

Reforming Massachusetts' Energy System



**Environment
Northeast**

A Policy Proposal - December 7, 2006

The region and the state are suffering from a lack of focus on energy costs and environmental impacts. The markets and players are fractured and there is little to no planning occurring as energy bills as well as air and greenhouse gas emissions increase. Significant energy resources such as energy efficiency and combined heat & power that are powerful tools to lower energy bills and environmental impacts are not being captured. It is time to reform and modernize the way Massachusetts plans for and procures energy resources.

Gain Control over Massachusetts' Energy Future

Escalating prices for electricity, natural gas and fuel oil hurt consumers, local businesses, and hamstring our state's economy. Over reliance on natural gas and oil hinders our ability to achieve an affordable energy future, especially given the growing crisis in availability and cost of fossil fuels. Consider the following facts:

- Electricity prices are at 150% of their 2002 levels and further increases are on the way.
- Natural gas consumers saw the commodity portion of their bill rise from \$600 in 2003 to \$850 last year.
- The average resident's home heating oil bill rose from \$600 in 2003 to over \$1,200 last year.

The money Massachusetts consumers spend on increased fuel and electricity costs flows out of the region to energy producing states and foreign countries around the globe. Last year alone, Massachusetts' energy trade deficit exceeded \$6.1 billion. That is \$6.1 billion no longer available to invest and circulate in our economy.

A new system of energy planning and procurement – *one that includes all cost-effective native energy resources* – is needed to gain control of current and future energy costs. Investments in cost-effective energy efficiency, co-generation, demand response, renewables, and distributed generation are the best way to take control of Massachusetts' energy future, lower consumers' costs, create local jobs, and recapture billions of dollars we lose each year. This proposal describes a process and regulatory

structure that will allow Massachusetts to capture cost-effective, local energy resources and reduce the burden of energy costs on local consumers and business.

Price Trends Show an Increasing Energy Drain on the Massachusetts Economy

Electricity and natural gas prices in Massachusetts have risen sharply over recent years. There is a clear connection between rising electric prices and natural gas prices—with gas/oil power plants setting the price for electricity 87% of the time in New England. Since the price of natural gas and oil are outside of the state's control, and weather is the key driver of peak demand days and expensive price spikes, the region is likely to continue to see high electricity prices for years to come.

Efficiency Resources Are Available at less than 50% of the Price of Supply

While electricity and natural gas prices are high and utilities continue to focus on the purchase of those resources to meet customers' needs, there is an overlooked energy resources available that is cheaper – energy efficiency.

Massachusetts' annual spending on electric supply exceeds \$4.5 billion dollars, at an average price of \$80 per MWh. In contrast, the state invests just \$120 million annually in electric efficiency resources, which deliver MWh savings at a much lower cost of \$12-44 per MWh. Today's system does not purchase nearly enough of the cheapest energy resource on behalf of consumers – efficiency – resulting in unnecessarily high bills.

Adopt a New Energy Planning and Procurement Approach

Proposed Goals of a New Planning and Procurement Process

Massachusetts should adopt a new framework to achieve the following goals:

- Create an energy planning and procurement process for electricity and natural gas that seeks to minimize total consumer costs, maximize environment benefits, and achieve the state's climate change goals;
- Increase investments in local energy resources like energy efficiency, renewables, and other distributed generation over imported energy resources like fossil fuels, to stem the flow of energy dollars out of the region and increase our energy independence;
- Procure all cost-effective energy efficiency investments, i.e. where: it is cheaper to assist consumers to use energy more efficiently than to supply them with another unit of electricity or natural gas (energy efficiency is also the most cost-effective option to mitigate greenhouse gas emissions).

Customers and Energy Resources

Restructuring of electric and natural gas utilities has led to competitive wholesale energy markets but little competition to supply residential and smaller commercial customers. As a result, policy makers and energy companies need to provide better planning and services for these customers. There are also critical energy resources and markets that policy makers should focus on to ensure system reliability and lower costs for all customers; examples are: ensuring enough energy supply to meet peak energy demands (capacity), providing access to energy efficiency programs that capture the full cost-effective potential, and ensuring that state-wide targets for new energy resources like renewables are met.

Independent Oversight and Regulatory Approval

Under today's system, ratepayers do not play a role in the energy planning & procurement decisions which they pay for directly. Establishment of a new Procurement Stakeholder Board will help ensure that residential ratepayers, business consumers, and environmental interests have real input into energy planning. The participation of relevant stakeholders (who ultimately pay the bill and bear environmental

burdens) will also help ensure that economically-sound and farsighted decisions are made for the state's consumers. Membership on the board would likely include state agencies (DOER, DEP, AG) and consumer and environmental representatives, with the utilities and PUC having ex-officio, non-voting membership.

The Board would provide significant input to and interactions with the utilities in the planning and procurement process. Board members would be supported by outside consultants retained by the Board to advise them in this process.

The Proposed Planning & Procurement Process

A planning process should assess both supply and demand resources to meet the state's energy needs, as well as factoring in environmental impacts and goals. This should be an opportunity to assess all resources in a transparent and analytical way comparing lifetime costs and environmental impacts. The utilities, in coordination with the procurement board, would conduct a 2-part planning process every three years. An energy and environmental review would be conducted to assess needs, options, costs, risks, and environmental issues. This would be followed by the development of a procurement plan that would detail what the utilities would procure on behalf of their customers, with specific implementation details and timelines.

Planning and procurement of the following energy resources should occur on behalf of customers:

- Planning and contracting for capacity resources that ensure the ability to meet peak energy demands would be considered on behalf of all customers;
- Procurement of all cost-effective energy efficiency, available at lower cost than supply options, would be completed on behalf of all customers;
- Procurement of renewable energy or other resources like CHP to achieve the state's portfolio standard or other goals would be considered on behalf of all customers
- Procurement of energy contracts would be completed to meet the demands of standard offer or default customers

Part 1 – Energy and Environmental Review

The energy and environmental review should assess the state's and distribution company customer's energy and capacity requirements over a multi-year period, such as 3, 5 and 10 years. It should examine the state's environmental goals and identify existing requirements and costs, coming regulations, and regulatory risk associated with future changes in order to incorporate this into the planning process (i.e. Renewable Portfolio Standards requirements, state energy plan goals, new Department of Environmental Protection regulations or State Implementation Plan (SIP) requirements, etc). The review should assess energy independence and economic risks associated with different resource choices to identify both risks and the need to address issues such as fuel diversity. It should also examine available supply and demand side resources and estimates of costs (cost-effective EE, renewable resource availability and cost, cost-effective CHP potential, traditional supply costs, etc). Finally it should present options and differences between resource types in terms of procurement method. This review would be presented to the Procurement Stakeholder Board for review and input prior to the development of the procurement plan.

The energy resources examined for electric customers should include but not be limited to:

- Energy efficiency programs and projects
- Renewable energy supply options
- Demand response
- High efficiency and low-emitting distributed resources like combined heat and power
- Traditional, commercial generating sources
- Options for additional imports and transmission infrastructure

The energy resources examined for natural gas customers should include but not be limited to:

- Energy efficiency programs and projects
- Demand response and interruptible service
- Traditional supply and storage contracts
- Options for additional imports and transmission infrastructure
- Over-time renewable energy supply options

Part 2 – Development and Implementation of the Procurement Plan

Based on the energy and environmental review a specific procurement plan would be developed to minimize consumer costs, risks, and environmental impacts. The plan would detail the amount and costs of the various resources to be procured, over what time periods, and would be in effect for a three year period. Some contracts or resource decisions might be for periods of longer than three years and would carry over into future planning and procurement cycles. The plans could be developed separately or jointly by the distribution utilities, but at a minimum should be developed in a coordinated fashion.

A hypothetical electric procurement plan might look something like the following:

- Contracts or investments in expanded energy efficiency programs that ramp-up to capture all cost-effective efficiency on behalf of all customers;
- Expanded contracts for demand response projects that can be called upon to reduce peak demand hot summer days on behalf of all customers;
- New capacity contracts for additional peaking generation to meet the state's remaining peak summer energy demand on behalf of all customers;
- Procurement of renewable energy to meet or exceed the state's RPS goals on behalf of standard offer customers, with a mix of long and short-term contracts (this could be for all customers or just for standard offer);
- Procurement of traditional energy contracts to meet the balance of standard offer load through a mix of short and long term contracts to hedge against fuel price volatility;

The plan(s) would be reviewed by the Procurement Stakeholder Board and their consultants. The plan would be approved through a supermajority or consensus vote of the Board and the plan, with necessary supporting background material, would then be submitted to the PUC through an open docket for final approval. The PUC would accept aspects of the Plan approved through supermajority or consensus vote of the Board. Unresolved issues would be defined for review and determination by the PUC.

Implementation of the plan would be the responsibility of the utility(s) under PUC oversight. The utility would be under typical rules of prudence, confidentiality, and review by the PUC as they implemented the plan and entered into contracts for resources. The utility would provide quarterly updates to the Procurement Stakeholder Board describing their progress implementing the plan.

Utility Rate & Incentive Reforms

In order to align utility incentives with the goals of this planning and procurement process, there should be reforms to the way distribution utilities are compensated for the services they provide.

Decoupling: Electric distribution companies currently recover most fixed costs through kilowatt-hour charges that create an incentive for the utility to maximize sales. To remove this powerful disincentive for investments in energy efficiency and distributed resources, modest, regular true-ups in rates should be established to ensure that any fixed costs recovered in kilowatt-hour charges are not held hostage to sales volumes.

Performance incentives: Distribution companies should recover reasonable and prudent costs incurred in implementing this planning and procurement process. The DPUC would conduct a proceeding to establish a performance-based incentive plan, tied to objective benchmarks, for gas and electric distribution companies to provide an incentive to lower the cost and variability of energy to consumers through the procurement planning and acquisition process. The DPUC proceeding could be preceded by a procurement board review with the utilities of a proposed incentive program.



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