Governor's Energy Office

Maine Energy Plan, Pathway to 2040: Draft Study Results and Implications
Friday, November 8, 2024
10:00am – 11:00am – Virtual Meeting via Zoom
Meeting Summary

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This document is a summary of the November 8, 2024, stakeholder meeting for the Maine Energy Plan, Pathway to 2040: Draft Study Results and Implications. Approximately 100 participants joined the hour-long public webinar meeting. This was the first in a series of webinars hosted by Governor's Energy Office (GEO) through the fall of 2024 on the Maine Energy Plan, building on the initial webinars hosted in 2023 and 2024 and additional stakeholder engagement during the Pathway to 2040 study process.

The call began with GEO providing a recap of the comprehensive Energy Plan process, the work accomplished during the past year, and next steps. The majority of the meeting was reserved for technical consultant The Brattle Group to summarize the Pathway to 2040 modeling draft report, including key results and policy implications. The Pathway to 2040 technical study draft demonstrates Maine's goal of 100% clean electricity by 2040 is achievable, beneficial, and results in reduced energy costs across the economy. Opportunity for comment and participant Q&A followed the Brattle Group presentation.

GEO is accepting public comments on the draft technical report prepared by the Brattle Group. Please submit comments via email to geo@maine.gov no later than 5pm on November 18, 2024.

Presentations

Dan Burgess, Governor's Energy Office (GEO) Director, provided opening remarks and background on the comprehensive Maine Energy Plan and the Pathway to 2040 technical study, as well as the next steps in the Energy Plan process (slides 1-10).

Dean Murphy, The Brattle Group, presented the multiple pathways analyzed during the modeling process, all of which achieve Maine's requirements and energy goals. The "core" pathway is a high-electrification, high-renewable baseline and the alternative pathways, identified by stakeholders, illustrate key issues and trade-offs (slides 11-25). Policy implications which spanned multiple pathways and important considerations related to innovation, emerging technologies and applications such as the importance of load flexibility were identified (slides 26-30).

David Plumb, Consensus Building Institute (CBI), moderated this webinar and facilitated the Q&A portion.

Public Comment Summary

This session included an opportunity for participants to ask questions and provide comments on the draft technical report. Themes are categorized and summarized below, including responses provided by the consultant team:

- **Transmission**. One participant noted the importance of expanding the transmission network in existing rights of way. A question arose around the use of advanced reconductoring to achieve transmission improvements and meet increased demand.
    - Reconductoring and deployment of other grid-enhancing technologies was identified as an important potential strategy for the state.
- **Role of the PUC.** Questions arose around the role of the PUC in achieving the pathways identified in the modeling. What changes are needed at the PUC level? How should utilities be regulated in a way to incentivize the adoption of the recommendations from the modeling?
    - Potential regulatory process changes were not included within the scope of this technical model. The importance of collaboration and engagement with entities across Maine was noted as critical to achieving the identified pathways.
- **Distributed Energy Resources**. What is the value of distributed energy resources (DERs), especially solar? DERs can reduce peak load, but what is the most cost-effective way to deploy DERs?
    - The modeling did not have access to robust distribution level data and so while the value of DERs was noted, it was difficult to understand at a spatial level where these benefits could be realized on the distribution system. Noted that deploying DERs in a targeted way, identifying where the system has capacity constraints and using DERs to defer or avoid upgrades, could be more beneficial and cost-effective than blanket deployment.
- **Time of Use.** Several participants highlighted the potential of time-of-use (TOU) rates as a key mechanism to achieve load flexibility and identified the need to offer TOU rates and more effectively regulate the supply portion of a utility bill to enhance heat pump and EV adoption. Another participant commended GEO and Brattle for the hourly nature of the study, commenting that it is the only way to see non-simultaneous electricity system dynamics and evaluate the impact of peak loads and the potential value of TOU rates.
    - The modeling looked at some modest flexibility in heat pump usage, but did not look at the impact of specific mechanisms on achieving load flexibility. TOU rates can be one such mechanism.
- **Clean thermal.** What are the sources of clean thermal in the modeling? With the high capital expenditures (capex) needed to invest in thermals and operate the plants to supply 5-10% of load, what are the economics and how can operators be incentivized to meet the demand? Another participant wondered how the modeling investigated shifting fossil fuel costs based on changes in the supply and demand for fossil fuels as there is increased electrification, assuming fossil fuel prices would drop with decreased demand.
    - The thermal fuels included in the model were hydrogen, a limited amount of RNG, and a small amount of ammonia (as a carrier for hydrogen). Clean fuels will be expensive due to the higher cost of the fuel itself. Understanding of the Brattle Group that most thermal generators are already installed and existing generators

with relatively minor modifications can be converted to run on hydrogen or biodiesel.
    - Fossil fuel prices exist in a global market where the demand from Maine and New England has a marginal impact. The modeling conducted incorporated U.S. Energy Information Agency fossil fuel cost projections which are reasonable but volatile, emphasizing the importance of reducing Maine's reliance on fossil fuels.
- **Transportation**. The Maine Won't Wait climate plan has a goal to reduce vehicle miles traveled by 20%—does this demand reduction fit into this modeling analysis?
    - The modeling is consistent with the goals included in *Maine Won't Wait*.

Dan Burgess provided closing remarks and next steps, emphasizing that GEO is seeking input and public comment on the draft technical report at this time. Future webinars and public comment periods will be held over the coming weeks to inform and present the comprehensive Energy Plan. Comments and questions can be sent to geo@maine.gov.