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The Evolution of a Market: Ten Years of Wholesale Market Design Changes in ERCOT

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The Evolution of a Market: Ten Years of Wholesale Market Design Changes in ERCOT

Resource adequacy—ensuring that the electric market provides enough generation to meet customer demand and maintain reliability—has been a key concern of the Public Utility Commission since the Electric Reliability Council of Texas (ERCOT) region was deregulated in 1999. Following deregulation, there was ample generation in the wholesale market, due in part to fleets previously developed by vertically integrated utilities with regulated rates, such as Houston Power & Light (HL&P) and TXU. The reserve margin at the time deregulation was adopted exceeded 30% of the peak demand in ERCOT.

In the first decade following deregulation, existing plants plus new build generally provided reserve margins that satisfied the non-mandatory "target" reliability standard of allowing only one reliability event in ten years due to a generation shortage, known as the "1-in-10" standard. During the early years of that period, given the excess capacity in the market, the market clearing price was capped at its highest point at $1000/MWh with a "shame cap" where entities bidding into the market above the $300 level would be publicly identified.[1] As reserve margins began to decline, and in conjunction with implementing the new "nodal" market design, the Commission increased the system-wide offer cap in Project No. 35392 to $1,500/MWh in March 2007, $2,250/MWh in March 2008, and $3,000/MWh two months after the nodal market opened.[2] In 2011, as reserve margins projection became tighter in ERCOT's Capacity, Demand and Reserves (CDR) reports, the primary scarcity pricing features[3] of the ERCOT market were: (1) relatively high offer caps of $3,000/MWh, (2) the "Power Balance Penalty Curve," which produces prices at the offer cap when certain reserves are depleted, and (3) the "small fish swim free" exemption, which allows market participants that own less than 5% of the installed generation capacity to bid substantially above their marginal cost.[4] ERCOT's deregulated wholesale market is often called an "energy-only" market because generators are not paid for owning installed capacity, operating and maintaining those units or for the administrative and

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[1] Docket No. 24770, *Report of the Electric Reliability Council of Texas (ERCOT) to the PUCT Regarding Implementation of the ERCOT Protocols*, Order No. 14. *See also* Project No. 31972, Final Order. http://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.502/31972adt.pdf at 3-5

[2] http://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.502/35392adt.pdf.

[3] Scarcity pricing mechanisms are meant to ensure prices reflect the value of supply.

[4] The offer caps are in P.U.C. Subst. R. 25.505, and the "small fish swim free" exemption is in P.U.C. Subst. R. 25.504.

Title search: The Evolution of a Market: Ten Years of Wholesale Market Design Changes in ERCOT

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