ISO new england

memo

To: NEPOOL Markets Committee

From: Andrew Gillespie – Director, Market Development

Date: April 24, 2023

Subject: Concerns with LS Power's Mechanism for Repowered Resources to Unwind Forward Capacity Market Obligations Proposal

While the ISO understands that LS Power finds itself in a challenging position with regards to its Capacity Supply Obligation (CSO), we have concerns with the remedy that it proposes which would 'revert' its CSO associated with this resource from the new repowered resource cleared in the Forward Capacity Auction (FCA) to the existing resource it 'replaced.' This memo articulates ISO's primary concern only. Due to the fast-track nature of LS Power's proposal, the ISO has not conducted a thorough assessment of the proposal and, therefore, takes no position on the efficacy of the proposal beyond the concern discussed in this memo.

The remainder of this memo is organized in three sections. The first section is a generalized description of the mechanics regarding the treatment of a repowering offer in the FCA. The second section demonstrates how clearing a new repowering offer in the FCA could yield different auction outcomes relative to the case where the underlying existing resource might have participated as a priced existing capacity segment. The final section summarizes the ISO's primary concern with the LS Power proposal; namely the incentive and appropriate compensation problems created if existing capacity effectively participates in the FCA as new capacity and sets the FCA clearing price.

Repowering 'Mechanics' in the FCA

In this section we generally describe, through an example, how repowering offers function within the FCA. Consider an example where a participant has submitted and qualified a new (repower) offer for an (underlying) existing capacity resource, and also submitted a de-list bid for the underlying existing capacity resource.[1] For this example, assume an existing 200 MW resource is participating as a new 250 MW repowered resource.

At the start of the auction and as it proceeds through its descending rounds, only the new (repower) offer supply segment (250 MW) is included in the auctioneer's aggregate supply stack. Of particular note is the additional capacity, 50 MW in this example, is not offered separately; it is part of the (singular) new offer for 250 MW. It is also worth recalling that new capacity offers (segments) are eligible to set the clearing price, and are only subject to buyer-side mitigation (*i.e.,* there is no 'downward' mitigation of new offers).

[1] It is not a requirement that a de-list bid for the underlying existing resource also be submitted with a repowering offer.

ISO New England Inc.
One Sullivan Road
Holyoke, MA 01040-2841
413-535-4088
agillespie@iso-ne.com

During the auction, only when the new (repower) offer supply segment becomes extra-marginal (*i.e.,* when it is not the marginal offer, or infra-marginal) is the underlying existing capacity segment then included in the auctioneer's aggregate supply stack. In the example, if the auction price goes below the 250 MW new (repower) offer price and hence would not get a CSO, only then is the 200 MW existing capacity segment included in the auctioneer's aggregate supply stack. As the auction then proceeds through subsequent descending rounds, only the (lower priced) existing capacity segment is included in the auctioneer's aggregate supply stack.

In the next section, we provide an example that contrasts a resource participating and clearing as a new (repower) offer with the same resource participating as an existing resource.

Different Potential Auction Outcomes

In this section we contrast two different scenarios.

The first scenario (Figure 1) shows the effects on the FCA outcome if a marginal new (repower) offer clears and sets the zonal clearing price (the 250 MW segment in the previous example).[2]

The second scenario (Figure 2) shows the effects on the FCA outcome if the existing capacity had instead participated with a de-list bid (the 200 MW segment in the prior example). In this scenario, the existing capacity is awarded a Capacity Supply Obligation (CSO) as the de-list bid price was infra-marginal.

In the next section, we use these figures to demonstrate one possible, unintended, outcome the LS Power proposal might create.

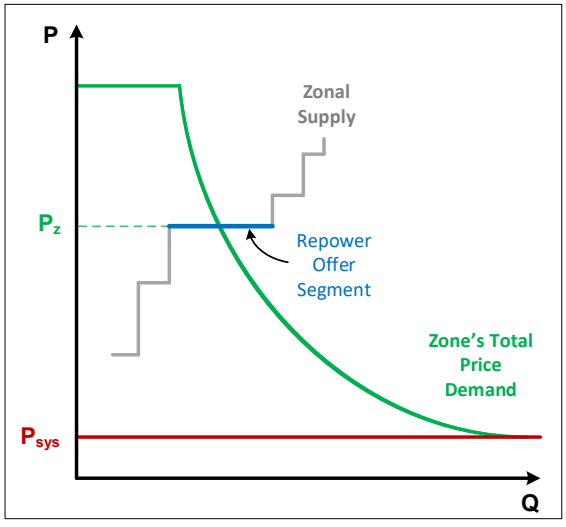


Figure 1. Marginal New (repower) Offer Segment

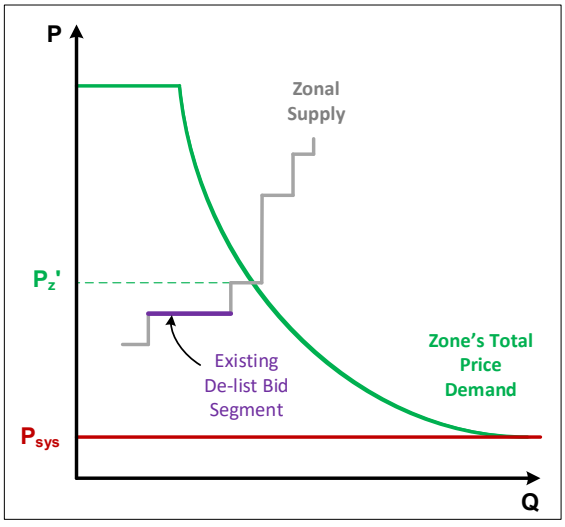


Figure 2. Infra-marginal Existing Bid Segment

[2] While the effect is shown in the context of an import-constrained capacity zone, the same would apply at the system level (*i.e.,* for the 'Rest of Pool' zone).

Implications of LS Power's Proposal

The main concern regarding repowering is the ability of an existing resource to participate as a new resource in the FCA.[3] For this reason the thresholds for qualifying an existing resource as a "new" repowered resource were established and the rules were developed to "assure that capacity from these re-powerings will be unable to exercise market power."[4] As the FCM Settlement Agreement Order stated "We further find that the level of the 20 percent/40 megawatt threshold is sufficient to provide incentives for significant additions to capacity levels, *while preventing existing capacity from being reclassified as new capacity by means of minor additions*" [emphasis added].[5]

Putting all this together, the ISO's primary concern with LS Power's proposal is that it could, going forward, produce an outcome where existing capacity, in effect, has participated in the FCA as new capacity *and set the clearing price*, with very little or perhaps no capacity addition. This is a problem from both an incentive standpoint and an appropriate compensation (ex post) standpoint.

This unintended outcome of LS Power's proposal can be seen using the figures shown above.

- Figure 1 shows the FCA clearing price is set by the new (repower) offer, which would include the additional capacity necessary to meet the threshold requirements.
- After the auction, this new (repower) offer is then 'unwound' and reverts back to the underlying existing resource. However, the auction results are not altered or modified after the fact to account for how the auction might have cleared had the resource instead participated in the FCA as an existing resource (Figure 2).
- Instead, the now 'reverted' existing resource, like all other resources with a CSO, would be paid the clearing price; in this case the higher clearing price set by the 'unwound' new (repower) offer. Unlike a terminated 'greenfield' new resource which does not have a CSO and is therefore not paid the auction clearing price, here the 'unwound' resource is paid the auction clearing price.

This possible outcome was of concern for stakeholders and from a market power perspective when the repowering rules were created. To prevent this outcome the rules are constructed such that if the new (repower) offer clears, the underlying existing resource is wholly replaced in all instances by the cleared new (repower) resource. Consequently, there is no ability in the current rules to 'unwind' a cleared new (repower) offer, and this omission was by design.

In summary, based on its initial review, the ISO's primary concern with the LS Power proposal is the problem it could create; namely that it could, in its effect, produce an outcome where existing capacity, whether occurring prospectively or retrospectively, has participated in the FCA as new capacity *and set the FCA clearing price*.

Again, the ISO understands the challenging position LS Power finds itself in. However, the ISO finds LS Power's proposed Tariff changes problematic.

[3] 115 FERC ¶ 61,340, pp134 "Objecting Parties argue that because existing suppliers have both the incentive and ability to withhold capacity, it is important that only "new" resources be allowed to set the auction clearing price."
[4] *Ibid* pp136.
[5] *Ibid* pp138

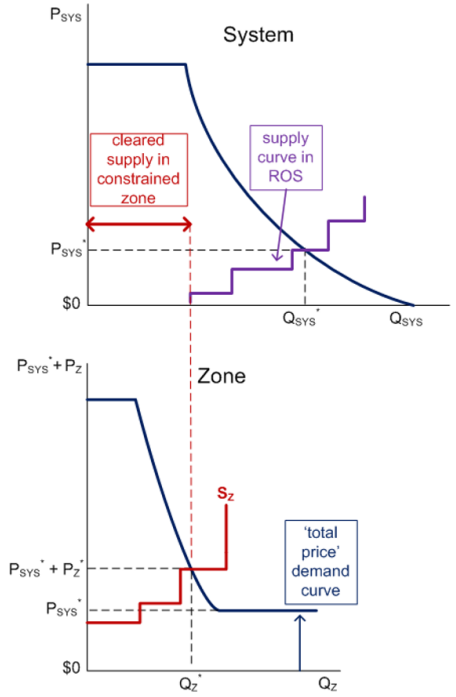
ISO New England Inc.
One Sullivan Road
Holyoke, MA 01040-2841
413-535-4088
agillespie@iso-ne.com

Appendix – Import-Constrained Zone pricing example

FCM Zonal Demand Curves presentation to December 2015 Markets Committee.

Example 1: Import-Constrained Zone

- System clears enough ROS capacity to meet system demand curve (holding cleared zonal capacity fixed at Q_Z^*)
  - System price is P_{SYS}^*
- Zone clears at intersection of zonal supply and 'total price' demand curve (zonal curve shifted 'up' by P_{SYS}^*)
  - 'Total price' demand curve represents sum of zonal congestion curve and system price
  - Zonal curve is bounded between system price and price cap



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