



Crews work to ensure you have safe, reliable electricity. PHOTO BY BRANDON JOHNSON

Remaining Reliable

Klickitat PUD undertook many projects in 2021 to improve system reliability

**By Ron Schultz,
Engineering Manger**

You may have seen a Klickitat PUD employee around town or in a store wearing a Klickitat PUD logo jacket.

On the right sleeve are the words “Honesty – Accountability – Customer Focused.” These represent our core values.

Reliability as a goal aligns well with being customer-focused. KPUD reviews its reliability statistics monthly and reports them to our board.

Several factors can affect reliability: Mother Nature, aging infrastructure, and environmental influences such

as vegetation and equipment damage. Many outside influences cause equipment damage, too. Most common are animals, trees and vandalism.

During our routine substation inspections in 2021, we found a busbar conductor in one substation had been shot. In another, the high-voltage insulators on a transformer had been broken with rocks.

Vandalism such as this not only is dangerous, it can negatively affect our reliability and service. Making the necessary repairs will require us to deenergize an entire substation,

which affects any communities served by those substations.

Klickitat PUD has a robust maintenance and construction plan that allows us to address the system’s major reliability risks. This past year, we planned and executed outages on two of our substations to perform routine maintenance and testing.

As part of the power outage planning process, staff assesses work and the time it takes to complete that work.

While planned outages are not convenient, they are necessary to allow KPUD to



KLICKITAT PUD

determine the health of a substation. When issues are found and we cannot fix them immediately, we plan another outage.

Recently, we had two outages in our Husum Substation, which allowed us to replace an aged transmission breaker that serves the Glenwood transmission line and an aged voltage regulator that serves the Husum area.

The breaker replacement was done using in-house engineering and line staff. Crews completed their work and reenergized the substation several hours ahead of schedule.

KPUD also has aggressively replaced voltage regulators—many of which are at least 25 years old.

Voltage regulators have many moving internal parts that wear down over time. If

we do not replace them on a planned schedule, it is only a matter of time until they fail.

The past two years, our annual regulator budget has increased more than 300%.

Customers in Roosevelt may remember several years ago when the Bonneville Power Administration had an equipment failure in one of its large substations. The community lost power for several days.

We had several discussions on what we at KPUD could do to restore power quicker. Our solution was to build onto our existing Linden Switchyard, which is southeast of Goldendale.

This addition—finished in 2019—allows us to route power from another BPA transmission source through KPUD facilities to serve the Roosevelt area. We

implemented that system for the first time in October when BPA had to deenergize its substation for 10 days for required maintenance.

We now have a reliable backup option to serve Roosevelt customers.

KPUD has had large growth in the west end of the county. A few years ago, we installed a larger transformer in our Bingen Substation to prevent overloading. We have transferred all load to the new transformer.

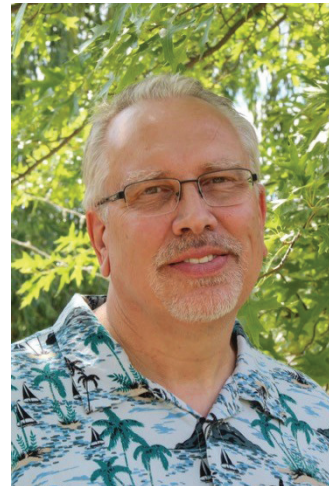
We planned to install new regulators this fall, but like many other businesses, we have been faced with supply-chain challenges that make it hard to plan and budget for system improvements. We were unable to obtain the materials needed to complete this project in 2021. That work will be deferred until spring 2022.

We left the existing transformer in place, which will supply us with limited backup capabilities, improving reliability.

Klickitat PUD continues to plan system improvements to make the system more robust and reliable. However, it is hard to detail all of them in one story.

We at KPUD take our reliability goals seriously. Our staff works diligently year-round to prioritize improvements and minimize customer impact.

If you have any questions, please call us at 509-773-5891 and follow KPUD on Facebook for updates. ■



Thank You, Readers

This is the last article I will author for KPUD. The time has come for me to hang up my hat and move on to other adventures. I have enjoyed my tenure at the PUD and thank you all for the opportunity to serve you, our customers.

-Ron Schultz