

# Substation Subproject



The UPF (Pine Ridge) Substation is the third of seven Uranium Processing Facility (UPF) subprojects. The Substation Subproject was designed and built by the Tennessee Valley Authority. It began in 2017 and was completed ahead of schedule and \$13M under budget in December 2019, for a total cost of \$47M.



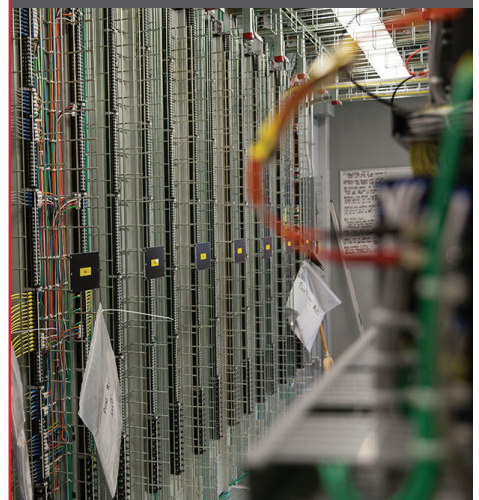
The Substation Subproject includes:

- Construction of a 70 megavolt ampere (MVA) substation
  - 161 kv switchyard
  - 161 kv – 13.8 kv power transformers
  - TVA switch house
  - DOE/NNSA power distribution center
- Construction of 161 kv transmission lines

## More Efficient Energy Generation

The new substation will service both the Y-12 National Security Complex and the UPF project, replacing the existing substation at Y-12 which is reaching the end of its service life. Servicing both sites with a single, modern substation is significantly more reliable and cost-effective to operate.

The Y-12 National Security Complex has three primary national security missions that protect the U.S. and its allies around the world: maintaining the U.S. nuclear deterrent, reducing global nuclear threats, and fueling the U.S. nuclear Navy. Currently, key operations that support these missions are conducted in buildings that originated in the 1940's and are costly to operate and maintain. UPF is one of the Department of Energy's largest investments in Tennessee since the Manhattan Project and one of the National Nuclear Security Administration's largest construction projects. UPF will support Y-12's key missions and will ensure the long-term viability, safety, and security of enriched uranium capabilities in the United States.





### Substation Fast Facts

New Right of Way and transmission lines	14,000 feet	About 3 miles
Reconductor/Rebuild of existing transmission lines	7,000 feet	About 1.4 miles

