

**Massachusetts Grid Modernization Working Group
Regulatory Model Option**

Title: Base Rate Case and Service Quality Index Program Regulatory Models
 Author: The Office of the Attorney General
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	Existing Model	Potential Enhancements to the Existing Model				
Regulatory Elements:	Base Rate Case and Service Quality Index Program Model:	Grid-Facing Reliability Investment Model:	Metering Model for an Advance Meter rollout:	Targeted TVR/TOU Model:	Distributed Generation Model:	Direct Load Control Model ¹
Customer-facing, grid-facing or both	Both.	Grid-facing.	Customer-facing.	Customer-facing.	Both.	Customer-facing.
Rationale for, or summary of, model	This column describes the existing base rate case model through which Massachusetts electric local distribution companies (“LDCs”) recover distribution related costs, including grid modernization costs. ² Under traditional ratemaking methods, base rates get set at a level that provides a utility an opportunity to recoup operating costs from customers for providing distribution service to those customers and to earn a reasonable return on its capital investments. Service quality is maintained through a separate program.	Enhance Service Quality Index benchmarks to allow utility to improve reliability in the most economical manner.	Allow LDCs to demonstrate net benefit of a full system wide Advanced Meter rollout. Otherwise require utility to provide technology to collect time of use data for those who request them, including electric vehicles and target resources accordingly.	Additions to Customers’ Supply service to provide TVR/TOU offerings to shift system peak. This is not a full rollout for new meters on a system-wide basis, and envisions an enhanced AMR that does not require additional communication systems to obtain the additional usage data.	Facilitate the connection of Distributed Generation.	Direct control of individual customers load to provide maximum control of system peak load reduction.
Regulatory Oversight:						
Utility pre-implementation filing requirement	None	No.	Yes.	Yes.	Yes.	Yes.

¹ The model refers to direct control of customer appliances, e.g. central air, water heaters and heat pumps.

² The smart grid pilot programs and the capital tracker established for Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid are the exceptions to this general rule. The Department of Public Utilities has, pursuant to a directive in the Green Communities Act, established limited trackers for recovery of capital investments made in conjunction with a pre-approved smart grid pilot program. Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid has a capital tracker that allows the utility to recover costs associated with incremental capital investments on an annual basis. No new trackers should be established.

FOR DISCUSSION PURPOSES ONLY – NOT FOR PUBLICATION

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Regulatory review and approval of filing	LDCs file a base rate request for review and approval by the Department. The filing includes a review of capital investments and operating expenditures. The Department conducts a proceeding, which entails discovery, expert testimony, evidentiary hearings, and briefings. The LDC’s SQI program is reviewed annually. ³	Yes for Enhancement of SQI.	Yes. However, the LDC does not receive cost recovery through base rates until after implementation.	Yes.	Yes.	Yes.
Utility request for pre-approved electric grid modernization (“GM”) budgets	None.	None.	Yes.	Not applicable.	No.	Yes.
Stakeholder input	Numerous opportunities: annual investigations into the LDCs Service Quality; periodic investigations into updating Service Quality requirements; base rate case proceedings, and; other DPU proceedings (distributed generation interconnection standards and annual capital tracker proceedings).	No Change.	All existing opportunities plus the pre-implementation proceeding.	Yes.	No Change.	Yes.
Utility reporting requirements	Annual Service Quality Reports.	Annual Service Quality Reports and New Grid Modernization Status reports.	New Grid Modernization Status reports. ⁴	New Grid Modernization Status reports	New Grid Modernization Status reports and Reporting on Enforcement of Interconnection Timelines	New Grid Modernization Status reports

³ Base rate distribution revenues may be reconciled through a decoupling mechanism, if approved by the Department as part of a base rate proceeding. NSTAR Electric Company is the only electric distribution company that does not have fully decoupled base distribution rates.

⁴ The LDCs have opportunity to earn a fair rate of return on all capital investments including grid modernization investments. The Service Quality framework may result in penalties for subpar service quality.

⁴ For reliability, SAIDI, SAIFI, CKAFDI, and CKAFI.

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Cost-Effectiveness:						
Explicit, public cost-effectiveness requirement ⁵	None.	None	Customer-oriented cost-effectiveness test (specific test TBD).	Customer-oriented cost-effectiveness test (specific test TBD)	No	Customer-oriented cost-effectiveness test (specific test TBD)
Internal analysis by utility	Yes. LDCs evaluate potential capital investment and non-capital investment solutions using a cost-benefit analysis.	Yes	No	No	Yes	No
Ratemaking and Cost Recovery:						
General ratemaking (historic, future test years)	The Department uses a historic test year to establish a revenue requirement, the level of revenues to be recovered from customers through base distribution rates.	Historic test year.	Historic test year.	Not Applicable.	Historic test year and customer-specific enhanced terms of service.	Historic test year.
Frequency of rate cases	Current law requires each LDC to file a rate case at least once every five years.	No change.	No change.	Not Applicable.	No Change.	No Change.
Cost recovery (e.g., base rates, trackers)	Base rates. Each LDC must demonstrate the prudence and used and usefulness of its capital investments in a base rate case.	No change.	No change.	Not Applicable.	Customer pays.	Base rates.
Cost allocation (among customer classes)	Employ cost causation principles, the practice of “assigning cost responsibility to the class of customers for whom the costs were reasonably incurred.” (D.P.U. 94-101/95-36, p. 70).	No change.	No Change For Full Rollout, But Direct Assignment For Targeted Investment to Customers that Request a Meter Enhancement /Participate in a Program.	Not Applicable.	No change.	No change.

⁵ We interpret this to mean a cost-benefit analysis methodology that is prescribed by the Department as opposed to a cost-benefit methodology that is developed internally by an LDC.

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Cost assignment (e.g., to third party) ⁶	Third party beneficiary pays for investments targeted for that third party.	No change.	If full rollout is not economic, direct assignment for targeted investment.	Yes – Assigned to that class of customers.	Per existing tariffs, investments made for connecting specific customers are paid for by those customers.	No.
Rate design	Traditional	No change.	No change.	Establish new supply service for TVR/TOU.	No change.	Provide a rate credit.
Utility incentives (e.g. ROE, rewards/penalties)	ROE for Rate Based Investments /Service Quality penalties. ⁷	No change.	No change.	No change.	No change.	No change.
Performance Targets or Metrics:						
Role of performance targets	Maintain service quality.	Maintain and enhance service quality.	To hold the utilities accountable for estimated costs and benefits provided during the pre-implementation review.	Measure effectiveness of program to shift peak.	Enforce DG interconnect on timelines.	To hold the utilities accountable for estimated costs and benefits provided during the pre-implementation review.
Performance targets that will be used	Performance targets are set in the Service Quality Guidelines. ⁸	Enhanced Service Quality Guidelines adopted in DPU 12-120. Additional targets as needed.	Review in rate case as a precursor to cost recovery.	Annual Review Of Effect On Peak in standalone proceeding.	Under Development by the D.P.U. 11-75 Working Group.	Review in rate case as a precursor to cost recovery and annual reviews to measure costs and benefits.

⁶ We interpret “third party” to refer to an individual customer, group of customers or a noncustomer.

⁷ The LDCs have opportunity to earn a fair rate of return on all capital investments including grid modernization investments. The Service Quality framework may result in penalties for subpar service quality.

⁸ For reliability, SAIDI, SAIFI, CKAIDI, and CKAIFI.

2. Description of Regulatory Models

a. Executive Summary

The framework above seeks to summarize the existing regulatory model under which the Massachusetts electric local distribution companies (“LDCs”) operate today, and then to describe a number of proposals to enhance the existing model to improve system reliability, lower electricity costs, and enable grid modernization technologies in a manner that minimizes costs to customers. The LDCs will recover prudently incurred costs including grid modernization investments through base distribution rates to be established in a base rate case proceeding. The LDCs will obtain incentives for investments made by earning a return on their investments that is recouped through base distribution rates at their cost of capital.

The framework is designed to address various questions posed by the Department of Public Utilities in its Grid Modernization Notice of Inquiry. The columns provide regulatory models that were developed with an eye toward facilitating individual grid modernization issues. These models are not mutually exclusive. Rather they can be used in combination to address certain customer and distribution company issues, individually and collectively. The Department should establish all rates and charges associated with these models in a base rate proceeding, where it will determine that the charge is just, reasonable, cost-based and reflective of cost causation principles.

b. Description of Individual Models

1. Advanced Metering

Before a utility invests in a full, system wide Advanced Metering program, the utility must seek Department approval of the investment to demonstrate its net benefits to customers over the complete lifecycle of the meters. If the Department finds there are net benefits to all customers and approves a plan, the utility would construct the system and recover the costs of the program through base rates, after the normal regulatory review of costs in a base rate case. If it is determined that a full, system wide rollout Advance Meter program will not provide net benefits to customers, then the utility may propose a targeted deployment plan of enhanced metering systems for certain programs and customers that opt into such a system, such as Electric Vehicle customers, Distributed Generation customers, and those customers requesting Time Variable Rates. Those customers that opt in will be charged the incremental cost of those programs and meter system services.

2. TVR/TOU

The utility would facilitate new Time Variable Rate (“TVR”) supply service offerings. The TVR customer would be required to obtain the metering technology to collect time of use data before it would be offered the service. The customer will be charged the incremental cost for those meter services.

3. Direct Load Control

The utility would be required to demonstrate the costs and benefits of a Direct Load Control program of customers’ appliances to the Department. If the Department finds there are net benefits to customers, and approves a plan, the utility would construct the system and establish the associated customer credit, after the normal regulatory review of costs and expected proceeds in a base rate case.

4. Grid Facing Reliability Enhancements

The Department has a regulatory model for treating distribution system service reliability in its Service Quality Index (“SQI”) program. This reliability benchmark and the associated penalties and rewards system provide a model that can be enhanced to improve reliability to the extent desired. The Department would preapprove the desired enhancements in the benchmark reliability. The utility would then be required to meet those standards by installing the most cost-beneficial options, albeit grid-facing technologies or traditional measures such as tree-trimming. The utility would recover any additional costs of the enhanced SQI program through the normal regulatory review in a base rate case.

5. Distributed Generation Connection

This model addresses integration of Distributed Generation through specific project-related investments. It recognizes the cost recovery process in place pursuant to the existing Department-approved interconnection tariffs. Under these tariffs, a Distributed Generator is assessed the costs associated with interconnecting to the distribution system. Thus, LDCs should be required to seek Department approval in a base rate case proceeding for enhancements or changes to existing interconnection tariffs or establishment of new tariffs to ensure that tariffs provide for the service connection requirements to ensure that these provisions are cost-based.