

What is a substation?

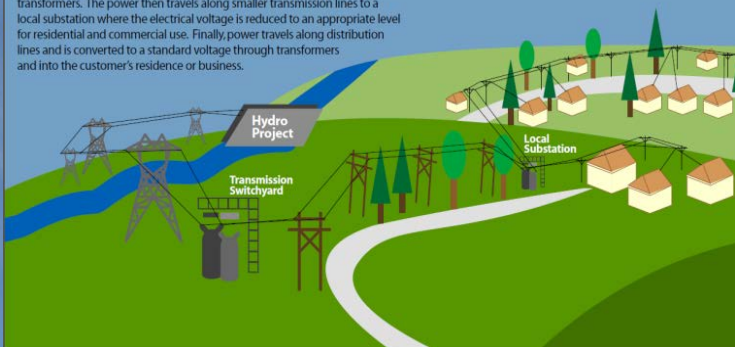
Your **Electric power System** is made up of:

- Generation – where the power comes from
- Transmission – how high voltage power is carried
- Distribution – how power gets to end-user

A distribution substation is a critical part of getting power to your home. A substation transforms the high voltage from transmission lines to a lower voltage that can be used by customers.

The Electric Power System

The Electric Power System is divided into generation, transmission, and distribution. In Chelan County, electrical power is generated at one of the PUD's three hydroelectric projects. Power moves across large transmission lines to a transmission switchyard where electrical voltage is reduced by transformers. The power then travels along smaller transmission lines to a local substation where the electrical voltage is reduced to an appropriate level for residential and commercial use. Finally, power travels along distribution lines and is converted to a standard voltage through transformers and into the customer's residence or business.



How big is a substation?

A residential substation requires about an acre of land. The footprint of a substation provides for set-back, fencing and the ability to use a mobile substation for maintenance and repairs. Generally, the substation takes up about a half an acre.

How does a substation benefit me?

A substation assures you of power quality and reliability.

Can the neighbors help decide what a substation will look like?

PUD staff will work with the community and neighbors to discuss design alternatives. Examples of how the community can be involved include decisions on landscaping, reduced sound design, fencing enhancements, lights to reduce light pollution, orientation, access and more. Once a location is identified, the PUD will strive to blend the substation into its surroundings.

How many customers does a substation serve?

A typical residential substation serves approx. 1,500 customers. When a substation reaches about 80% of its capacity, the PUD will start to consider the need for a new substation.

How can I get more information and provide my input?

Please visit our website for more information: chelanpud.org/substations

We encourage you to sign up for email updates on or provide public comment on our website.

You can also contact Teka Sellers for more information or to provide comments:

teka.sellers@chelanpud.org or 509-661-4294.

