



## Filing Receipt

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**PROJECT NO. 54335**

**REVIEW OF MARKET REFORM § PUBLIC UTILITY COMMISSION  
ASSESSMENT PRODUCED BY OF TEXAS  
ENERGY AND ENVIRONMENTAL  
ECONOMICS, INC. (E3)**

**Comments of Equistar Chemicals, LP and Lyondell Chemical Company  
in Response to a Request for Comments  
by the Public Utility Commission of Texas**

**Who We Are**

Equistar Chemicals, LP and Lyondell Chemical Company (collectively referred to herein as “LyondellBasell”), wholly-owned subsidiaries of LyondellBasell, one of the largest plastics, chemicals, and refining companies in the world, appreciate the opportunity to provide comments to the Public Utility Commission of Texas (PUCT) related to the market reform assessment produced by E3. LyondellBasell employs more than 5,600 workers at twelve sites in Texas that consumed nearly 4,000 GWh of electricity in ERCOT in 2021. LyondellBasell strives daily to reliably and safely deliver the plastics, chemicals, materials, fuels, and technologies that advance solutions to our world’s largest challenges.

**LyondellBasell is Concerned about Grid Reliability and Energy Costs**

LyondellBasell believes that grid reliability is important and a necessity. LyondellBasell’s petrochemical plants rely on the ERCOT grid to obtain electricity needed to operate. Petrochemical companies like LyondellBasell have sites with highly complex and interrelated operations across the state where grid reliability and stability are imperative for maintaining safe and reliable operations. Because LyondellBasell and other petrochemical and industrial manufacturing companies operate facilities in ERCOT that do not have backup power supply on site available to meet their load demand, and cannot realistically shut down and restart within an

hour, let alone a few minutes or seconds, unexpected power loss due to a lack of grid stability has the potential to cause human safety, environmental, and financial harm to LyondellBasell specifically, and all Texas industrial energy consumers generally. Winter Storm Uri is a prime example of the harm that can be caused by an unreliable power grid. In addition to all the harm that befell Texas residential electricity consumers, Texas commercial and industrial electricity consumers suffered financial losses due, in part, to the power grid failures which occurred during Winter Storm Uri.

Competitive electricity prices are what Texas energy consumers (including LyondellBasell) have come to expect from the ERCOT market, and are also important to the continued growth of Texas' economy and the stability of day to day business and operations of commercial and industrial energy consumers alike. LyondellBasell believes that any solution to grid reliability concerns in the Phase II of the ERCOT Market Redesign should promote three things that LyondellBasell values: (1) freedom to contract, (2) freedom to innovate, and (3) a market that encourages transition to lower carbon energy while maintaining the reliability of the grid.

LyondellBasell believes that implementing the Performance Credit Mechanism (PCM) will not guarantee any additional reliability of the grid and would be bad for Texas businesses. LyondellBasell sees this as simply an electricity tax without addressing the real-world operational issues or providing a vision for increasing use of new technologies on the ERCOT grid that will eventually make the grid more reliable.

### **Regulatory Capacity Markets Like PCM Don't Work in a Rapidly Changing Environment**

Any regulatory capacity market or load serving obligation developed or approved in a regulatory rulemaking that interacts with commercial energy markets will most certainly fail

because the regulator can never gather enough information and process it quickly enough in regulatory proceedings to solve the myriad of unexpected problems that arise in the dynamic interplay between two complex systems – reliability and commerce – that also interact increasingly with the unpredictability of weather.

Experience over the past fifteen years in other organized power markets where LyondellBasell operates plants - MISO and PJM - highlights that problem. Whether it has been a forward capacity market (PJM) or a load-serving obligation (MISO), the attempt to use a regulatory capacity market to address grid operating issues has not been successful. LyondellBasell believes that ERCOT would endure similar problems if the PUCT tried to implement some form of PCM, a novel, untested regulatory capacity market that won't be operational until 2026, to address the operational issues ERCOT is facing right now, and will increasingly continue to face before 2026.

In particular, the implementation and operation of PCM in the ERCOT market setting will struggle for the following reasons:

- ***Intermittent renewables create too many scenarios for any regulatory capacity program to manage.*** Unlike traditional utility-scale generation, intermittent renewables that have entered the ERCOT market in recent years have had widely varying impacts on reliability by time of year, time of day, and location on the power grid. Going forward, increasing penetration of intermittent renewables will create too many scenarios to efficiently manage in any regulatory capacity market, let alone the novel, untried PCM.
- ***New technologies come in waves that are not predictable.*** The PUCT has made laudable efforts over the past year to better accommodate the growth and development of new distributed and demand-side technologies in the ERCOT grid. The exact timing of their mass deployment in the coming years will be unknown, with interactions with the rest of the market being too complex and too rapid to include effectively in regulatory planning that would be required in PCM.
- ***Real-time need for dispatchable resources is becoming less predictable.*** In a market with an increasing amount of intermittent renewables and distributed resources coming online, dispatchable resources should be rewarded for being “on call” and performing at any hour on any day throughout the year given that net load is becoming less predictable

on a daily basis as well as an increasing number of transmission constraints arising at unexpected locations.

- ***Competition in the market is much better for the consumer than competition at a PUCT regulatory docket.*** A regulatory capacity market like PCM provides a temptation for the owners of existing technologies to lobby for features within the PCM to hinder competition from new technologies which threaten their business model.

In addition, regulatory capacity markets are straightjackets on creativity and innovation in energy markets. Developers, using commercial markets, need time to experiment with how best to apply these technologies and could be hindered by the specific features of the PCM, unnecessarily increasing costs to energy consumers without an improvement in grid reliability. The problem also will reach into the carbon reduction space where many industrial firms in ERCOT have current and future plans to review, test, and implement innovative solutions to reduce carbon output. A regulatory capacity market like PCM will not be able to fully account for what a wide variety of industrial consumers may plan to do and when they plan to do it.

The timeline to review and comment on the PCM is also dangerously short. To put the current timeline for review into perspective, the move from a zonal market design to a nodal market design took place from March 2002 to December 2010. The original resource adequacy debate took place roughly from 2001 to 2006. In each case, stakeholders spent substantial time reviewing the details of all potential alternatives.

The time was used wisely. The PUCT and stakeholders discovered that many variations in the design that seemed appealing in a PowerPoint presentation, a high-level description in filed comments, or based on the results of modelling that relied upon a simplified set of static assumptions, were found to be fatally flawed when stakeholders and the PUCT took the time to fully understand the implications of how those approaches would operate over time in the retail and wholesale markets in ERCOT.

Based on that experience and the concerns expressed by a wide range of market participants, the Texas Senate Business and Commerce Committee members were right to request that the PUCT suspend any decisions on the regulatory capacity markets reviewed by E3. Key members of the Texas Legislature appear to want at least six months, not six weeks, for review and decision-making in this part of Phase II of the ERCOT Market Redesign and have asked the PUCT to review additional ancillary service or reliability services to meet grid reliability needs. LyondellBasell believes that the PUCT should take this request to heart and take more time to look at other alternatives such as the ERCOT IMM's "Uncertainty Product" while better understanding the problems that the PCM or other regulatory capacity markets would likely entail.

### **LyondellBasell Supports the ERCOT IMM's "Uncertainty Product" to Address Core Challenge in Phase II of the ERCOT Market Redesign**

LyondellBasell believes that the foundation of Phase II of the ERCOT Market Redesign should be centered on the ERCOT IMM's Uncertainty Product. LyondellBasell strongly agrees with the ERCOT IMM that the ERCOT grid does not have a capacity issue - it has operational adjustments to make. As such, operational adjustments, not a change in the ERCOT resource adequacy rules, should be the way forward.

The operational challenges have arisen because the resource mix in the ERCOT grid is rapidly changing and is projected to do so for the next few years. Not only is there projected to be a continued increase in wind and solar facilities, but within the next five to ten years smaller scale (distributed) generation and load response will be entering the ERCOT market, possibly in a wave of investment, not unlike the waves of investment we have seen over the past twenty years with combined cycle plants, wind farms, solar facilities, and utility-scale energy storage.

In situations as we are facing today, where adapting to rapid changes over time is important, it would seem reasonable to assume market participants and the ERCOT grid operator should be given the tools and price signals to nimbly manage the operational risk that the ERCOT grid will continue to face. LyondellBasell believes that the market participants and the ERCOT grid operator have the specific knowledge at a given time and place in the future to best resolve operating issues as they change over time and will be far more successful than relying on an untested regulatory capacity market such as the PCM.

PUCT staff emphasized during the market design debates of 2002-2006 that getting the pricing correct was vital to allow market participants to make choices that are good for wholesale and retail markets, reinforcing reliability and better integrating new technologies during times of rapid change.<sup>1</sup> The concurrent resource adequacy debate in FERC-jurisdictional markets failed to focus on the impact of new technologies, instead choosing to rely on regulatory capacity markets in attempts to meet resource adequacy and reliability needs. The PUCT should maintain that earlier focus in this proceeding rather than heading down the rabbit hole of top-down regulatory capacity markets that repeatedly have failed in FERC-jurisdictional markets across the country because of this lack of vision.

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<sup>1</sup> PUCT Project No. 26376, *Transmission Congestion Issues in the Electric Reliability Council of Texas*, PUCT Market Oversight Division, “Comments on Issues Related to the Transmission Congestion Workshop on September 18, 2002,” pages 6-13. [https://interchange.puc.texas.gov/Documents/26376\\_20\\_364764.PDF](https://interchange.puc.texas.gov/Documents/26376_20_364764.PDF)

PUCT Project No. 24255, *Rulemaking Concerning Planning Reserve Margin Requirements*, “An Energy-Only Resource Adequacy Mechanism,” Eric S. Schubert, Wholesale Market Oversight, April 14, 2005. [https://interchange.puc.texas.gov/Documents/24255\\_98\\_475491.PDF](https://interchange.puc.texas.gov/Documents/24255_98_475491.PDF)

LyondellBasell believes that the ERCOT IMM's Uncertainty Product can directly address the challenges mentioned above, working with ongoing competitive forces in the ERCOT wholesale and retail market, and reinforce the locational value of dispatchable resources as well. Proper energy pricing combined with ancillary or reliability services work as the best way to ensure that the grid is reliable in real-time and resource adequate in the long run while allowing market participants the freedom to develop new products and services that will benefit Texas energy consumers, improve grid reliability, and allow industrial customers to more easily meet their sustainability goals.

The ERCOT IMM's Uncertainty Product also will increase demand for dispatchable resources, which will increase the money all dispatchable generation receives on a daily basis, because ERCOT-run and commercial bilateral day-ahead and real-time markets explicitly and implicitly co-optimize across products (ancillary services and energy).

The ERCOT IMM's Uncertainty Product dovetails nicely with the PUCT's efforts to integrate new distributed technologies and demand response, which would be a perfect complement to variable net load risk over time and lowering the cost of compliance in the long term. This proposal will accelerate the adoption of cost-effective technologies, as the ERCOT IMM's Uncertainty Product will, at a minimum, provide a stream of revenue as an on call, backup resource available when ERCOT and market participants miss a net load forecast.

These new distributed and demand response technologies also could lower use of the transmission system during high use periods, allowing industrial consumers broader access to power across ERCOT at lower prices. This would complement potential buildouts of transmission needed to meet the sustainability goals of not only LyondellBasell, but other petrochemical and industrial manufacturing companies in Texas alike.



Respectfully Submitted,



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## **Executive Summary of LyondellBasell's Comments**

LyondellBasell believes the ERCOT IMM's "Uncertainty Product" should be the basis for Phase II of the ERCOT Market Redesign. As the ERCOT IMM has testified at the Texas Legislature, ERCOT does not have a capacity problem, it has operational adjustments to make.

The ERCOT IMM's Uncertainty Product also promotes three things that LyondellBasell values:

- Freedom to contract
- Freedom to innovate
- A market that encourages transition to lower carbon energy while maintaining the reliability of the grid

Only a market-based approach for resource adequacy coupled with an enhanced mix of ancillary services and reliability products such as the ERCOT IMM's Uncertainty Product can work effectively and reliably in this time of rapid energy transition of the ERCOT power grid.

The ERCOT IMM's Uncertainty Product also dovetails nicely with the PUCT's efforts to integrate new distributed technologies and demand response, which would be a perfect complement to variable net load risk over time and lowering the cost of compliance in the long term. Meeting reliability needs in innovative, cost-effective ways are only now starting to be developed, and the PUCT should continue to encourage their development.

These new technologies also could lower use of the transmission system during high use periods, allowing industrial customers broader access to power across ERCOT at lower prices. This would complement potential buildouts of transmission to meet the sustainability goals of LyondellBasell and other petrochemical companies.

LyondellBasell notes the inherent weaknesses and failures of regulatory capacity markets established in other regional power markets over the past fifteen years where it has facilities - PJM and MISO - to work efficiently and reliably.

These failures should not be a surprise. Any regulatory capacity market that interacts with commercial energy markets is going to fail because the PUCT can never gather enough information and process it quickly enough to solve in administrative law proceedings the myriad of unexpected problems that arise in the dynamic interplay between two complex systems – reliability and commerce – that also interact increasingly with the unpredictability of weather.

A robust price mechanism, supported with the appropriate mix of ancillary services, is vastly preferable to the Performance Credit Mechanism (PCM) and other regulatory capacity markets revied by E3, first and foremost because PCM cannot guarantee improved reliability of the ERCOT grid.

Lastly, market participants who have the skill to respond effectively to the proper mix of energy pricing and ancillary and reliability services should be rewarded instead of those companies that can hire the better lawyer or who has stronger clout at PUCT proceedings to "fix" or modify a regulatory capacity market like PCM when it encounters a rapidly evolving power grid.