

21st Century Energy Plan

Energy Efficiency Workgroup Demand Response Pilot Programs

Demand Response Initiative

What we looked at:

- Issues related to developing a statewide *Smart Meter* program
- Plan for merging the *Smart Meter* program with:
 - **new rate structures**, i.e. *Smart Pricing*
 - **active demand control** & interruption
- Inventory of existing programs

Demand Response Initiative

What's next:

- Develop a plan for phased implementation concentrating on developing **pilots** to test:
 - Meter technologies
 - Communication technologies
 - Ancillary device technologies
 - Pricing structures
 - Grid friendly appliances
- Pilots should take advantage of existing and planned electric utility AMR installations

Demand Response Pilots

Rate Structures

- Test retail rate structures that would enable electric customers to manage energy use and cost through advanced metering technology:

Goal #1:

- Time-of-use (TOU) – daily pricing blocks
- Real time pricing (RTP) – hourly prices
- Critical peak pricing (CPP) – TOU plus predetermined # of extreme peak hours

Goal #2:

- Credits for pre-established peak-load reduction agreements

Demand Response Pilots

Rate Structures

- Provide a level of savings sufficient to motivate customers to change consumption patterns by:
 - Shifting load from peak to off-peak
 - Conserve
 - Replace or retrofit with high-efficiency appliances and energy consuming devices
 - Agree to active interruption of appliances

Demand Response Pilots

Rate Structures

- Pilots should answer the questions:
 - Which type of time-based rate structure is appropriate for individual utilities and their respective consumer sectors?
 - Are customers **willing** and **able** to adjust their consumption levels and patterns?
 - Will time-based rates will lower customer bills over current average-cost pricing?
 - How will low-income customers be impacted by time-based rates?
 - How best to communicate pricing info to customers

Demand Response Pilots

Rate Structures

- Pilots tool to evaluate:
 - Costs incurred to implement time-based rates and how those costs should be recovered
 - Infrastructure costs
 - Administrative costs
 - Education costs
 - Data management costs
 - Generation and purchased power savings that can be realized
 - Impact of meter/communication failures on ability to render accurate pricing and billing

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Legislative Issues

- Sec. 6j:(3) of P.A. 304 of 1982
 - In order to implement the power supply cost recovery clause ... a utility annually shall file ... a complete power supply cost recovery plan ... requesting for **each of those 12 months** a specific power supply cost recovery factor.
- Sec. 6j:(6)
 - The Commission shall approve, reject or amend the **12 monthly power supply cost recovery factors** requested by the utility in its power supply cost recovery plan.

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Legislative Issues

- Energy Policy Act of 2005 Sec. 1152 (a) added Standard 14 to the Public Utility Regulatory Policies Act of 1978 (PURPA):
 - (A) Not later than 18 months after the date of enactment of this paragraph, each electric utility shall offer each of its customers classes, and individual customers upon request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and the reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level.

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Legislative Issues

- Energy Policy Act of 2005 Sec. 1152 (b) states:
 - **STATE INVESTIGATION OF DEMAND RESPONSE AND TIME-BASED METERING** - Sec115 of the Public Utility Regulatory Policies Act of 1978...is amended as follows: ... “Each State Regulatory authority shall conduct an investigation and issue a decision whether or not it is appropriate for electric utilities to provide and install time-based meters and communication devices for each of their customers which enable customers to participate in time-based pricing rate schedules and other demand response programs.”

Demand Response Pilots Assistance

- Energy Policy Act of 2005 Sec. 1152 (c) states:
 - **FEDERAL ASSISTANCE ON DEMAND RESPONSE** - Sec132(a) of the Public Utility Regulatory Policies Act of 1978...is amended by ...adding the following ...”(5) technologies, techniques, and ratemaking methods related to advanced metering and communications and the use of these technologies, techniques and methods in demand response programs.”

Energy Efficiency Program

What's next:

- Request from participating parties for their Smart Meter & Smart Pricing Pilot Program “strawman”
 - E-mail to workgroup chair
 - See website for prior presentation detailing issues and elements of a statewide program
- Utilities volunteer to undertake pilot(s)