# core metrics

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August 24, 2015

New Jersey Energy Master Plan

c/o Board of Public Utilities

P.O. Box 350

Trenton, NJ 08625 (delivered by e-mail)

RE: Forecasting’s essential role in planning and meeting long-term goals

Dear Commissioners and Staff:

This letter is a supplement to my prepared statement of August 11, delivered at the EMP hearing in Newark. At the hearing, I spoke about how the 2011 Energy Master Plan misused PJM’s net energy forecast in three ways – to make changes to the state’s energy savings goal, to exaggerate the aggressiveness of the 2011 goal, and to exclude power supplied outside of PJM’s grid from data on overall electric loads for the state. I have learned the problem of New Jersey’s misinterpreting forecasts is more widespread than I realized. I will return to this topic in relation to the Global Warming Response Act.

Load forecasts and energy sector forecasts[[1]](#footnote-1) are fundamental to defining and meeting New Jersey’s current and future energy needs. Forecasting is a complex process, and a model that produces forecasts cannot be treated like a black box. Understanding a forecasting model’s purpose and limitations are important. It appears the BPU latched onto PJM’s forecasts without adequately understanding the model’s documentation and published studies on the limitations of PJM’s forecasts[[2]](#footnote-2). PJM was explicit about the purpose of their forecast and the intended audience. When used appropriately, their forecast can still be a very useful tool for planners in New Jersey.

Load forecasting in the presence of energy efficiency (EE) programs is tricky, because the programs meet the demand for energy by subtracting from loads rather than adding to new generation. Planning issues related to developing forecasts that are consistent with energy efficiency programs are well known to forecasters with experience in EE, so I have not cited references here.

However, I know several Commissioners participate in NARUC, which co-sponsored a recent case study that may help in answering a whole host of forecasting issues. NARUC’s co-sponsor was the Eastern Interconnection States Planning Council (EISPC) in a January 2015 report titled “Load Forecasting Case Study”, available on NARUC’s website.

Given what happened to PJM’s forecasts in the 2011 EMP, and the fact that the BPU shares its analysis (forecasts) with other government agencies, university researchers, etc…, it is important that any new projections or claims about New Jersey’s future energy use or emissions be based on a credible forecasting process. Forecasting methods and data used in the EMP should be open for public review, and open to criticism by academics and energy experts. This is part of public disclosure.

PJM’s net energy forecast leaves out six categories of generation I identified in my August 11 statement: rooftop solar, CHP, other distributed generation, backup generators, “behind-the-meter generation”, and generation which power plants consume on-site. The last four categories may have been omitted from the recent greenhouse gas inventory study conducted by Rutgers as part of periodic updates to monitor compliance with the Global Warming Response Act. I have only briefly looked at Rutgers’ study. Any future inventories that Rutgers conducts should include these categories to assure comprehensive coverage of emissions from New Jersey’s electric power sector.

Emissions projections based on the state’s promotion of natural gas, our transportation priorities that underfund mass transit, and a return to normal economic growth would have been instructive. I understand that the Bloustein School’s projections have not been updated since 2008.

Yours truly,

Franklin Neubauer

Principal

1. To be comprehensive, forecasts should include economic and demographic factors. [↑](#footnote-ref-1)
2. The Sustainable FERC Project sponsored the Brattle Group in a 2014 report “Quantifying the Amount and Economic Impacts of Missing Energy Efficiency in PJM’s Load Forecast”. [↑](#footnote-ref-2)