

Performance Incentives

A look at the current guidance
and the current (2009) electric
mechanism

Council Consultants

MA EE Advisory Council Meeting
April 14, 2009

Statutory and Regulatory Guidance

The Green Communities Act, in its directives on the PAs' three year statewide plans, states in Section 21 (b)(2): “A plan shall include...(v) a proposed mechanism which provides performance incentives to the companies based on their success in meeting or exceeding the goals in the plan;...”

Statutory and Regulatory Guidance

The DPU, in its order in DPU 08-50a, states:

In reviewing the performance incentive mechanism included in an energy efficiency plan, the Department will rely on the following principles:

- Performance incentive mechanisms should be designed to encourage distribution companies to pursue all available cost-effective energy efficiency.
- The amount of funds available for performance incentive mechanisms should be kept as low as possible, in consideration of the other principles adopted herein, in order to minimize the costs to electricity and gas customers.
- Performance incentive mechanisms should be designed in such a way as to encourage energy efficiency program designs that will best achieve the Commonwealth's energy goals, particularly with regard to the goals stated in the Green Communities Act.
- Performance incentives should be based on clearly-defined goals and activities that can be sufficiently monitored, quantified and verified after the fact.
- Performance incentives should be available only for activities where the distribution company plays a distinct and clear role in bringing about the desired outcome.
- Performance incentive mechanisms should be as consistent as possible across all electric and gas distribution companies. Any deviations across distribution companies should be clearly justified.
- Performance incentive mechanisms should be created in such a way to avoid any perverse incentives.
- Any modifications to a previously approved performance incentive mechanism should be fully justified at the time they are proposed to the Department.

EEAC Priority Resolution Item 4

The Commonwealth should employ the right structure and level of performance incentive for PAs who administer and deliver demand-side management programs striking the appropriate balance between fiscal responsibility and positive economic signals for the PAs to achieve strong efficiency performance and customer value. As set out in the GCA, the PAs shall coordinate with the Council, as part of the development of the statewide and individual three-year electric and gas energy efficiency plans, to develop appropriate performance incentive mechanisms.

The Electric PA Mechanism 2005-2009

$$\text{Incentives} = \text{EE Spending in Year} \times \begin{matrix} 5\% \\ (\sim 8.25\% \text{ pre-tax}) \end{matrix} \times \begin{matrix} \% \text{ Achieved} \\ \text{in Relation to Planned} \\ (75\%-110\%) \end{matrix}$$

Three Measures to Earn Incentives

Savings Incentive	Value Incentive	Performance Metrics
<p>Goal: Maximize savings</p>	<p>Goal: Maximize net benefits (benefits – costs)</p>	<p>Goal: Establish PA focus on specified program outcomes or plan development</p>
<p>Rewards PA for acquiring additional lifetime energy and demand savings (kWh and kW) and project associated non-electric benefits</p>	<p>Rewards PA for seeking additional cost effective savings (kWh and kW) and non-electric benefits</p>	<p>Enables the PAs and stakeholders to highlight elements of the EE Plan which might not receive the attention they merit in the hierarchy of carrying out the Plan</p>

The Electric PA Mechanism 2005-2009

Other factors associated with the mechanism:

Savings and Value incentives are bounded within a 75% to 110% range around the “Design” – planned – levels that are identified in the filed plans

The Savings and Value mechanisms are not inherently consistent with one another in the context of seeking maximum incentives. A balance between maximizing Savings and maximizing Value (net benefits) is necessary to achieve the highest performance incentive.

The Electric PA Mechanism 2005-2009

An example – NGrid 2009 EE Plan

TABLE 1
Available Performance Incentive Dollars

1. Budgeted Energy Efficiency Expenses		\$76,991,528		
2. Performance Incentive Rate (%)		5.00%		
	<u>Threshold</u>	<u>Design</u>	<u>Exemplary</u>	
3. Incentive Range	75%	100%	110%	
4. Potential Available After-Tax Incentive	\$2,887,182	\$3,849,576	\$4,234,534	
<u>Available After-Tax Incentive by Component:</u>	<u>Threshold</u>	<u>Design</u>	<u>Exemplary</u>	
5. Component 1: Savings Mechanism	\$1,227,199	\$1,636,265	\$1,799,891	
6. Component 2: Value Mechanism	\$890,458	\$1,187,278	\$1,306,005	
7. Component 3: Performance Metrics	\$769,526	\$1,026,034	\$1,128,637	
8. Grand Total Available Incentive	\$2,887,182	\$3,849,576	\$4,234,534	
<u>Calculation of Available After-Tax Incentive by Component</u>		<u>Weights for Incentive Components</u>		
	<u>Budget</u>	<u>Savings</u>	<u>Value</u>	<u>Perf. Metrics</u>
9. Residential	\$25,864,399	45%	35%	20%
10. Low Income	\$12,805,938	30%	10%	60%
11. Commercial and Industrial	<u>\$38,321,192</u>	45%	35%	20%
12. Total	\$76,991,528			

The Electric PA Mechanism 2005-2009

An example – NGrid 2009 EE Plan

TABLE 2
Component 1: Savings Mechanism

1. Available Design Level Savings Incentive	\$1,636,265	
		<u>% of \$ Benefits</u>
2. Design (Targeted) Lifetime MWh	2,626,172	61.8%
3. Design (Targeted) Lifetime kW	417,991	21.8%
4. Design (Targeted) Lifetime Non-Electric Benefits	\$65,085,914	16.4%
5. \$/Lifetime MWh Savings Incentive Rate	\$0.3851	
6. \$/Lifetime kW Savings Incentive Rate	\$0.8545	
7. \$/Lifetime Non-Electric Benefits Incentive Rate	\$0.0041	
8. Exemplary Performance (Cap - Savings Mechanism)	\$1,799,891	

Line Notes:

1. Available Design Level Savings Incentive, from Table 1.
2. See Energy Efficiency Plan goals; % of Benefits (in \$) from Table 3.
3. See Energy Efficiency Plan goals; % of Benefits (in \$) from Table 3.
4. See Energy Efficiency Plan goals; % of Benefits (in \$) from Table 3.
5. (Line 1 times Line 2 %) / Line 2 MWh. At least 75% of the lifetime MWh shown on line 2 must be achieved before an incentive can be earned on energy savings.
6. (Line 1 times Line 3 %) / Line 3 kW. At least 75% of lifetime kW shown on line 3 must be achieved before an incentive can be earned on demand savings.
7. (Line 1 times Line 4 %) / Line 4 Non-Electric Benefits. At least 75% of the Lifetime Non-Electric Benefits shown on line 4 must be achieved before an incentive can be earned on non-electric benefits.
8. The sum of the the earned incentives related to lifetime energy savings, lifetime demand savings, and lifetime non-electric benefits cannot exceed 110% of the design level incentive for the savings

The Electric PA Mechanism 2005-2009

An example – NGrid 2009 EE Plan

TABLE 3
Component 2: Value Mechanism

		Value of Benefits (\$)		
		MWh	kW	Non-Electric
1. Available Design Level Value Incentive	\$1,187,278			
2. Design (Plan) Benefits	\$397,837,695	\$245,908,449	\$86,843,332	\$65,085,914
3. Design (Plan) Costs	\$98,000,749	62%	22%	16%
4. Design (Plan) Net Benefits	\$299,836,946			
5. Exemplary Performance (Cap - Value Mechanism)	\$1,306,005			

Line Notes:

1. Available Design Level Value Incentive, from Table 1.
2. Planned benefits, from benefit/cost analysis.
3. Planned costs from benefit/cost analysis. Includes TRC costs net of Performance Incentive costs.
4. Line 2 minus Line 3.
5. The actual earned value incentive will be equal to actual net benefits/line 4. At least 75% of the net benefits in line 4 must be achieved before a value incentive can be earned. The value incentive will be capped at 110% of the Design Level Incentive amount for the value mechanism.

The Electric PA Mechanism 2005-2009

An example – NGrid 2009 EE Plan Component 3: Performance Metrics

- Examples of Performance Metrics -

The 2009 Plan included 6 residential, 4 low income, 5 C&I metrics

Residential #1 CAC QIV in ENERGY STAR Homes	Threshold: Develop a cost-effective plan for addressing quality installation and verification (“QIV”: system sizing, charge, airflow, duct design and duct leakage) of central air conditioning (CAC) systems in ENERGY STAR Homes based on the results of the Summer 2008 QIV study. Coordinate with Cool Smart and the national ENERGY STAR pilot QIV effort. Draft plan to Energy Efficiency Advisory Council ("Council") Consultants by June 15, 2009, Council Consultant final comments by July 1, 2009, and final plan by August 1, 2009.
	Design: Implement the plan within 60 days of approval by the Council Consultants.
	Exemplary: Incorporate a QIV protocol as a program component in the 2010 program for all ENERGY STAR Homes participants that have CAC systems.

The Electric PA Mechanism 2005-2009

An example – NGrid 2009 EE Plan Component 3: Performance Metrics

- Examples of Performance Metrics -

<p>Low Income#3 Best Practices Contractor Support</p>	<p>Threshold: N/A</p> <p>Design: In coordination with LEAN and the Massachusetts Department of Housing and Community Development (DHCD), contribute increased funding and logistical support of LEANs efforts and those of the DHCD to continue efforts to recruit and train Weatherization and heating contractors to support network activities sufficient for the ramp up of the program. Specifically, working closely with LEAN and the Massachusetts Department of Housing and Community Development (DHCD), strongly support their recruitment of weatherization and heating contractors in numbers appropriate to meet the requirements of Energy Efficiency funding.</p> <p>Exemplary: To achieve Exemplary, the Design level for Low Income Metrics 1, 2, and 3 must be attained</p>
---	---

The Electric PA Mechanism 2005-2009

An example – NGrid 2009 EE Plan Component 3: Performance Metrics

- Examples of Performance Metrics -

C&I #3 Performance Lighting	<p>X percent of 2009 new construction and major renovation (NC/MR) projects that include lighting projects go through the performance lighting path (PLP) and achieve a collective average of Y percent savings that is better the Massachusetts Energy Code in effect on January 1, 2009. Projects that qualify under this program must be new construction projects or renovation projects that involve the installation of new fixtures throughout the building or renovated spaces.</p> <p>Note: If no such NC/MR were available during 2009, the associated Design level monies will be allocated among the remaining metrics.</p>
--	--

Threshold
% of NC/MR projects with lighting in PLP (X) = 20 %
Average savings (Y) = 20 %

Design
% of NC/MR projects with lighting in PLP (X) = 25 %
Average savings (Y) = 20 %

Exemplary
% of NC/MR projects with lighting in PLP (X) = 30 %
Average savings (Y) = 25 %