Action Items for Time-Sensitive and Dynamic Pricing

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5 June 2006

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Pricing of Default Service

- Default service in the MADRI states is provided under a variety of traditional rate structures:
  - Block rates
  - TOU, seasonal
  - Capacity and energy
- There are also some new approaches, e.g., RTP for C&I customers in New Jersey

Pricing Options

- The MADRI regulatory and business case subgroups considered a range of pricing options for default service
- Interest in more dynamic pricing structures has coalesced around critical peak pricing

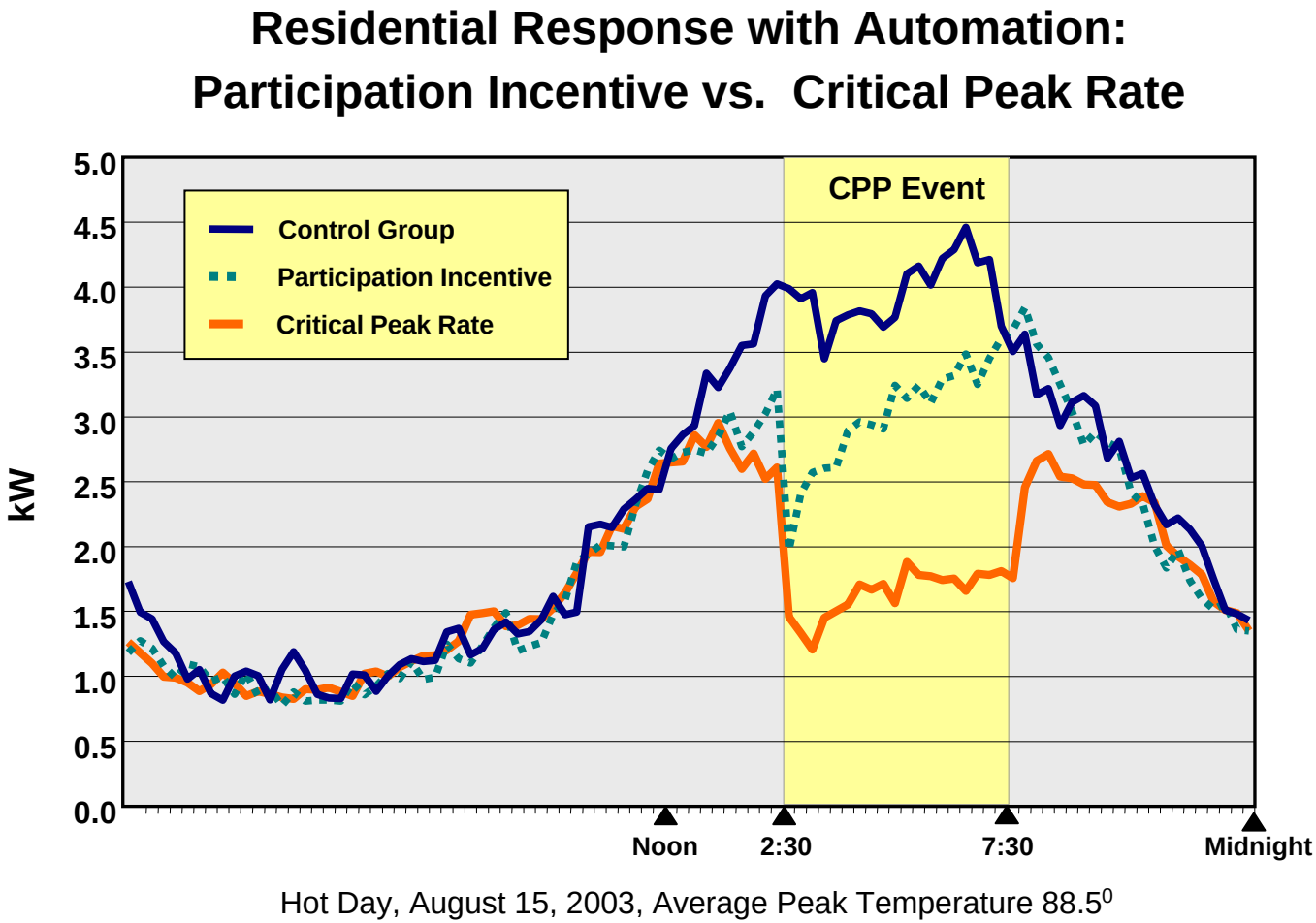
Illustration: Critical Peak Time-of-Use Pricing

- Flat or TOU rate during all “normal” hours.
- Defined or Market price effective when market price exceeds defined threshold.
- Customers get notice when Critical Peak rate is in effect.

Defined Critical Peak	Price
On-Peak (except Critical)	$ 0.117
Off-Peak	$ 0.05
Critical kWh	$ 0.60

Market Critical Peak Price	
On-Peak (except Critical)	$ 0.117
Off-Peak	$ 0.05
Critical kWh	Market + margin

CA Pilot: Residential Load Impacts (Incentives)



Hot Day, August 15, 2003, Average Peak Temperature 88.5^0

Source: Levy Associates, October 2005

Critical Peak Pricing: Issues

- Programs in Florida (Gulf Power) and California have shown that CPP elicits meaningful, persistent demand response
  - PSE&G is in the second year of a two-year CPP pilot called myPower
  - DC is implementing a pilot to test the cost-effectiveness and public acceptability of three different rate design options
- Can CPP in the MADRI region be likewise successful?
- And, if so, are regulators and policymakers prepared to implement it?
  - California is now considering whether CPP should be a condition of default service.

Implementing CPP

- Programmatic approaches designed to make use of existing infrastructure (i.e., metering, load management systems, communications)
  - To answer the questions:
    - What is the size of the demand-response resource associated with CPP?
    - What are the costs and challenges of upgrading a system to enable more dynamic pricing and demand response capabilities?
  - “Beta” versions of new rate structures

Approach Affected by Infrastructure

- Program 1: “Smart Thermostat” program
  - Business Subgroup has focused on this
- Program 2: One-year turn-key program for ~20 MW of economic- and reliability-based demand reduction
  - Operated by utility
  - Leverages existing metering system for verification
  - Aims to quantify substation and circuit benefits
  - $400-$500 one-time cost for demand response infrastructure to go along with the existing metering
- Program 3: Greenfield program of “Gulf Power” type of system
  - Enables price–responsive demand through critical peak pricing
  - Existing infrastructure is insufficient: $600-$1,000 one-time cost for fully integrated two-way AMI

Considerations

- Infrastructure to support CPP and other dynamic price structures
  - Cost-effectiveness of AMI is a function of the utility operational savings and the system cost reductions flowing from customer responsiveness to the prices
  - RTP for large-volume customers on a parallel track with implementation of CPP?
- Opt in or opt out?

Implementing New Rate Structures

- Requires regulatory action, leadership
  - Rate design processes: workshops, dockets
  - Pilots such at the PSE&G critical peak pricing pilot
  - Skipping pilots and simply implementing CPP
    - No need to duplicate pilots in every state
    - Are the lessons from California, Florida, and elsewhere applicable in the MADRI region?
- Program design
  - Joint action of regulators, utilities, default service providers, and other interested stakeholders
  - Mechanisms for the recovery of the costs of the program and, if appropriate, net lost revenues
    - Impacts on default service providers if implemented outside the default service procurement process?
    - Impacts on the procurement of default service?
  - A multi-state approach, to identify opportunities for reform of default service rates?
  - Customer education

Matrix of Rate Design Options By Customer Class

	Typical Current Rate Design	Inverted Rate	TOU Rate (Fixed time periods)	TOU plus Critical Peak Pricing	Baseline-Referenced RTP	Market Indexed RTP
Residential	Flat Energy Charge	Default (if kwh-only metering in place)	Default (if TOU meters in place)	*Optional*	*Not Available*	*Not Available*
Small Commercial 0 - 20 kw demand	Flat Energy Charge	*Not Available*	Default (if TOU meters in place)	*Optional*	*Not Available*	*Not Available*
Medium General Service 20 - 250 kw	Demand Charge --- Flat Energy Charge	*Not Available*	Default (until interval metering installed)	Default (after interval metering installed)	*Not Available*	*Not Available*
Large General Service 250 - 2,000 kw	Demand Charge --- Flat Energy Charge	*Not Available*	*Not Available*	Default	*Optional*	*Optional*
Extra Large General Service >2000 kw	Demand Charge --- Flat Energy Charge	*Not Available*	*Not Available*	*Not Available*	Customer Must Choose Between These Two Options	

Source: New England Demand Response Initiative