Competitive Auctions with Subsidized Policy Resources

The ISO's Approach to Balancing Markets and Policy

EPSA: RTO/ISO Executive Panel

Gordon van Welie

PRESIDENT AND CEO

Key Challenge: Balancing Markets with Public Policy

The region must find a way to accommodate the states' clean energy goals while maintaining competitively-based capacity pricing for resources without state subsidies

States Are Subsidizing Renewable Resources to Meet Their Specific Legislative and Regulatory Goals

- Most renewable power resources are still relatively expensive to build
- States provide out-of-market revenues through long-term contracts and other subsidies

State Subsidies Undermine the Competitive Marketplace

- Subsidies for renewables offset costs, so these resources can sell capacity for artificially low prices
- Traditional generators needed for reliability are put at a disadvantage
- Most subsidized renewables have very low operating costs and, as energy market revenues fall, resources will rely more on capacity payments

Current FCM Rules Are on a Collision Course with State Goals

- The FCM must have competitively-based prices to attract and sustain needed resources
- The ISO's minimum offer-price rule (MOPR):
  - Excludes resources that seek to bid low because of their subsidies
  - Exempts a limited amount of state-subsidized renewables
- As more subsidized renewables come on line:
  - They will exceed the MOPR exemption and be excluded from the FCM
  - New non-subsidized resources would clear instead

The Likely Results Are Inefficient for the Region

- The region could end up with overbuilt capacity—more power resources than needed
- Consumers would effectively "double pay" to incentivize future electricity supplies:

1. Capacity payments through the FCM

+

2. Retail fees/charges that fund state subsidies

Summary of ISO New England's Solution

- The ISO is developing an innovative market design solution:
  - Accommodates state-subsidized resources into the Forward Capacity Market (FCM) over time, and
  - Preserves competitive capacity price signals for unsubsidized resources

- It builds upon—but does not replace—the capacity market framework in New England
- We will seek our Board's feedback and approval on April 20 and, subject to their views, begin public discussions with stakeholders in May
  - Plan to file tariff revisions in December, for FCA #13 (Feb. 2019)

Design Objectives and Principles

1. **Competitive capacity pricing.** Maintain competitively-based capacity auction prices, by minimizing the price-suppressive effect of out-of-market subsidies on competitive (unsubsidized) resources

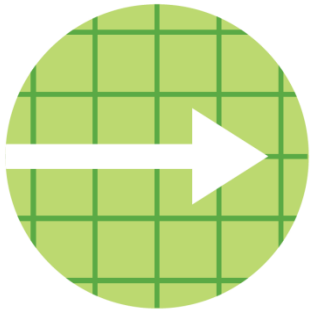
2. **Accommodate entry of subsidized resources into the FCM over time.** Minimize the potential for New England developing too many resources in the power system, an inefficiently costly outcome

3. **Avoid cost shifts.** To the extent possible, minimize the potential for one state's consumers to bear the costs of other states' subsidies

4. **A sustainable, market-based approach** that extends, rather than upends, the existing capacity market framework

Solution Concept: A Substitution Auction

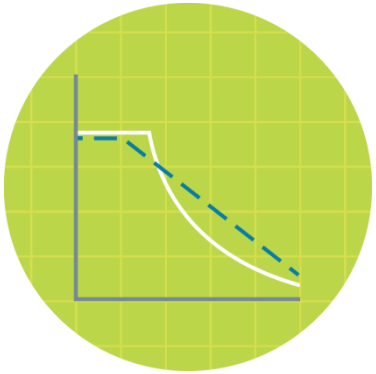
- Existing resources awarded capacity supply obligations (CSOs) in the FCA may subsequently **transfer their obligations** to new, *subsidized* resources that do not have CSOs
- Transferring resources must then **permanently retire** (they have no CSOs), and **pay the subsidized resources** for fulfilling their supply obligations



- This is arranged, at a clearing price that makes both parties better off, using a two-settlement process known as a ***substitution auction***
- The substitution auction is similar to the two-settlement process that occurs between the Day-Ahead and Real-Time energy markets
- It does not directly affect the capacity payments by loads or to the other (non-retiring) resources awarded CSOs

Solution Stage 1 – The Primary FCA

- **The ISO would conduct the FCA in two stages**:
  The primary auction and the substitution auction
- **First stage:** ISO runs the FCA like today
  - Primary FCA determines the total supply to be procured, and resources' initial CSO (in MW)
  - MOPR applies to new resource offers, like today
  - Use the current capacity demand curves, like today
  - Retirement offers below the clearing price receive a CSO, like today



- The primary FCA sets the competitively-based price paid to cleared (existing and new) capacity resources
  - This achieves design objective #1…
  - But subsidized new resources are unlikely to clear the primary FCA

Solution Stage 2 – Substitution Auction

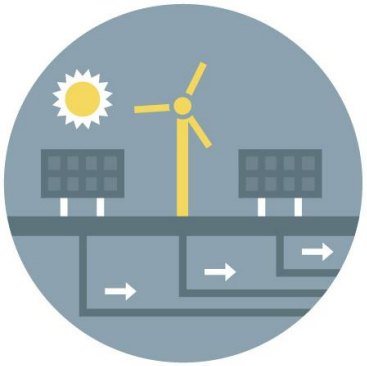
- **Second stage:** Substitution auction is run promptly after the primary FCA, without resubmission of bids/offers
  - **Supply:** Subsidized resources entered at *original* (no MOPR) offer prices
  - **Demand:** Retirement offers that cleared in first stage (and acquired initial obligations) entered *on demand side* at the same offer price
  - No administrative demand curves are used in the substitution auction
- Effectively, resources with priced retirement offers that retained a CSO in the primary FCA may **transfer ("buy out") their obligations**, at a price paid to the subsidized resources
  - The transfer price is the substitution auction's clearing price
  - If no retirement offers: Subsidized resources would not obtain obligations this year, but can participate again in next year's auctions

Examining Key Insights

- A substitution auction **coordinates, through a market**, the **entry** (of subsidized) **and exit** (of unsubsidized) capacity resources
  - There is no net change to total capacity supply market-wide
- **The states' subsidies** enable high-cost, existing resources to receive a net payment to retire and be replaced by states' preferred new (e.g., clean energy) resources
- **Last, all participants in the substitution auction are *better off*** than under the status quo (i.e., primary) FCA results alone, and participants in the primary FCA are unaffected

Notable Properties of the Substitution Auction

- It is likely to help New England states **achieve their GHG policy goals** (older, high-emitting units will retire sooner)
  - In popular terms: A "**cash for clunkers**" market
- The substitution auction rules are **technology neutral**
  - Accommodates future state subsidies to non-renewable resources (e.g., storage, fuel cells, large-scale hydro, and so on)
- It provides a mechanism to replace the (200 MW annual) existing MOPR renewables exemption that:
  - Accommodates greater amounts of state-subsidized capacity into the FCM over time, and
  - Replaces an administrative rule with a sustainable, market-based solution



Notable Properties, *Continued*

- Competitive benefits: It ensures **competitive price formation** in the primary FCA, including strong incentives for competitive priced retirement offers
  - Competitive suppliers remain protected by the MOPR in the primary FCA from the price-suppressive effects of subsidies
  - Retiring generators should offer at the **'point of indifference'** that reflects their going forward costs and any option value associated with the retiring unit
- Although the ISO's self-supply rules provide for (load-side) credits, this may **help subsidized self-supply** acquire CSOs
  - Supply participation in the substitution auction is not limited to state-subsidized resources, but can accommodate subsidized resources regardless of the subsidy provider (e.g., a municipality)

Risks, Limitations, and Caveats

- **No perfect solution.** The first two design objectives are in fundamental tension, and there is no truly perfect solution
- **No guarantees regarding the retirements' pace.** If no retirement offers are submitted to the FCA, no subsidized resources would acquire capacity obligations that year
- **Retirements may impact winter fuel security.** This is a complex issue to be addressed in a separate process
- **MOPR does not apply to existing resources in New England**, and we are not proposing to extend it

Questions