Integrating Markets and Public Policy: Using Competitive Markets to Achieve New England’s Public Policy Goals

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Integrating Markets and Public Policies (IMAPP)

**INITIATORS**
- New England States Committee on Electricity (NESCOE)
- New England Power Pool (NEPOOL)

**PURPOSE**
- Address imbalances created by failure of ISO-NE markets to account for state public policies

**PUBLIC POLICIES**
- Renewable Portfolio Standards, renewables procurement requirements, greenhouse gas emission reduction targets and mandates, etc.
ISO-NE Market Imbalances

MARKETS
• Forward Capacity Market (FCM)
• Energy Markets
• Ancillary Services (eventually)

IMBALANCES
• Focus on “reliability” and “least cost” attributes
• Clean resources inadequately compensated
• Resulting out-of-market contracts
IMAPP Proposals

TWO CATEGORIES

1) Price on Carbon in Energy Markets
   Designed to increase compensation for clean forms of energy while reducing carbon in dispatch

2) Forward Capacity Market for Clean Energy
   Provides an investment signal for the development of clean energy resources on a schedule consistent with states goals
Example of Carbon-Intensity Dispatch
Carbon Price = $20/ton CO2
Load = 5000MW

Hypothetical Bid Stack

<table>
<thead>
<tr>
<th>Unit</th>
<th>Unit Type</th>
<th>Capacity (MW)</th>
<th>Bid Cost ($)</th>
<th>Emissions Rate (Tons CO2/MWh)</th>
<th>Carbon ($/MWh)</th>
<th>Dispatch Cost and Order ($/MWh)</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Wind</td>
<td>1000</td>
<td>$-</td>
<td>0</td>
<td>$-</td>
<td>(1) $-</td>
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<tr>
<td>B</td>
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<td>$10</td>
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<td>$-</td>
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Carbon Price Proposals

FEATURES

• Carbon price applied to generator offers according to CO2 emission rate and reduced by the most recent RGGI auction price

• Designed to be technology neutral, rewarding low and zero carbon emitting resources

• Customer cost increases could be offset by the ISO returning the carbon charges collected proportionally to state-regulated EDCs, muni/coop entities and direct wholesale customers on a monthly lump sum basis
Example: FCM Clean Energy Proposal (CLF)

FEATURES
• Eligible resources offer a single bid and price (for two commodities) sufficient to meet their revenue requirement:
  – Capacity Product: Current definition of capacity megawatts; cleared resources acquire obligation
  – Clean Energy Product: Zero emission credits for producing megawatt-hours from non-emitting resources
• ISO clears both products simultaneously in the single auction using least-cost combination of the two products
Consumer Benefits of Market Integration

BENEFITS

- Maintain robust electricity markets
- Ensure competition for capacity and energy attributes and associated cost benefits
- Drive technology innovations
- Avoid cost redundancy
- Avoid stranded costs of carbon resource
- Market-based, least-cost approach to climate goals