



November 15, 2019

VIA EMAIL: emp.comments@bpu.nj.gov

Re: IEP Feedback

The American Gas Association (AGA) thanks The Board of Public Utilities for the opportunity to submit comments on the Rocky Mountain Institute's (RMI) Integrated Energy Plan (IEP) that will inform New Jersey's Energy Master Plan. We appreciate the effort to make informed fact-based policy decisions and believe in thorough analysis, clear and transparent data sources, and unbiased technology assumptions. AGA submits the following comments based upon the information provided in the November 1 webinar.

Based upon the limited availability of information, and relying only upon a public webinar, AGA has grave concerns with RMI's modeling and reported outcomes of its study of a least-cost emission reduction pathway for New Jersey.

AGA's primary concern is that a detailed analysis of the findings cannot be completed given a lack of necessary data and information included with the study as presented. AGA strongly urges the BPU to make available RMI's data, assumptions, and details of the modeling framework so a more in-depth analysis of the presented Integrated Energy Plan can be conducted.

AGA is further concerned that there is no consideration of alternative pathways other than the policies prescribed in the assumptions of the analysis. For example, the study approach pre-determines a pathway—electrification—for reducing emissions from the building sector and then concludes that pathway to be the most cost-effective. There is no consideration of alternatives to the electrification of the building sector for reducing emissions from residential and commercial buildings. Nor is there specification about how the modeled assumptions for building retrofits and delivered fuels to buildings represent a preferable pace or level of electrification relative to other options. AGA recommends a fuller examination of these and other potential emission reduction pathways.

Finally, there are many noteworthy limitations and potential concerns over RMI's modeling approach that could lead to a significant underestimation of costs to consumers and the overall energy system. To note three specific areas, AGA is concerned that there is not sufficient analysis of peak-energy-demand requirements, the effects of eliminating natural gas customers, and the cost impacts to consumers. A more detailed examination of these and other potential items is warranted.

Below we elaborate further on these points and ask the Board of Public Utilities to consider these comments.

1) The analysis fails to make all modeling inputs and assumptions publicly available.

There are no available details on technology cost assumptions or performance characteristics for any economic sector analyzed. Concerning the building sector, there is no discussion or information about assumed types of home heating equipment, housing types, equipment performance characteristics, equipment and installation costs, distinctions between new construction and retrofits, or other information relevant to an analysis of the building sector.

AGA strongly recommends that all data inputs, assumptions, and details on modeling framework used for the analysis to produce these pathways and associated costs be made available in order to complete a more detailed assessment of the IEP. Without access to this information, credible results cannot be evaluated or verified.

2) The IEP does not evaluate the technical merit or cost-effectiveness of many other alternative pathways to reduce emissions.

The study uses pre-determined pathways as inputs to model end-use energy consumption in the building sector. However, the assumptions are not analytically justified, nor is the conclusion that those pathways are “least-cost.”

More broadly, the RMI analysis fails to evaluate the technical merit or cost-effectiveness of many other alternative options to reduce emissions from buildings. For example, the use of high-efficiency natural gas appliances, renewable natural gas supplies, and hybrid gas-and-electric appliances are three potential alternative approaches that are not contemplated in the analysis. These natural gas solutions and other technologies should be included in any analytical effort, and the results provided transparently to the public. By failing to do so, the approach utilized in this analysis has unilaterally restricted the choice and manner in which New Jersey residents can meet their energy needs at a low cost and contribute to emission reductions.

All but one variation in RMI’s modeling presupposes building electrification, but there are no details about how this level or pace of building electrification was determined or why it is preferred.

RMI’s analysis includes one scenario variation that retains gas use in buildings. This alternative case shows that retaining gas use in buildings results in no major changes in the total estimated costs compared with the “least cost” scenario until 2040, at which point “retaining gas use” is a lower-cost option. Only after about 2047 does this

alternative case exceed the "least cost" scenario when costs of the alternative case abruptly rise and disqualify the alternative case as a least-cost solution. The reason for the rapid cost increase in the final years is unclear. This sharp upturn in costs is true for the other variations as well. In all instances, no data or explanation for these results is provided. AGA believes this finding calls into question the veracity of the study's conclusion that electrification of buildings is the least-cost pathway for emissions reductions.

Based on their modeling approach, AGA believes that the analysis as presented cannot effectively conclude that building electrification is the most cost-effective pathway to meet the specified New Jersey energy and emissions policy objectives. The BPU should question the technical merits of the study underlying these findings and revisit the range of assumptions considered.

3) Questions and potential limitations of the modeling approach and cost analysis

AGA is concerned that there is not sufficient analysis of peak-energy-demand requirements, the effects of eliminating natural gas customers, and the cost impacts to consumers.

The RMI peak-energy analysis concludes that monthly peak-electricity demand doubles, shifting the peak from the summer months to the winter. However, it is unclear if RMI calculated peak-energy demand beyond a monthly basis. If not, the analysis may then significantly underestimate the actual energy requirements on a weekly, daily, hourly, or sub-hourly basis. It is also unclear what weather conditions were imposed to constrain the peak-energy analysis. An underestimation of peak-energy requirements would suggest the analysis also underestimates energy system infrastructure requirements and therefore costs.

A policy of electrification of natural gas end uses in residential and commercial buildings would result in a significant decrease in the number of customers connected to the natural gas distribution system, and a significant decline in natural gas throughput on the system. These changes would result in a material shift in natural gas distribution system costs to the remaining gas utility consumers, including the remaining residential, commercial, and industrial sector customers. The RMI analysis does not appear to account for these costs, which could be significant.

A more detailed examination of these items and a more thorough analysis of costs to consumers and the energy system is warranted.

Conclusion

AGA provides these comments to help New Jersey in its analytical efforts studying how the state will meet its energy and climate goals in a thoughtful, reasoned, and cost-effective way. AGA recommends that New Jersey should consider a broad range of solutions that can achieve environmental goals while also addressing energy affordability, safety, security, reliability, and resiliency objectives.

There are noteworthy limitations in the RMI IEP analysis and potential concerns over the modeling approach utilized that could lead to a significant underestimation of costs and other impacts on consumers and the overall energy system. AGA strongly recommends utilizing an analytical process that emphasizes the transparency of data assumptions and modeling approaches vetted by a broader research community to address these and other potential concerns.

Finally, AGA recommends that the BPU re-examine the inputs of the analysis and the framework for evaluating different pathways to meet New Jersey's energy and emissions goals. Advanced high-efficiency natural gas appliances, renewable natural gas supplies, and hybrid gas-and-electric applications are three potential cost-effective options not considered in the IEP but that are available to consumers and can help meet New Jersey's energy and emissions goals. Furthermore, residents have invested billions of dollars into the state's safe and reliable natural gas infrastructure system. AGA urges the commission to recognize this critical infrastructure that is delivering clean fuel today and its ability to deliver renewable fuels in the future.

Sincerely,



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