Acadia Center
Advancing the Clean Energy Future
PO Box 583 • Rockport, ME 04856-0583

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Eric J. Bryant and Leslie Raber
Presiding Officers
Maine Public Utilities Commission
State House Station #18
Augusta, ME 04333

Public Utilities Commission Docket No. 2024-00231 Inquiry of Time of Use Rates for Delivery and Standard Offer

Acadia Center appreciates the opportunity to provide written comments in response to the September 12, 2024 Request for Comments in Public Utilities Commission (PUC) Docket 2024-00231, Inquiry of Time of Use Rates for Delivery and Standard Offer. Acadia Center recommends that the Commission implement default standard offer and delivery time-of-use (TOU) rates, with an opt-out option, to ensure high levels of customer enrollment and to achieve the benefits that TOU rates can offer.

Rate design can be used to support a range of policy priorities, including promoting fairness and equity among all customer classes; maximizing the value of and supporting the deployment of clean energy resources; optimizing the use of system resources; reducing emissions; improving incentives for energy efficiency; preserving equitable access to clean energy; and maintaining protections for low-income ratepayers.

Acadia Center strongly supports the use of time-of-use rates for customers. Many of the grid and consumer benefits that electric vehicles (EVs), heat pumps, and other distributed energy resources provide cannot be fully realized without the use of time-of-use and time-varying rates (TVR). Time-of-use rates, a category of TVR that uses a tiered pricing structure for pre-determined peak and off-peak time periods, can offer several benefits, including:

- Providing customers an opportunity to lower their electricity bills by adjusting their electricity usage throughout the day;
- Reducing peak demand and strain on the electricity system, especially as Maine increasingly moves towards beneficial electrification; and
- Reducing the reliance on fossil fuel-powered generation to meet the periods of highest demand.

Time-of-use rates are a subset of the larger category of time-varying rates (TVR). TOU rates can reflect underlying system costs more accurately than rates that are not time-differentiated. Basic TOU rates can include two or more periods, with or without seasonal variation and with or without Critical Peak Pricing (CPP) and/or Peak Time Rebates (PTR). TOU rates use predetermined periods and price schedules, whereas Critical Peak Pricing and Peak Time Rebates can be more dynamic and responsive to changing grid conditions and prices. CPP and PTR involve advance notice to customers of periods of extreme stress during which customers will face higher prices or can be rewarded with a rebate for decreases in demand.

Standard offer and delivery TOU rates with aligned peak and off-peak periods will help to ensure that customers face sufficiently robust price signals to motivate shifts in demand.

1. TOU Time Periods

TOU rates must include a peak window that is narrow enough to motivate customer behavior change and to deliver the intended peak-shifting benefits. TOU periods must be short enough that they actually reflect underlying system costs during periods of stress. Shorter periods of higher costs are easier to understand and respond to in terms of changing energy usage. Periods that are too long (e.g. 4 hours or more) dilute price signals and are less effective at motivating behavior change.

The ratio between on-peak and off-peak rates must be large enough for customers to see a noticeable difference in their bills and to motivate changes in behavior. According to the Regulatory Assistance Project, in order to maximize peak demand reductions, TOU periods must be sufficiently narrow and the annual average price differential between on-peak and off-peak should be at least 3 to 1.[1]

2. Opt-in, opt-out, or mandatory

Acadia Center was pleased to see the Commission's comments in its November 20, 2023 report to the Legislature that clearly articulated both a need for default TOU rates and that TOU pilot programs are unnecessary given the evidence that already exists of the benefits of TOU rates. Default TOU rate offerings with an opt-out option would enable the level of peak load reductions and other benefits that are less likely to be realized if confined to a small pilot program. Pilot programs would further delay the ability of customers to realize the benefits of TOU rates. Acadia Center agrees that a TOU "pilot represents an unnecessary cost to ratepayers and years of valuable customer savings and peak GHG emissions reductions lost."[2]

3. Interaction with other rates offered by the T&D utilities

a. No response.

4. What effect will expected changes in seasonal load variability have on demand response?

As ISO New England prepares for the needs of the future regional grid, it has analyzed system needs assuming a peak demand during winter in 2050 of upwards of 57 GW.[3] Annual peak demand for New England today is just over 24GW. While experts have proposed a range of values for anticipated peak demand in 2050, the general consensus is

[1] Time-Varying Rates in New England: Opportunities for Reform; A Look at New England Rate Design: Issue Brief #4. David Littell and Joni Sliger, RAP. October 2020.
[2] Public Utilities Commission. *Report Regarding the Implementation of Time-of-Use Rates Pursuant to Resolves 2023, chapter 79.* Submitted to the Joint Standing Committee on Energy, Utilities and Technology, November 20, 2023 (p. 3).
[3] ISO New England, *2050 Transmission Study*, February 2024. https://www.iso-ne.com/static-assets/documents/100008/2024_02_14_pac_2050_transmission_study_final.pdf

that the region, including Maine, will switch to a winter-peaking system well before 2050. In terms of rate design and the potential implementation of TOU rates, anticipated changes in seasonal load variability mean that the Commission should build in flexibility to any rate offerings and the ability to make refinements over time.

5. What can be learned from other jurisdictions that have implemented a similar rate?

No response.

6. Demand charges

Acadia Center is concerned about the potential risks of demand charges, particular non-coincident demand charges, on ratepayers. Demand charges could result in overly complicated rate options for customers, especially residential customers, particularly as monthly peak demand varies from month to month.

7. Customer education

Robust customer education and outreach programs are essential for ensuring the success of TOU rates. Transparent pricing and clear and consistent messaging are key for helping customers understand what TOU rates are, how they can be beneficial, and how customers can reap those benefits in response to different price signals. Shadow billing can be a useful education tool in the early stages of implementation.

As with all rate design changes, good communication is key. Rate design and utility bills in general can be difficult to fully understand, and it can be hard for many ratepayers to gain familiarity with the specifics of different rate design options. Any rate design changes must be carefully communicated, including any potential risks or unintended consequences for customer bills depending on whether and how customers respond to different price signals.

Sincerely,

Oliver Tully
Director, Utility Innovation Initiative
otully@acadiacenter.org
207-236-6470 ext. 202

Peter LaFond
Senior Policy Advocate and Maine Program Director
plafond@acadiacenter.org
207-236-6470 ext. 305