



would create a larger redistribution in surplus than a more limited implementation. Any implementation of fast start pricing would create a redistribution in surplus without any efficiency gains.

Consumer surplus is the benefit that consumers receive from paying a single clearing price rather than paying a higher price they would be willing to pay. Likewise, producer surplus is the revenue that producers receive from payment of a single clearing price rather than a lower price (marginal cost) they would be willing to accept. PJM mischaracterizes the figure created by the Market Monitor to illustrate issues with PJM's convex hull approach to repricing. But PJM does recognize that PJM's fast start pricing proposal is a significant step towards PJM's convex hull repricing. The fact that market surplus shifts from consumers to producers does not depend on the slope of the demand curve.<sup>4</sup> The magnitude of the redistribution does change based on the slopes of supply and demand. In fact, a steeper demand curve results in a larger loss of consumer surplus.

Total surplus falls because PJM's proposed lost opportunity cost ("LOC") payments to support dispatch instructions would impose new uplift costs on the market that do not currently exist. Fast start pricing creates no cost savings that would increase market surplus to offset LOC payments. PJM has not described how it intends to fund the LOC payments. Paying these costs from consumer surplus will reduce consumer surplus. Paying these costs from producer surplus will reduce producer surplus. The LOC payments do not create producer surplus, because the generators receiving the payments are not selling or producing energy associated with the payment. Any such per MWh charge to cover the payments would change market incentives, undermine efficient market dispatch and further alter market surplus.

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<sup>4</sup> See "Design Criteria for Energy Market Prices," Monitoring Analytics presentation to the Energy Price Formation Senior Task Force (February 15, 2018) <<http://pjm.com/-/media/committees-groups/task-forces/epfstf/20180215/20180215-item-06C-epfstf-energy-and-reserve-pricing-goals-and-criteria-imm.ashx>>.

## **B. Nonconvex Supply Does Not Invalidate Short Run Marginal Cost Pricing.**

PJM argues (at 2–4) that the efficiency of pricing based on short run marginal costs requires evidence and documented support from economic principles. The opposite is true. Short run marginal cost pricing is the established standard in economics and in LMP markets. It is pricing at levels other than short run marginal cost that require substantiation. The nonconvexity of supply does not invalidate short run marginal cost pricing.<sup>5</sup> In making these arguments, PJM implicitly agrees with the Market Monitor that commitment costs for fast start resources are not short run marginal costs. PJM’s goal is not to better capture short run marginal costs in prices. PJM’s goal is to abandon short run marginal cost pricing.<sup>6</sup> PJM’s proposal should be rejected.

Despite PJM’s arguments, prices cannot and are not expected to always rise with load.<sup>7</sup> Even with fast start pricing, factors such as generator ramping constraints, availability of reserves, and the discrete nature of resource commitment will always result in prices that can rise or fall as load rises. Intuition about the directional change of prices with load does not substitute for pricing consistent with decision making on the margin in efficient market design.

## **II. MOTION FOR LEAVE TO ANSWER**

The Commission’s Rules of Practice and Procedure, 18 CFR § 385.213(a)(2), do not permit answers to answers or protests unless otherwise ordered by the decisional authority. The Commission has made exceptions, however, where an answer clarifies the issues or

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<sup>5</sup> IMM Answer at 3.

<sup>6</sup> See “Proposed Enhancements to Energy Price Formation,” PJM Interconnection (November 15, 2017), which can be accessed at: <<http://www.pjm.com/-/media/library/reports-notice/special-reports/20171115-proposed-enhancements-to-energy-price-formation.ashx>>.

<sup>7</sup> PJM at 2–3.

assists in creating a complete record.<sup>8</sup> In this answer, the Market Monitor provides the Commission with information useful to the Commission's decision-making process and which provides a more complete record. Accordingly, the Market Monitor respectfully requests that this answer be permitted.

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<sup>8</sup> See, e.g., *PJM Interconnection, L.L.C.*, 119 FERC ¶61,318 at P 36 (2007) (accepted answer to answer that "provided information that assisted ... decision-making process"); *California Independent System Operator Corporation*, 110 FERC ¶ 61,007 (2005) (answer to answer permitted to assist Commission in decision-making process); *New Power Company v. PJM Interconnection, L.L.C.*, 98 FERC ¶ 61,208 (2002) (answer accepted to provide new factual and legal material to assist the Commission in decision-making process); *N.Y. Independent System Operator, Inc.*, 121 FERC ¶61,112 at P 4 (2007) (answer to protest accepted because it provided information that assisted the Commission in its decision-making process).

### III. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to this answer as the Commission resolves the issues raised in this proceeding.

Respectfully submitted,



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Dated: May 4, 2018

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,  
this 4<sup>th</sup> day of May, 2018.



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