



**Georgia Environmental Protection Division Public Hearing - May 8, 2014 – Waynesboro, Georgia  
Draft Non-Farm Surface Water Withdrawal Permit – Southern Nuclear Operating Company:  
Vogtle Electric Generating Plant (Units 3 and 4)  
Public Comments from the Southern Alliance for Clean Energy**

Good evening. My name is Sara Barczak and I am the program director for the Southern Alliance for Clean Energy's high risk energy choices program. We are a non-profit organization working on energy policy in the Southeast with staff and members throughout Georgia who are concerned about energy, water issues and climate change. Thank you for granting our request to hold a public hearing in order to ensure more public participation in this process. I want to specifically thank Dr. LeBone Moeti for his assistance. However, I do want to note that the public meeting notice contained an incorrect address for today's meeting, basically it's a non-existent address. This was not corrected even when I brought it to the attention to EPD. I hope no one got lost on the way to tonight's meeting.

In addition, I question the location chosen for tonight's meeting. While this is close to Plant Vogtle, the reason many of us are here tonight is because of the far-reaching impacts that the proposed withdrawals will have on both upstream and downstream users. While convenient for supporters of the expansion, it is inconvenient for the many voices concerned about the impacts of the proposed withdrawals, and those voices also need to be heard. For example, the permit has major implications for the Savannah Harbor – it is for the protection of the harbor that EPD has proposed to require Speece Cones as a mitigation measure, and really, the only mitigation measure, in this permit. It seems logical, then, to hold a public hearing in the Savannah area. Similarly, upstream communities, such as those relying on Lake Hartwell for their personal or business needs, are also entitled to a hearing. We therefore urge EPD to hold additional hearings in closer proximity to those locations. And regarding these experimental "bubblers," we'd like to know how they will be monitored and maintained and who will foot the bill for doing so?

Power plants have a tremendous impact on our water resources. Less water used for power generation translates into more water for other life-dependent or life-enhancing uses in Georgia and the region. Thus, our future energy choices will make a big difference on the future of our communities and businesses reliant on those water sources. Decisions made today will have ramifications for many future generations.

Georgia's power sector is the largest water user in the state, surpassing agriculture. Georgia's existing electricity system already significantly burdens our water resources. Our many power plants degrade water quality (through discharges of thermal pollution, harmful chemicals and heavy metals) and reduce water availability not only for Georgians, but for our neighbors, such as South Carolina. Our existing electricity system competes for water with other important uses vital to our state's economy and quality of life: drinking water supply, agriculture, industry, fishing, and recreational opportunities. Letting Georgia Power have the biggest straw in the Savannah River, such as with Vogtle and the downstream Plant McIntosh coal plant, will further increase this competition with other uses if Vogtle's permit is approved by EPD.

The existing two Vogtle reactors are already among the largest water users on the river and are permitted to withdraw as much as 127 million gallons per day (mgd). Plant Vogtle currently withdraws 67 mgd on average with an approximate consumptive use of 43 mgd, basically returning to the river less than one-third of what is withdrawn. The two proposed Toshiba-Westinghouse AP1000 reactors, which have never been built nor operated anywhere in the world, seek withdrawal permits for 74 mgd maximum daily and 62 mgd monthly average with a reported estimated average consumption of 43 mgd or 71%.<sup>1</sup> To put the projected consumptive water loss in perspective, with average per capita daily water use in Georgia at 75 gallons from surface and ground water sources, this means the two existing and two proposed reactors could consume enough water to supply over 1.1 million Georgians with drinking water.<sup>2</sup>

<sup>1</sup> Documentation from EPD from July 24, 2012 stated "the worst case equates to a 49 mgd withdrawal, 8 mgd return ... This scenario causes a consumptive loss to the Savannah River of 88%."

<sup>2</sup> The average per capita daily water use in Georgia is 75 gallons from surface and ground water sources, <http://water.usgs.gov/watuse/tables/dotab.st.html>. With water consumption for all 4 reactors (2 existing and 2 proposed) projected at approximately 86 mgd (~43 mgd for the existing two reactors and ~43 mgd for the proposed two reactors) that could mean the equivalent of over 1.1 million residents.

Already as a result of heavy demands, the Savannah River and its basin have seen a steady reduction in flow and aquifer levels over time. This reduction in flow becomes particularly problematic in times of drought, which have been frequent and severe over the last decade, and which will become more frequent and intense with climate change. That is why it's particularly troubling that the draft permit fails to have a low-flow requirement. For residents who live along the river and its basins, such as Lake Hartwell, this reduction in flow impacts both their water needs and their property values. As EPD is aware, the Lake Hartwell Association, who have representatives here tonight, have previously expressed concerns regarding the Vogtle expansion, and the lack of long-term analysis of water needs in the basin.<sup>3</sup>

And this situation is likely only to get worse over time. A large oversight is that the permit ignores the impacts that climate change could have on this region and the Savannah River. Just earlier this week, the National Climate Assessment was released and a take-away message for all of us to pay attention to as the Vogtle permit is considered is this: "The Southeast is 'exceptionally vulnerable' to sea level rise, extreme heat events, hurricanes and a decreasing freshwater supply."

According to the report, the Southeast faces three key threats.<sup>4</sup> First, sea level rise, which is of particular concern to Coastal Georgia including the Savannah River. In part this will put more pressure on utilities, contaminating freshwater supplies with saltwater – such as the cities of Savannah or Hilton Head. Vogtle is competing with the drinking water needs of many, many residents. Who will have top priority to the water? The people or a \$15+ billion nuclear plant run by one of the most powerful and influential utilities in the country? A second threat is rising temperatures and Atlanta was highlighted in the report. Hotter temperatures for longer periods of time will impact the river's water temperatures, exacerbating dissolved oxygen problems and also having the potential to affect the operation of Vogtle's reactors. Instead of being a "solution" to climate change, nuclear power may be one of its victims, affecting power plants' ability to operate when the electricity is most needed – during the hot summer months.

The third threat identified is that there will be less water available. The net freshwater supply availability is expected to decline over the next several decades, as demands for water go up. Higher sea levels will accelerate saltwater intrusion into freshwater supplies near the coast—a situation we already face downstream from Plant Vogtle.

We recommend that poorly conceived proposals that have excessive water impacts, such as the proposed reactors at Plant Vogtle, should not be permitted. Instead, EPD should push measures that advance less water-intensive energy choices, particularly, energy efficiency and conservation that offer both water and energy savings while saving money for Georgia families and businesses. Renewable energy supplies, such as wind and solar, can also provide substantial water quality and water savings benefits.

Therefore, we strongly recommend that a viable and very effective mitigation measure would be to require that the proposed new reactors use the most efficient cooling technologies available, such as wet/dry-hybrid cooling. We have highlighted this concept in the past and now is the time is now to stop ignoring important engineering advancements such as this. A key benefit of this type of system is that it is extremely effective during long drought periods, which as I stated earlier, are anticipated to increase in frequency with climate change. This highlights the need for climate modeling to occur before finalization of this permit. If implemented, the water withdrawal requirements would be drastically reduced. And if the power companies involved are concerned about increased costs, I'd like to remind them that they just recently received a sweetheart deal of zero dollar credit subsidy fees from the federal government for the \$6.5 billion in loan guarantees with \$1.8 billion yet to be finalized for MEAG. The money they "saved" at the potential detriment of taxpayers could easily be put towards securing a better future for the Savannah River.

Further, we would like EPD to be mindful that incorporating sound energy planning policies into state water policy guidelines will provide much needed, system-wide benefits to both the energy and water resources in Georgia and our neighboring states. If this had been done years ago, we likely wouldn't be here tonight debating yet another water-guzzling power plant. Thank you for your time and consideration.

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<sup>3</sup> See generally, Lake Hartwell Association, Inc. *Vogtle Electric Generating Plants Units 3 and 4, A Position Paper of the Lake Hartwell Association*, November 20, 2008, available at <http://www.lakehartwellassociation.org/portals/0/Proposed%20Vogtle%20Plant%20Expansion.pdf>.

<sup>4</sup> The Associated Press, May 7, 2014, *Report: Southeast 'exceptionally vulnerable' to climate change*. Available via AccessNorthGeorgia.com at <http://www.accessnorthga.com/detail.php?n=274638>. May 2014 Climate Assessment Report at: <http://nca2014.globalchange.gov/report/>.