Problem/Opportunity Statement

RPM – Non-firm Capacity Resource Incentives

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Problem / Opportunity Statement

The Reliability Pricing Model design should be modified to assure that resource commitments obtained in an RPM auction (esp. the Base Residual Auction) will result in the physical delivery of electricity during the relevant delivery year. The current design encourages market participants to offer and clear prospective capacity resources in a Base Residual Auction with little recourse for failure to bring such resources to delivery. Such incentives undermine the goal of RPM and hinder its purpose. Moreover, the current market design provides insufficient oversight of cleared, prospective resources to assure that development is on course. Current RPM rules provide minimal milestones for prospective resources that typically fail to assess the vitality of such resources until very close to expected delivery. Further, the current rule set provides no authority for PJM to dismiss a specious resource to avoid further dilution of the forward planning signals that the RPM auction structure is designed to produce.

According to PJM, the RPM Capacity Market is designed to ensure the adequate availability of necessary resources that can be called upon to ensure the reliability of the grid. The goal of RPM is to align capacity pricing with system reliability requirements on a sufficiently forward basis to permit an actionable physical response to the reliability needs of the system through the use of competition.

PJM and its stakeholders should immediately address the policy considerations and market rules described below to improve the RPM market design prior to the May 2014 Base Residual Auction. PJM has experienced an influx of non-firm, planned resources clearing in the past three BRAs coincident with the exit of many firm existing resources. Such resources include planned internal generation, existing and planned external generation that is committed without completed firm transmission service and uncontracted demand response.

The scope of the anticipated work includes both broad policy considerations as well specific market rule examinations. Matters for consideration include:

- Incentives and option value for prospective or “planned” resources to purchase replacement capcity in Incremental Auctions or fail to deliver resources committed in a Base Residual Auction
- Disincentives for prospective or planned resource to cover in Incremental Auctions; including, but not limited to credit requirements and penalties
- Milestones for assessing the progress of prospective or planned resource development, including a comparative assessment of best practices from other RTOs
- PJM authority for removing or barring resources that fail to meet development milestones

Objective

The objective of this Problem Statement is to initiate PJM Stakeholder consideration and action to assess the vitality of RPM in achieving its goal to align capacity pricing with system reliability requirements and to provide transparent information to all market participants far enough in advance for actionable response to the information, consistent with the PJM Regional Transmission Expansion Planning Process (RTEPP). Such

assessment must consider whether the current market design unreliably an inequitably promotes planned resources by providing low-risk opportunities for financial gain without sufficient assurance of physical delivery.

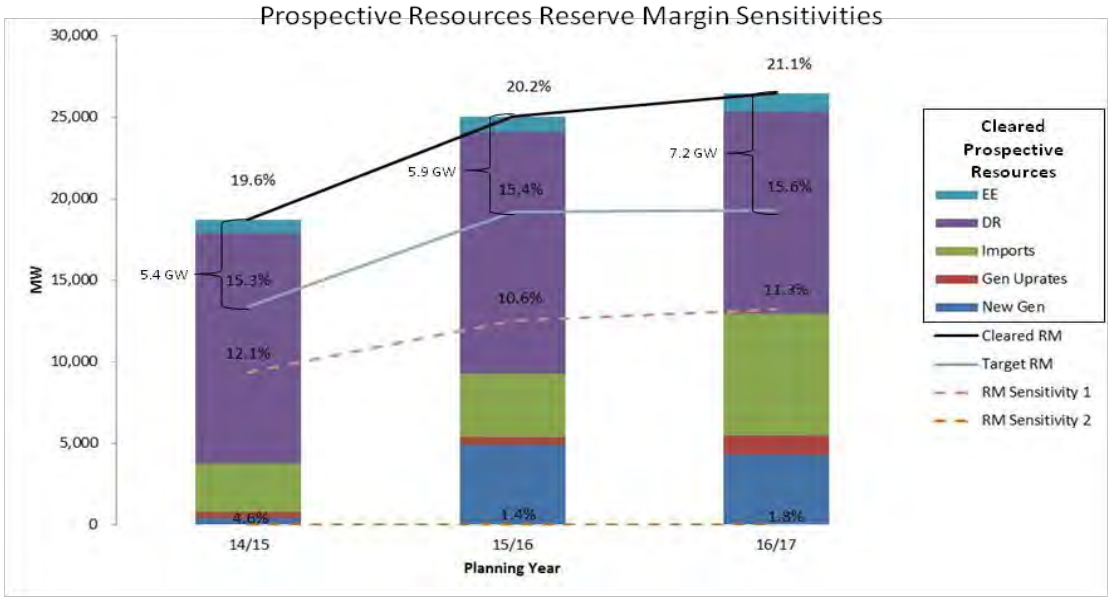
Timeliness

The matter should be addressed and resolved by November 2013 to assure that required tariff an manual revisions are approved prior to the 2017/18 RPM BRA.

Magnitude and Impacts

The current market design and rules provide insufficient assurance that resource adequacy targets will be met in the delivery year. Resource developers have insufficient motivation to ultimately commit physical resources in the delivery year when low-risk options exist to purchase replacement capacity in Incremental Auctions or to default on their capacity obligation. Moreover, PJM has insufficient tools to track the viability of such resources through the delivery year. For example, the IMM observed that 27% of DR purchased replacement capacity in Incremental Auctions for the 2012/13 Delivery Year. [*Analysis of Replacement Capacity for RPM Commitments: June 1, 2007 to June 1, 2012,* Monitoring Analytics (Dec. 11, 2012)]. More recently, PJM reported that 36% of all imports in the 2016/17 Delivery had not obtained a complete firm transmission path at BRA clearing. [*2016/2017 RPM Base Residual Auction Results*, PJM (May 2013)].

The impact could be substantial. In each of the two most recent RPM Base Residual Auctions, PJM has cleared over 20 GW of prospective or planned resources (i.e., planned generation, imported generation without firm transmission, undesignated demand response). As the graph below illustrates, if only approximately 25-33% of such resources fail to materialize for the delivery year, then PJM would have less committed capacity than its target reserve margin. Under extreme stress, if none of the prospective resources materialized, then PJM would tread dangerously close to having insufficient resources to meet forecasted peak load.



Assumptions
- RM Sensitivity 1: Assumes 50% of prospective resources are unavailable for delivery
- RM Sensitivity 2: Assumes all prospective resources are unavailable for delivery