

# PUD moves forward in substation selection process

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The Chelan County PUD held another meeting regarding the planned new Leavenworth substation on Nov. 2 at the Leavenworth Fire Hall. There were about 40 people in attendance. Scott Bradshaw, a member of the PUD focus group on the substation, said he thought this was something very needed.

The community needs to be involved with these types of decisions, Bradshaw said.

"I've had over 35 years in the utility industry. This is a new way of doing it for most electric utilities. Let's get the public involved. Let's get buy-in. Let's help people understand why the new facilities are needed," Bradshaw said. "The substation we have is over capacity. In the next 3-to-5 years, we're going to be at the peak of capacity for that substation. I wish we would have started this 10 years ago, from a utility engineer's perspective."

Bradshaw said, because of the growth in the community, the city is going to need extra power and capacity. Chelan County PUD Director of Engineering on the distribution side, Chad Rissman, said once a transformer reaches capacity, the voltage through the transformer becomes less reliable and the voltage starts dropping.

You can also start to stress out the transformer and put increased loss of life on the transformer, Rissman said.

"Bottom line, we don't want to run over capacity. We want to make sure we have adequate capacity to serve the area's growth," Rissman said. "Chelan PUD is not a growth planning agency. We respond to growth. What we're doing is monitoring what the loads are, what the growth is, trying to keep tabs on what is happening. We're at 85 percent right now."

A year ago, Rissman said they received a directive from the PUD Commission and General Manager to partner with the community to determine where a substation might be best located. A focus group was formed.

That focus group has had six meetings.

"We're receiving guidance from the focus group on a number of issues. One of the first things we did, we identified the site selection criteria. How are we going to narrow this whole thing down and work with the community?" Rissman said.

Four categories of site variables were established to help the PUD and focus group narrow down the potential sites in the Leavenworth area. Initially, 16 sites were identified. Each of those areas were scored to find out which rose to the top, Rissman said.

Three different areas were identified, at the west end of town, at Rattlesnake Hill and at the current PUD substation site on the east end of town.

"Site number three by the Heidelberger has some pros and cons associated with it. There's some great electrical advantages to having a substation out here, but there are also some aesthetic disadvantages," Rissman said. "All of the circuits come out of the substation and come toward town. Anything that affects the pole line would affect the entire town. If we had another feed and an event occurred on either one of those, it could be picked up from the other direction. There is some redundancy for having a substation on the other end of town."

It is a great electrical advantage, he said, but also a disadvantage because transmission lines will have to come over to the site.

"We're trying to identify potential sites, get information from a consultant that we hired, so we can make a more informed decision," Rissman said. "Cost, furthering renderings, outreach, site developments and access. What does the permitting process look like? We haven't flushed out those details yet. We've brought to you some initial thoughts."

The Commission and General Manager's directive was to bring back three options with costs, pros and cons so the Commission could make a decision, Rissman said.

PUD Project Manager Gary Rice said he hired a consultant to get an independent evaluation on what the three sites might look like from a cost standpoint and develop further considerations with each one of those sites.

"We went to the consultant with just the three areas. We focused in on getting specific sites on each one of those areas. Part of consultant's work is to figure out how we'll get transmission to it and how we'll get the distribution lines out," Rice said. "We'll have one or two distribution lines come in. If you bring one transmission line in, if something happens to that line, the substation is dead. If you have two transmission lines, you can loop around and it is a lot more reliable."

As he went through all the site considerations, Rice said he established pros and cons, advantages and disadvantages. At the west end site, Rice said one line would follow along the existing transmission lines going through town behind the hotels and swimming pool.

A second transmission line would zigzag through town.

"If you had that, you would have the dual redundancy. Transmission is expensive, but the distribution going out would be cheaper and better located. We're developing that more. The consultant will develop the costs," Rice said. "We want to know what would one line cost? What would two lines cost?"

The existing transmission line pole is 40-feet tall. If the PUD built the transmission line and put the distribution on top of it, that pole would grow to 60-feet tall. If they went with transmission only and buried the distribution, the pole would be 50 feet tall, Rice said.

The Rattlesnake Hill site also provides some redundancy, Rice said.

"You can get the transmission there easier because it is right there, but you have to run the distribution out a lot further," Rice said. "You would have four circuits of distribution going to different

areas of town. That site also has some advantages from the dual lines coming in. The consultant will analyze that even further. Then, those pros and cons will show up."

Alpen See Strasse resident, Nick Seto, expressed concerns about locating a second substation near the existing one, because that borders his neighborhood.

"You don't put these things near people if you don't have to. Whatever site is chosen should be far away from people. The site at Alpen See Strasse is right next to it," Seto said.

Another Alpen See Strasse resident, Ron Gonsalves, pressed for the substation to be located on the west end of town. He asked how the footprint would be expanded if the new substation were located near the current one.

"We're not there yet. Now that we identified these sites, we want to explore, what does that look like? What does access look like? How big would the footprint be? What can we do to mitigate some of the concerns?" Rissman said.

The next steps are for the consultant to dive deeper into each site and provide a detailed cost analysis and renderings of what an actual substation would look like on each site, said Teka Sellers, PUD Customer Relations administrator.

"We anticipate that information being available by the end of the year. We would hope to have a focus group meeting by mid-January and a community meeting by the end of the January," Sellers said, via a Nov. 3 email. "Then take the public's input and the consultant's detailed analysis and present that to the PUD Commissioners in February, with hopes they would make a decision to begin site acquisition by the end of March."

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