Energy Efficiency’s role in Pay-for-Performance

Presentation to the NEPOOL Markets Committee Stakeholders
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Acronyms used in this Presentation

ACP	Actual Capacity Performance
CBR	Capacity Balancing Ratio
CMR	Current Market Rules
CSC	Capacity Scarcity Condition
CSO	Capacity Supply Obligation
DA	Day Ahead
DR	Demand Resource
EE	Energy Efficiency
FCM	Forward Capacity Market
LMP	Lead Market Participants
M&V	Measurement and Validation
PfP	Pay-for-Performance
RT	Real Time
RTOR	Real Time Operating Reserves

Presentation Outline

- Examine how re-distribution of base capacity payments occurs during a CSC;
- Examine how different Resource types participate in a CSC;
- Provide numerical examples of the re-distribution effect;
- Describe the credit support costs of participating in PfP; and
- Discuss the proposal and the stakeholder schedule.

What is a Capacity Scarcity Condition?

It's a re-distribution of base FCA payments

- Triggered upon *a measurable* RTOR deficiency;
- Step 1: all CSO holders are assessed a charge (PfP rate x CBR x CSO) from their base forward capacity market payments; load bears no cost;
- Step 2: Resources' receive gross payments (ACP x PfP Rate) based on their performance:
  - Directly Measured Assets:
    - based on metering requirements of Appendix C of OP-18
    - 0.2% for Generator and Tie-Line Assets, 2.0% or less for Active DR
    - Settled on 5-minute intervals
  - Statistically sampled:
    - based on the M&V requirements of MR1 III.13.1.4.3.1
    - 10% relative precision with 80% confidence
    - Reported once monthly; and
- "Allocation of Deficient or Excess Capacity Performance Payments" is ignored. The principle concern is that a CSC causes a re-distribution.

How do Resources Participate in a Capacity Scarcity Condition?

Not all Resources respond to operating reserve deficiencies equally

Type	Measured?	Participates in DAM?	May Deliver Energy / Reduce Load in RT	May Deliver Reserves
Dispatchable Generator	Yes	Yes	Yes	Yes
Non-dispatchable Generator	Yes	Yes	Yes	No
Intermittent Power	Yes	Yes	Yes	No
Active DR	Yes	Yes	Yes	Yes
BTM PV	Yes	No	Yes	No
Energy Efficiency	No	No	No	No

Examples to highlight the Redistribution Effect

Actual and hypothetical examples

- During the CSC on 9/3/18, EE received a charge of $551k, its *pro rata* share of the insurance pool. The non-EE Resources' share of the pool charge was $7.3 million;
- Holding the 9/3/18 conditions constant except:
  - changing the PfP rate to $5,455/MWh, EE's **charge would have been $1.5 million**, non-EE CSO holders would have been charged $20 million;
  - (a) changing the PfP rate to $5,455/MWh, and (b) applying DR On-Peak and Seasonal Peak Hours rules, EE would have received a **net payment of $10.3 million** funded by charges to all non-EE CSO holders, a net reduction of $0.31/kW in base capacity payments to all non-EE CSO holders; and
  - (a) changing the PfP rate to $5,455/MWh, (b) applying DR On-Peak and Seasonal Peak Hours rules, and (c) reducing system load by 10%, EE would have received a **net payment of $12.6 million**, a net reduction of $0.39/kW in base capacity payments to all non-EE CSO holders.
  - This increase in net payments to EE as system load decreases is in direct contradiction to the evidentiary record.
- Under this proposal net charges or net payments to EE in any hour of any CSC would be ZERO.

Participating in PfP does have a Cost

It's specific to each Lead Market Participant

- All LMPs that retain a CSO must post credit support for "FCM Delivery Financial Assurance" in accordance with the Financial Assurance Policy;
- ISO *estimated* that for CCP 2019-20 the face value of credit support required due to EE's participation in PfP was between $11 – 19 million;
- The cost of providing this support is higher for smaller, non-public companies that may have lower credit ratings; and
- If EE did not participate in PfP this requirement, and its associated cost, would be eliminated.

Conclusion and Recommendation

- Conclusions:
  - CSCs are dynamic events that may be triggered by a minimal reserve deficiencies;
  - A CSC is a re-distribution of base FCM payment from all Resources. A key principle of PfP is to reward Resources' *actual* performance during a CSC;
  - Being measured and being able to influence the outcome of a CSC should be the minimum criteria for a Resource to be able to participate in PfP. EE is not measured and does not participate in the RT;
  - Under CMR EE receives higher performance payments the lower system load is, which is in direct contradiction to the evidentiary record; and
  - There is a cost (i.e., posting of collateral) for all Resources to participate in PfP.
- Recommendations:
  - Retain EE's base capacity payments;
  - Remove EE from the PfP settlement including the "insurance pool"; and
  - Eliminate EE's requirement to provide credit support for the FCM Delivery Financial Assurance.

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The Proposal and Schedule

- Market's Committee schedule
  - 6/10: Introduce proposal and solicit stakeholder feedback
  - 7/9: Distribute Tariff changes and respond to stakeholder questions
  - 8/11: bring Tariff changes to the committee for a vote
- Budget & Finance Subcommittee:
  - 8/10: Introduce FAP changes and solicit stakeholder feedback
  - 8/21: Review FAP changes and respond to stakeholder questions
- Seek a vote on the Market Rule 1 and FAP changes at the 9/3 PC meeting.

Thank You for Your Time and Attention Today