Public Utility Commission of Texas

Memorandum

TO: Chairman Donna L. Nelson
Commissioner Brandy D. Marty

FROM: Commissioner Kenneth W. Anderson, Jr.

DATE: August 28, 2013

RE: **Open Meeting of August 29, 2013, Agenda Item No. 20**

Project No. 40000 -- *Commission Proceeding to Ensure Resource Adequacy in Texas.*

As I mentioned in the last open meeting, but glossed over in my previous memorandum[1], I believe there are numerous advantages for the ERCOT market that result from implementing an operating reserve demand curve (ORDC) in the form of "interim solution B+"[2] that I will summarize below in bullet format.

- An ORDC can be implemented in six to eight months at a relative minimum cost, which is far more quickly than other alternatives.

- Adoption of an ORDC does not preclude this Commission from adopting additional resource adequacy mechanisms, if and when they are ultimately determined to be necessary.

- An ORDC incents actual reliability year-around because it places an explicit and transparent value on operating reserves, which are what provide real reliability on any given day. As ERCOT's own history has repeatedly demonstrated, installed capacity does not guarantee reliability. Currently, depending upon the season and forecasted system conditions, ERCOT only procures between 3,750 MW and 5,200 MW in operating and other reserves in the form of various ancillary services, plus a small amount of curtailable load in the Emergency Reserve Service.

[1] Memorandum of Kenneth W. Anderson, Jr., Project No. 40000 (July 18, 2013).

[2] The form of the ORDC before us is so named because the original proposal made by Dr. William H. Hogan, Raymond Plank Professor of Global Energy Policy at the John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts, assumed that the ERCOT real-time energy market was fully co-optimized, which is not the case. Consequently, the proposed ORDC went through several iterations to reflect the ERCOT settlement systems and processes. "Interim" reflects that further changes and enhancements to the ORDC to gain additional market efficiency can be made if and when ERCOT's real-time market is fully co-optimized.

- An ORDC is tied fundamentally to the principle of pay for performance; many other mechanisms are not.

- An ORDC is self-correcting. If an ORDC generates too much revenue, and as a consequence excessive generation is built in the near term, then the revenue produced is reduced, so there is a naturally occurring equilibrium.

- An ORDC, because it produces an adder to the real-time energy price, allows participants to hedge against the increasing prices of electricity. Its effects can be modeled and priced in the forward and secondary markets.

- An ORDC will improve market efficiency because it smooths out transitory price spikes that may or may not be the result of true scarcity conditions, thereby improving price formation while reducing operating risks for both generation and load-serving entities and their respective counterparties. An ORDC is technology neutral and naturally incents desired load and resource behavior.

- An ORDC indisputably improves resource adequacy, whether or not additional resource adequacy mechanisms are ultimately determined to be necessary.

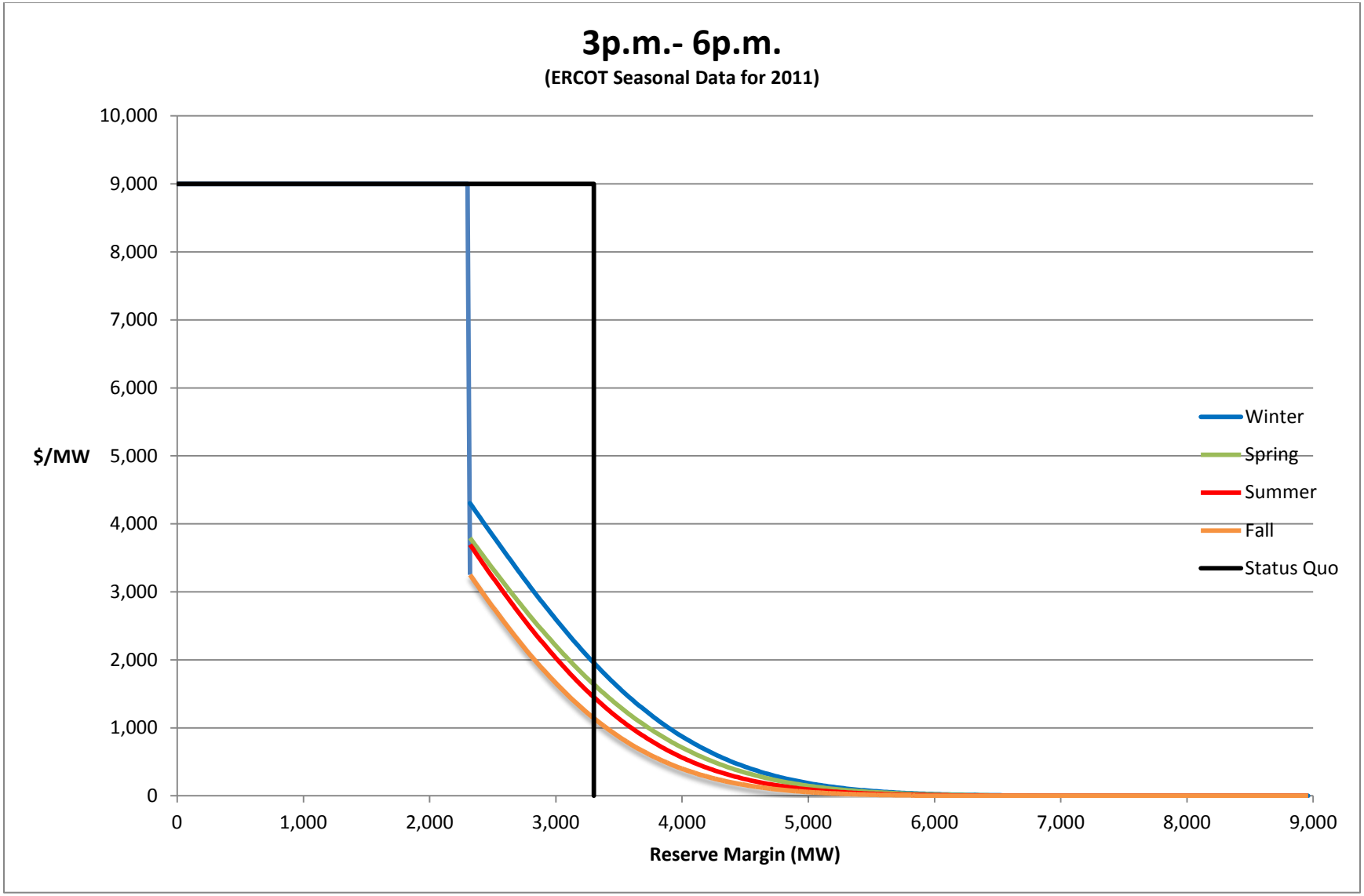
To compare an ORDC with our existing pricing curve I have overlaid an example ORDC (one for each season) on top of our existing curve in the figure included as attachment A.[3] In this example for the ORDC, the minimum contingency is 2,300 MW. At this point prices rise to the SWOC, or $9,000 per MW. With the ORDC, prices do not get to this price as soon as with our existing scarcity pricing curve (3,300 MW). Instead, prices rise up the gradual slope of the curve as ERCOT's operating reserves decline. A simple way of thinking about the ORDC compared to our existing curve is that the area under the existing curve (indicated by the black "status quo" line on the graph) represents money put into the market for operating reserves, whether generation or load. The area under the ORDC to the right of 3,300 MW is money that flows into the market sooner than our existing scarcity pricing curve. Because operating reserves are often under 5,000 MW, or even 4,000 MW during peak conditions without getting as low as 3,300 MW, revenue also flows into the market more often. The ORDC puts more money in the market, more often, but in smaller, more gradual increments, instead of the abrupt change in price up to the SWOC, which now occurs.

I believe that the advantages of an ORDC over our existing scarcity pricing curve are such that the Commission should immediately direct ERCOT to finalize development and implementation of an ORDC to replace our existing scarcity pricing curve.

I look forward to discussing all of these issues at the open meeting.

[3] These example ORDC curves, one for each season, were produced from ERCOT 2011 data using the statistical method advocated by the ERCOT IMM.

ATTACHMENT A



ATTACHMENT A