July 30, 2014
Supporting documents for testimony of Colleen Kiernan
Sierra Club Georgia Chapter Director


The math:

According to EPA’s building blocks, Plant Vogtle Units 3 and 4 are responsible for 209 lbs/MWh of our target.

To be conservative, we’ll assume a capacity factor of 1.

\[
2200 \text{ MW} \times 8760 \text{ (hours in a year)} = 19,272,000 \text{ MWh}
\]

According to ACEEE, Georgia has potential for 34,000,000 MWh of energy efficiency.

The EPA Clean Power Plan building blocks only look to Georgia to achieve 12,000,000 MWh of energy efficiency by 2030.

\[
34m - 12m = 22,000,000 \text{ available MWh of energy efficiency we could tap into WITHOUT FINISHING PLANT VOGTLE.}
\]

US EPA’s target for Georgia of 834 lbs/MWh is totally achievable, and energy efficiency is the cleanest, cheapest, safest most affordable resource we can rely on. It creates good jobs for Georgians, and keeps consumers’ money in their pockets and investing in other areas of the economy.
Georgia

<table>
<thead>
<tr>
<th>2012 Generation</th>
<th>GWh</th>
<th>122,306</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 CO2 Emissions</td>
<td>000 metric tons</td>
<td>57,006</td>
</tr>
<tr>
<td>2012 CO2 Emissions Rate</td>
<td>lbs/MWh</td>
<td>1.534</td>
</tr>
<tr>
<td>2030 CO2 Emissions</td>
<td>000 metric tons</td>
<td>46,224</td>
</tr>
<tr>
<td>2030 CO2 Emissions Rate</td>
<td>lbs/MWh</td>
<td>834</td>
</tr>
<tr>
<td>2030 CO2 Emissions Rate Reduction</td>
<td>lbs/MWh</td>
<td>701</td>
</tr>
<tr>
<td>2030 % in-state generation</td>
<td>%</td>
<td>88%</td>
</tr>
</tbody>
</table>

Emission rate reduction by building block. Reductions are shown as a percent of the total reduction, and in lbs/MWh in parentheses.

- (1) Lower Average Coal Emission Rate
- (2) Redispatch to Existing NG
- (3) At-Risk Nuclear
- (4) Under-Cons. Nuclear
- (5) Incremental Renewables
- (6) Incremental Energy Efficiency

State has 4 nuclear units, totaling 4 GW of capacity. Of this, 5.3 percent, (0.2 GW) is at-risk. This state has 3 GW of nuclear units under construction.

Generation from increased NGCC capacity factors displace coal and other fossil generation.