

Keowee-Toxaway Hydroelectric Project Relicensing



Keowee Hydro Station



Jocassee Hydro Station

Whether you live near Lakes Jocassee and Keowee or just visit from time to time, there's no doubt the sparkling waters and expansive mountain views are a special treasure. Duke Energy, the Federal Energy Regulatory Commission (FERC) licensee authorized to operate both lakes, is undertaking an effort to ensure that both lakes continue to remain just as special in the future as they are today. The license issued by the FERC to Duke Energy balances customers' need for electricity, while protecting the natural resources that are so critical to supporting water quality, water supply, recreation, wildlife and aquatic habitat and local tourism. The planning process for Duke Energy's new operating license that will span the next several decades is under way now with the Keowee-Toxaway Hydroelectric Project relicensing.

The Keowee-Toxaway Hydroelectric Project (KT Project) was originally licensed in 1966 for 50 years. The existing license expires in August 2016. The KT Project includes Keowee Hydroelectric Station and Lake Keowee, along with Jocassee Pumped Storage Station and Lake Jocassee. Together the two plants have an installed generating capacity of 868 megawatts. Lakes Jocassee and Keowee also support the operation of Oconee Nuclear Station and the Bad Creek Pumped Storage Project. The license application is due to the FERC by August 2014, and the next license term will be 30 to 50 years.

Stakeholder teams involving more than 30 agencies and organizations began meeting in summer 2009 to prepare for relicensing. March 11, 2011, was the official kickoff of the process with the filing of the Notice of Intent and Pre-Application Document with the Federal Energy Regulatory Commission (FERC). Now the pace of work ramps up until the license application is due to FERC in August 2014.

Keep updated on the KT relicensing process at:
www.duke-energy.com/lakes/keowee-toxaway-relicensing.asp.

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The Jocassee Development includes the Jocassee Dam and Powerhouse and Lake Jocassee. Lake Jocassee, with a surface area of approximately 7,980 acres and approximately 92 miles of shoreline, is much smaller than Lake Keowee. Unlike the Keowee Development, Lake Jocassee is a pumped storage facility. During times of high energy demand, electricity is generated by water flowing from Lake Jocassee into Lake Keowee. During times when energy demand is low and Duke Energy has excess electricity, the turbines at Jocassee are reversed and water is pumped from Lake Keowee back into Lake Jocassee. Much of the shoreline adjoining Lake Jocassee is owned by the South Carolina Department of Natural Resources and other resource agencies, with only a small portion of the shoreline developed in residential housing.

The Keowee Development consists of the Keowee Dam and Powerhouse, the Little River Dam and Lake Keowee. Lake Keowee impounds approximately 17,660 surface acres and has more than 388 miles of shoreline. Much of the land adjoining Lake Keowee has been, or is in the process of being, developed in residential housing.

The Value of Hydro

Duke Energy's hydro stations are critical to meeting each day's peak electrical demand. Hydroelectricity normally supplies 15 to 25 percent of the electricity needed each day when customers' electricity usage is highest. With no emissions, hydroelectric stations were the first "green" power generating source and continue to be important elements in Duke Energy's generation mix.

The performance characteristics of hydro are not matched by even the newest generation technologies. Modern hydro turbines can convert 90 percent or more of the available energy potential into electricity, making it the most efficient generation source by far. The best fossil-fueled generators are only about 50 percent efficient. Hydro also helps insulate Duke Energy electric customers from the cost and risk of having to obtain peak power from sources outside of Duke Energy's service area.

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