

The Broad River, from which the Lee site will rely, is already stressed from the drought and a variety of industrial and municipal users. Further, other proposals, such as Duke's efforts to expand the Cliffside coal plant in NC, also aim to use huge amounts of water from the Broad River. The full extent of these proposed impacts are not discussed in the application. The NRC needs to analyze not only the Broad River of today but the Broad River of tomorrow, which is slated for more development. The application even states that an estimated 56 percent increase in water demand is projected from 1997 to 2020 for the North Carolina portion of the Broad River basin.⁴ How will the Broad River be able to provide enough water for all these needs?

David Stooksbury is Georgia's State Climatologist and he recently told the Augusta Chronicle that the Broad River, which is a major upper Savannah River basin stream, is at 47% of its normal flow.⁵ The Savannah River also has new nuclear reactors proposed for Plant Vogtle in Georgia. The NRC must look at this connection not only in this COL review but also in the permitting processes underway for Plant Vogtle. Duke's application certainly does not nor does Southern Company's.

Another problem with water discharged from nuclear plants is its temperature. This water is warmer than the water into which it is discharged, and the resulting "thermal plumes" cause stress on aquatic life, which can include commercially important fish and shellfish. Warmer water temperatures proximate to a nuclear power plant result in conditions that effect the feeding and breeding patterns of various species. For instance, nuclear power plants aggravate the problem of low dissolved oxygen levels through its heated discharge to lakes and rivers. The NRC needs to study these impacts.

Cumulative Impacts

As the NRC is aware, Duke already operates five reactors here in SC and several more nearby in NC. In fact, SC is the most nuclear power reliant state in the SE and the 3rd most reliant in the country, with about 58% of its electricity produced by nuclear power. Further, a host of nuclear waste and nuclear industrial operations are here in SC. The Savannah River Site near Aiken is the most radioactive Department of Energy site in the nation. The Barnwell nuclear dump is also a radioactive hot spot. Nowhere in the application does it discuss the cumulative impacts of having all these facilities operating in SC. Nor does it discuss the cumulative health impacts to Carolinians. The NRC must address these cumulative impacts to water resources and human health in the draft EIS.

Global Warming

Nuclear power plants are vulnerable to the effects of heat and drought. Drought conditions in this region have already forced power plants to shut down or power back. The predicted effects of global warming in the region, such as summer heat waves or droughts, could negatively impact the ability for the proposed reactors at Lee to generate electricity under those conditions if the Broad River is impacted. This deficiency was demonstrated by the recent summer heat

⁴ Lee COL application, Rev. 0, p. 2.3-25

⁵ See Augusta Chronicle, "Drought conditions far from over," 4/25/08:
http://chronicle.augusta.com/stories/042508/met_196347.shtml

waves and droughts, when nuclear power plants in France, Germany, and across Europe, and in the U.S., had to shut down or power back because the water temperatures were too high. The application has no mention of the predicted impacts of global warming including in terms of temperature and drought on the Broad River and how that could impact the operation of the Lee reactors. The NRC should evaluate these concerns in the draft EIS.

Public Involvement -- Summary

Lastly, and we have stated this at other scoping meetings, we would like to comment on the difficulty with reviewing the application. Though we appreciate having the resources available on-line, it is a very cumbersome process to do so. Regular citizens and policymakers do not have the time to wade through these thousands of pages that have to be downloaded at times individually. I would guess that many people in this room have not even looked at one page of the application. And I cannot blame them given the frustration it has caused me.

Fundamentally, we believe this application is not complete and should never have been accepted by the NRC. It is frustrating that taxpayer dollars have been wasted on this document, and that time and effort on the part of public citizens has also been wasted reviewing this document, since it really does not seem to be complete. We request that the NRC ask Duke to revise and resubmit their application.