

Anderson Turbine Runner Replacement

This project seeks to replace Anderson Ranch Dam Unit Nos. 1 and 2 turbine runners with a new stainless-steel runner, mechanically overhauling the units, as well as performing modernization upgrades. Unit 1 would be completed by FY26, and Unit 2 would be completed by FY27.

Anderson Ranch is a two-unit Francis turbine facility originally installed in 1950 and 1951, and each unit rated 13.5 MW at 245 feet of head. Work proposed is to replace the runner on Unit No. 2 and Unit No. 1 at Anderson Ranch as well as performing modernization upgrades. The existing runners are original to the facility and have been in service for over 70 years. In 1986, both units were upgraded to 20MW at 320 feet of head from the original 13.5 MW. Cracking on the runner blades was first identified in 1993. Measurements of the cracks were not taken at this time. In 2001 cracks were measured and documented for record. Reclamation started tracking the cracking trend in 2010 as propagation of the cracking was beginning to manifest. In 2017 due to the increase in crack propagation, a self-imposed operational limitation was placed at power output no less than 50% gate opening in effort to minimize crack propagation.