

Bridgewater Hydroelectric Station

SEISMIC PROJECT QUESTIONS AND ANSWERS



Q. What is this project at Lake James?

A. To comply with new federal guidelines with regards to potential seismic activity, Duke Energy is making modifications to further strengthen the three dams on Lake James related to the Bridgewater Hydro Station. The Bridgewater project consists of three dams: Paddy Creek, Catawba and Linville (where powerhouse is located).

Q. Why is Duke Energy doing this project?

A. The Federal Energy Regulatory Commission (FERC – an agency which governs Duke Energy’s hydro operations), has established new guidelines to assess the physical condition of dams in the event of a large earthquake (predicted ground movements from earthquakes are based on the regional geology and records from historical events including the 1866 Charleston, S.C. earthquake). We are making modifications to the three dams at Lake James, to comply with the new federal guidelines.

Q. Will this work impact lake levels?

A. We do not expect any change in lake levels at this time due to project work. If in the event lower levels were needed, this would be communicated to the public in advance. Please remember, the annual lowering of the lake from September to February is not a part of this project, but an annual event.

Q. How does this project compare with the Lake Murray project?

A. Although the Saluda Hydroelectric Project at the Lake Murray Dam was also to comply with new FERC requirements related to seismic stability, the excavation and construction for the Saluda (Lake Murray) project, is much different and more massive. The FERC determined that the lake should be drawn down as a safety precaution during construction. This has not been the situation at Bridgewater.

Q. What will you actually be doing?

A. The project work will include the construction of large earth structures along the downstream slopes of the dams. These structures will add strength to the dams in the unlikely event of a large earthquake. This design for the three dams is similar to other Duke Energy dam projects. Other activities include:

- Identifying areas for obtaining soil, sand and rock materials needed for construction.
- Excavation downstream of the existing dams to prepare the foundation for the proposed berms.
- Construction of earth and rock components of the berms. Materials used in the construction will be from areas developed on Duke Energy-owned properties and/or from commercial quarries located near the site.
- Reclamation and re-vegetation of disturbed areas after construction is complete.

Q. Where else have you done or are you going to do this same work?

A. Duke Energy has already completed seismic modifications at the Wateree development in South Carolina to comply with new FERC guidelines related to severe seismic activity. Other modifications for Dam Stability and Probable Maximum Flood (PMF) concerns include the Wateree, Lookout Shoals, 99-Islands, Wylie, Mountain Island, and other dams.

Q. What is the time frame for the construction?

A. Construction on Paddy Creek is in progress and the entire project is scheduled for completion in the first quarter of 2012.

Q. What will happen to the powerhouse at the Linville Dam?

A. We have decided to retire and demolish the existing powerhouse to make room for the best overall design for the seismic stability upgrade of the Linville Dam. The existing penstock will be extended downstream and a replacement structure (either a new powerhouse or a valve system) will be attached to it to continue providing flow control. Additional evaluation is needed to determine the final design of the flow control structure.

Results of relicensing studies and stakeholder team discussions will be considered. We anticipate making a decision on the flow control device and design later in 2006.

Q. Where will you be getting materials such as sand, rock, etc?

A. Much of the fill material will be “borrowed” from nearby properties owned by Crescent Resources. Other materials will be purchased by contractors who may search locally for their needs.

Q. What are the benefits of this project to the community?

A. Primarily, a stronger dam in the unlikely event of a huge earthquake. Also, local jobs for contractors and individuals as well as increased materials and supplies purchases, temporary housing for workers, and business for restaurants, hotels, grocery stores, etc.

Q. Are there any rare, threatened or endangered (RTE) species on the sites?

A. An intensive site evaluation was conducted for RTE plants and animals. The dwarf flowered heartleaf was observed.

Q. How will you protect them?

A. Conservation easements will be established around two populations of the protected plant species.

Q. What about protection of buffers while doing this construction?

A. Buffers will be established around rivers, streams and wetlands as well as the protected plants. A buffer monitoring plan will be put into effect to assure integrity and maintenance of the buffer.

Q. Will there be an increase in traffic during construction?

A. Yes. Workers will be traveling to and from the work area each day. Also, there will be delivery of project materials. Access to the site will be controlled and restricted.

Q. Have you ever had a problem at the dams before?

A. No. This project is to address new guidelines in the unlikely event of a huge earthquake. Duke Energy dams are safe. These dams are inspected on a regular basis.

Q. Is this work a result of the September 2004 flooding event?

A. No it is not. This is related to new federal guidelines for seismic work.

Q. Do you routinely monitor the dams for cracks or movement?

A. Yes, Duke Energy personnel regularly inspect the dams. The dams are also inspected annually by FERC and every five years by an independent dam safety engineering consultant.