

Resource Adequacy Assurance Mechanism (RAAM)
Proposal by New York State Department of Public Service (DPS) Staff
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1. Current ICAP Market is Broken

- 118% capacity purchase requirement, enforced by severe penalties for failure to meet 118%, yields an all or nothing market environment.
- Prices either spike to extreme heights or crash to near zero values. Such prices overstate the marginal value of capacity when they spike and understate it when they crash.
- Large price volatility causes potential entrants (and their lenders) to severely discount capacity market revenue streams to the point where the capacity market fails to achieve its goal of stimulating additional capacity.
- Market is highly vulnerable to market power at times when it is slightly in excess of 118% so that withholding can send it into a capacity deficiency and drive the price to the extremely high level associated with the deficiency penalty.

2. Goals of DPS Staff Proposal

- Repair the spot market by eliminating the boom or bust phenomenon.
- Recognize the value of additional capacity in excess of minimum reserve margins by establishing a mechanism for purchasing such additional capacity. The mechanism provides moderately declining capacity prices with increasing capacity levels.
- Facilitate the forward market by enabling both sides of the forward market to reasonably forecast future spot prices due to their greater stability. This makes it easier for market participants to determine a range of reasonableness and reach agreement on price.
- Virtually eliminate the market power threat in the spot market. Under the proposal, the withholding of supply causes only a modest price rise, not enough to be profitable to a supplier contemplating withholding.

3. Elements of the DPS Staff Proposal

- Centralized spot market, run by the ITP, open to all resource providers, including approved demand side measures. ITP buys, then reassigns to LSEs, similar to current operation of ancillary services market.
- Forward markets are available to enable LSEs to satisfy much or all of their capacity obligations before centralized spot market procurement takes place. These forward markets encompass long-term contracts, medium and short-term bilateral agreements, and ITP-run auctions such as the NYISO’s current six month strip auctions.
- Centralized spot market operated monthly.
- ITP publishes a demand curve (quantity and price) ahead of time for all capacity levels. According to this curve, the willingness-to-pay by the ITP for incremental capacity is specified. The price the ITP is willing to pay declines gradually with quantity procured, unlike the willingness-to-pay implicit in the current NYISO ICAP rules. The table below, shows this difference in the willingness-to-pay (\$ per kW–year).

<u>Quantity of Capacity (% of peak load)</u>	<u>Willingness-to-pay of Current NYISO ICAP rules</u>	<u>Willingness-to-pay of DPS Staff’s RAAM proposal</u>
116%	\$150.00	\$64.00
117%	150.00	60.00
118.01%	0.00	56.00
120%	0.00	48.00
123%	0.00	36.00
126%	0.00	24.00
129%	0.00	12.00
132%	0.00	0.00

- The market clears at a price and quantity along the prespecified demand curve. As such, the quantity procured will likely differ from the minimum reserve margin. The goal is to generally procure more than the minimum. All suppliers receive the market clearing price. All LSEs pay the market clearing price. Quantity requirement of LSEs varies depending on quantity procured in the auction (e.g., 117%, 119%, 123%, etc.).
- Demand curve has sufficiently shallow slope to mitigate market power, and produce prices that don’t suffer from excessive volatility. Demand curve does not incorporate exorbitant deficiency charges that are far above the long-run cost of capacity.

- Demand curve is set high enough to ensure reasonable amounts of supply. In the vicinity of minimum reserve levels (118% for NYISO), demand curve reflects long-run cost of capacity. The annual cost of a new combustion turbine provides an upper bound on the long-run cost of capacity; annual costs are offset by net revenues from energy and ancillary services.
- ITP performs annual studies of long-term forecasts of load and capacity. A forecast of capacity shortages triggers a review of the level of the demand curve. In the event of an actual shortage, the ITP may purchase resources and charge to appropriate LSEs on an emergency basis.
- With the spot market repaired, all other markets (bilaterals, forward auctions, etc.) will perform better. Spot market prices will be much more predictable by players in the forward markets, facilitating long-term agreements.
- DPS staff has considered combining the spot market's demand curve approach with the establishment of a forward purchase requirement for LSEs. Concerns associated with a forward purchase requirement are still under discussion. We do know that a 100% forward purchase requirement is not advisable.