



Control Number: 47199



Item Number: 67

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PUC PROJECT NO. 47199

2017 DEC 22 AM 9:14

PROJECT TO ASSESS PRICE-
FORMATION RULES IN ERCOT'S
ENERGY-ONLY MARKET

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PUBLIC UTILITY COMMISSION
OF TEXAS
FILING CLERK

SHELL ENERGY'S REPLY COMMENTS

TO THE HONORABLE CHAIRMAN AND COMMISSIONERS OF THE PUBLIC UTILITY
COMMISSION OF TEXAS:

Shell Energy North America (US), L.P. (Shell Energy) submits these Reply Comments in response to the Commission's October 27, 2017 request in PUC Project 47199, *Project to Assess Price-Formation Rules in ERCOT's Energy-Only Market*.

Removing the full capacity of RUC and RMR capacity from the operating reserve demand curve (ORDC) reserve

Shell Energy agrees with a number of commenters representing a large portion of both generation and load¹ that out-of-market actions² like reliability unit commitment (RUC) and reliability must-run (RMR) have significant impact to the energy prices, and eliminating those impacts from Operating Reserve Demand Curve (ORDC) price adder before summer 2018 is crucial. Contrary to the argument made by TIEC and the ERCOT Steel Mills, as the designer of ORDC, Dr. William Hogan, has explained, ORDC is not creating the expected price results due to the impacts of out-of-market actions. Hence, the expected scarcity this coming summer is not an argument for waiting. Instead, it is the reason why the Commission should take immediate action. When ERCOT brings RUC/RMR resources online, the ORDC reserves are artificially increased by that capacity, which would not have been online if not for the out-of-market actions. The suppression of the ORDC adder due to this out-of-market capacity is not addressed by previously adopted market design changes like the introduction of the price floor for RUC and RMR and the elimination of the pricing impact of blocky MWs. There are a number of out-

¹ Vistra, NRG, Calpine, Dynegy, Exelon, Shell Energy, LCRA, Rainbow Energy Marketing Corporation, Lone Star Sierra Club, Tenaska and The Wind Coalition

² *Project to Assess Price-Formation Rules in ERCOT's Energy-Only Market*, Project. No. 47199 (26), Shell Energy's Comments at 3 (Sept. 29, 2017).

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of-market actions that ERCOT takes that undermine price formation.³ Removing the full capacity of RUC and RMR capacity from the ORDC reserve amounts will eliminate the impacts of the most significant out-of-market actions and can be implemented quickly as it will require only minimal system changes. Since the impact of this change will be incorporated in energy prices, this pricing change will be hedgable, satisfying the retail electric providers' needs as noted by Direct Energy. Shell Energy strongly believes that it is crucial to make this change before the coming summer. Hence, Shell Energy requests the Commission to direct stakeholders to harvest this low hanging fruit without further ado.

Eliminating mitigation of resources “RUCed for capacity” and relaxing mitigation of resources “RUCed for congestion”

Shell Energy and Vistra Energy (Vistra) agree on eliminating mitigation of resources “RUCed for capacity.” However, Vistra does not support relaxing the mitigation of resources “RUCed for congestion.” We do not agree with the concerns that Vistra raised and believe that relaxing mitigation for resources “RUCed for congestion” is needed to address the price suppression caused by all RUCs. Changes to the Competitive Constraint Test (CCT) or changes in determining which resources get mitigated are not prerequisites to relaxing the price level at which the resources are mitigated. Incorporating the startup and the minimum energy costs of RUC and fast start resources⁴ in the Locational Marginal Price (LMP) requires changes only to the Mitigated Offer Cap (MOC) and Reliability Deployment Price Adder (RDPA) calculation. These changes can be done without any change to the current CCT. It is significant that TIEC has expressed a willingness to reconsider the price level at which resource offers should be mitigated to ensure that prices appropriately reflect the true marginal cost of committing the resource to meet the next MW of load.⁵ Startup and minimum energy costs of fast start resources can be considered as marginal cost because fast start resources are committed in real time to meet the next MW of demand. Modifying the mitigated offer cap, to include startup and

³ Pricing impacts of these out-of-market actions can be found at: http://www.ercot.com/content/wcm/key_documents_lists/113936/Consideration_of_Reliability_Actions_in_Pricing_QMWG_Update.xlsx

⁴ Although Shell Energy believes this concept should apply to all resources which have a start time less than 3 hours, it is critical that the threshold be at least one hour.

⁵ *Project to Assess Price-Formation Rules in ERCOT's Energy-Only Market*, Project No. 47199, Texas Industrial Energy Consumers' Initial Comments at 8.

minimum energy costs of fast start resource over the minimum run time, and including the blocky MWs from those resources in ERCOT's Reliability Deployment Price Adder is a simplified way to reflect real marginal cost of commitment in LMPs. Since the impact of this change is also incorporated in the energy prices, this solution also supports the retail electric provider's need for the price changes to be hedgable as noted above.

Considering startup and the minimum energy costs of fast starts and RUCs in LMP

Shell Energy has fundamental concerns with Vistra's proposal⁶ to create a price adder for only thermal resources. This recommendation effectively creates two different prices at the same point and will have effects on the market similar to a subsidy. The fact that ERCOT has a price adder and Vistra's proposal has a price adder does not make Vistra's proposal the appropriate solution for ERCOT. By providing this adder for non-flexible resources alone, the proposed solution removes the incentives for resource owners to invest in enhancing the flexibility of their resource fleet. Moreover, since the adder will not be incorporated into the energy price, there will be uplift associated with it and therefore, doesn't support the retail electric providers' need to hedge.

In its comments, Vistra claims that its proposal is similar to PJM's new Energy Price Formation proposal. Shell Energy disagrees and believes that Vistra's proposed solution is fundamentally different from PJM's current proposal⁷ and the Extended Locational Marginal Price (ELMP) pricing model because Vistra's proposed price adder would only be available to select resources and is based on just the energy part of the resource's offer curve. Conversely, PJM's solution would create different pricing outcomes by allowing the startup and minimum energy cost of inflexible resources to be incorporated into the determination of the final energy price at each settlement point.

The fundamental dynamics of the ERCOT and PJM markets are different as well. PJM has a capacity market which facilitates entry and exit of resources into the market. Their

⁶ *Project to Assess Price-Formation Rules in ERCOT's Energy-Only Market*, Project. No. 47199, Vistra Energy's Comments and Alternative Proposals at 4 (Sept. 29, 2017) (proposal for determining a price adder based on the highest cost traditional resource whose minimum output is needed to serve load in any affected interval and paying it only to those thermal resources whose low sustained limit (LSL) is needed to serve load).

⁷ PJM Interconnection, Proposed Enhancements to Energy Price Formation (Nov. 15, 2017) (<http://www.pjm.com/-/media/library/reports-notice/special-reports/20171115-proposed-enhancements-to-energy-price-formation.ashx>).

resources recover part of their fixed cost from the capacity market. This is fundamentally different from ERCOT's energy-only market in which marginal resources rely on the scarcity pricing intervals to recover their fixed cost. PJM has an energy market must-offer obligation for resources that have a capacity market supply obligation. ERCOT does not have a must offer requirement in its day ahead market (DAM) nor does ERCOT have the associated make whole payments when the real time (RT) dispatch deviated from DAM awards. One of the motivations for PJM's proposal is to minimize the uplift associated with the make whole payments. Unlike PJM, ERCOT does not have an uplift problem requiring an immediate solution. ERCOT's RUC make whole payment for the past 7 years have totaled less than \$50 million while PJM's energy uplift payments in that time frame have been more than \$3.6 billion.⁸

Finally, PJM's energy market pricing proposal is not yet fully developed. PJM and its stakeholders are still defining the scope of the discussion. The proposal is intended to address the unique circumstances of PJM market, and may never be implemented as proposed. Accordingly, it has no bearing on potential changes in ERCOT's market design.

Shell Energy also disagrees with Vistra's assertion that not reflecting the commitment cost of base load resources in LMP is a failure of the LMP design. Contrary to Vistra's argument, the cost of serving the next MW of load need not be higher than the cost of serving the last MW of load. It can be the same. Startup and the minimum energy costs of base load generators are generally considered fixed costs, and including those items in the energy prices is a deviation from the pricing model established in most of the organized markets – LMP creates energy prices that reflect the *marginal cost* of serving the next MW of load.⁹ Startup and the minimum energy costs of fast start generators can be considered as marginal costs if the resources are committed in real time. If applied to fast start resources, PJM's proposal and ELMP will create similar pricing and will allow prices to reflect the true cost of meeting the next MW of load when these resources are committed.

⁸ 2015 State of the Market Report for PJM at 153 (http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2015/2015-som-pjm-volume2-sec4.pdf). Uplift in PJM has reduced since 2014 when it peaked due to the Polar Vortex. PJM has implemented a number of measures since then to reduce the uplift.

⁹ ERCOT resource mix has evolved to have a larger mix of fast-start resources. Markets with different circumstances may find reasons to include startup and minimum energy costs of base load resources in energy prices.

As many parties have commented, prices should appropriately reflect real marginal cost of committing resources to meet the next MW of load. This is acknowledged not just by generators, but also by parties like TIEC that represent loads, and are open to discussions to ensure that mitigated prices appropriately reflect unit costs. Including the startup and minimum energy cost of RUCs and fast starts in LMP by implementing ELMP would achieve that. It could also be approximated in a much simpler way by using ERCOT's Reliability Deployment Price Adder in combination with mitigated offer caps modified to include startup and minimum energy costs. This simplified version can be implemented without significant system changes and potentially can be made effective before summer 2018, if the Commission directs ERCOT stakeholders to start work on it soon.

Conclusion

In summary, Shell Energy believes that while the ERCOT market continues to operate well, timely action on a few issues will improve market outcomes. The Commission should take this opportunity to minimize out-of-market actions, address the pricing impacts of unavoidable out-of-market actions, and adopt certain relatively simple measures such as removing out-of-market MWs from ORDC reserves, eliminating mitigation for both "RUC for Capacity" and "RUC for Congestion" and including startup/minimum energy cost of fast start generators and RUCs in LMP. We respectfully request that the Commission provide clear policy directives to that effect so that stakeholders with varied financial interests can work together to preserve and improve the integrity of energy price formation, the foundation for ERCOT's energy-only market.

Respectfully submitted,

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