

August 8, 2019

Dear Honorable Governor Murphy:

While the aspirational objectives contained in the New Jersey Energy Master Plan meet public sentiment about moving to cleaner energy, the problem that remains is that unless there is a higher price placed on greenhouse gas emissions in the region, the current power price economics will continue to weigh down meeting those objectives. Rejoining RGGI is a start but the economics still favor fossil fuel energy sources.

The competitive power markets prove the point how difficult it will be to meet the higher cleaner energy standards. Just look at the PJM generation fuel mix as of today. The PJM is the regional transmission system operator and operates the region's (Pennsylvania, New Jersey and Maryland) energy and capacity markets. Despite the many efforts to introduce renewables, still they make up a small fraction of the region's energy mix. Fossil fuel dominance remains because a major factor in their dominance is their economic price in the regional marketplace.

A further issue with the master plan is that noticeably missing from it, is the role nuclear energy would play in the future. While subsidies have kept the current nuclear units alive, given the time it would take to build new units, it seems the master plan outcome will favor a smaller contribution from nuclear in the future placing more weight on intermittent solar and wind energy that have limited capacity factors. It has not been demonstrated how a power grid can operate reliably with such a resource mix.

Add to this the expectation the electricity sector demand will expand as it will soon take on the new generation for the fuel for the reliability needed for the electrification of the state's transportation and building sectors. This is a recipe for unreliability. Picture being on the Garden State Parkway stuck in a traffic jam at Route 280 exit due to electric cars stalling due to a power outage caused by a master plan based on solar storage systems that remain unproven at such large scale that would be needed.

The master plan consideration provides a pause enough now to think harder about how to ensure future reliable clean energy on the east coast.

There is no question that offshore wind electricity production is needed to further diversify the energy mix. But the question not addressed is that as long as the energy marketplace is run by economic bids that do not adequately factor carbon into the price, fossil fuel fired generation will continue to have a useful life past the period of state government policies and create issues for renewable projects.

My view for the state to consider includes:

1) A carbon price higher than RGGI price should be developed and established regionally on the east coast including in Pennsylvania. Such a price is needed to ensure the cost of carbon puts renewables such as offshore wind, and nuclear, on the same economic playing field. Legislation is also required to ensure every dime generated from RGGI goes back into energy efficiency programs to lower demand growth that reduced ratepayer costs and not be diverted to the state's general budget. Possibly RGGI revenues should also be used to mitigate the add on of a carbon price higher than the current RGGI price. Carbon is either a serious externality and needs to be embedded in the economic price of electricity or it is not. The current low RGGI price and without including Pennsylvania makes no sense and collecting millions of dollars from ratepayers becomes an aspiration and will not change the economics for clean energy.

2) New nuclear needs to be in the mix of the future New Jersey energy supply. While cost per MW is expensive, clean energy from a facility that runs 90% of the time for the next 60 years makes the case more compelling. Nuclear energy generation has been the bedrock of the reliability of the New Jersey electric utility industry for several decades. First-of-a-kind technology issues have been worked through on new nuclear being constructed in Georgia and New Jersey needs to consider next steps to new nuclear.

(3) The state's energy efficiency programs should be managed by the state's local governments in the same fashion as done by municipal Community Choice Aggregators in California. PSEG has been provided billions of dollars over the

past twenty years and the limited success has been recorded or what I understand not recorded. Local control would help to eliminate the natural corporate objection of investor owned utilities to demand reduction in implementation of a more aggressive state efficiency program.

Dan Aschenbach

President

AGVP Advisory

Danaschenbach@agvpadvisory.net

908-468-8806