



Control Number: 52373



Item Number: 244

# *Public Utility Commission of Texas*

## **Commissioner Memorandum**

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PUBLIC UTILITY COMMISSION  
FILING CLERK

**TO:** Chairman Peter M. Lake  
Commissioner Lori Cobos  
Commissioner Jimmy Glotfelty

**FROM:** Commissioner Will McAdams

**DATE:** November 3, 2021

**RE:** Project No. 52373, Item No. 20 – *Review of Wholesale Electric Market Design*

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As we have discussed reforms to the current market design, this Commission has heard from many stakeholders as they have presented a variety of issues that the ERCOT system may face in the coming years. These filings have presented such a broad spectrum of problems and solutions that I have found it difficult to see the forest for the trees in identifying those challenges that must be our first priority.

On October 25, 2021, ERCOT Staff published a report on the Impact of Growth in Wind and Solar on Net Load study and made it available to the public via their website. The document, attached to this memo, clearly articulates a realistic projection of solar deployment within the ERCOT system over the next two to three years and the resulting effect on the grid.

Pages 11 and 12 of the report demonstrate the effective magnitude of expected solar winter and spring ramp-downs over a two-hour period each evening. As we experienced during Winter Storm Uri, such a dramatic drop in available generation on the system, unless checked by rampable, dispatchable resources, can and will result in troubling frequency and inertial problems for the grid.

I file this memo with the accompanying report to provide the Commission and the public with a document that demonstrates the clearest example of a real-world challenge we must address through this proceeding. Fortunately, many of the tools we are developing now will directly help mitigate the risks to the system in coming years, but a sense of urgency is clearly needed.

I found that the report helped me find the forest despite the trees and has allowed me to prioritize the task before us. I look forward to discussing this memo and our other scheduled topics at our next work session.

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# IMPACT OF GROWTH IN WIND AND SOLAR ON NET LOAD

ERCOT Staff

OCTOBER 25, 2021  
WMWG

Also available as part of the eCourse

[2022 Renewable Energy Law eConference](#)

First appeared as part of the conference materials for the  
17<sup>th</sup> Annual Renewable Energy Law Institute session

"Integrating Renewable Energy in ERCOT's Market Redesign"