. He now erroneously states that the longevity of the Option 3 with no load growth is only 17 years<sup>21</sup>. If there is no growth the longevity of Option 3 would be unlimited. The calculations would look like this: Year 1,  $63.1 + 0 = 63.1$  Year 2,  $63.1 + 0 = 63.1$ , . . . . . Year 100,  $63.1 + 0 = 63.1$ .

Because TPUD WANTS the transmission line and substation, they needed to show a need for the substation and transmission under N -1 conditions. TPUD staff has manipulated the capacity numbers of all of the transformers in the N -1 calculations. In 2011, the capacity of Wilson T1 & T2, Garibaldi, and Trask was 173.20 MW, in 2014, (before the CAG kickoff meeting) the capacity was reduced to 147 MW (same transformers)<sup>22</sup>, in 2018 (before TPUD went to the PUC) the capacity was further reduced to 138.9 MW (same transformers)<sup>23</sup>. On paper TPUD has now effectively eliminated one entire transformer<sup>24</sup>. Now with the new transformer at Wilson T1 the current total capacity of the 4 substations in the N -1 calculations is 151.9 MW. The N -1 capacity is 106.7 MW. Even with the lowering of the transformer capacities, the maximum peak, of the 71 years of TPUD's history, which occurred in 2009 was only 58% of the capacity of the 4 substations and only 83% of the substations' N -1 capacity. The average load on

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<sup>18</sup> TPUD/401 Fagen/1

<sup>19</sup> David Mast/300 p 4 - 6

<sup>20</sup> David Mast/200 p 5

<sup>21</sup> TPUD/401 Fagen/1

<sup>22</sup> Doris Mast 1/10/2019 Exhibit Doris 4

<sup>23</sup> Doris Mast 1/10/2019 p 2 Exhibit Doris 4

<sup>24</sup> Doris Mast 1/10/2019 p 2 Exhibit Doris 4

the substations was 37.83 MW. That is only 24.9% of the substations' total capacity and only 35.4% of their N -1 capacity.

KC Fagen's N -1 data, assumptions, and calculations are even more erroneous because he has omitted the fact that TPUD can use Beaver, Mohler and South Fork to relieve the load on Garibaldi, Trask, Wilson 1, and Wilson 2. In the 2018 TPUD construction work plan it states:

1. Beaver Substation has three-phase ties to Trask River, Nestucca, and Hebo
2. Garibaldi Substation has three-phase ties to Mohler and Wilson River 1 Substations.
3. Mohler Substation has three-phase ties to Nehalem and Garibaldi Substation
4. Trask River Substation has three-phase ties to Beaver and Wilson River Substations.
5. South Fork has a three-phase feeder tie with Wilson River 63<sup>25</sup>.
6. Wilson River Substation . . . load can be transferred . . .to Garibaldi, Trask, or South Fork Substations.

Beaver has a capacity of 9.5 MW, Mohler has a capacity of 22 MW and South Fork has a Capacity 6 MW<sup>26</sup>. As you can see TPUD already has the ability to transfer load to adjoining substations and serve expected load growth in the central Tillamook valley. Staff errs in stating that the transmission line project gives TPUD an ability they already possess<sup>27</sup>.

The statement; *The radial distribution line is increasingly limited in capacity, resulting in an increase in long outages*<sup>28</sup> is an erroneous conclusion. From Exhibit Staff DR-52, I compiled the number of outages on feeder 51 affecting over 500 customers. In 2011 there were 18, 2012 there were 24, 2013 there were 11, 2014 there were 9, 2015 there were 12, and in 2016 there were only 7<sup>29</sup>. Rebuild feeder 51 with conductors large enough to meet present and future loads. It is in the public interest to choose a solution that solves the stated problem with the least cost and impact<sup>30</sup>

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<sup>25</sup> TPUD 2018 Construction Work Plan p 4, 9, 16, 31, 35, 40

<sup>26</sup> Testimony David Mast 1/10/2018 Exhibit David 8

<sup>27</sup> Staff's Brief – PCN2 p 3 - 4

<sup>28</sup> Staff's Brief – PCN2 p 4

<sup>29</sup> Exhibit Staff DR-52

<sup>30</sup> Doris Mast/300 p 1, 2

Both Option 3<sup>31</sup> and the transmission line option provide redundant power sources. Both which will improve reliability on TPUD's system.

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. The transmission line capacity is not needed for 38 years<sup>32</sup>. Both Option 3 as well as other options will allow for the replacement of infrastructure. Both Option 3<sup>33</sup> and the transmission line option provide redundant power sources which will improve reliability on TPUD's system.

Option 3 would also have lower impacts on farms and forests because it is a distribution line. Everybody wins with Option 3. Oceanside residents have fewer outages. TPUD has more capacity that isn't jeopardized by returning on the segment of feeder 51 that caused 84% of the outages<sup>34</sup> and rate payers will have smaller increases. Because Option 3 meets the stated objectives of the transmission line project at a lower cost with less impacts, the transmission line is not necessary. Oregonians will not forego something desirable and useful without it.

On the other hand, if the transmission and substation is approved, Oregonians will forego something desirable and useful. With the transmission line, property owners will forever forgo the ability to effectively farm their land or harvest their trees. 10,000 customers will depend on the worst feeder in the system to provide backup power. Rate payers will forgo other amenities because they will be paying increased rates for something that will not be used for 38 years.

## **B. Safety**

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. The transmission line goes through 4 miles of forest which are buffeted by high winds that often peak at over 70 mph. These winds are cross winds to the

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<sup>31</sup> David Mast/400 p 4

<sup>32</sup> Doris Mast/300 p 3

<sup>33</sup> David Mast/400 p 4

<sup>34</sup> TPUD-Staff DR-31 p 1 Map Proposed Oceanside Substation and Feeders

transmission line making it more vulnerable to being susceptible to being blown down and starting a fire as happened in California.<sup>35</sup>

The distribution line options will be safer because they are on road rights of ways and do not go through 4 miles of forest. In Option 3, TPUD would have better access during our frequent floods after our flood waters go down because Option 3 is all on county road right of way.<sup>36</sup>

### C. Practicability

To establish the practicability of the project, the petitioner must show the project is feasible and will be effectively and efficiently constructed. The CAG is used to imply that community input occurred when they only evaluated transmission route segments and did not evaluate other options such as Option 3 and the public was not allowed to discuss need<sup>37</sup>. TPUD’s proposed transmission line route is not a straight path along an existing corridor. It also goes through the center of farm and forest properties severely hampering the efficient use of the properties it crosses. Option 3 along Eckloff, already has existing distribution lines for all but 1.6 miles and those 1.6 miles are along a road right of way.

TPUD has erroneously reported that the project will only cost \$14.6 million. The \$14.6 million does not include the \$8.5 million in interest and \$1.7 million in taxes<sup>38</sup> that rate payers will pay over the next 25 years. Total cost of the

Transmission Line - Loan Calculator			
Loan Values		Loan Summary	
Loan amount	\$14,600,000	Monthly payment	\$77,064.18
Annual interest rate	4.00%	Number of payments	300
Loan period in years	25	Total interest	\$8,519,253.61
Start date of loan	3/21/2019	Total cost of loan	\$23,119,253.61

project as TPUD has presented is in reality \$24.8 million. In the \$24.8 million, there are no costs built in the project for rebuilding feeder 51. In TPUD’s Rate Impact Analysis<sup>39</sup>, TPUD only shows the cost of the project to be \$10 million and the rate impact of 1.43% on \$40 million in revenue. The project is now \$24.8 million and the revenue is only \$38 million. I did not see the repayment of the

<sup>35</sup> David Mast 300 page 10

<sup>36</sup> Don Aufdermauer/200 page 1

<sup>37</sup> David Mast/200 p 3, 4; David Mast/400 p 9

<sup>38</sup> TPUD/104 Simmons/1

<sup>39</sup> TPUD/104 Simmons/1



\$14.6 million of principal included in Tillamook PUD’s rate impact analysis<sup>40</sup>. The cost would be \$14.6 million (\$14.6 million/25 years = \$584,000 annually) of principal that needs to be repaid. Surely it has to be repaid. Wouldn’t it impact the cost to the consumer?

Staff was unaware of these issues when they found the proposed project feasible because of reasonable cost. Staff’s cost for the transmission line and estimate is extremely flawed. Again, their current estimate of \$14.6 million does not include \$8.5 million in interest and \$1.7 million in taxes totaling \$24.8 million over the life of the loan. They were also unaware that the proposal does not include any of the cost to rebuild feeder 51.

The Option 3 cost is \$6.4 million with \$3.7 million in interest. Taxes would be

Option 3 - Loan Calculator			
Loan Values		Loan Summary	
Loan amount	\$6,400,000	Monthly payment	\$33,781.56
Annual interest rate	4.00%	Number of payments	300
Loan period in years	25	Total interest	\$3,734,467.33
Start date of loan	3/21/2019	Total cost of loan	\$10,134,467.33

much lower because Option 3 does not add 8.6 miles of transmission line and a substation. Total cost is \$10.1 million. Option 3 provides the same benefits at 41% of the transmission line cost.

Second, given that Petitioner is proposing to wield eminent domain across so many properties and against so many property owners, the legal process and cost for eminent domain will not be efficient. Petitioner and staff have not addressed why such dramatic use of eminent domain would be efficient<sup>41</sup>.

#### D. Justification

As established previously more capacity is not needed. There are no benefits for rate payers to pay \$24.8 million for capacity they will not use for 38 years.

Since one does not need a transmission line to replace aging infrastructure, if **consumers would spend \$24.8 million and not a single foot of aging infrastructure has been replaced**<sup>42</sup>, there is a large cost and no benefit has been

<sup>40</sup> TPUD/104 Simmons/1

<sup>41</sup> Oregon Coast Alliance Response Testimony Sean Malone 3/02/2018 p 2

<sup>42</sup> Doris Mast/308 Mast/1 316B - TPUD/417 Fagen/5

received. Additional money must be spent to replace aging infrastructure. The \$24.8 million cost does not include replacing the infrastructure even while it is being stated as a need. A reasonable person would expect that if a need has been stated for the building of a particular project that the cost of satisfying that need should be included. The rate payers are being asked to spend \$24.8 million only to find out that no aging infrastructure replacement is budgeted in that cost. They are promised something they must pay extra for in order to receive. This cannot be justified on cost benefit analysis.

Previous testimony on reliability has been entered that Option 3 has a good reliability, can be constructed without a CPCN, at lower cost and with lower impacts. Since property owners are overwhelmingly opposed to the transmission line, the costs will keep increasing. There is not sufficient reason for TPUD to keep spending money to force the transmission line onto property owners when Option 3 or rebuilding feeder 51 could be done. The benefits of such a tactic will result in continued ballooning costs with no added benefits derived.

It is clear, affected landowners are overwhelmingly opposed to the project: “Staff is concerned by the lack of support from affected property owners for the proposed transmission line. It points to potential issues with public engagement and collaboration.” Staff Exhibit 100, Gibbens 15. Staff then dismisses this lack of support and lack of public interest because “after reviewing the process that TPUD underwent to work with the public, Staff believes that the utility has performed its due diligence.” Id. Justification, however, is not contingent upon due diligence. Staff asks a question at Exhibit 100, Gibbens 15 about due diligence but due diligence is not a component of the public interest or the justification of the project. Therefore, a rationale to find justification must be based on the standard, including whether the Project is justified in the public interest, not “due diligence.” There is a significant difference between attempting to minimize impacts – including employing eminent domain and creating serious fire risks – and actually minimizing those impacts. Again, the cost-benefit analysis does not favor a finding of justification<sup>43</sup>. It is clear that landowners do not find the project justified.

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<sup>43</sup> Oregon Coast Alliance Response Testimony Sean Malone 3/02/2018 p 4

Staff's and Petitioner's allegation that the project is justified are mistaken because the costs outweigh the benefits and the public interest does not favor a finding that the project is justified.<sup>44</sup>

Staff incorrectly assumes because TPUD is a not-for-profit entity, it is acting for the benefit of all its customers. TPUD has not listened to the public demand from organizations, landowners, and consumers even though it has received many letters in opposition the transmission line and substation.

Tillamook PUD has been arrogant and has not had any public meetings to discuss other alternatives. In fact, Ed Jenkins a TPUD board member summed TPUD's attitude well when he replied to the Oregon Farm Bureau & The Oregon Dairy Farmers Association that he hoped the intervenors would be tarred and feathered and run out of the county<sup>45</sup>.

Intervenor, Don Aufdermauer summed the feelings of many when he testified "I am appalled that our TPUD Board of local citizens would hire somebody to come to Tillamook to trample over the local people for a transmission line that is not needed nor can they afford it. I am embarrassed that business and life has gone to this level when citizens have no voice<sup>46</sup>."

Staff's conclusions that failure to construct the line may result in continued prolonged outages, safety concerns, increases in rates and inability to provide power to new customers, are not sound and do not confirm to fact or reason. Continued failure to rebuild feeder 51 may cause the aforementioned<sup>47</sup>.

David Mast Intervenor recommends that the Commission find a Certificate should not be issued after considering the record and arguments on necessity, safety, practicability and justification in the public interest.

Dated this 26<sup>th</sup> day of March 2019

/s David Mast

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<sup>44</sup> Oregon Coast Alliance Response Testimony Sean Malone 3-02-2018 p 2

<sup>45</sup> David Mast/300 p 14

<sup>46</sup> Don Aufdermauer/300 p 3

<sup>47</sup> Doris Mast/500 p 11