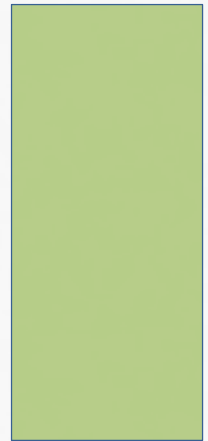


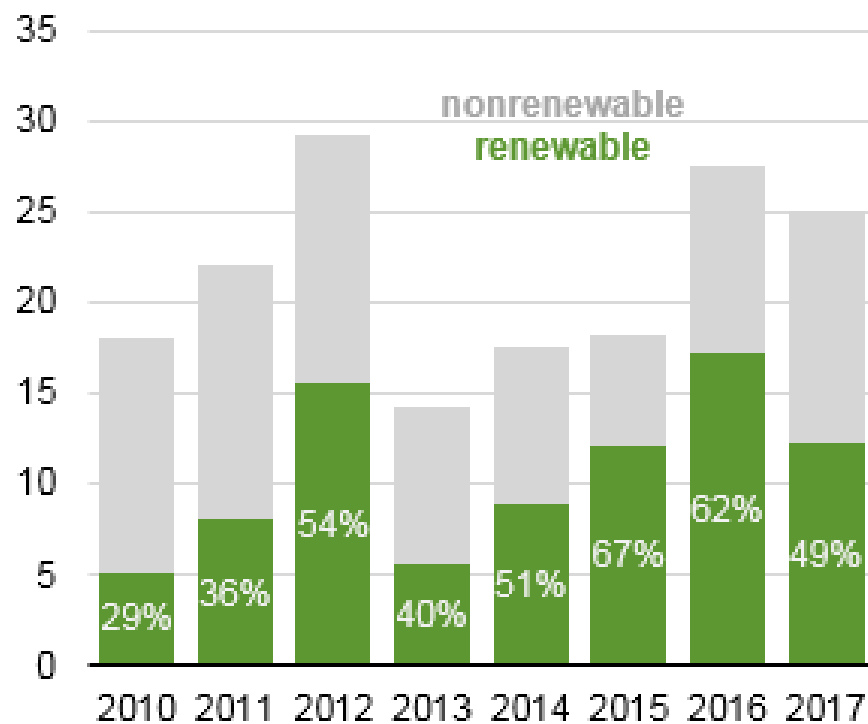
ELECTRICITY AND THE TRUMP ADMINISTRATION

MELISSA POWERS
JEFFREY BAIN FACULTY SCHOLAR & PROFESSOR OF LAW
DIRECTOR, GREEN ENERGY INSTITUTE
LEWIS & CLARK LAW SCHOOL

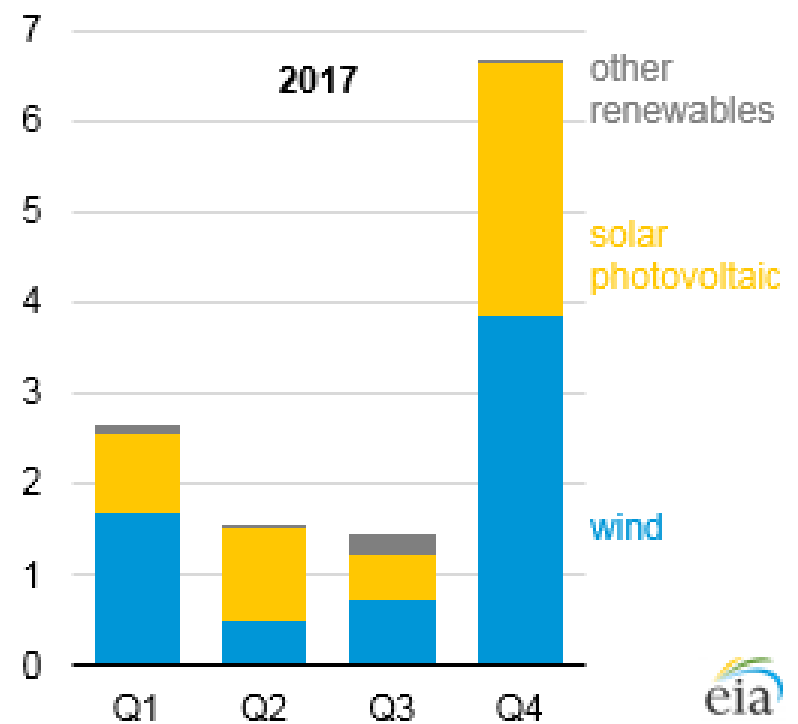


RENEWABLE POWER DEPLOYMENT

Utility-scale capacity additions, 2010-2017
gigawatts



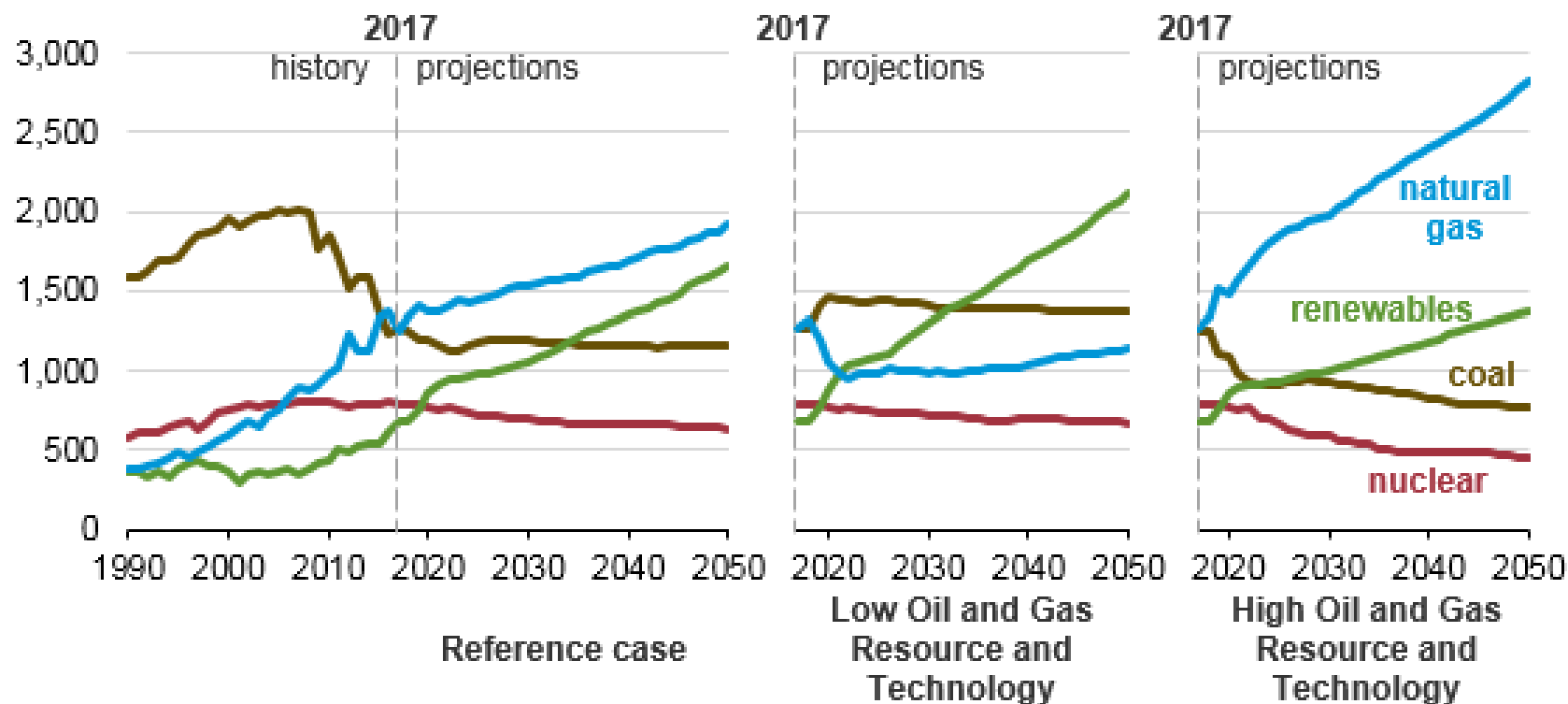
Utility-scale renewable capacity additions
gigawatts



ELECTRICITY GENERATION: PAST AND FUTURE?

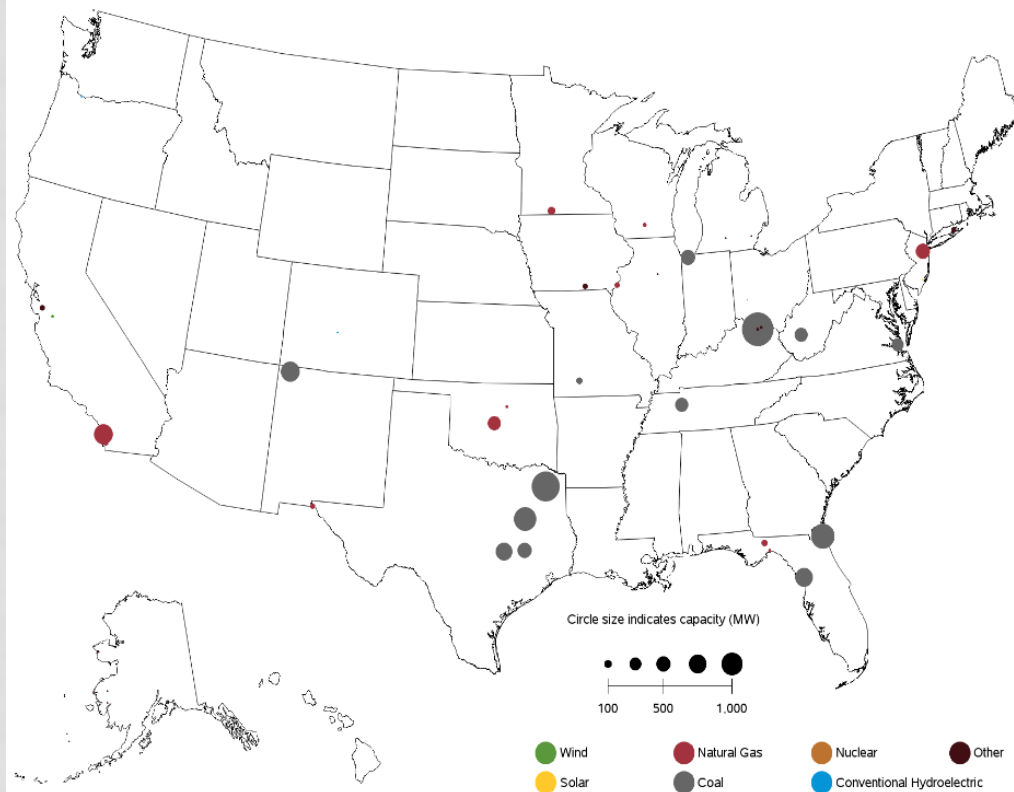
Electricity generation from selected fuels (1990-2050)

billion kilowatthours



PROJECTED RETIREMENTS

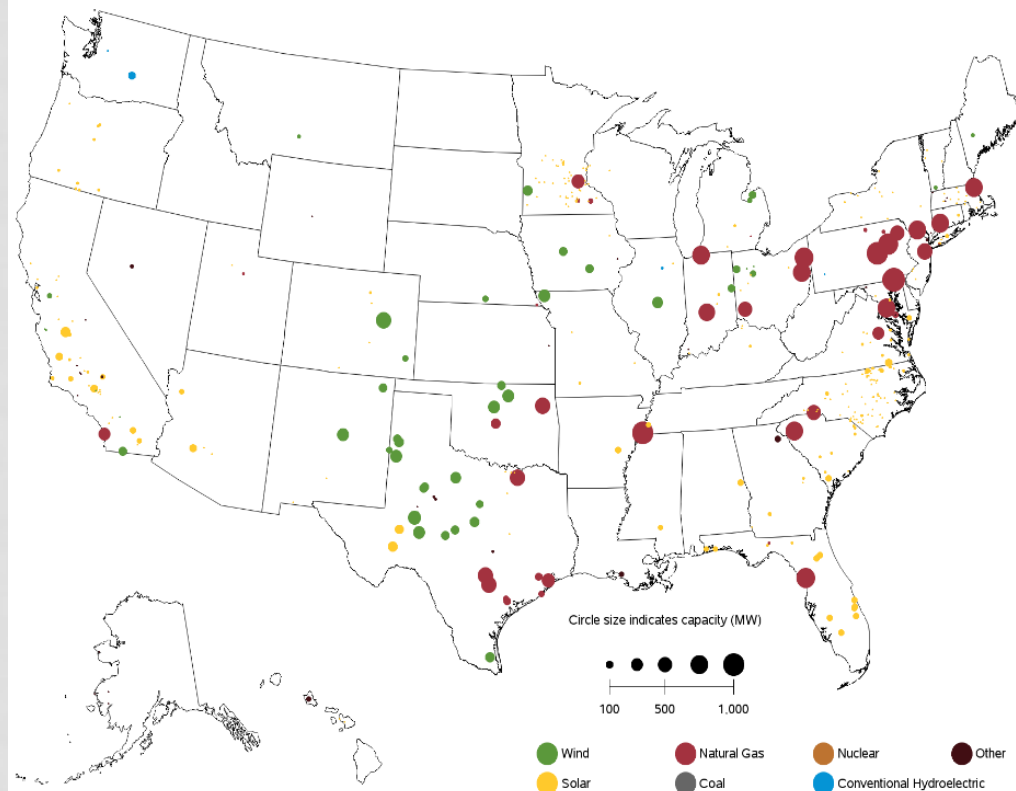
Figure 6.1.D. Utility-Scale Generating Units Planned to Retire from November 2017 to October 2018



Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

PROJECTED ADDITIONS

Figure 6.1.C. Utility-Scale Generating Units Planned to Come Online from November 2017 to October 2018

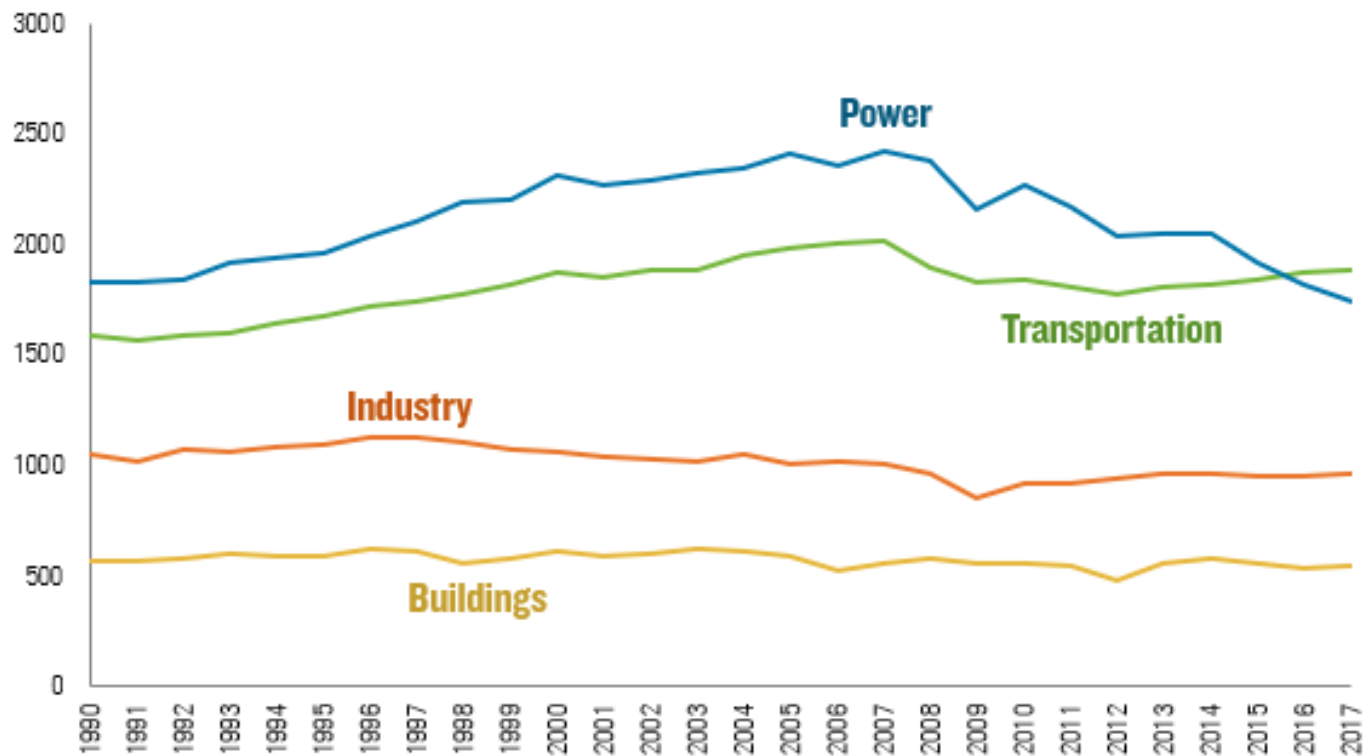


Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'

GHG EMISSIONS

Figure 4: Energy-related CO₂ emissions by sector

Million metric tons



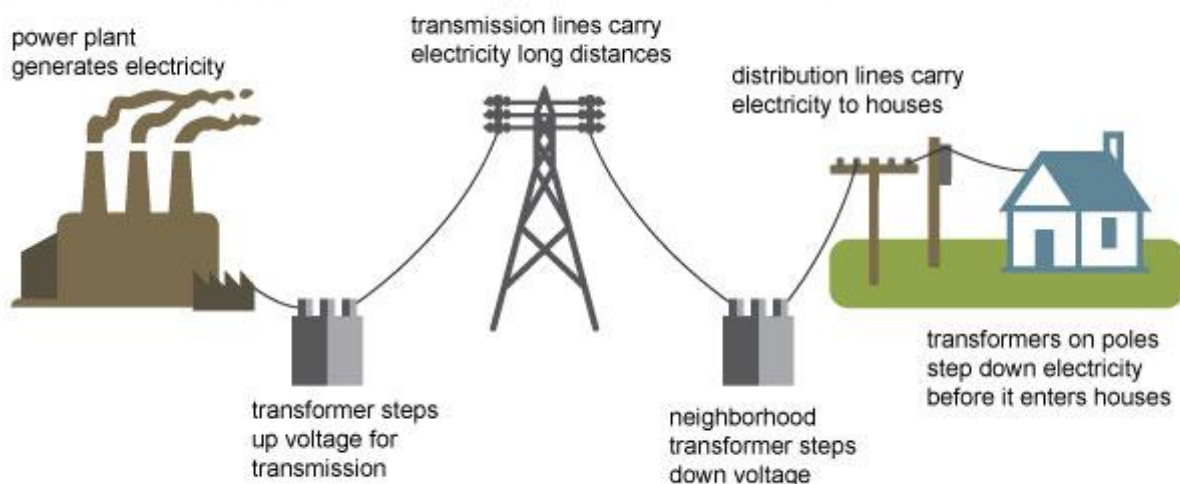
Source: EIA, GasScape, OPIS and Rhodium Group estimates

REGULATION AND THE ENERGY TRANSITION

- FERC's preferences: energy markets
 - DOE's NOPR (and FERC's response)
 - State subsidies and federal preemption
 - Competitive transmission and the monopoly legacy
 - Storage

ELECTRICITY REGULATION 101 – STATE REGULATION

Electricity generation, transmission, and distribution



Source: Adapted from National Energy Education Development Project (public domain)

Vertical integration (bundled retail transaction):
states regulate

Utility generation

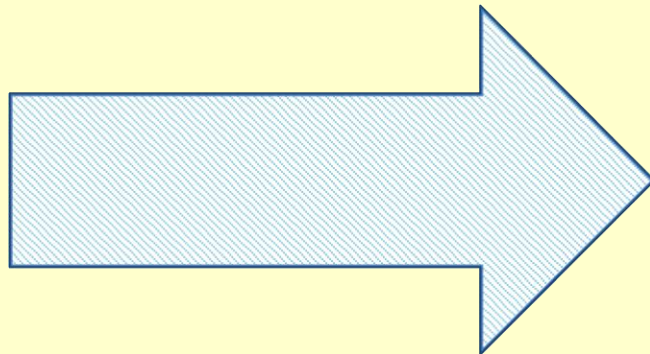
Utility transmission/distribution

Utility retail sales

ELECTRICITY REGULATION 101 – UNBUNDLED TRANSACTIONS

FERC regulates wholesale
sales and unbundled
transmission

States regulate retail,
procurement



Utility
purchases
power

Utility
transmission/distribu
tion

Utility retail
sales

FERC REGULATION OF WHOLESALE SALES: ELECTRICITY MARKETS

- Auctions and market clearing prices
 - Utilities (Load-serving entities) bid to buy certain amount of power at certain place and time
 - E.g. need 100 MW from 10-11 a.m. at point X
 - Generators bid to sell amount at certain price
 - Bids are stacked from lowest to highest price until demand is met – highest accepted bid sets price for all

Generator	Amount	Bid Price	Amount Sold	Clearing price
4	20 MW	\$45	10 MW	\$45
3	20 MW	\$43	20 MW	\$45
2	20 MW	\$41	20 MW	\$45
1	50 MW	\$38	50 MW	\$45

FERC REGULATION OF WHOLESALE SALES: ELECTRICITY MARKETS

- Auctions and market clearing prices
 - If new, cheaper generators enter market, clearing prices will drop and some generators will not sell their power

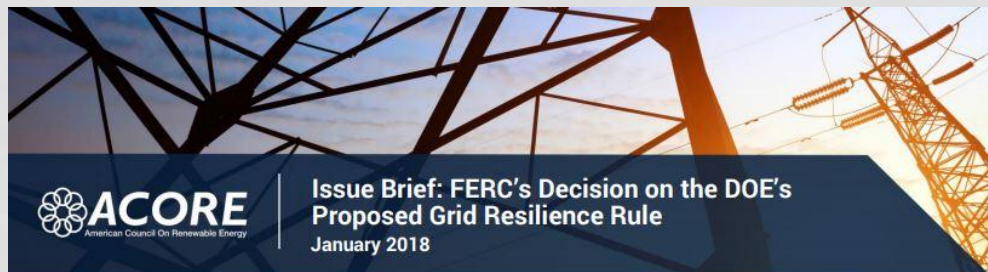
Generator	Amount	Bid Price	Amount Sold	Clearing price
4	20 MW	\$45	0 MW	No sale
3	20 MW	\$43	0 MW	
2	20 MW	\$41	20 MW	\$41
1	50 MW	\$38	50 MW	\$41
A	30 MW	\$35	30 MW	\$41

FERC REGULATION OF WHOLESALE SALES: ELECTRICITY MARKETS

- Auctions and market clearing prices
 - If new, cheaper generators enter market, clearing prices will drop and some generators will not sell their power
 - Rules prohibit companies from bidding below their marginal costs

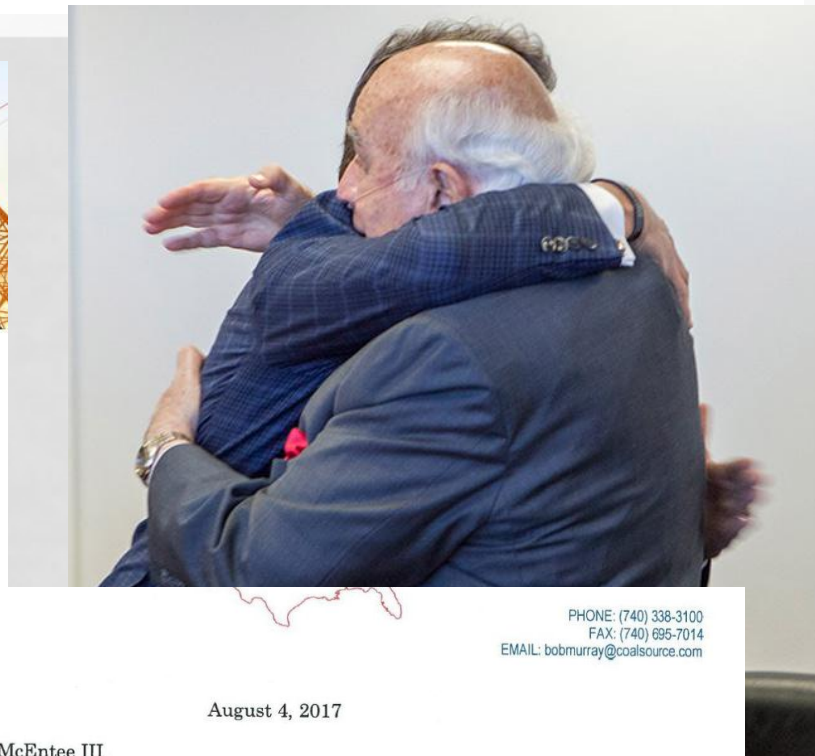
Generator	Amount	Bid Price	Amount Sold	Clearing price
4	20 MW	\$45	0 MW	No sale = coal/nuclear plants
3	20 MW	\$43	0 MW	
2	20 MW	\$41	20 MW	\$41
1	50 MW	\$38	50 MW	\$41
A	30 MW	\$35	30 MW	\$41

DOE'S NOTICE OF PROPOSED RULEMAKING (NOPR)



Overview

This issue brief provides a summary of the Federal Energy Regulatory Commission (FERC)'s decision on the Department of Energy (DOE)'s Proposed Rule on Grid Reliability and Resilience Pricing. The proposed rule provided cost recovery to coal and nuclear power under the guise of promoting grid resilience with preference for a 90-day supply of on-site fuel. On Jan. 8, 2018, FERC issued an order to terminate the rulemaking proceeding and established a new proceeding to gather additional information on resilience. FERC's decision was a 5-0 unanimous agreement, with concurring opinions by Commissioners Cheryl LaFleur, Neil Chatterjee and Richard Glick. The independent agency's ruling aligns with the [comments](#) submitted by ACORE on Oct. 2, 2017.



ROBERT E. MURRAY
Chairman, President &
Chief Executive Officer

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August 4, 2017

Mr. John D. McEntee III
Special Assistant and Personal Aide to the President
The White House
1600 Pennsylvania Avenue, N.W.
Washington, D.C. 20502
johndmcentee@WHO.EOP.GOV

Dear Mr. McEntee:

Last evening in Huntington, West Virginia, after President Donald Trump met briefly with Mr. Charles E. Jones, Chief Executive Officer of FirstEnergy Corporation, and the undersigned, he turned to you and said "tell Cohn to do whatever these two want him to do".

In Youngstown, Ohio nine days ago, after my personally speaking with President

FERC ACTION ON NOPR

- Nope! (Unanimous rejection of the NOPR)
- But 3 concurring opinions with 3 different views

Friday, January 26, 2018

FERC Rejects Rick Perry's Directive to Subsidize Uneconomical Power Plants—and Presents Diverging Visions for the Future of the U.S. Energy System

By Amelia Schlusser, Staff Attorney

Last October, Secretary of Energy Rick Perry submitted a [Proposed Rule](#) on Grid Reliability and Resilience Pricing to the Federal Energy Regulatory Commission (FERC). The Proposed Rule directed FERC to impose new rules on the organizations responsible for managing the nation's competitive wholesale power markets. These new rules were required ensure that certain coal and nuclear



ANOTHER TRY?

- FirstEnergy (owned by Murray) has asked DOE to issue emergency order requiring companies to keep purchasing power

ELEMENTS

A WHISTLE-BLOWER ALLEGES CORRUPTION IN RICK PERRY'S DEPARTMENT OF ENERGY



By Carolyn Kormann April 5, 2018

STATE SUBSIDIES AND FEDERAL PREEMPTION

- *Hughes v. Talen Energy Marketing LLC.*, 136 S.Ct. 1288 (2016)
 - The Federal Power Act preempts a state rule that compensates new natural gas plant through a contract-for-differences payment system
 - Utilities would enter into K with new generator for set price
 - Generator would sell power and capacity into markets
 - If market price > K price, generator pays utilities
 - If K price > market price, utilities pay generators
 - Designed to create fixed price for gas plant, but distorts competitive market

STATE SUBSIDIES AND FEDERAL PREEMPTION

- How far does *Hughes v. Talen* go?

We reject Maryland's program only because it disregards an interstate wholesale rate required by FERC. **We therefore need not and do not address the permissibility of various other measures States might employ to encourage development of new or clean generation**, including tax incentives, land grants, direct subsidies, construction of state-owned generation facilities, or re-regulation of the energy sector. Nothing in this opinion should be read to foreclose Maryland and other States from encouraging production of new or clean generation through measures “untethered to a generator's wholesale market participation.” (emphasis added)

STATE SUBSIDIES AND FEDERAL PREEMPTION

- How far does *Hughes v. Talen* go?
 - *Coalition for Competitive Electricity, Dynergy Inc. v. Zibelman*, 272 F. Supp. 3d 554 (S.D.N.Y. 2017) (on appeal to 2d Cir.)
 - The FPA does not preempt New York's zero-emission credit (ZEC) program designed to provide economic support for nuclear power plants
 - *Village of Old Mill Creek v. Star*, 2017 WL 3008289 (N.D. Ill. Jul. 14, 2017)
 - The FPA does not preempt the Illinois ZEC program

FEDERAL TRANSMISSION AND STORAGE REGULATION

RTOS AND ISOS



FEDERAL TRANSMISSION

- *Ameren Services Co. v FERC*, 880 F.3d 571 (D.C. Cir. 2018)
 - FERC Order Nos. 1000 and 2003
 - 1000: transmission operators must engage in regional and inter-regional transmission planning
 - 2003: sought to improve interconnection by non-transmission owning utilities by
 - Creating interconnection process
 - Requiring generators to pay for their own interconnection costs
 - Requiring generators to pay for network upgrades they cause (but will be paid back over time through credits on transmission fees)
 - Years of rulemaking/litigation to implement
 - Early disputes:
 - Transmission owners were typically seeking to avoid transmission construction and to avoid paying for it

FEDERAL TRANSMISSION

- *Ameren Services Co. v FERC*, 880 F.3d 571 (D.C. Cir. 2018)
 - Most recent order by MISO/approved by FERC:
 - Generators have the right of first refusal to pay for network upgrades
 - If transmission owners pay, they will receive regulated rates
 - $R = B * r + O$
 - $B * r$ = rate base (capital costs) * rate of return = incentive to overbuild and overcharge
 - If generators pays, they do not get regulated rates
 - = incentive to be more efficient
 - Court:
 - Denying transmission owners the first option of building/paying may undermine their bottom line
 - Even if it's more expensive, regulations must ensure that regulated utilities continue to earn adequate returns
 - Does this mean monopolies must be protected even when competition changes?

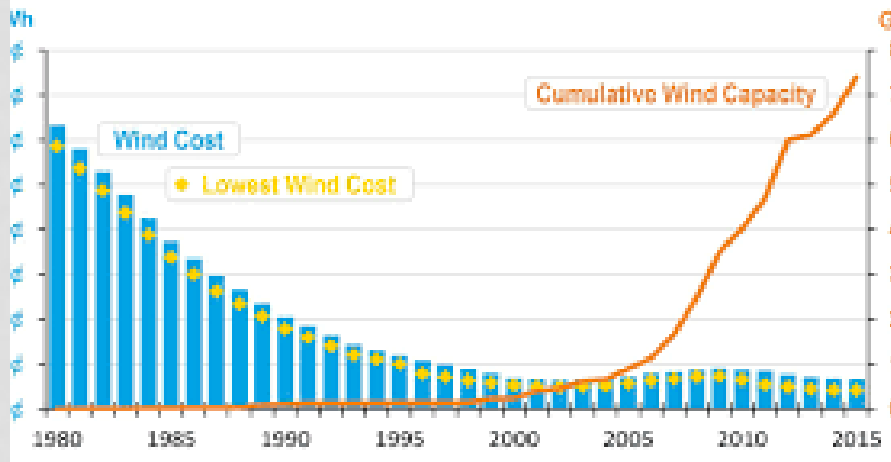
FEDERAL STORAGE REGULATION

- FERC Order No. 841 (Feb. 2018)
 - RTOs and ISOs must create rules for storage to participate in energy markets to ensure that storage assets are fairly compensated for the resources they provide

FEDERAL ELECTRICITY REGULATION UNDER TRUMP

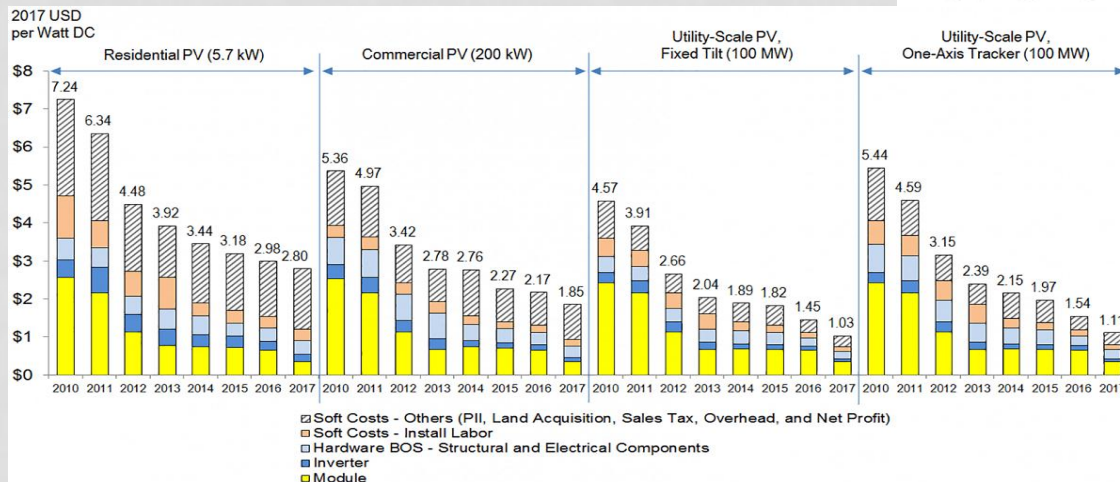
- FERC's focus on opening markets is generally consistent, although the FERC NOPR concurrence raises some concerns
- The energy system is changing very quickly, and FERC, the courts, and states are all trying to address the challenges of transition
 - New market rules and new competitive players v. embedded costs and infrastructure
- It's tricky!
 - Markets alone aren't going to be enough

LOWER COSTS = QUICKER TRANSITION, MORE CHALLENGES, AND MORE OPPORTUNITIES



BRIEF

**APS to install 50 MW, 135 MWh
solar-shifting battery**



IT'S TIME FOR A PLAN!

