Advancing the Clean Energy Future

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Mark D. Marini, Secretary
Department of Public Utilities
One South Station, 5th Floor
Boston, MA 02110

Dear Secretary Marini:

Acadia Center appreciates the opportunity to provide written comments on the Department of Public Utilities' ("Department") dockets 21-80, 21-81, and 21-82. Each electric distribution company (EDC) in the state filed grid modernization plans and plans to achieve full-scale deployment of advanced metering infrastructure (AMI) in response to an order in D.P.U. docket 20-69, Phase II. Acadia Center is a non-profit research and advocacy organization committed to advancing the clean energy future and is deeply committed to a grid that is robust, modern, and adaptable.

National Grid, Eversource, and Unitil each propose grid modernization and AMI plans that to varying degrees meet the Department's grid modernization objectives. If implemented successfully, the proposed plans can deliver significant benefits for customers and can enable critical energy system upgrades. However, the plans fall short in several key areas. Acadia Center applauds the Department for requiring detailed grid modernization plans and full-scale deployment of AMI and looks forward to working as a full intervenor alongside the utilities and other stakeholders as the plans are further developed.

Acadia Center has several concerns with the plans as currently proposed and has identified the following issues:

1. The proposed timelines for implementing time-varying rates (TVR) are far too slow.
2. By using an opt-in approach to TVR, the EDCs' assumed customer participation rates are significantly lower than would be optimal to deliver the maximum possible benefits to customers.
3. The AMI plans do not propose specific AMI deployment performance metrics.
4. The plans either make passing mention or no mention of environmental justice, which must be a priority for grid modernization.
5. The EDCs must prioritize data access for customers and third-party vendors. The EDCs should implement plans to ensure robust data access and transparency to support greater customer control of their usage and bills, as well as the ability of third-party providers to offer innovative programs and services.

EDCs must accelerate the proposed timelines for TVR implementation

Eversource's and National Grid's plans call for implementation of TVR to start only when they have completed installing 100% of their AMI meters. National Grid plans to begin deployment of AMI meters at the start of 2024 and complete at the end of 2026. The company includes an estimation for the implementation of time-varying rates beginning in 2027. Eversource will spend two years between 2023-2024 implementing its Meter Data Management

System (MDMS) and building out a mesh communications network before deploying meters between the start of 2025 (i.e. one year after National Grid) and the middle of 2027. Eversource's estimated rollout for time-varying rates is also slower than National Grid's: Eversource would begin planning for TVR in 2027 and would start implementation in 2029, reaching a "steady state" of 10% of customers by 2033.[1] Unitil fails to provide any substantive information about the implementation of TVR

The timeline for implementation of TVR for both National Grid and Eversource is unreasonably slow. Both utilities should accelerate the planned deployment of TVR. National Grid claims that "[e]xcept for TVR and outage detection, the Company proposes to develop and implement the near-term functionalities when meter installation begins."[2] Acadia Center believes that the development and implementation of TVR and outage detection should be included alongside other AMI functions and that the Department should prioritize a plan to facilitate their implementation. Particularly given their existing AMI functionality, Unitil's lack of any information regarding TVR is concerning, and the Department should require more detail on plans for TVR implementation.

In Docket 15-120, the Department identified three primary goals for grid modernization. It stated that "a modern grid is one that is characterized by: (1) optimal levels of grid visibility, command and control, and self-healing, thereby providing distribution companies with the tools to optimize system performance; (2) price-responsive usage, thereby optimizing the demand placed by end-users on the system; and (3) a broad range of distributed energy resources that inject clean electricity into the system and are fully integrated into the distribution companies' planning and operations processes."[3] In order to meet the requirements of goal #2 (price-responsive usage), the EDCs must accelerate the proposed timelines for implementation of TVR.

EDCs should prioritize higher customer participation rates in TVR

Both Eversource and National Grid assume an opt-in time-varying rate, rather than the opt-out rate previously required by the Department in Order 14-04-C, in their business case analysis. National Grid assumes an opt-in rate of 15%, while Eversource assumes 10% of customers will enroll in TVR. Although the Department did not require the utilities to propose an opt-out TVR program, Acadia Center recommends that the Department require the utilities to provide a scenario with an opt-out time-varying rate in each utility's benefit-cost analysis to provide customers and regulators with a clearer sense of the potential customer savings that are possible compared to 10% or 15% enrollment in an opt-in time-varying rate. A 2016 study by the U.S. Department of Energy showed that a TVR opt-out enrollment program resulted in an average rate of 92% participation, while opt-in approaches resulted in an average participation rate of 15%.[4] National Grid's illustrative best-case scenario for TVR enrollment—which assumes 85% participation—still does not reach the national average for opt-out TVR offerings. Given that many of the benefits of AMI come from customers being able to use the data to inform how they use energy and at what times of the day, it is very likely that

[1] Exhibit NG-AMI-2, p. 25 and Exhibit ES-AMI-4 REVISED, p. 24

[2] Exhibit NG-AMI-1, p. 21.

[3] Docket 15-120, page 105.

[4] See https://www.osti.gov/servlets/purl/1424221, p. vii

each utility's proposed value of benefits would be considerably higher if a greater percentage of customers enrolled in TVR.

In the Department's 15-120 order, it found that "the primary benefits of advanced metering functionality are derived from reduced peak usage as customers respond to pricing signals. Achieving this benefit requires customers to participate in time varying rates or other dynamic pricing programs."[5] In order to maximize the benefits of advanced metering infrastructure, the EDCs should prioritize plans to achieve high customer participation rates in TVR.

EDCs should implement robust performance metrics for both grid modernization and AMI deployment

Each utility includes a set of performance metrics to track progress in meeting their grid modernization objectives, some of which the Department already approved in its previous grid modernization decision. However, National Grid does not include metrics to track AMI deployment in its plan but notes that it will work with the Department to identify metrics and reporting requirements. Eversource also does not include AMI-related metrics but mentions several example metrics that it will finalize throughout the planning period.[6] Acadia Center applauds the utilities' commitment to working with the Department to implement specific performance metrics for AMI deployment. Acadia Center believes that in reviewing the AMI plans, the Department should require performance metrics that track success in meeting AMI deployment timelines, system performance improvements as a result of AMI, customer usage of online portals, customer AMI opt-out rates, the number of third parties who successfully access customer data, and ensuring that customer savings from AMI actually materialize.

Environmental justice must be a priority for grid modernization

Efforts to modernize the electricity grid in Massachusetts should prioritize benefits for people living in environmental justice communities, including deploying equitable levels of grid modernization across the state. This is also consistent with the Department's updated mandate requiring its decisions to "prioritize safety, security, reliability of service, affordability, equity and reductions in greenhouse gas emissions to meet statewide greenhouse gas emission limits."[7] For several of its grid modernization investments, National Grid states that "[a]ll customers will benefit from this investment, including low-income customers and EJCs."[8] However, the proposal does not explicitly state how National Grid's grid modernization efforts will prioritize benefits for people living in environmental justice communities. While National Grid makes minimal mention of environmental justice communities in its grid modernization plan, Eversource's plan never mentions environmental justice communities. A resilient grid can benefit the most underserved communities in many ways, including by providing protection during extreme weather events. The development of a modern grid requires a sharp eye focused on environmental justice. That the grid

[5] Docket 15-120, page 2.

[6] Examples include the number of routers deployed per day or week, geographical coverage percentages, the number of meters experiencing communications issues, meter read rates, meter loss of communications, bandwidth of network routers and collectors, and latency statistics. Exhibit ES-AMI-2, page 21 and 22.

[7] M.G.L. c.25 §1A (2021)

[8] Exhibit NG-GMP-2, p. 26, 29, and 32.

modernization plans barely mention environmental justice is deeply concerning, and the Department should be attentive to this area, particularly as an early implementation of its expanded mandate.

EDCs should prioritize customer data access

National Grid provides a detailed plan for how it will enable access to energy usage data, allowing both customers to take greater control of their energy usage and third-party vendors to provide innovative products and services. Conversely, Eversource provides significantly less information on how customers will access and share their data with third parties. Unlike National Grid's proposal, the main goals for Eversource's customer portal do not mention sharing data with third parties, a notable absence. All EDCs should fully recognize that smart meter data belongs to the customer and that customers should not be limited in terms of what they can do with it. Meter technology and data management protocols should not limit the choices that customers can make about how to use their data and with whom to share it.

The Department should consider the implementation of a centralized, state-wide energy data repository. A centralized repository would provide a single access point for energy management providers and would ensure technological consistency across Massachusetts, enabling customers to easily and securely share their energy usage information with providers. A centralized repository could help to reduce costs associated with accommodating utility-specific data types, data formats, and technical access requirements, and can enable greater adherence to standards (including Green Button Connect). Massachusetts can look to other states, including New Hampshire, for lessons on a centralized approach.[9]

Conclusion

Thank you for the opportunity to submit written comments. Acadia Center looks forward to engaging on these critical issues.

Sincerely,

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[9] See https://www.greenbuttonalliance.org/index.php?option=com_dailyplanetblog&view=entry&year=2019&month=09&day=23&id=73:new-hampshire-moves-forward-on-statewide-energy-data-access-platform