2010-2012 Energy Efficiency Plans: Consultant Initial Analysis of Performance Incentives

Council Consultants

MA EE Advisory Council Meeting
August 25, 2009

Outline

- Background and introduction
- Statutory and regulatory guidance
- MA performance incentives in prior years
- *Level* of the incentive, interaction with savings goals and benefits, initial analysis
- Incentive *mechanism* recommendations
- Informed by discussions with PAs
- PA proposal vs. Consultant recommendations
- Next steps and schedule

Consultant Observations and Initial Recommendations

- Performance incentives can be very effective in supporting achievement of goals and objectives
- Such incentives have been effective in MA
- Perf. incentives are an extremely important part of Plans; design, level, and balance are crucial
- Perf. incentives should focus on key objectives:
  - Higher savings, more benefits for MA
  - Cost-effectiveness and using ratepayer $ well
  - Deeper savings (first), reaching broader, & others

Where we are in the process

- Initial presentations to the Council in April
- Some discussions recently with individual Councilors and representatives of the PAs (still reaching out to Councilors)
- Initial Consultant analysis & recommendations, Council discussion today
- Further Council discussions on Sept. 8 and 22
- Strong linkage and relationship to savings goals, benefit/cost results, and other key objectives

Statutory and Regulatory Guidance

The Green Communities Act, in its directives on the 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 08-50-A, 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.

The Key Pieces

Distinguish between:

- *Level* of incentive
- Incentive *mechanism*

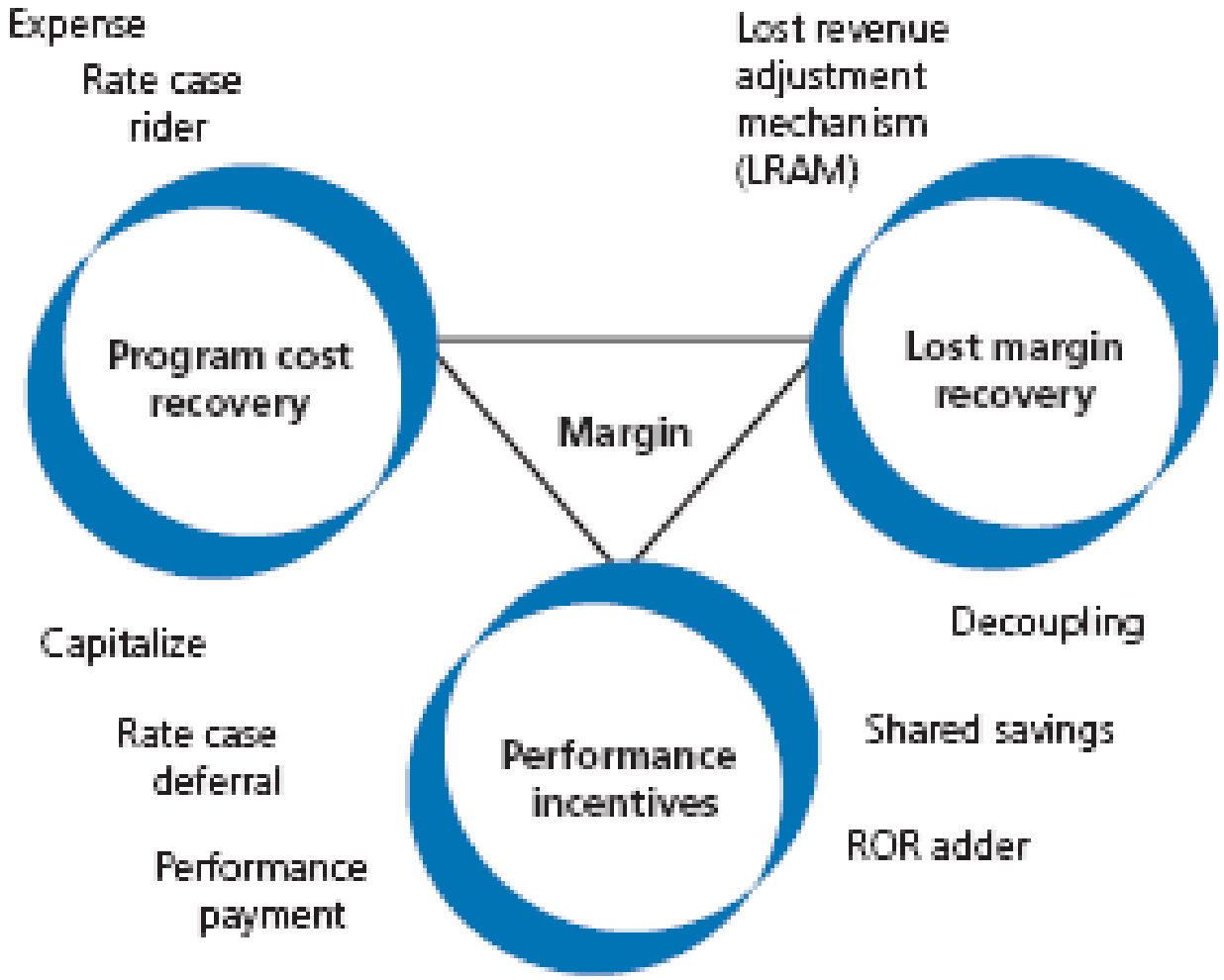
Today, we will be making some initial recommendations about the *mechanism* and providing some analysis on the *level* (but not making a recommendation on the level)

Terminology

- Incentives – amount of money, pre-tax (the amount in the Plan budgets)
- Earnings – amount of PA earnings, after-tax (utility tax rate = ~40%)

Recommendation: focus majority of the discussions on the *incentive* amount (the pre-tax amount contained in the budgets)

Many Related Considerations



The MA Electric PA Mechanism, 2005-2009

Incentives	=	Basis		Earnings Rate (Incentive Rate)		Performance Range
		EE Spending in Year	x	5% (~8% pre-tax)	x	% Achieved in Relation to Goal (75%-110%)

Three Measures to Earn Incentives

Savings Incentive	Value Incentive	Performance Metrics
Goal: Maximize savings	Goal: Maximize net benefits (benefits – costs)	Goal: Establish PA focus on specified program outcomes or plan development
Rewards PA for acquiring additional lifetime energy and demand savings (kWh and kW) and project associated non-electric benefits	Rewards PA for seeking additional cost effective savings (kWh and kW) and non-electric benefits	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

Structure and key content adopted from PA slides

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%	
	Threshold	Design	Exemplary
3. Incentive Range	75%	100%	110%
4. Potential Available After-Tax Incentive	$2,887,182	$3,849,576	$4,234,534

Available After-Tax Incentive by Component:	Threshold	Design	Exemplary
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

Calculation of Available After-Tax Incentive by Component		Weights for Incentive Components		
	Budget	Savings	Value	Perf. Metrics
9. Residential	$25,864,399	45%	35%	20%
10. Low Income	$12,805,938	30%	10%	60%
11. Commercial and Industrial	$38,321,192	45%	35%	20%
12. Total	$76,991,528			

Incentive Level

- Generally compared as % of program cost
- MA recent past design, about 8% (pre-tax)
- PA proposal in Plans: 8% (pre-tax)

  2010-12 Electric: pre-tax = $78 million

  (after-tax = $47.4 million)

  2010-12 Gas: pre-tax = $18.5 million

  (after-tax = $11.8 million)

- Nationally, incentive levels range from 1-2% (management fees) to over 15% of prog. cost

Incentive Level – Other Issues

- Impact of performance range: performance at 130% of goal means an 8% design incentive rate = incentives at 10.4% of program costs
- Legislation: statutory requirement
- Decoupling ($?) and lost base revenues (~$40M PA-proposed in 2010-12): how do these impact the incentive level?
- Interaction of incentive level and saving goals: relationship between goals (benefits) and level

Incentive Level and Savings Goals

Conceptually: to encourage higher savings goals, consider higher incentive rates if the PAs commit to higher goals.

2.75% savings	X+1% level
2.5% savings	**X% incentive level**
2.25% savings	X-1% level
2.0% savings	X-2% level

(Depends on how important the *goals* in the Plans are to you vs. the actual achievements)

Performance Incentive *Mechanism*: Council Consultant Analysis and Recommendations

Seven Consultant Recommendations
One PA-Proposed Issue

1. Build on the Current Approach

- Build upon the current electric performance incentive mechanism with its three components: savings (benefits), value (net benefits), and performance metrics
- Three components focus on key objectives:
  - Higher savings, more benefits for MA
  - Cost-effectiveness and using ratepayer $ well
  - Deeper savings (first), reaching broader, and others
- Retain the performance metric component for deeper savings, broader reach, other objectives

2. Scale the Incentive Rate

- Scale the incentive rate to encourage higher savings; higher incentives (higher scale) for higher savings, lower $ for lower savings
- Vary the performance incentive rate across the performance range:

  Higher = 120% X+1% rate (or X+2%)

  Goal = 100% X% incentive rate

  Lower = 80% X-1% incentive rate

Example: Scaled Incentive Rate

	Actual Performance as % of Goal					
Actual Performance	70%	80%	90%	100%	110%	120%
Incentive Rate (%)	X-1.5	X-1	X-0.5	X	X+0.5	X+1
					X+1	X+2

Could also implement as a smoother scale, to reduce the size of the "steps" and to reduce any undue pressure at each step (less lumpiness)

(Note: there are other ways to design and implement a scaled incentive)

3. Modify the Performance Range

- 2009 electric mechanism = 75% to 110%
- Modify the performance range
  - Higher % on the upper end (125%?) or no cap, to encourage achieving higher savings (to exceed the goals or targets)
  - Higher threshold on the lower end of the range to encourage achieving or getting very close to the goals (e.g., if PAs propose lower savings goals, then higher thresholds of 80% or 85%)

4. Vary Weights of PI Components

- Over the three years, vary the weights of the performance incentive components
- First year: more emphasis on deeper savings (higher % savings, savings per participant, savings from multiple fuels through integrated delivery) in the early period; perf. metrics
- Latter years: more emphasis on savings among the components (once the deeper savings program designs are developed and in place)

5. More Weight on Savings

- Overall, somewhat more emphasis on savings and the savings component, particularly in the second and third years
- Emphasize savings particularly for encouraging the achievement of savings higher than the goals (through a scaled incentive for exceeding goals, i.e., higher incentives for exceeding goals -- see scaled incentive rate, above)

6. Use Physical Units

- In framing savings goals and analyzing incentive designs, we often use percentages
- However, in the *implementation* of perf. incentives, best to use physical units
  - MWh of energy savings, $ of net benefits
  - Using physical units is a clear target that is less influenced by other factors (compared to %)
  - Statewide: determine the $ incentive/kWh saved and $ incentive/net benefit achieved and apply those incentive factors to all PAs consistently

7. Single Year (2010) Perf. Incentive

- Consider including in the three-year Plans a performance incentive for just the first year, with the overall structure of the mechanism for all three years set forth, but with the details not included for 2011 and 2012
- Propose and file the performance incentive details for 2011 (and 2012?) in Oct. 2010, making use of the experience/data from 2010
- Uncertainty is larger over the longer time period, which impacts goal setting; to reduce uncertainty, focus on just one year at this time

8. Application of Evaluation Results

- Issue *proposed by the PAs* in the Plans (not part of Consultant recommendations)
- Retrospective or prospective application of evaluation results for impact factors
- The PAs (not EEAC Consultants) have proposed two systems, one for the performance incentive determination (prospective application of evaluation results, no retrospective adjustments) and one for the annual report (use of all evaluation results, with retrospective application)

Next Steps and Key Dates

- Continue interactions with PAs and Councilors; try to resolve differences, develop mechanism
- Need process to address incentive level
- Performance incentives are on the Council meeting agendas for Sept. 8 and Sept. 22
- Savings goals, revised Benefit/Cost analysis, and Bill Impact analysis are on the Council agendas concurrently
- Additional data from the PAs around Sept. 15?
- Plenty to do, focus on the highest priority issues