Energy and Capacity Markets: Carts and Horses in Parallel Universes

Harvard Electricity Policy Group

New England Power Generators Association

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Who is NEPGA

- The trade association representing competitive electric generators in New England
- Our member plants represent 26,000 MW – or 80% – of all New England generating capacity
- Our core mission is to promote sound energy policies which will further economic development, jobs & balanced environmental policy

NEPGA is a regional trade association representing a diverse portfolio of plants, including natural gas, oil, coal, nuclear, hydro, and other renewable resources.
Changing Landscape

- **Natural Gas** – Driven lower energy market revenues. Increased volatility in winter months.

- **Variable/Distributed Resources** – Changed operations and required additional attributes from other resources.

- **Out-of-Market** – Resources relying on state-sponsored revenue streams or resources receiving uplift payments. These out-of-market revenues are undercutting the price signals and revenue adequacy across the marketplace.
It’s All About the $ to Meet Demand
Revenue Adequacy

• **Get the Size of the Pie Right** – Need to ensure the opportunity for sufficient revenues in the electricity markets to support reliability and operational performance. Avoid uplift/out-of-market payments.

• **Who Gets a Piece** – Through operational parameters, performance obligations and capital requirements, ensure the appropriate players are participating.

• **How to Slice the Pie** – Clearly define the products in the energy, ancillary services and capacity markets to provide all the needed and compensated attributes for a reliable and well functioning electricity market.
Holistic Look Across Markets

- **Coordination** – Energy, ancillary services and capacity markets must be designed to fit together. A major challenge in settlement-driven market design.

- **Accurate Price Signals** – All operational attributes needed by the market operator and revenue opportunities for the generator should be included in the markets.

- **Mitigation** – Focus truly on manipulation/market power. Cannot replace the participant’s business judgment.
We are stuck together
But it Doesn’t Have to Be Combustible

Clearly Define the Product Being Bought

- **What is the Service?** Energy, voltage support, frequency response, reserves, etc.

- **What are the Attributes?** Quick start, ramping, baseload, etc.

- **What are the Performance Obligations?** Fuel certainty, variable resources, transmission outages, etc.

**Bottom Line:** Ensure that all services, attributes and obligations are reflected in the products and price signals.
Forward Capacity Market Performance Incentive Proposal

• Three-year forward, one-year commitment auction.
• In delivery year, premium payment/penalty depending on performance during shortage events.
• No excuses for non-performance.

- Direct link between capacity payments and peak period performance.
- Attempting to mimic energy-only market.
- Major stakeholder dissatisfaction with current proposal.
NEPOOL Alternative

**Forward Capacity Market EFORp/RCPF Proposal**

- Three-year forward, one-year commitment auction.
- Premium/penalty based on Equivalent Peak Period Forced Outage Rate (EFORp) hours performance.
- Increase Reserve Constraint Penalty Factor (RCPF) values.
- Excuses for non-performance “outside control of generator.”

- Incremental changes to capacity, reserve & energy markets.
- Received 80% NEPOOL support.
Questions?

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“Electric Power Generators Working for New England”