



Capacity Senior Task Force: Issue Summary Report

Last updated: January 28, 2014

Replacement Capacity / Prospective Capacity Resource Incentives



The following report summarizes the “Replacement Capacity” and “Prospective Capacity Resource Incentives” issues, the work process at the CSTF, the Status Quo, and the various proposals being considered and voted on by the CSTF. These two issues have been worked in combination at the CSTF due to the amount of overlap between the two problem statements.

Replacement Capacity / Prospective Capacity Resource Incentives – Issue Description:

In a report developed by the PJM Independent Market Monitor, it was observed that a significant share of Capacity Resources clearing in RPM Base Residual Auction have covered that position by buying out of it in the Incremental Auctions. Part of this market behavior – buying out of commitment rather than physically delivering committed capacity - may be the result of the risk/reward mismatch between the BRA and IAs. Currently, a participant who clears the BRA can buy-back the capacity in an IA at a price that historically has been substantially less than the BRA price and retain 100% of the difference between the BRA clearing price and the IA clearing price. This has created an unintended incentive for participants to over-commit in the BRA only to buy-back the position in the IA at a lower price for the sole purpose of earning a profit. This speculative activity has the potential to create a reliability issue by displacing known physical capacity resources in the BRA, resources which a speculative BRA seller may rely on for replacement purposes in the IA. If this displacement leads to the retirement of capacity resources, there is reduced availability of capacity for sale in the IA or for sale at a price lower the Capacity Resource Deficiency Charge, resulting in the BRA seller choosing to become deficient rather than replace itself with a more expensive physical resource.

Summary of work at the CSTF:

Stakeholders discussed this issue over the course of eight (8) meetings from July 23rd to November 5th. Over that time and through the course of education, discussion and debate, PJM Staff and stakeholders developed eleven (11) proposals that were voted on by the CSTF (and described in a previous version of this summary report [here](#); Voting Results [here](#)). After reviewing the results of the vote, and recognizing the complexity of the issue, PJM Staff felt that further discussion was needed at the CSTF and that a FERC filing on this issue could be delayed until mid-March. Therefore, the MRC did not vote on this issue and the CSTF continued discussion from mid-November until mid-January. At the end of the additional 2 months of Task Force discussion, the CSTF ultimately developed five (5) proposals to address the Replacement Capacity/Prospective Capacity Resource Incentives issues. These proposals were voted on from January 22 – 26, 2014, the results of which were as follows:

	Package 2	Package 2A	Package 4	Package 9	Package 10
Yes	141	68	75	62	36
No	62	116	130	105	131
Abstain	3	22	1	39	39
Total	206	206	206	206	206
% in Favor	69%	37%	37%	37%	22%
Simple Majority	Y	N	N	N	N

The Status Quo and the five (5) proposals voted on by the CSTF are described in the following sections.



Status Quo

Currently, PJM conducts three (3) Incremental Auctions (IAs) after the Base Residual Auction leading up to the Delivery Year. If the reliability requirement *decreases* by a certain percentage at the time of the 1st or 2nd IA, or regardless of percentage in the 3rd IA, PJM will release capacity via a *sell offer* in the IA using an upward sloping offer curve. If the reliability requirement *increases* using the same percentage guidelines above, PJM will procure capacity via a *buy bid* using a downward sloping bid curve. In each IA, cleared buy bids and sell offers are settled against the IA clearing price. If a resource clearing in either the BRA or IA (or some combination) is not physically deliverable at the start of the Delivery Year, the resource pays a Capacity Resource Deficiency Charge equal to the weighted average Resource Clearing Price (BRA or IAs) plus the higher of 20% of the RCP or \$20.

Package Proposals

Final Solutions Matrix

Package 2

This proposal increases the Capacity Resource Deficiency Charge to the weighted average Resource Clearing Price (RCP: BRA or IA) + (higher of 50% of RCP or \$50). This represents an increase to the Status Quo, but not a return to "2.0x" levels that used to be in effect for RPM. This proposal also reduces the number of IAs conducted to one (1) "Final IA", which would take place at the same time as today's 3rd IA. However, two conditional IAs would be conducted prior to the final IA for the purposes of procuring capacity due to an *increase* in the Reliability Requirement only. In the final IA, if PJM releases capacity, the PJM Sell Offer would be formed using an upward sloping offer curve that was floored at the BRA clearing price (offer could be greater than the BRA price, but not lower). This proposal also allows existing generation to elect a Market Seller Offer Cap of 1.1 times the BRA clearing price for the Final IA. For the 1st and 2nd conditional IAs, existing generation capacity may elect MSOC of greater of 1 times BRA CP or their MSOC in first and second IA. Planned generation capacity resources are not subject to any offer capping.

In addition to changing the number of IAs and PJM's sell offer price in the IA, Package 2 would also settle cleared buy bid and sell offers differently than the Status Quo. This proposal would institute an "IA Settlement Adjustment", where cleared sell offers settle against IA CP. Cleared buy bids settle against the IA CP *plus pay the difference between the BRA clearing price for the relevant Delivery Year and the IA CP for the cleared buy bid quantity*. If the IA clearing price is greater than the relevant BRA clearing price, there is no settlement adjustment. PJM buy bids will pay the IA CP. As part the IA Settlement Adjustment, the amount of the difference between the IA clearing price and the BRA clearing price paid by IA buyers would be allocated to zones proportionally based on their daily share of the total reliability charges. A generic example of the IA Settlement Adjustment proposed in package A1 is shown in Figure 1. For a more detailed example, please see "PJM Replacement Capacity Follow-up Items" under the CSTF materials from October 2, 2013, slides 11-12.



	BRA	Single IA Auction			
Locational Deliverability Area (LDA)	BRA CP	Cleared Participant Buy Bid (MW)	Clearing Price (\$/MW-day)	IA Adjustment Charge (\$/day)	
LDA 1	\$100.00	500	\$20.00	\$40,000.00	
LDA 2	\$50.00	100	\$25.00	\$2,500.00	
LDA 3	\$200.00	50	\$75.00	\$6,250.00	
Total				\$48,750.00	

Zone	Final Zonal UCAP Obligation (MW)	Zonal Load Price (\$/MW-day)	Final Zonal Reliability Charge (\$/day)	IA Adjustment Credit allocation (each zone's share of total zonal reliability charge (%) x Total IA Adjustment Charge)	Net Zonal Reliability Charge (\$/day)
Zone A	1,000	\$105.00	\$ 105,000.00	\$4,898.33	\$ 100,101.67
Zone B	1,500	\$105.00	\$ 157,500.00	\$7,347.49	\$ 150,152.51
Zone C	2,000	\$60.00	\$ 120,000.00	\$5,598.09	\$ 114,401.91
Zone D	2,500	\$55.00	\$ 137,500.00	\$6,414.47	\$ 131,085.53
Zone E	3,000	\$175.00	\$ 525,000.00	\$24,491.63	\$ 500,508.37
Total	10,000		\$ 1,045,000.00	\$ 48,750.00	\$ 996,250.00

Figure 1. Generic example of cleared buy bids in the single Incremental Auction and application of the Settlement Adjustment Charge (Top) and the allocation of that total amount as a Settlement Adjustment Credit to load based on the zonal share of the total reliability charge (Bottom).

This proposal also introduces new requirements for offering into the BRA. First, a Non-Diversion Agreement must be completed by all resources, which prohibits the replacement of capacity committed in RPM for the purposes of selling to another market. Second, a letter of Non-Recallability for imported capacity resources must be signed between the resource owner and the host balancing authority. Third, an executed Facilities Study Agreement would be needed by planned generation greater than 20 MW to offer into the BRA.

The changes proposed here would take effect for all auctions associated with the 17/18 Delivery Year, except for the 'PJM Sell Offer' and 'Mitigation' measures, which would take effect immediately upon FERC approval.

Package 2A

This proposal is the exact same as Package 2, above, except for one key provision. With Package 2A, an explicit tariff rule would be added requiring resources cleared in a BRA to go to physical delivery. In the event PJM or its market monitor discovered what appeared to be speculative activity, either party would have a clear rule on which to base a claim of violation of the tariff, should the party choose to refer the matter to FERC. In addition, a 'force majeure' provision for the replacement of capacity would provide a stated safe harbor against any potential claim of a violation of the rule requiring physical delivery for the types of events described in the present definition of force majeure in the tariff. The tariff rule would clarify the basis for any potential claim that a party has participated in a BRA under false pretenses. The tariff rule would not establish a condition for or prohibition against transacting in an IA or through a bilateral contract to replace a cleared resource. Nor would it establish any penalty over and above those established in Package 2.



Package 4

This proposal increases the Capacity Resource Deficiency Charge from the Status Quo to the weighted average Resource Clearing Price (RCP: BRA or IA) + (higher of 20% of RCP or \$40). It also adjusts the PJM sell offer price to establish a non-zero offer floor of 10% of the BRA clearing price. This proposal maintains the Status Quo for most other features in the solutions matrix, including maintaining three (3) incremental auctions.

The changes proposed here would take effect for all auctions associated with the 17/18 Delivery Year, except for the 'PJM Sell Offer' and 'Mitigation' measures, which would take effect immediately upon FERC approval. In this proposal, Mitigation is defined as in Package 2.

Package 9

This proposal contains many of the same features as in Package 2, including the increase in Capacity Resource Deficiency Charge, PJM Sell Offer, Number of IAs, Mitigation, and new measures for BRA/IA participation.

Key differences include the settlement of Incremental Auctions, in which this proposal maintains the Status Quo, and the application of the Short Term Resource Procurement Target, in which this proposal applies the entire STRPT solely to Limited DR and procures that amount in the Final IA.

Another key provision of this proposal is new tariff language stipulating that offered into any RPM auction are making a commitment to provide physical capacity in the delivery year. Exceptions to this commitment, and the ability to replace in an IA, would be allowed under certain 'qualifying events'. Additional details on these last two provisions of Package 9 can be found at the following link:

<http://www.pjm.com/-/media/committees-groups/task-forces/cstf/20140117/20140117-package-9-physical-offers-specific-performance-and-exceptions.ashx>

The changes proposed here would take effect for all auctions associated with the 17/18 Delivery Year, except for the 'PJM Sell Offer' and 'Mitigation' measures, which would take effect immediately upon FERC approval.

Package 10

This proposal increases the Capacity Resource Deficiency Charge from the Status Quo to the weighted average Resource Clearing Price (RCP: BRA or IA) + (higher of 100% of RCP or \$50). It also establishes a pre-auction credit rate equal to $[1.5 \times \text{Net CONE} \times \text{MW} \times 356]$, but which can be reduced if development milestones are met prior to the BRA. The post auction credit rate of $[\text{RCP} \times \text{MW} \times 356 \times \text{Adjustment Factor}]$ can also be reduced for DR & EE, and Planned Resources that meet certifications and development milestones, respectively. Milestones do not reduce the Capacity Resource Deficiency Charge, which remains static.

In this proposal, the PJM Sell Offer Price, Number of IAs, Mitigation, and Allocation of the STRPT are all the same as in Package 2. The IA Settlement Calculation remains the Status Quo, as in Package 9.

Notably, this proposal introduces new milestones for BRA and IA participation, which are as follows:



BRA Participation:

- Non-Diversion Agreement (all resources)
- Letter of Non-Recallability executed by host control area (Imports)
- Executed Facilities Study Agreement (Planned Generation)
- DR can only sell actual end user commitments. Such registrations are ineligible for further DY sale as a capacity resource. Such registrants may participate in Economic Load Response or peak shaving programs to sell DR capability.
- Failure to demonstrate firm financing commitment (see below) results in bar to participation in subsequent BRAs and immediate reversion to "planned resource" status

IA Participation:

- Access to IAs barred for undeveloped resources

Additional Development Milestones for Planned Resources:

- Executed ISA by Aug. 31 of BRA calendar year
- Demonstrated firm financing commitment ("financial close") prior to next BRA

The changes in this proposal would be immediately implemented upon FERC approval, except for post auction credit requirement which will commence consistent with 17/18 DY.

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