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# *Public Utility Commission of Texas*

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## **Commissioner Memorandum**

**TO:** Commissioner Will McAdams  
Commissioner Lori Cobos  
Commissioner Jimmy Glotfelty

**FROM:** Chairman Peter M. Lake

**DATE:** October 20, 2021

**RE:** October 21, 2021 Work Session – Item No. 2; Docket No. 52373 Review of Wholesale Electric Market Design

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Throughout the summer and fall, the Commission has held extended work sessions to address the functions and deficiencies of the ERCOT wholesale market. Those sessions and discussions with stakeholders have provided valuable input in identifying market reforms necessary to enhance the reliable delivery of electricity to Texans in the ERCOT power region.

My thoughts have coalesced around several key concepts that should be the foundation of the ERCOT market redesign process. This memo presents those concepts as a starting point for discussion with you all. I want to emphasize that these design concepts are preliminary; nothing is set in stone at this point. Equally as important as identifying promising concepts is identifying the concepts that should no longer be considered. The Commission must quickly narrow the scope of its efforts, eliminate unacceptable proposals, and focus on refining the concepts that will bring reliability to our grid.

This list is by no means exhaustive – many elements of our grid need improvement. These concepts are what I consider to be the most important, but they must be pursued in conjunction with other regulatory and operational enhancements.

I look forward to discussing these concepts with you at the work session. Based on the outcome of the work session, I anticipate staff will issue the first draft (a “strawman”) of what will eventually be the blueprint for ERCOT market redesign early next week.

Concept	Details	Problem Targeted	Key Questions / Requested Data
ORDC Reform	<ul style="list-style-type: none"> <li>- Move MCL to 3,000 MW.</li> <li>- HCAP = VOLL = \$4,500.</li> <li>- No change to Standard Deviation.</li> </ul>	<ul style="list-style-type: none"> <li>- Market-based mechanism to bring units online sooner during scarcity events (as opposed to non-market RUC action).</li> <li>- Increases revenues to reliable assets able to be dispatched during scarcity events.</li> </ul>	<ul style="list-style-type: none"> <li>- Need to see side-by-side scenario analysis of different ORDC parameter sets (to be set during work session discussion).</li> <li>- How much new revenue is anticipated to be added to the market under each of the above scenarios?</li> </ul>
LSE Obligation	<ul style="list-style-type: none"> <li>- Steady state; no trigger provision.</li> <li>- Physical obligation.</li> <li>- Accreditation based on reliability standard by resource type.</li> <li>- Accreditation accounted for w/ credit system by resource for each operating day.</li> <li>- Three year forward requirement</li> <li>- Obligation: 100% of LSEs load share ratio of ERCOT forecast net peak load (3 years from operating day = 50% of load share ratio, 2 years = 70%, 1 year = 90%, 6 months = 95%, 1 month = 100%).</li> </ul>	<ul style="list-style-type: none"> <li>- Realistic accounting of reliability of each resource type.</li> <li>- Ensure LSEs procure the electricity they have promised to their customers.</li> <li>- Provide price formation information years in advance of operating day to give investors real data points on which to base investment financing.</li> <li>- Potentially provide financial reward for meeting weatherization standards w/o having to build new AS markets.</li> </ul>	<ul style="list-style-type: none"> <li>- How do we ensure the continued viability of competitive retail market?</li> <li>- How do we prevent market manipulation by affiliated gentailers at the expense of independent retailers?</li> <li>- How do we ensure demand response resources can participate fully and at all points in time?</li> <li>- What is the appropriate accreditation level for each resource?</li> <li>- What is the appropriate segment of time for each obligation? (Months? Weeks? 24 hour operating day? 12 hour segments? Hourly?)</li> </ul>

	<ul style="list-style-type: none"> <li>- Penalties: Levied on LSE for lack of adequate credits, levied on generator for lack of performance + obligation to procure amount short in RT market.</li> <li>- Transparency: ERCOT maintains bulletin board where all credit transactions are posted w/ counterparties, volume, &amp; price. IMM has full authority to investigate market manipulation .</li> <li>- Phase-In: Consider phased implementation w/ temporary price caps, limited penalties, etc. as market adjusts.</li> </ul>		<ul style="list-style-type: none"> <li>- Can we integrate winter weather standards into the accreditation system?</li> <li>- What other methods of accreditation are possible with less administrative burden/oversight?</li> <li>- What other methods can be utilized to ensure transparency?</li> <li>- Is a “must offer” provision required, and if so, how should it be structured?</li> </ul>
Demand Response	<ul style="list-style-type: none"> <li>- Upgrade hardware &amp; software to improve frequency of telemetry data.</li> <li>- Change demand response pricing from zonal to LMP.</li> <li>- Establish higher performance standard for energy efficiency program.</li> </ul>	<ul style="list-style-type: none"> <li>- Enhance demand response capabilities system-wide.</li> <li>- Improve transparency of price signals for load resources.</li> <li>- Improve precision level of load shed.</li> </ul>	<ul style="list-style-type: none"> <li>- What performance standard should be targeted for telemetry?</li> <li>- What performance standard should be targeted to generate the most value per ratepayer dollar invested in energy efficiency program?</li> </ul>
ERS Reform	<ul style="list-style-type: none"> <li>- Move ERS deployment to new MCL.</li> </ul>	<ul style="list-style-type: none"> <li>- Provide an additional margin of safety during scarcity events.</li> </ul>	<ul style="list-style-type: none"> <li>- What metric should set seasonal procurement quantities?</li> </ul>

	<ul style="list-style-type: none"> <li>- All ERS should be deployed before a conservation call is needed/issued.</li> <li>- Set a quantity of MW to be procured by season rather than a fixed dollar amount.</li> </ul>	<ul style="list-style-type: none"> <li>- Provide a clear and consistent revenue stream for reliable demand response resources.</li> </ul>	
ECRS (Ramping Ancillary Service)	<ul style="list-style-type: none"> <li>- Continue on current implementation schedule.</li> <li>- Assign costs to IRRs responsible for sudden, substantial drops in generation capacity.</li> </ul>	<ul style="list-style-type: none"> <li>- Provide operational flexibility to ensure resource adequacy during evening drop in solar generation and periodic drops in wind generation.</li> </ul>	<ul style="list-style-type: none"> <li>- What quantity should be procured?</li> <li>- Should the quantity procured automatically adjust seasonally based on the amount of IRRs in the generation fleet?</li> </ul>
FFRS	<ul style="list-style-type: none"> <li>- Continue on current implementation schedule</li> </ul>	<ul style="list-style-type: none"> <li>- Enhance frequency stability.</li> </ul>	
Voltage Support Product	<ul style="list-style-type: none"> <li>- Develop a voltage support product similar to other ISOs.</li> <li>- Assign costs to resources that do not provide grid supporting capabilities.</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure voltage support to maintain grid stability as more inverter-based resources come online.</li> </ul>	<ul style="list-style-type: none"> <li>- What is an appropriate standard/metric for grid forming capabilities?</li> <li>- What mechanisms can IRRs utilize to provide grid forming capabilities?</li> </ul>
Winter Ancillary Services Product	<ul style="list-style-type: none"> <li>- Develop a stand-alone, auction-based winter weather product (procured in a manner similar to Black Start program).</li> </ul>	<ul style="list-style-type: none"> <li>- Provide revenue support for dispatchable resources that meet a higher standard of (“firm”) winter weather resiliency and reliability.</li> <li>- If weatherization cannot be incorporated into an LSE Obligation (or an intermediate product is</li> </ul>	<ul style="list-style-type: none"> <li>- What is the definition of “firm” winter weather reliability? Dual fuel + on-site storage? Firm gas/coal contracts? Offsite storage w/ firm delivery?</li> <li>- What quantity should be procured, and if the quantity is dynamic what metric</li> </ul>

		needed during implementation), this product can serve as a stopgap to ensure winter reliability.	should guide procurement each winter?
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