

**ZEC Public Hearing via Webinar**  
**February 1, 2021**  
**New Jersey Board of Public Utilities**

**Comments of Dr. Dean Murphy, Principal, The Brattle Group**

Good afternoon; my name is Dean Murphy. I am a Principal of The Brattle Group, an economic consulting firm. I would like to thank the Commission for holding this hearing and for the opportunity to speak. As background, I was a co-author on a previous Brattle report on the environmental and economic impacts of New Jersey's nuclear plants, and spoke regarding that report at several of the original ZEC legislative and regulatory hearings.

PSEG recently commissioned Brattle to do a new study, to update the economic impact analysis, now with a greater focus on the geographic dispersion of impacts. We looked at the localized impacts in Salem County where the plants are located, at impacts in the surrounding counties, and in the rest of the state. The study, Salem and Hope Creek Nuclear Power Plants' Contribution to the New Jersey and Local Economies, can be found here:

- [https://brattlefiles.blob.core.windows.net/files/20628\\_salem\\_and\\_hope\\_creek\\_nuclear\\_power\\_plants\\_contribution\\_to\\_the\\_new\\_jersey\\_and\\_local\\_economies.pdf](https://brattlefiles.blob.core.windows.net/files/20628_salem_and_hope_creek_nuclear_power_plants_contribution_to_the_new_jersey_and_local_economies.pdf)

First, I'd like to offer a perspective on these nuclear plants and New Jersey's clean energy resources, in the context of the state's long-term clean energy goals. If these nuclear plants are closed, their lost output will be replaced with fossil generation, with an attendant increase in greenhouse gas and other emissions. This will begin immediately when the plants shut down, and will continue in the long term, until and unless much more renewables are added, much faster than they would be otherwise. New Jersey is already planning a major increase in its renewable generation – under its Energy Master Plan, its RPS rises to 50% by 2030. These Nuclear plants serve 40% of New Jersey load, so a 50% RPS means that 90% of the state's electricity will be clean, if nuclear plants continue to operate. But if the plants shut down, the RPS would have to rise to 90% by 2030 to achieve same amount of clean energy. If that is even possible, emissions would be much higher in the interim.

Viewed another way, in context of Governor Murphy's goal of adding 7,500 MW of offshore wind off the New Jersey coast by 2035, most or all of this offshore wind buildout would just replace the lost nuclear output, again with higher emissions in interim. Losing the New Jersey nuclear plants would mean that even with its ambitious new Renewable targets, the state would backslide. Emissions would be much higher, and it would take many years to make up the lost ground, instead of making immediate forward progress.

Our recent report modeled the New Jersey economy, including local detail on Salem County, the three surrounding counties (Gloucester, Cumberland, and Camden Counties), and the rest of the state. We modeled the economy first with the nuclear plants operating (and including

the ZEC cost, at the current ZEC rate), and a second time without the nuclear plants (and without the ZEC cost). The economic impact is just the difference – in state GDP and jobs – between these two cases. We found that the loss of the plants would cause an annual GDP loss of about \$1.2 billion in New Jersey. The vast majority of the loss would be concentrated in Salem County, with a modest loss in the surrounding counties. In the rest of the state, there would be a very small GDP impact, which could be a loss or a gain, depending whether new gas plants are built within New Jersey as result of the nuclear loss. Building new gas plants in New Jersey would cause some economic activity, slightly mitigating the impact of the nuclear loss. In terms of employment, the loss of the plants would cost about 4,500 jobs. About 1,600 of these are direct jobs at plants, with the remainder being indirect/induced jobs throughout the rest of the economy. Again, the large majority of the impact – almost 4,000 jobs lost – would occur in Salem County, with a smaller loss in the surrounding counties. As with GDP, the net jobs impact in the rest of the state would be smaller and depends on whether new gas plants are built in-state.

We conclude that the loss of these New Jersey nuclear plants would have a significant negative impact on GDP and employment in New Jersey. The large bulk of the impact is localized in Salem County, with a moderate effect in the surrounding counties and a small effect in the rest of the state. Please see our report for additional detail.

Thank you for the opportunity to share these insights.