

Priorities for the Evolution of an Energy-Only Electricity Market Design in ERCOT

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FACTORS AFFECTING ENERGY-ONLY PRICES IN ERCOT

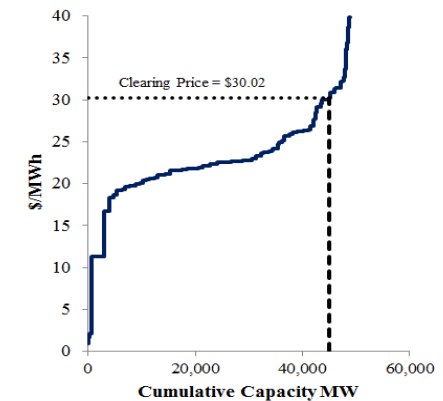
Are prices incenting efficient entry and exit of suppliers, including dispatchable generation?

Macro-Economy

- Declining gas prices

market factor

No Wind



Federal Policies

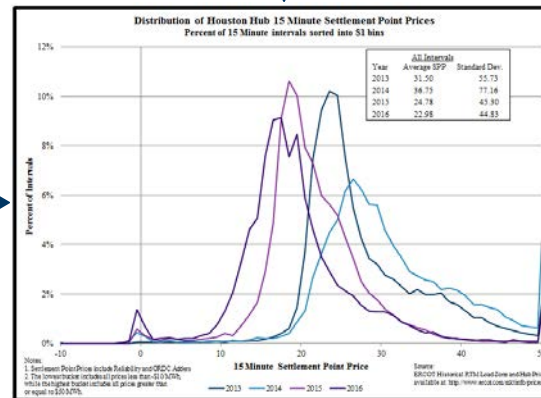
- Production and Investment Tax Credits for wind and solar

*out-of-market
out of Texas*

*out-of-market
within Texas*

State of Texas Policies

- Centralized transmission planning rules
- 4CP transmission cost allocation



within market

ERCOT Market Rules

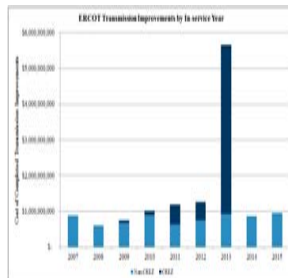
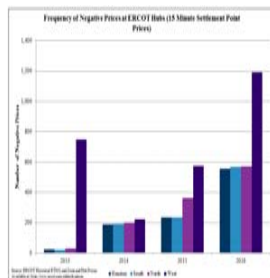
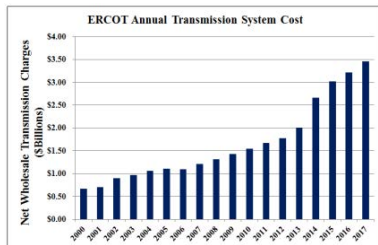
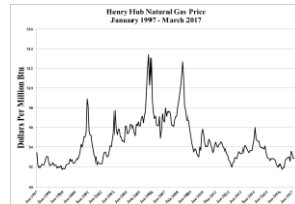
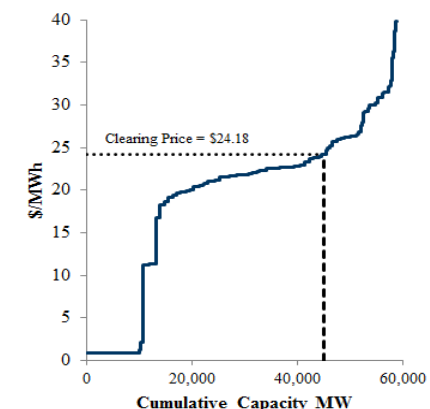
- Marginal Loss Pricing
- Local Scarcity Pricing
- ORDC Details

Total PJM Costs Congestion and Marginal Losses (2009-2016)

Year	Percent of PJM Billing	
	Congestion	Marginal Losses
2009	2.7%	4.8%
2010	4.1%	4.7%
2011	2.8%	3.8%
2012	1.8%	3.4%
2013	2.0%	3.1%
2014	3.9%	2.9%
2015	3.2%	2.3%
2016	2.6%	1.8%

Source: Monitoring Analytics, LLC, "2016 State of the Market Report for PJM: Section 11: Congestion and losses", March 2017

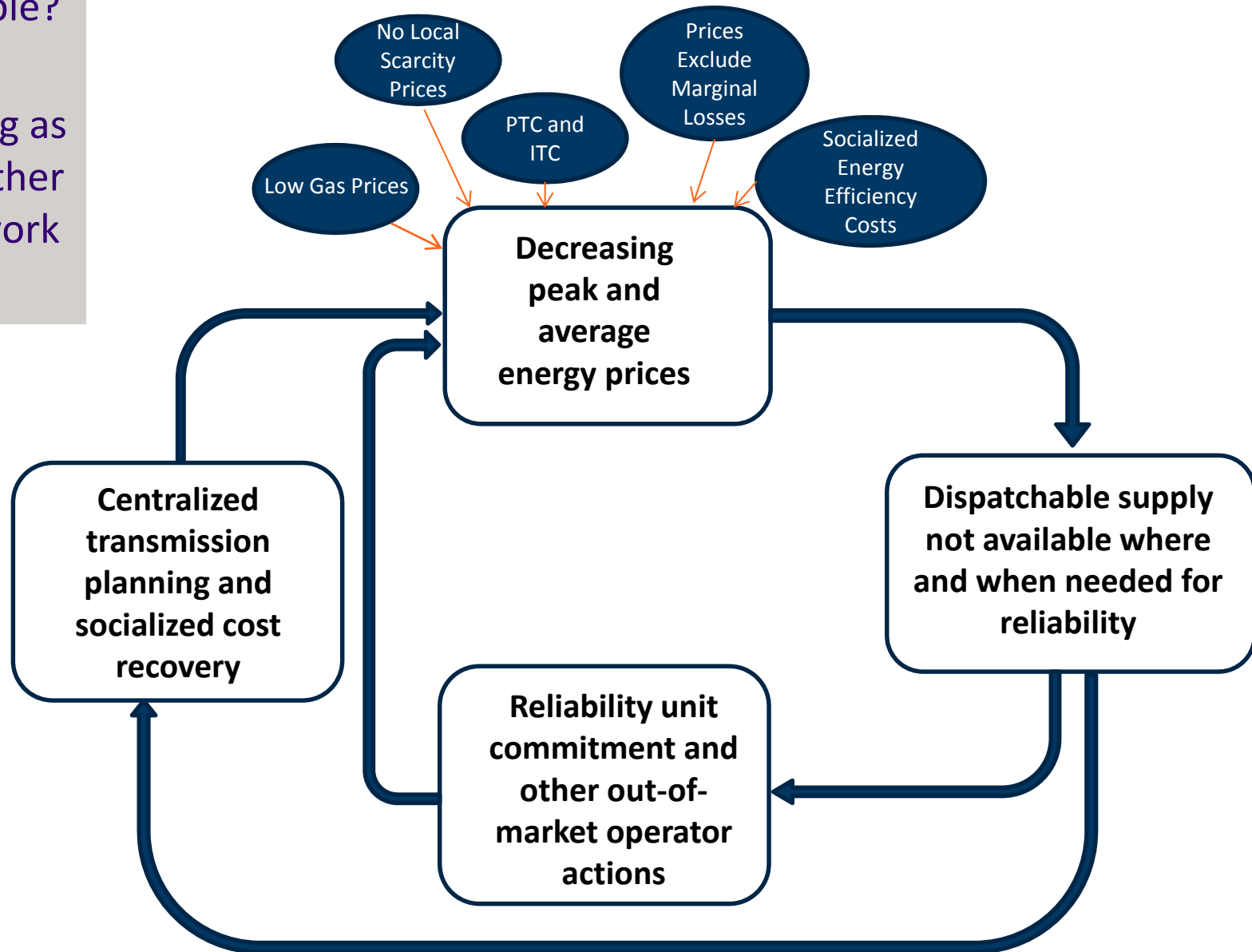
10,000 MW Wind



CYCLE INCONSISTENT WITH MARKET OBJECTIVES

Is this sustainable?

ORDC is working as intended but other factors are at work



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