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## FCM Performance Incentives – An Alternative Proposal

- ISO's proposed *upside* incentive can and should be achieved in the RT energy and reserve markets
  - Increasing the RCPFs in the energy markets will allow RT energy and reserve prices to better reflect the shortage conditions, creating incentives on sellers to be available to capture these revenues, and on buyers to enter price-sensitive bids or otherwise hedge their exposure to RT scarcity
  - An RCPF value of \$5,000/MWh would provide exactly the same upside incentive for sellers as proposed by ISO, with the added benefit of more accurate incentives for buyers
- The Brattle Group, in their recent work in ERCOT, concluded that even with high scarcity pricing in the energy market, a capacity market would be necessary to provide a full opportunity for new resource investment to recover its fixed costs.
- A better metric for the FCM (*adequacy*) product is a long-run measure of availability
  - EFORd, as reported through GADS, measures the availability of resources during periods when they are in demand
  - As a possible alternative, PJM uses an economic availability metric, EFORp, measured only in defined peak periods, as part of its Peak-Hour Period Availability (PHPA) mechanism. *See*, PJM Manual 18, Section 8.4. PJM's metric explicitly recognizes a unit's operating characteristics as well as events and conditions Outside of Management Control.
- In place of ISO-NE's proposed mechanism tied to scarcity conditions, implement a pay-for-performance incentive mechanism based on a longer-run availability metric.
  - Collect the availability metric for all resources with Capacity Supply Obligations over the course of each Capacity Commitment Period, and calculate a capacity-weighted average for all resources<sup>1</sup>
  - Resources with worse-than-average availability would forfeit some of their capacity revenues, and resources with better-than-average availability would receive these extra revenues
    - The rate of forfeit/reward would be the effective availability-adjusted price for capacity, calculated as the actual clearing price divided by the system-wide weighted-average availability. Assuming a \$5/kW-month clearing price and a 90% weighted-average availability factor, the effective forfeit/reward rate would be  $(\$5.00/0.9) = \$5.56/\text{kW-mo}$ .

<sup>1</sup> Conceptually, this mechanism should be implemented locationally, and there do not appear to be any theoretical or computational barriers to extending the system-wide concepts to capacity zones.

- A 100MW resource with an 86% availability factor would be subject to a forfeit of  $(100 \times (0.9 - 0.86)) \times \$5,560/\text{MW-mo} \times 12 \text{ months} = \$266,800$  for the year.
- A 100MW resource with a 95% availability factor would receive an additional payment of  $(100 \times (0.95 - 0.9)) \times \$5,560/\text{MW-Mo} \times 12 \text{ months} = \$333,600$  for the year.

### Discussion

- ISO's focus on the energy market is appropriate
  - RT energy markets are the foundation of the entire competitive wholesale market construct. RT prices must reflect RT operating conditions, including scarcity and DA under-scheduling, and provide incentives for DA and longer-term bilateral hedging. If RT energy market pricing is not accurately pricing the actions at the margin needed to maintain reliability and balance demand and supply, all other aspects of the markets will be out of kilter.
  - RT energy markets have been under-signaling contingency and other reliability issues, largely due to ISO reliability commitments and technical limitations that prevent higher-priced resources dispatched out-of-merit or un-priced operator actions from setting price.
- ISO's proposal to use FCM as a substitute for energy market pricing is *not* appropriate
  - Buyers as well as sellers should be exposed to RT scarcity pricing whenever DA scheduling does not fully cover RT conditions
  - A major element to make energy markets work is a functional, price-sensitive buy side. If buyers do not see RT prices reflecting scarcity, there will be no incentive to further develop and expand this capability.
  - FCM should be an *adequacy* product, ie, ensuring there are enough MW available to ISO to satisfy anticipated peak demand and reserve requirements.
- ISO's proposal inappropriately penalizes suppliers in situations over which the suppliers have no control
  - Generators that are not committed or dispatched by ISO based on ISO's anticipated needs and the resource's economics would be penalized if ISO's forecast is incorrect, or if contingencies occur. This is wrong – if suppliers are to be penalized, it should only be for actions/behaviors over which they have control.