

Comments on Triggering, Re-Pricing and other CCPP Issues

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FYI about the presenter

- Consultant to consumer advocates of NJ, PA, MD, DC, DE
- Consultant to New England States Committee on Electricity (NESCOE) for similar issues being addressed in New England
- Testified on MOPR issues in PJM, also NE (2010), MISO (2013)
- Have testified against subsidized resources > 10 times in past three years (~5x elec. gen., ~5x gas pipe); not a fan!

Views expressed here are my own and may not be those of some clients

Comments in AD17-11:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14620400>

Comments on two-tiered pricing proposals in New England:

http://nepool.com/uploads/IMAPP_20161021_NESCOE_2Tiered_Pricing_Analysis.pdf

Missing Money Revisited: Evolution of PJM's RPM Capacity Construct:

<http://appanet.files.cms-plus.com/PDFs/MissingMoneyRevisitedJWilsonSept16.pdf>

Topics

1. Bigger picture
2. Potential impacts of incremental/decremental resources
3. Comments on determination of action (“trigger”)
4. Comments on two-tier pricing approaches
5. Takeaways

1. Bigger Picture

- RPM capacity market is a market intervention
 - *Provide “missing money” to get to “one day in ten years”*
- MOPR rules are an intervention into the market side of the RPM intervention
 - *Interventions should generally be kept to minimum necessary*
 - *Attempts to suppress capacity prices should be mitigated, punished, of course*
- Longer term, our goal should be to see:
 - More revenue in energy and ancillary services markets rather than capacity
 - More long-term contracting to guide and price entry decisions

MOPR Rules and Policy Resources: Three Conflicting Objectives

1. All resources' contributions to resource adequacy should be recognized (else inefficient, consumers pay twice)
2. Capacity prices should be fair, J&R, not manipulated or suppressed
3. Total cleared capacity cost should be reasonable, efficient

These three conflicting objectives pose a challenge; and in addition:

- Different stakeholders place very different priorities on the objectives
- Misconceptions about the impact of policy resources on prices

(a fourth objective – that one region should not be negatively impacted by policies in another region – is yet another challenge)

2. Impact of Incremental/Decremental Resources on Capacity Prices

- Market participants adjust their entry and exit plans based on the overall supply/demand balance, anticipated capacity prices
- When a new resource (or a retirement) is announced it changes the supply/demand balance; some existing or future plans are adjusted
 - Timing of entry or exit; sizing of entry; go/no go; the supply curve changes
- With sufficient lead time, the market fully reflects and absorbs an incremental or decremental resource
- In particular, a new resource known, say two years before the base residual auction (five years before its first delivery year) should be fully absorbed and not appreciably impact prices
 - May displace another resource, yes; suppresses price, no.
 - Relatively large resource changes in smaller LDAs could take longer

The Market Absorbs: Some Indications

- 26,000 MW of retirement in a short period without price spike
- 12,000 MW of new resources cleared for base residual auction w/o mitigation, but only about 3,000 MW offered and cleared
- RTO Region capacity prices generally in the \$80-\$165/MW-day range (with a few exceptions) over many years, despite rules changes, retirements, entry, etc. etc.

Conclusion: the relevant section of the supply curve (near market clearing) is rather stable year-to-year, due to adjustments of entry and exit decisions in response to the anticipated supply/demand balance and resulting prices.

New Entrants' Offer Prices

- Note that the discussion in this section pertains equally to any new resource whether entering on a merchant basis or with policy support
- Note that new entrants of all types typically offer into RPM as price-takers, not based on a levelized cost (Net CONE) calculation (it's a long-term decision, auction determines only one price)

Forward Capacity Market CONEfusion (Electricity Journal, November 2010)

<http://wilsonenec.com/dev/wp-content/uploads/2016/07/Capacity-Market-CONEFusion-Elec-Journal-as-posted.pdf>

Capacity Prices “But For” a Resource?

(the hypothetical underlying MOPR “re-pricing”)

- Usual approach: shift the supply curve by the resource quantity (either by removing it or by MOPR pricing it out of the money)
 - Approach assumes no market adjustment; the rest of supply curve unchanged
 - A reasonable approach under circumstances when the market had essentially no time to adjust (a last-minute surprise), as has occurred or almost occurred a few times recently
- But this re-pricing approach overstates the impact to the extent the market had any opportunity to adjust
 - Smaller resource; larger zone with many other resources
 - Longer lead time since entry was known
- Even if a resource totally surprised the market, the market will likely fully absorb it in a few years through the various adjustments

MOPRing Can Distort and Delay Market Absorption

- Example: Assume market adjustments would fully absorb a particular unexpected incremental resource over, say two years
- MOPR removes it from the market clearing, sending a price signal as if it did not exist
- Could delay adjustments needed to fully absorb the resource
- MOPRing is especially wrong and distorting in 3rd, 4th, ... years

Goal should be to have the market absorb the resource, that is, get back to the right supply/demand balance and right price.

3. Determination of Action (as in PJM's flow chart)

Two related issues:

1. Under what circumstances should auction results be adjusted due to certain resource entry (or exit or non-exit) (“trigger”)
2. What adjustment should be made (what is the impact; how to undo)

Put another way, is there a price impact, and how large, how to undo it

Some considerations that really do matter (ignoring them will get the wrong answer and likely lead to litigation):

- Absorption, discussed above: size, lead time, whether resource replaces existing resource, etc.
- Whether the subsidy is to reflect a known, quantifiable externality (carbon)

4. A Few Comments on Two-Tiered Pricing

1. Any approach that clears based on one price, but pays a different price (as in PJM's proposal), will distort offer prices:
 - “race to the bottom” – bid below cost to clear; actual payment will be higher
 - And “clear out the top” – offer any other resources that won't win that race at very high prices, to support high clearing prices in the second stage
 - Leads to a thin, steep supply curve in exactly the price range where we want many resources, to have stable pricing over time.
2. The administrative price calculation (with re-pricing) overstates the “competitive price” for multiple reasons (some noted above)
3. The resulting price and quantity pair may not be a point on the VRR curve (so resulting cost may be excessive)

5. Some Takeaways

- Markets not as fragile as some suggest; substantial ability to absorb incremental/decremental resources with minimal impact on prices
 - “Shift the supply curve” or MOPRring overstates price impact of an incremental or decremental resource except under “total surprise” conditions
 - Suggested design component: lead time, market knowledge of resource entry (or exit or non-exit) to auction
 - MOPR intervention should be minimized, and market encouraged to absorb incremental/decremental resources
- Two-tiered pricing gets price wrong, may distort offer incentives

Attempts to suppress prices should be thwarted, “of course”