



**This is what America's
eco city of the future
looks like**

▲ Turbines in a Texas wind farm pump energy to towns like Georgetown. While Texas is an oil-and-gas-centric state, Joey Romano, a solar farmer near Houston, believes it's also perfect for renewable energy. Photograph: Katie

No Way Out of Renewables?

A Path to Restoring Market Reliability & Affordability

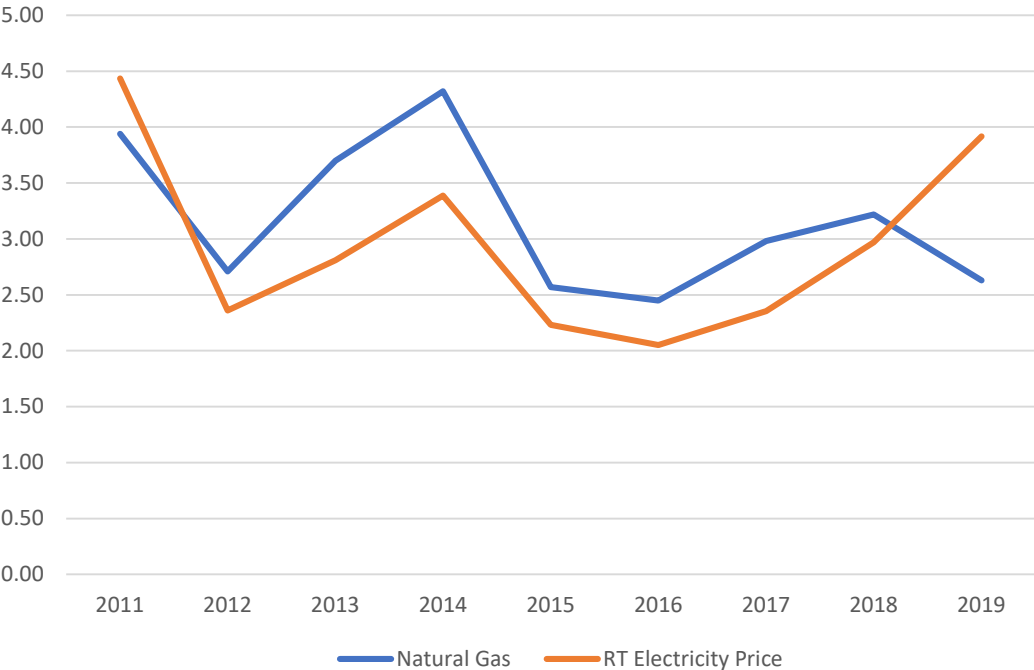
Bill Peacock

Intervention: Less Reliability, Higher Costs

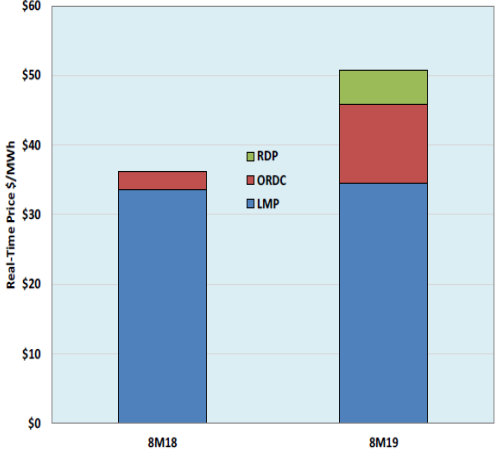
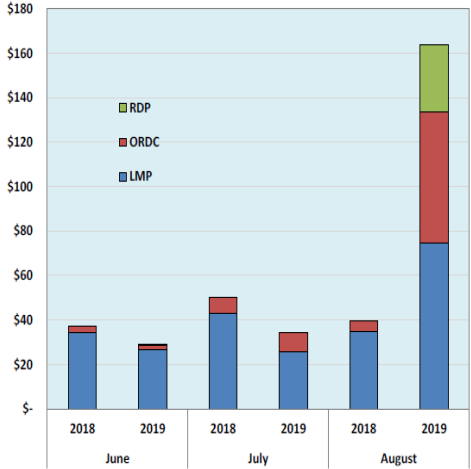
- Texas' energy-only market was the most competitive & efficient electricity market in the world
- Competitive markets supply reliable & affordable electricity
- Intervention distorts price formation and the demand curve; Texans are paying higher prices and have lower reserves despite lower fuel costs
- Renewable industry has taken advantage and profits through subsidies
 - Federal Production Tax Credit
 - Socialized Transmission, including CREZ lines
 - Chapter 312/313 tax abatements
 - Renewable energy credits and interconnections
- ERCOT is being transformed into a capacity market
 - PUC Market Power Rules & ERCOT Ancillary Market Operations
 - Operating Reserve Demand Curve

Lower Gas Prices ≠ Lower Electric Prices

TX Electricity Prices v. Natural Gas Prices



Larger adders contribute to higher 2019 prices



Higher Prices Not Leading to Investment

- Higher peak demand not leading to higher locational marginal prices (LMP)
- Much of the benefit from higher prices goes to renewables & transmission
- ORDC doesn't appear to incentivize investment in dispatchable generation

Planned Resources (MW)	2020	2021	2022	2023	2024
Planned Resources (not wind, solar, or storage)	212	813	813	813	813
Planned Wind, Peak Average Capacity Contribution (63%, 29%, 16% of installed capacity)	1,448	3,118	3,453	3,566	3,566
Planned Solar Utility-Scale, Peak Average Capacity Contribution (76% of installed capacity)	1,192	6,035	7,197	7,197	7,197
Storage	0	0	0	0	0

- Lower LMPs do not mean lower energy costs

The High \$ Cost of Renewables

Texas Renewable Costs 2019

Consumers		Taxpayers	
CREZ Lines	\$718 million	PTC (Wind)	\$1.18 billion
Other	\$84 million	ITC (Solar)	\$190 million
ORDC	\$3.9 billion	Chap. 312/3	\$315 million
Subtotal	\$4.7 billion	Subtotal	\$1.7 billion
Total	\$6.4 billion	w/o ORDC:	\$2.5 b

U.S. Subsidies per MWh - 2016

Solar	\$43.75
Wind	\$5.75
Coal	\$1.04
Natural Gas	- \$0.54

U.S. Energy Tax Expenditures 2019-23

Solar	\$21.2 b
Wind	\$19.3 b
Oil & Gas	\$5.2 b
Coal	\$1.4 b

The Path to a Reliable and Affordable Grid

- Eliminate Chapter 313 Abatements for Wind and Solar
- Eliminate the ORDC and ...
- Directly address the price distortions caused by renewable resources receiving out-of-market support
 - Renewable energy minimum offer price (MOPR: FERC 12/19)
 - Firmness of dispatch w/ ancillary energy through renewables
- Less expensive & more efficient/effective than the ORDC
 - Dollars go from those imposing costs to those that are harmed
 - Price formation and the demand curve are restored