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Harry Lanphear
Administrative Director
Maine Public Utilities Commission
State House Station #18
Augusta, ME 04333

Maine Public Utilities Commission Docket 2020-00344 Inquiry into Performance Metrics and Regulatory Mechanisms for Transmission and Distribution Utilities

Dear Mr. Lanphear,

Acadia Center appreciates the opportunity to submit written comments in response to Maine Public Utilities Commission (Commission) Docket 2020-00344 Inquiry into Performance Metrics and Regulatory Mechanisms for Transmission and Distribution Utilities. Acadia Center is a non-profit research and advocacy organization committed to advancing the clean energy future. Acadia Center strongly supports the use of performance metrics and incentives as a tool to align utility performance with state policy goals.

There is tremendous opportunity in Maine to accelerate climate, clean energy, and grid modernization goals by implementing a robust set of performance metrics, targets, and incentives to improve utility performance. In considering the role that performance metrics and incentives can play in regulating Maine's T&D utilities, Acadia Center respectfully submits the following recommendations:

Process Considerations

- Before designing specific performance metrics, the Commission should first identify the policy objectives and regulatory outcomes that improved utility performance can help to address.
- Next, the Commission should clarify the stakeholder processes that will be utilized to generate and evaluate proposed metrics. In considering performance metrics and incentives, the Commission should allow for broad public comment and participation.
- The Commission should conduct a full assessment of what is not working well in terms of utility performance to identify areas that need improvement and that are not currently aligned with public interest. A more detailed understanding of current performance helps to establish baselines and provide guidance for how to measure progress.

Characteristics of Performance Metrics and Incentives

- The Commission should use performance incentives to address the misalignment between existing utility incentives and state policy goals. In doing so, the Commission should shift the emphasis of utility

shareholder returns away from return on equity for capital investments and towards performance incentive mechanisms designed around the achievement of consumer benefits and policy goals.

- The Commission should implement performance metrics and incentives that are focused on achieving particular outcomes, rather than prescribing specific actions. Performance metrics should be quantifiable, when possible. Performance incentives should be appropriately sized so that the incentive does not exceed the value of the resulting benefits. The Commission should also consider the use of both rewards and penalties, especially for areas that are well-integrated into the utility's normal course of business.
- The Commission should allow for learning and refinement of performance metrics and incentives over time and accept the need for iteration as new metrics are implemented.

Broader Utility Regulatory Reform

- Beyond performance metrics and incentives, policymakers in Maine should push for statutory reforms to empower the Commission to include climate and equity responsibilities in its decision-making more broadly. By including climate and environmental justice requirements on par with other core responsibilities, the Commission would have greater authority to push Maine's utilities to be stronger partners in addressing climate and energy challenges.
- Policymakers should also consider broader utility business model reform, including implementing cross-fuel planning processes, as well as separating the entity that owns grid infrastructure from the entity that conducts grid planning.

Performance Metrics and Incentives Can be a Powerful Regulatory Tool

The primary way for regulated utilities to earn income is by making capital investments on which the utility can earn a specified rate of return set by regulators. This system gives utilities incentives to build or upgrade traditional infrastructure, a practice that is increasingly at odds with adoption of new technologies that can optimize the energy system and increase energy efficiency and consumer adoption of clean energy technologies. The regulatory model needs to evolve to provide utilities with the appropriate financial incentives to be full partners in achieving states' consumer and environmental goals. Instead of earning income primarily from investing in traditional infrastructure projects, utilities should be rewarded for achieving energy efficiency and clean energy goals, minimizing the cost of maintaining the electric grid, and providing new choices, opportunities, and control to customers.

Performance metrics and performance incentive mechanisms (PIMs) are one of several regulatory tools that can be used to reform utility business models in line with the evolving needs of a 21st century energy system. An updated utility business model should seek to level the playing field for non-capital strategies (both utility-owned and third-party investment), incentivize the utility to engage in activities that would otherwise threaten its bottom line, and give regulators new tools to save money for ratepayers.

Performance metrics and incentives can be a powerful tool in achieving these outcomes by addressing existing disincentives, creating an incentive where there is currently no signal, or increasing an incentive that is too small to spur action. By increasing the portion of revenue requirements recovered through PIMs, while reducing the portion of

revenue linked to the rate base, PIMs help shift the utility financial incentive towards achieving performance goals that benefit ratepayers and the environment.

In response to the Commission’s question as to “whether metrics should be adopted for consumer-owned utilities as well as investor-owned,” performance metrics should not be limited just to investor-owned utilities and should be used for consumer-owned utilities as well.

The Commission should take a systematic approach to designing performance metrics and incentives

Although the potential utility performance areas the Commission outlined in its request for comments cover a broad set of important issues, the Commission should first clarify the process through which performance metrics and incentives will be set.

In response to the Commission’s question regarding “whether adoption of revised or new metrics is best accomplished in individual utilities’ future rate cases or through the rulemaking process, or some other process,” while there may be opportunities to set some performance metrics in individual rate cases, Maine ratepayers would be best served with a broader, more comprehensive approach to PIMs and utility business model reform that would allow for deeper stakeholder engagement and a fuller consideration of the policy objectives that performance metrics can help to achieve.

The Hawaii PUC recently completed a multi-year process to consider performance-based regulatory tools, including PIMs. While a years-long process may not be appropriate in Maine, the Commission should still consider lessons learned from other jurisdictions that took a systematic approach to implementing performance metrics and incentives.

A systematic process of adopting performance incentive mechanisms would include the following steps:

1. Identify the relevant areas of utility performance appropriate for meeting particular policy objectives;
2. Develop metrics for tracking and reporting;
3. Set performance targets; and
4. Add financial rewards and penalties.

In pursuing an investigation into the role of performance metrics and incentives, the Commission should first identify specific policy goals that could be achieved through utility business model reform. Then, the Commission can match these goals with regulatory outcomes to guide decision-making around performance metrics. Before considering specific metrics, it is important for the Commission to conduct a full assessment of what is and is not working well in terms of utility performance and regulation, including performance areas that need improvement or are not currently aligned with the public interest.

After identifying specific policy goals and regulatory objectives, the Commission can consider whether it is appropriate to adopt any metrics, or even set incentives for certain areas of performance. For some performance

areas, data may be insufficient or nonexistent. In these cases, stakeholders may not be comfortable setting a financial reward or penalty initially. Nevertheless, it is important simply to start tracking performance to build data. This data can be reported in performance scorecards, which, when made public, can sometimes serve to motivate improved utility performance even without a financial incentive. Collecting data in publicly available scorecards can help to establish performance baselines. The Commission can then use these baselines to set specific performance targets, which can then be tied to financial rewards, penalties, or both.

Performance metrics can be focused on particular activities, programs, or outcomes. The Commission should seek to implement outcome-based performance metrics whenever possible to ensure progress towards specific policy goals; to allow for flexibility in the methods used to achieve the outcomes; and to help avoid potential unintended consequences. For example, poorly defined metrics that are not clearly connected to regulatory objectives could lead to gaming, manipulation, or overcompensation.

In developing performance metrics, targets, and incentives, the Commission should allow for experimentation and learning and create opportunities to refine metrics over time as more data is collected. The Commission should also develop processes to collect stakeholder input and create opportunities for stakeholders to provide commentary and feedback on proposals.

Potential utility performance areas

Note: The comments below include general recommendations about some of the performance areas outlined in the Notice of Inquiry and do not attempt to fully capture the many issues that would be considered in response to specific performance metric proposals. Acadia Center supports a more thorough stakeholder investigation to consider the most appropriate metrics and incentives for Maine utilities.

Energy and environmental policies

The Commission should consider performance metrics that track progress towards meeting existing statutes, including the Renewable Portfolio Standard and the Solar Energy Act. The Commission can also set performance targets to ensure that utilities are aligned with state climate targets of a 45% reduction in GHG emissions by 2030 and 80% by 2050.

Performance metrics can include tracking total carbon emissions, total criteria pollutant emissions and emissions intensity, as well as demand response and other measures to reduce peak demand and shift load to less carbon-intensive times of day. Performance metrics could also measure carbon emissions avoided by electrification of transportation and buildings.

Reliability

To date, the Commission has implemented only basic reliability and service quality metrics. While reliability and service quality metrics such as CAIDI and SAIFI can be important for ensuring that service is quickly restored after a storm, the Commission should consider performance metrics that move beyond simple definitions of reliability and towards a more comprehensive recognition of resiliency as the energy system adapts to meet the needs of an electrified and net-zero economy.

The Commission has available a wide set of solutions that can improve resiliency while lowering costs. The Commission should require investment in distributed energy resources (DER), energy storage, and systems that allow for islanding in response to power outages. They should require better system-wide communications and outage detection systems, as well as broader utilization of AMI technologies. By balancing supply and demand more closely using more sophisticated modeling and planning processes that account for the role of distributed energy resources, and by supporting greater load flexibility, grid operators can improve reliability and resiliency. Resiliency metrics should also include equity parameters, such as measuring reliability performance based on geography or income.

Continuing to incentivize simplistic definitions of reliability rather than focusing on resiliency could potentially lead to greater costs for ratepayers. For example, just relying on metrics like CAIDI and SAIFI may lead utilities to double down on efforts to harden the one-way power flows from centralized generators to make power outages from storms less likely, when a more holistic approach involving DER and islanding is better for consumers and resiliency. While some degree of storm hardening may be necessary, the Commission should look to broader resiliency metrics as well.

DER interconnection and deployment

There are a wide range of potential metrics and incentives that the Commission can adopt to improve processes around DER interconnection and asset utilization. Metrics can include tracking DER asset effectiveness (such as measuring the avoided costs from DERs), as well as customer experiences related to interconnection (e.g. length of time to secure approvals, etc.).

The Commission can animate market activity around non-wires alternatives (NWA) to replace or mitigate traditional utility transmission and distribution investment by setting metrics for DER deployment and rewarding utilities for the deferred or avoided costs to upgrade T&D infrastructure. Performance metrics related to DER deployment can include shared-savings mechanisms to deliver net benefits to ratepayers. By setting performance metrics, the Commission can help to ensure that ratepayers benefit from the services that DER and NWA provide, including load relief, improved reliability and resiliency, and voltage/VAR support.

In designing performance metrics to incentivize the use of DER, it is important for the Commission and utilities to use cost-benefit methodologies that fully value the benefits that DER provide. Acadia Center recommends that a benefit-cost framework to assess the full range of benefits from DER include an accurate accounting of the social cost of carbon and the costs that more greenhouse gas emissions will impose on the citizens of Maine.

Despite the role that performance metrics can play in supporting DER deployment, the Commission should not only pursue performance metrics. Screening and solicitation of NWA should become integral to normal utility distribution planning processes. Performance metrics and incentives are a key solution, but other utility business model reforms may be necessary to maximize the benefits that NWA and distributed energy resources can provide to ratepayers and to overcome the barriers that traditional cost-of-service regulation create.

Affordability and cost control

Performance metrics to address affordability could include tracking average monthly bills for residential customers, the number of customers in debt management programs, as well as the number of service disconnections. Affordability metrics could also include prioritizing energy efficiency benefits for LMI customers.

Grid modernization

Maine's electricity grid is not ready for the needs of a net-zero economy. The Commission must act quickly to prepare the grid for significantly higher penetrations of DER, two-way power flows, and increasing levels of building and transportation electrification. There exist many potential performance metrics to target grid modernization efforts. For example, the Commission can consider metrics related to increasing utilization of Advanced Metering Infrastructure; tracking the number and class of customers enrolled in time-of-use and time-varying rates; metrics related to transportation electrification (e.g. the number of charging stations installed in LMI communities); among others.

Other categories to consider

In addition to the performance areas listed above, the Commission should prioritize specific performance metrics that address equity and improve services for low-and-moderate income communities and rural residents. The Commission should also consider metrics to incentivize pilot programs, innovation, and experimentation. This could include, for example, expedited review of pilots based on certain criteria that aligns with regulatory objectives.

Maine policymakers should consider broader utility business model reform, beyond simply performance metrics and incentives

Implementing performance metrics and incentives is only a small part of broader utility business model reform that is required to meet Maine's energy needs. PIMs must be used in conjunction with other regulatory reforms to overcome outdated utility business models and incentives and to better align utility behavior with policy and societal goals. Now is the right time to explore a new regulatory regime. While there are many regulatory tools to improve utility performance, the Commission should consider more comprehensive reforms to utility regulation to accelerate progress in meeting climate and clean energy goals.

Policymakers should add climate and environmental justice responsibilities to the Commission's statutory mandate

Beyond performance metrics and incentives to improve utility performance, policymakers in Maine should push for statutory reforms to empower the Commission to include climate and equity responsibilities in its decision-making more broadly. By including climate and environmental justice requirements on par with other core responsibilities, the Commission would have greater authority to push Maine's utilities to be stronger partners in addressing climate and energy challenges. Inclusion of climate and environmental justice responsibilities to the Commission's mandate would allow the Commission to prioritize actions that reduce greenhouse gas emissions and that minimize long-term impacts from climate change. Acadia Center and its coalition partners at the Environmental Priorities Coalition are supporting legislation introduced by Rep. Doudera that would enable such changes.

Policymakers should also implement all-encompassing planning and separate utility planning and owning responsibilities

As Acadia Center has demonstrated in [EnergyVision 2030](#), the fastest and most cost-effective way to reach our climate goals is to electrify our transportation and building heating sectors and decarbonize the grid through use of both large-scale renewables and distributed energy resources. But to electrify everything, we will need a better grid,

better policies, and better, all-encompassing planning so that we can be sure our investments will hold up to future demands, without needing to rebuild to meet each successive climate target.

Today, planning is conducted within silos – fossil gas companies plan for gas usage, electric companies for electric usage – and based on horizons of 5-10 years in the future under the assumption that things stay mostly the same. The planning that Maine needs for its electrified future is far more integrated and ambitious. It needs to consider electrification of buildings and transportation alongside energy justice and climate goals; interconnection needs at the same time as electrification; smart meters at the same time as self-healing circuits; phase out of fossil fuels while encouraging local energy resources; reliability at the same time as resiliency; and people at the same time as profit. A siloed planning framework does not allow for a full assessment of non-wires alternatives and could inhibit the consideration of innovative solutions.

In addition, cost-of-service regulation incentives are fundamentally incompatible with NWA, given that they incentivize utilities to invest in large capital infrastructure projects on which they earn high returns, rather than DERs and other NWA solutions that would cut into earnings opportunities under the existing regulatory framework.

To address both of these challenges, Acadia Center is developing a proposal for a new structure that would separate owning and planning functions. Rather than the utility conducting its own siloed planning, as well as owning the infrastructure to meet system needs, these responsibilities should be separated into different entities. A “planning entity” would do just that – plan for the future of the system. Instead of a traditional utility, the planning entity would be a new quasi-agency or non-profit established for this purpose. This neutral entity would answer to state regulators and span beyond the existing boundaries of current electric and gas utilities. Using long-range planning that takes into account electrification of heating and transportation, integration of large-scale and distributed renewables, and the need for load to be flexible enough to respond to availability of intermittent resources, the planning entity would identify distribution needs. The planning entity would create markets or run solicitations to identify solutions and select projects that meet key criteria – including grid, consumer, equity, energy justice, and climate objectives.

While the planning entity would hold the responsibility for soliciting solutions to meet grid needs, it would not have a financial stake in the outcome. Such a division would incentivize the planning entity to invest only as much as necessary to ensure resiliency and reliability – rather than gold-plating the grid just to be sure. By removing the existing financial incentives that bias utilities toward traditional utility-owned projects from the equation, this new planning entity would be well-positioned to seek effective NWA solutions.

The “owning entity,” on the other hand, would be the winner of the planning auction. It could be a traditional utility, an aggregator, or a 3rd party developer. The owning entity would design, build, own, and operate the infrastructure or DER assets – or make its own arrangements to contract out such responsibilities. Separating planning and ownership can help to overcome existing utility incentives toward traditional investments and away from non-wires alternatives. Allowing planning decisions to be made outside of the influence of utility incentives would reduce conflicts of interest within the existing grid planning and management process. And it would lead to planning decisions that better prioritize consumer interests and the changes that are needed to meet our climate targets. By considering fundamental changes to planning processes, Maine policymakers can open the door not only for NWA, but also for other technologies and resources that will be critical for meeting the state’s clean energy targets.

Conclusion

Acadia Center appreciates the opportunity to submit comments in Docket No. 2020-00344 and looks forward to future discussions.

Sincerely,

Oliver Tully
Policy Strategist
otully@acadiacenter.org
860.246.7121 ext.202

Jeff Marks
Senior Policy Advocate & Maine Director
jmarks@acadiacenter.org
207.236.6470 ext.304