Avoiding the Credibility Trap:
A Proposal to Maintain Resource Adequacy

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1. I am Dr. Roy Shanker, Ph.D. an economist with 50 years of experience in electric markets. I have actively participated in PJM market design since the inception of the market. I am presenting my proposal today because I think we are at a point where decisions made now will determine the success or failure of RPM.
2. My view is that for all its faults and imperfections, RPM has delivered in its central mission – resource adequacy. But now, cumulatively, political and other forces seem to have combined in such a way that may bring about its demise. While PJM has laid out a problem statement of alternatives for a longer horizon transition, there is a need to address the immediate issues raised by the Reliability Backstop Procurement/Auction (RBP). My observations are consistent with PJM's own recent paper released May 6th, but I focus more on the immediate need for the correct representation of RBP supply in RPM auctions.
3. Without measures to protect investment incentives, the PJM proposed representation of RBP supply as price takers will greatly stymie new entry and the retention of existing resources, again leading to a resource adequacy problem. This result will occur regardless of any new market paradigm that PJM decides on for the future. This follows my long-held concerns, that PJM has acknowledged in their paper, and named as the "Credibility Trap".
4. The current challenge facing PJM is twofold: First, how do we maintain reliability when facing a perceived supply shortage? Second, how do we preserve a viable competitive market for Capacity Resources?
5. A simple hypothetical example can help illustrate these challenges:
    a. Assume, to address a forecasted reliability deficiency, 14 GW of operational capacity magically appears overnight in PJM because of the RBP. This seems like a good thing. Prices might be low as a result, but that just reflects supply and demand, right?
    b. But there is a problem. Existing and potential new resource owners wonder if even more new supply will appear in the future when higher prices are anticipated. They worry about recurrences of things like price collars and regulatory intervention. If these worries are credible, will they put their capital at risk in the competitive RPM market structure? Probably not. Will they retire existing capacity? It is certainly more likely. Will they sit on the sidelines waiting for a low-risk, out-of-market opportunity? Very likely.
    c. And PJM's track record – e.g. over-accreditation of capacity resources, price collars, doing nothing when prices were low – suggests these concerns are very credible.
    d. The result is that price signals from RPM cannot be relied on to guide new investment and retirement decisions, the very foundation of the RPM initial design. PJM characterizes these types of problems as creating a "Credibility Trap." Resource adequacy now becomes dependent on repeated additions of new capacity outside of the RPM process, instead of market-based price signals.
    e. If there is any hope of retaining a market-based structure that works, the price impacts of out of market new supply must be mitigated/isolated. Otherwise, long-term resource adequacy will suffer, and reliability requirements will default to a perpetual backstop process.
        i. Moreover, the facts on the ground indicate that some of the issues PJM references may not actually be happening – e.g., 811 new generation projects totaling ~220 GWs of capacity have entered the queue. One-sided market interventions now such as the RBP risk strangling this supply response at its inception and creating resource adequacy problems in the near term. Uncertainty in the marketplace discourages new entry as new suppliers wait for the long-term RBP contracts.
    f. This basic problem gets more worrisome as you consider the details such as load forecast error. For example, what if all the regulatory process complications lead to a delay in anticipated load arriving – not that it doesn't ever appear, but that it shows up several years later than expected?
        1. Assume again RBP procures 14 GW of new capacity, and it is represented as zero priced supply in RPM, but only 5 GW of the anticipated load shows up when expected. There will be a surplus caused by the out-of-market supply, and the price signal in RPM will be for no new entry, and indeed for retirement, even though a shortage is anticipated.

2. Next, two years later than anticipated, when the 14 GW of load does show up, the 14 GW of supply is no longer enough due to the false price signal and the associated increased retirements. As a result, there is a shortfall triggering an immediate need for more capacity.
3. This causes the initiation of further RBPs. PJM itself describes this cycle as the "**Credibility Trap.**"

6. As proposed, RBP will procure a large amount of new resources under long-term contracts outside the RPM. PJM proposes to include these resources into the future RPM actions as price-takers.
   a. This type of intervention will distort competitive market signals, with the impact being particularly pronounced if load growth is less than expected, potentially leading to prices that cannot sustain resource adequacy over an extended period.
      i. I am particularly concerned that we could see situations like this one where the RBP brings more generation than is needed, given that there is a strong financial incentive (with RBP resources offered as price takers) for load related interests to over-forecast and over-procure. For that reason, PJM should remain the final arbiter for the load forecast as it is today.
      ii. Having contracts for terms of up to 15 years will mean that the impact will be felt for an extended period. Coupled with long lead times these distortions could extend over 18 years into the future, amplifying the problem. This also argues for prudence in the procurement process.
7. Graphics of the impact of excess capacity as price takers due to forecast errors followed by retirements show the adverse impacts of the price-taking representation of RBP new generation. Pricing is inconsistent with actual market conditions and will force additional out of market intervention (see Shanker Slides).
8. PJM's and others' documented efforts to limit the high end of the designed range of prices in the RPM has not been matched by symmetrical efforts to support prices when they were depressed.
   a. Immediately preceding the current tight market conditions, the RPM experienced a period of extremely depressed prices, with RTO prices clearing at 10-20% of Net CONE from 2022/23 through 24/25, and prices ranging between 10 and 50% of Net CONE for the entire period from 2012/13 through 2024/25.
   b. These depressed prices were likely a material consideration in recent exits of existing resources that would have been very helpful in maintaining reliability under the current tight conditions.
   c. Yet these depressed prices did not lead to a market intervention to support prices that would be analogous to either the price collar or RBP; instead, the low prices were simply allowed to persist, and resource exits and low levels of entry were accepted as the appropriate market outcome.
9. If PJM continues an RBP path where there is no long-term resource adequacy protection for merchant entry and the market-based price signals of RPM are undercut, PJM's real-world pattern of one-way intervention will be cemented into RPM for 15 years or even longer, if not perpetually. It will be internalized into the economic investment and retirement decisions of owners of potential new and existing capacity and will chill new investment and drive the exit of existing resources (other than that procured by future RBP). All this leads to the perpetuation of the need for additional RBP and out-of-market procurement.
10. The first-best solution to this problem is to allow the market to work as designed and avoid ad-hoc out-of-market interventions. When this is not possible, as is the case with the RBP and associated reliability concerns, the intervention should incorporate elements that address the potential downsides for resource owners and investors and provide confidence that future interventions will not be one-sided. **The goal should be to isolate the impact of the out of market supply from the market-based process as much as possible.**
    a. The RBP should incorporate protections against this downside risk to preserve the investment incentives needed to ensure long-term resource adequacy. Specifically, I recommend an isolation approach where (a) RBP resources are kept out of the BRA, and (b) the lower of (i) the amount of load targeted for procurement in the RBP (assuming the RBP is successful, if not, simply use the amount procured), and (ii) actual large load in the corresponding BRA, is also excluded from the BRA.

(Please also see the associated summary slides presented in the PJM Stakeholder process)