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| NPRR Number | [1092](http://www.ercot.com/mktrules/issues/NPRR1092) | NPRR Title | Reduce RUC Offer Floor and Remove RUC Opt-Out Provision |
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| Date | March 8, 2022 |
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| Submitter’s Information |
| Name | Resmi Surendran |
| E-mail Address | Resmi.surendran@shell.com |
| Company | Shell Energy North America (US), L.P. (Shell Energy) |
| Phone Number | 512-289-7131 / 346-234-0691 |
| Market Segment | Independent Power Marketer (IPM) |

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| Comments |

Shell Energy appreciates the support from Commissioners and Commission Staff in further reviewing this critical change and look forward to supporting the stakeholder discussion during the workshop to reach a resolution on the issue. We submit these comments to provide additional information on Reliability Unit Commitment (RUC) policy background and perspectives on Nodal Protocol Revision Request (1092) which were not covered in Shell Energy’s comments filed on February 16th, 2022[[1]](#footnote-1).

**RUC Policy Background**

* System-Wide Offer Cap (SWCAP) was set to $3000/MWh until 2012 summer and then it was set to $4,500/MWh in 2012 summer, $5,000/MWh in 2013 summer, $7,000/MWh in 2014 summer, $9,000/MWh in 2015 summer, and $5000/MWh in Jan 2022.
* RUC offer floor was set to SWCAP in 2012 by NPRR435, Requirements for Energy Offer Curves in the Real Time SCED for Generation Resources Committed in RUC. Based on comments from Texas Industrial Energy Consumers (TIEC) and CPS Energy, the RUC floor was then reduced from SWCAP to $1000 in NPRR568, Real-Time Reserve Price Adder Based on Operating Reserve Demand Curve, in 2013 as part of implementing Operating Reserve Demand Curve (ORDC). However, in 2014, because of price suppression concerns RUC floor was raised to $1500 as part of the NPRR626, Reliability Deployment Price Adder, which implemented Reliability Deployment Price Adder (RDPA). As detailed in Shell Energy’s previous comments, Shell Energy sees similar price suppression concerns with the reduction of RUC offer floor to $75/MWh as proposed in NPRR1092.
* $1500 was a compromise reached by Market Participants based on the average of the historic highest offers from Quick Start Generation Resources (QSGRs), to reflect the commitment cost and not to undercut market-based QSGR offers.

**Perspective on NPRR1092**

* The RDPA calculation doesn’t “assume” that generation would not self-commit. RDPA calculation removes price suppression below $1500/MWh (by out-of-market RUC capacity) by correcting the energy price to reflect the price if Load was met by market-based offers. Data shows that the average RUC capacity considered in RDPA (RTRRUC[[2]](#footnote-2)) was roughly the same on Feb 3rd, Feb 23rd and Feb 24th. However, RDPA/ORDC/Lambda were very low on 3rd because there was on average ~22GW On-Line reserves on that day due to significant wind production. On the other hand, due to drop in wind production to ~ 600MW, On-Line reserves dropped to as low as 2.7GW on 24th. Hence, prices on 24th accurately reflected the drop in market-based reserves below the ERCOT desired reserve level allowing out-of-market capacity, needed to maintain the reliable operational reserve buffer, to ensure grid reliability without suppressing the market pricing signals.
* Feb 23rd and 24th seems to be more of an example of how market responds to price suppressions rather than an example of withholding. As presented by IMM[[3]](#footnote-3), during the first cold front on Feb 3rd, wind production came out much higher than wind forecast used by ERCOT and Load came out lower than the conservative forecast used by ERCOT causing Real-Time prices to be at a level where self-commitments could lose money. The wind forecast before DAM was nearly 10GW higher than the actual wind level. During the second cold front, market responded to the potential for over forecast and lower prices. However, since the wind was very low and Load came out higher than the forecast, prices reflected the low market-based reserves incenting Resource to commit more the next time. If RUC offer floor were at $75/MWh, prices would have been very low incenting resource to further reduce self-commitments next time. This shows why under the conservative operation, it is even more important that RUC offer floor be not reduced. Reducing the floor would create the opposite effect of the NPRR intention resulting in ERCOT having to rely even more heavily on RUCing to ensure reliability.
* With a $75 RUC offer floor, RDPA won’t be as effective in addressing the price suppression as it is now because the RUC Resources will be marginal with a $75/MWh offer and hence Low Dispatch Limit (LDL) relaxation in pricing run with result in near $0/MWh RDPA adder. i.e. with a $75/MWh offer, the RUC capacity between LDL & High Dispatch Limit (HDL) would undercut the market-based offers in normal Security-Constrained Economic Dispatch (SCED) run and RUC capacity below LDL would undercut the market-based offers in pricing SCED run.
* A $1500/MWh floor doesn’t imply that the prices will be set at $1500/MWh whenever we have RUC commitments. RUCs commitments after last June have never set price at $1500/MWh. The data[[4]](#footnote-4) shows that, with ERCOT’s conservative operation, RUC capacity is hardly ever needed to serve Load.
* Even if one Entity withholds, ORDC changes and RUC buyback removal will give enough incentives to other Entities to self-commit their units and fill the reliability need. Market Participants won’t self-commit if they expect to have a low probability to recover their start-up and minimum energy cost, let alone make any profit. Market signals reflecting reliability needs are key to maintaining an efficient market.
* RUC offer floor was set to ensure that RUC commitments don’t undercut market-based offers, out-of-market RUC commitments don’t suppress prices, the emission limits and fuel limits of the old units that are RUCed are preserved for use when needed and the prices reflects the commitment cost sending signal to Load/generators to respond to system reliability needs. The principles that were used to set the floor before the conservative operation started are still valid now.
* Analysis shows that $75 RUC offer floor will undercut 5% of the dispatchable capacity. These are QSGR offers which are important type of fast Resources needed to maintain reliability under rapidly changing system condition which would be more and more prevalent with the higher penetration of renewable.
* Commission approved the latest set of QSGR voluntary mitigation plans (“VMPs”) in Aug 2019[[5]](#footnote-5), 5 years after ORDC was implemented in summer 2014, approving 840+14\*FIP as the appropriate energy offer to set price and reflect the commitment cost when those Resource commitments are needed to maintain reliability.

**Alternative solutions**

 Shell Energy agrees with IMM and comments made by several Market Participants that the root cause of the issue is excessive RUC commitments. Addressing the symptoms instead of addressing the root cause could results in significant unintended consequences. We understand ERCOT’s need and desire maintain more reserves so as not to operate at the edge operationally. We propose the following alternatives to achieve that outcome with out impacting the market pricing signals.

* Load Resources providing Ancillary Service are Resources that are available and procured by ERCOT to maintain reliability. At least, Load Resources providing reserves that could be deployed before Energy Emergency Alert (EEA) should be considered as available capacity when determining MWs needed to be RUCed to maintain 6,500MW of reserves.
* If there is a reliability need to maintain a minimum amount of On-Line generation capacity, then a service should be defined for it so that it can be procured competitively and valued for the reliability it provides.
* Off-Line Resources that can start in two hours can provide benefits, similar to RUCed capacity, without the inefficiencies. Instead of RUCing, procure an Off-Line Ancillary Service that is committable when needed and is provided by Resources that can come On-Line in two hours. This will ensure that ERCOT has the reserves but don’t create the inefficiency of Resources staying On-Line when it is not needed. For ease of implementation, until the new service is implemented, Non-Spinning Reserve (Non-Spin) could be split into 30 min On-Line/Off-Line product and two hour Off-Line product.

**Conclusion**

Shell Energy support commission’s desire to address incentive issue identified by IMM and support approving the NPRR without reducing the RUC offer floor. Agree with Joint commenters that RUC should be delayed to the maximum extent possible to encourage self-commitments, while still maintaining reliability and that the ORDC curve should provide sufficient commitment incentives so that RUC is not needed as frequently. If our objective is to address the incentive issue identified by IMM, then we shouldn’t reduce RUC offer floor as ORDC changes and RUC buyback removal mostly addresses the concern as detailed in Shell Energy’s previous comments. The previous comments also show how reducing RUC offer floor to $75/MWh causes price suppression, reduces the incentive for self-commitment and could potentially create opposite effect of the intent of the NPRR. Shell Energy respectfully request that we not repeat the mistake of reducing the floor and creating price suppression again.

However, if the objective is to reduce the RUC floor, based on the concern that the price when RUC energy is needed are too high, then to not cause significant price suppression and create more problems, Shell Energy requests that the floor be set above the QSGR offers. The upper bound of historic competitive QSGR offers in the recent past appears to be about $950-$1000/MWh. As Shell Energy outlined in its initial comments, the RUC offer floor should be set in a way that utilizes RUCed capacity only when it is really needed, does not result in out-of-market Resources moving in front of competitive offers, allows market-based offers to set price that reflects the need for such commitments to maintain reliability there by incentivizing resources to respond to reliability needs in Real-Time. Putting the RUC offer floor behind the historic competitive QSGR offers would achieve that and also reduce the floor roughly in the same ballpark as the SWCAP reduction. Based on that Shell Energy can support approving the NPRR with RUC offer floor set at $1000/MWh.

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| Revised Cover Page Language |

None

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| Revised Proposed Protocol Language |

None

1. *https://www.ercot.com/files/docs/2022/02/16/1092NPRR-18%20Shell%20Comments%20021622.docx* [↑](#footnote-ref-1)
2. [Historical Real-Time ORDC and Reliability Deployment Price Adders and Reserves](https://www.ercot.com/misapp/GetReports.do?reportTypeId=13231&reportTitle=Historical%20Real-Time%20ORDC%20and%20Reliability%20Deployment%20Price%20Adders%20and%20Reserves&showHTMLView=&mimicKey) [↑](#footnote-ref-2)
3. [16 REVISED Independent Market Monitor (IMM) Report](https://www.ercot.com/files/docs/2022/03/04/16_Independent_Market_Monitor_Report_REVISED.pdf) [↑](#footnote-ref-3)
4. *TAC Item 15 - 2021 Annual Review of the Market Impacts of RUCs - 020722 update* [↑](#footnote-ref-4)
5. *https://interchange.puc.texas.gov/Documents/49858\_1\_1030185.PDF* [↑](#footnote-ref-5)