



Rhode Island Power Sector Transformation
Performance Incentive Mechanisms
Straw Proposal
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1. Financial Incentives

One near-term component of utility business model reform is the introduction of performance-based incentives that increase the portion of utility revenue earned through performance toward agreed upon outcomes.

There are several factors to consider when determining financial incentives for performance incentive mechanisms. These include:

- Outcome-based incentives. Those initiatives and outcomes that are especially likely to help achieve Rhode Island energy policy goals may warrant greater financial incentives than those with less of an impact on those goals.
- Benefit-cost analysis. Those initiatives and outcomes that are expected to be especially cost-effective generally warrant greater financial incentives than those that are less cost-effective. Also, any financial incentive should be less than, and ideally a reasonable portion of, the net benefit of the initiative or outcome being incentivized.
- Ability of the utility to control the outcome. Those initiatives and outcomes that are well within the control of the utility generally warrant greater financial incentives than those that are not. If a PIM creates risks of unintended consequences, or over/under-recovery by the Company, then those risks can be mitigated by assigning that PIM smaller financial incentives.
- Outside factors that might influence the outcome. Those outcomes that are significantly affected by factors outside the Company's control generally warrant fewer financial incentives than those that are not. Again, risks of over- or under-recovery of financial rewards can be mitigated by assigning small financial incentives.
- Design or structural issues of the PIM. Those PIMs that are well-designed, e.g., in terms of a predictable baseline or an easily measured and verified outcome, generally warrant greater financial incentives than those that are less well-designed. If a PIM creates risks of unintended consequences, or over/under-recovery by the Company, then those risks can be mitigated by assigning that PIM smaller financial incentives.
- Double-recovery. If certain initiatives or outcomes are covered by more than one PIM, then those PIMs generally warrant relatively small financial incentives. Risks of double-recovery can be mitigated by assigning small financial incentives where double-recovery is possible.
- Countervailing financial incentives. In general, utilities have a financial incentive to make capital investments that will increase their rate base and result in higher amounts of authorized profits. DERs can reduce the need for utility capital investments, and thus potentially reduce utility profits. The financial incentive should be designed to help offset the financial disincentive for DERs.

The following catalogue of incentives represents a straw proposal for stakeholder consideration.

2. System Efficiency

Transmission Peak Demand

Description: To encourage the utility to reduce transmission peak demand, in order to reduce its share of New England transmission costs.

Metric: Narragansett Electric contribution to the ISO-NE coincident peak, by month.

Target: TBD. Should be based on assessment of historic peak demands.

Incentive: TBD. Since this metric is affected by factors outside of utility control, and this metric is subject to other PIMs, the financial incentives should be relatively low.

Something similar used by NGrid in: MA

Distribution Peak Demand

Description: To encourage the utility to reduce distribution peak demand, in order to reduce its distribution costs.

Metric: Narragansett Electric peak distribution demand, by month, by customer sector.

Incentive: TBD. Since this metric is affected by factors outside of utility control, and this metric is subject to other PIMs, the financial incentives should be relatively low.

Something similar used by NGrid in: MA, NY

Time-Varying Rates

Description: To encourage the utility to promote customer participation in time-varying rates.

Metrics: (1) Percent of customers on TVR, by customer sector, by year. (2) Percent of customers with EVs enrolled in a time-varying rate, by month and by year.

Target: TBD. This should be based on reasonable progress relative to historic levels, by sector.

Incentive: TBD. This should be based on targets. Options include dollars per percent of customers.

Something similar used by NGrid in: NY (metric only, for EVs only)

Substation Capacity Factor

Description: To indicate the extent to which specific substations are stressed.

Metric: For a select number of the most stressed substations, the ratio of capacity utilized during peak hour to the nominal capacity rating of the substation, by month and annually.

Target: None. One could be developed after assessment of historic capacity factors.

Incentive: None.

DG-Friendly Substations

Description: To indicate the portion of substations that are capable of readily installing distributed generation.

Metric: Ratio of substations that can accept DG without upgrades, to all substations.

Target: None. One could be developed after assessment of historic ratios.

Incentive: None.

Distribution Load Factor

Description: To indicate the efficiency with which the distribution system is being used, regarding the relationship between peak demand and energy consumption. In general, a higher load factor means that the system is being used more efficiently.

Metric: The ratio of retail sales during the peak hour to retail sales in all hours, by month and annually.

Target: None. While this is a useful metric to monitor, there are risks with assigning targets or incentives: load factor can be increased by simply increasing electricity sales; this metric is subject to other PIMs; and load factor can be influenced by factors outside utility control.

Incentive: None.

Customer Load Factor

Description: To indicate customer demand relative to energy consumption. In general, a higher load factor is more efficient is less costly to serve.

Metric: Ratio of distribution sales during peak hour to distribution sales in all hours, by month and annually, by customer sector. Requires interval metering.

Target: None. While this is a useful metric to monitor, there are risks with assigning targets or incentives: load factor can be increased by simply increasing electricity sales; this metric is subject to other PIMs; and load factor can be influenced by factors outside utility control.

Incentive: None.

Customer Intensity

Description: To indicate the amount of consumption by each customer class, and how that might change over time.

Metric: Ratio of sales to number of customers, by customer sector, annually.

Target: None. While this is a useful metric to monitor, there are risks with assigning targets or incentives: developing a baseline is challenging; this metric is affected by factors outside of utility control; and this metric is subject to other PIMs.

Incentive: None.

Something similar used by NGrid in: NY

3. Distributed Energy Resources

EE - Gas

Description: To encourage the utility to optimize the use of the gas energy efficiency programs.

Metric: MMBtu of gas savings.

Target: Set in annual EE Plans.

Incentive: Based on MMBtu saved, up to 5% of program budgets.

Something similar used by NGrid in: MA, NY

EE - Electricity

Description: To encourage the utility to optimize the use of the electric energy efficiency programs.

Metric: MWh and MW of electricity savings.

Target: Set in annual EE Plans.

Incentive: Based on MWh and MW saved, up to 5% of program budgets.

Something similar used by NGrid in: MA, NY

Long-Term Renewable Contracts

Description: To encourage the utility to implement renewable long-term contracts.

Metric: Payments made through PPAs.

Target: None.

Incentive: 2.75% of actual payments made through PPAs.

Something similar used by NGrid in: MA

DG Standard Contracts

Description: To encourage the utility to implement DG standard contracts.

Metric: Payments made through PPAs.

Target: None.

Incentive: 2.75% of actual payments made through PPAs.

Something similar used by NGrid in: MA

RE Growth DG Facilities

Description: To encourage the utility to support RE Growth facilities.

Metric: Incentives issued to DG owners.

Target: None.

Incentive: 1.75% of incentives issued to DG owners.

Something similar used by NGrid in: MA

Something similar used by NGrid in: MA

SRP / NWA

Description: To encourage the utility to develop non-wires alternatives to reduce distribution system costs.

Metric: Under discussion, for 2018 SRP. Provide distribution system data (e.g., distribution system constraint maps, hosting capacity maps, locational avoided costs, marketing plans, RI

System Data Portal) to empower customers and third parties to identify opportunities to install distributed energy resources in constrained areas of the grid.

Target: Under discussion, for 2018 SRP.

Incentive: Under discussion, for 2018 SRP. Action-based incentive of 5% of program budgets (for distribution system data, etc.); and savings-based incentive of 9% of program budgets for initiatives that achieve specific kW reduction targets.

Something similar used by NGrid in: NY (shared savings for large projects and \$/MW for small).

Demand Response (non-SRP)

Description: To encourage the utility to design and implement successful demand response programs.

Metrics: (1) percent of customers served annually; (2) annual capacity savings (MW); (3) program costs per capacity saved (\$/kW)

Target: TBD.

Incentive: TBD. Options include shared savings, dollar per kW saved.

Something similar used by NGrid in: NY

Electric Vehicles

Description: To encourage the utility to assist with the development of EVs and charging stations in an efficient and cost-effective manner.

Metrics: (1) Percent of customers who own EVs, by customer sector, by month and by year, by circuit. (2) Preparation of an EV hosting map. (3) Number of independently-owned (by customer or third party) charging stations, by month and by year, by circuit. (4) Investment in make-ready work for EV charging stations. (5) Provision of and participation in customer awareness and education events.

Target: TBD. This should reflect the state's EV goals, perhaps as developed in the EV power sector transformation track.

Incentive: TBD. Could include potential to earn a certain percent of EV make-ready investments (as is done in MA). Could include an award for increasing the portion of EV customers that have time-varying rates (as is done in NY).

Something similar used by NGrid in: MA (for make-ready investments only). NY (for enrollment in TVR only).

Behind-the-Meter Storage

Description: To encourage the utility to promote cost-effective behind-the-meter storage.

Metrics: percent of customers with storage, annual and cumulative, by customer class.

Target: TBD after sufficient metrics information is collected.

Incentive: TBD. Options include dollar per customer, dollar per kW of storage.

Something similar used by NGrid in: NY

Utility-Scale Storage

Description: To encourage the utility to assess and implement storage technologies where cost-effective.

Metrics: (1) number of substations served by utility storage. (2) MW of utility storage installed.

Target: TBD after sufficient metric information is collected.

Incentive: TBD. Options include shared savings, dollar per kW of storage. This could be applied to the Company's proposal for a storage pilot at Tiverton-Little Compton.

Something similar used by NGrid in: NY

4. Network Support Services

AMF Capabilities

Description: To encourage the utility to increase the penetration of advanced metering functionality. This will depend upon what the Company files regarding AMF in the upcoming rate case.

Metrics: (1) Percent of customers with AMF, by sector. (2) Percent of energy served with AMF, by sector. Several states have developed a variety of metrics to hold utilities accountable for their AMF investments. Examples include: customer engagement metrics (e.g., customer awareness of AMF, customer adoption of time-varying rates, customer education events, customers using an AMF portal); billing metrics; outage management metrics (e.g., proactive identification of power quality issues, false outages resolved through AMI); system operation metrics; and AMI deployment metrics.

Target: TBD. This should depend upon the current penetration of AMF, by sector. It should also be informed by the Company's AMF roll-out plan.

Incentive: TBD. This should be based on the targets developed. Options include dollars per meter, dollars per MWh served to customers with AMF.

Something similar used by NGrid in: NY

Access to Customer Info

Description: To encourage the utility to increase customer and third-party access to customer consumption information. This will depend upon the implementation of AMF.

Metrics: (1) Percent of customers able to access hourly or sub-hourly usage data, by customer sector, by year. (2) Percent of customers that provide hourly or sub-hourly usage data to third-parties, by customer sector, by year.

Targets. TBD. This should begin with current levels and reflect reasonable increases from those. Note that customer access to customer data might overlaps with some AMF metrics.

Incentive: TBD. This should be based on the targets developed.

Interconnection Support

Description: To encourage the utility to reduce time and cost of interconnection. This performance area is expected to be addressed in an upcoming Commission docket.

Metrics: (1) Average days for customer interconnection, by month, by customer sector. (2) Average cost of interconnection, annually, by customer sector. (3) Difference between initial estimate and actual cost of interconnection.

Target: TBD. This should be based upon reasonable improvements over past practices, depending upon the extent to which these practices have been a problem in the past.

Incentive: TBD. This should be based on the targets developed. Options include dollars per reduction in interconnection time; dollars per average cost of interconnection; dollars per reduction in actual costs.

Something similar used by NGrid in: NY (metrics only)

Distribution System Planning

Description: To encourage the utility to use distribution system planning to provide network support and encourage the implementation of distributed energy resources.

Metrics: (1) Preparation of forecasts of utility, customer, and third-party distributed energy resources, by customer sector, by year, by circuit if feasible. (2) Preparation of forecasts of locations and magnitudes of independent EV charging stations. (3) Preparation of forecasts of avoided distribution costs, by circuit.

Targets: Include the forecasts in next ISR.

Incentive: TBD.

Customer Engagement

Description: To encourage the utility to increase customer engagement in distributed energy resources and network support services.

Metrics: (1) Customer engagement surveys. (2) Transaction conversion rate at customer portals and platforms. (3) Customer participation rates in specific initiatives (e.g., energy efficiency, demand response program, distributed generation programs, AMF offerings, TVR offerings). (4) Customer education programs.

Targets: TBD. Targets for conversion rates will require first defining the customer portals and platforms better. Targets for customer participation should be based on assessment of historical participation and reasonable improvements to that.

Something similar used by NGrid in: NY