

# IMPACT OF EPA'S TRANSPORT RULE FIP ON ELECTRIC GRID RELIABILITY

By

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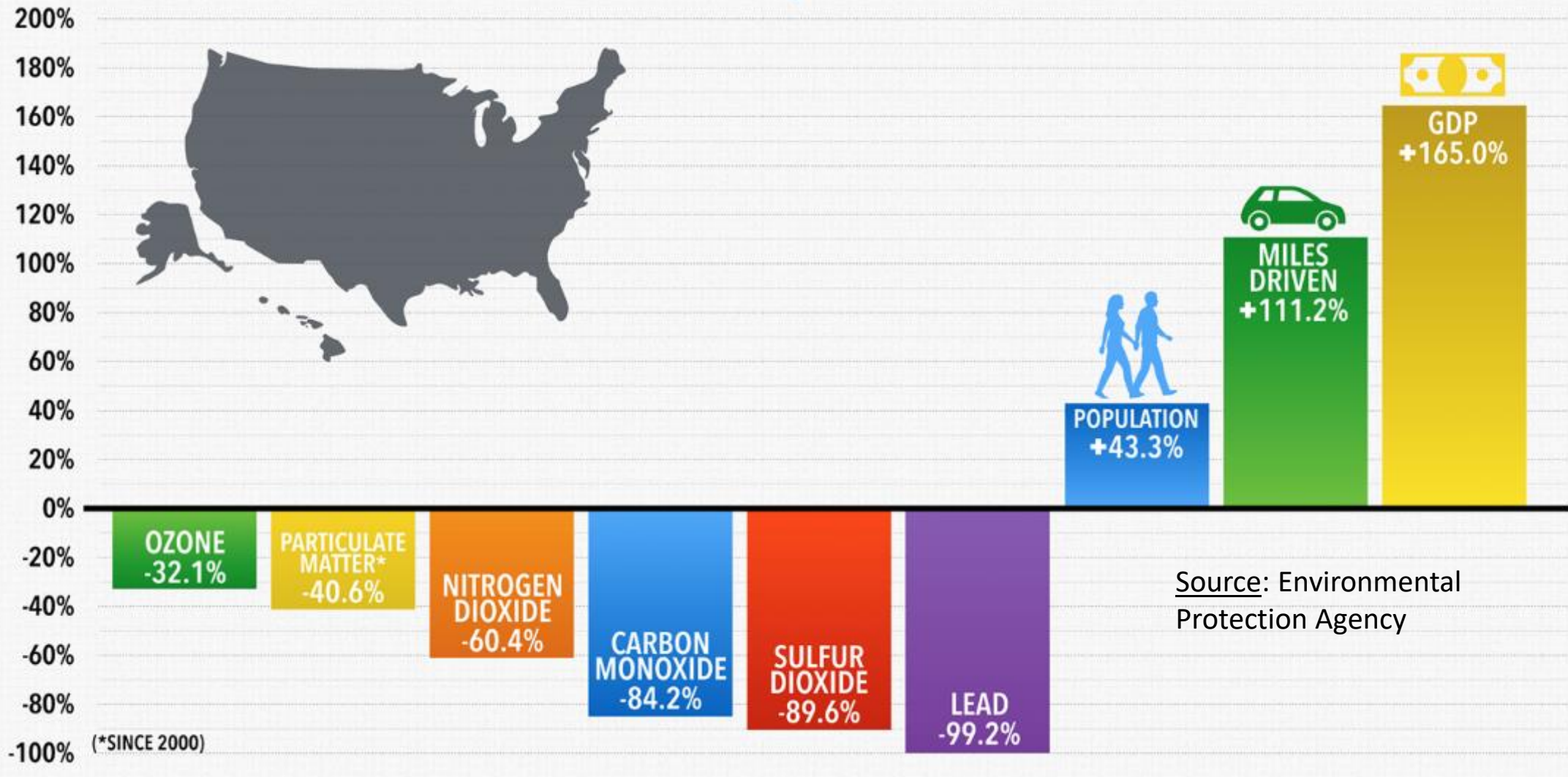
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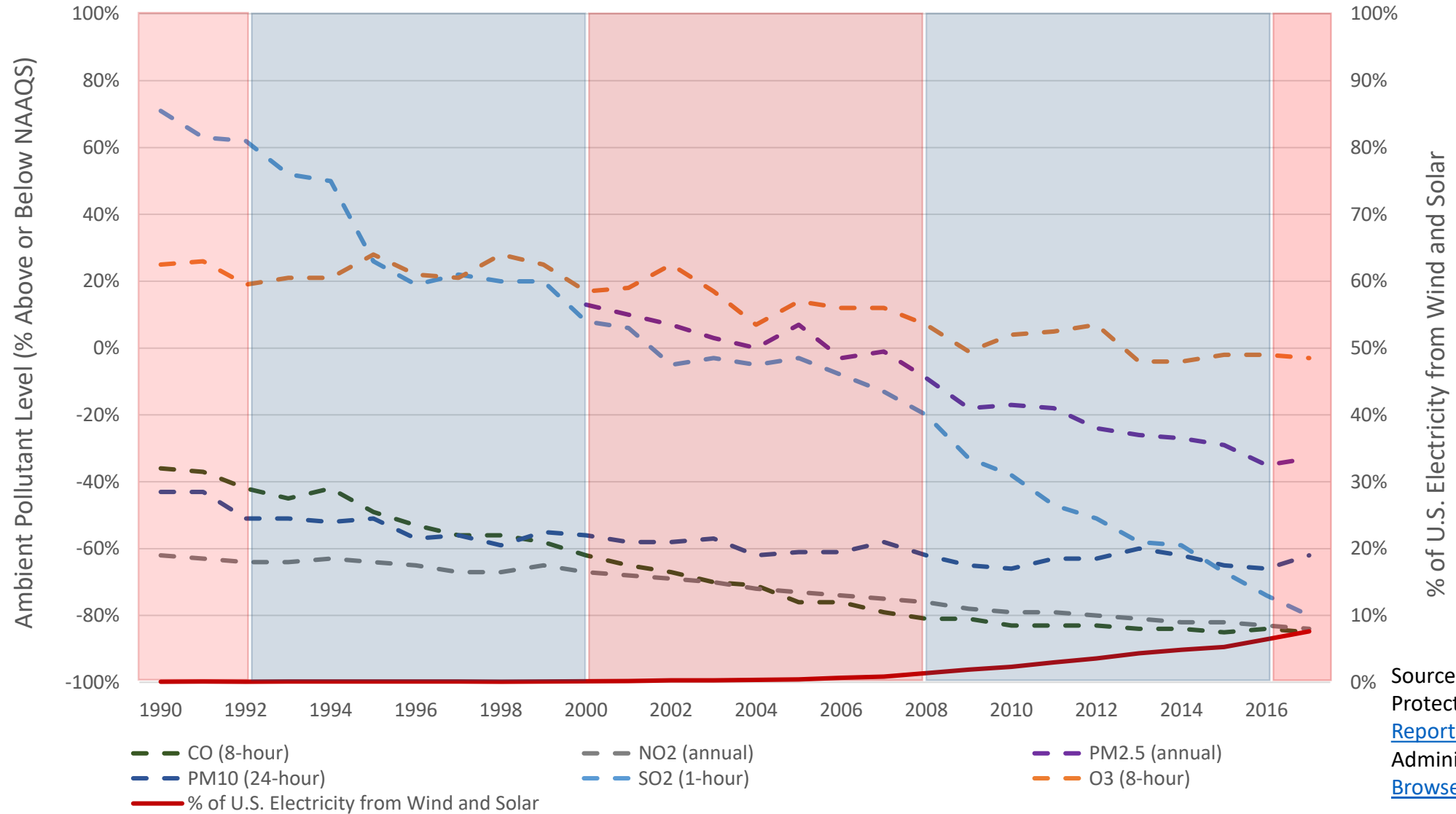




# ***The U.S. Has Set the Global Standard for Making Our Air Safe & Economy Strong***

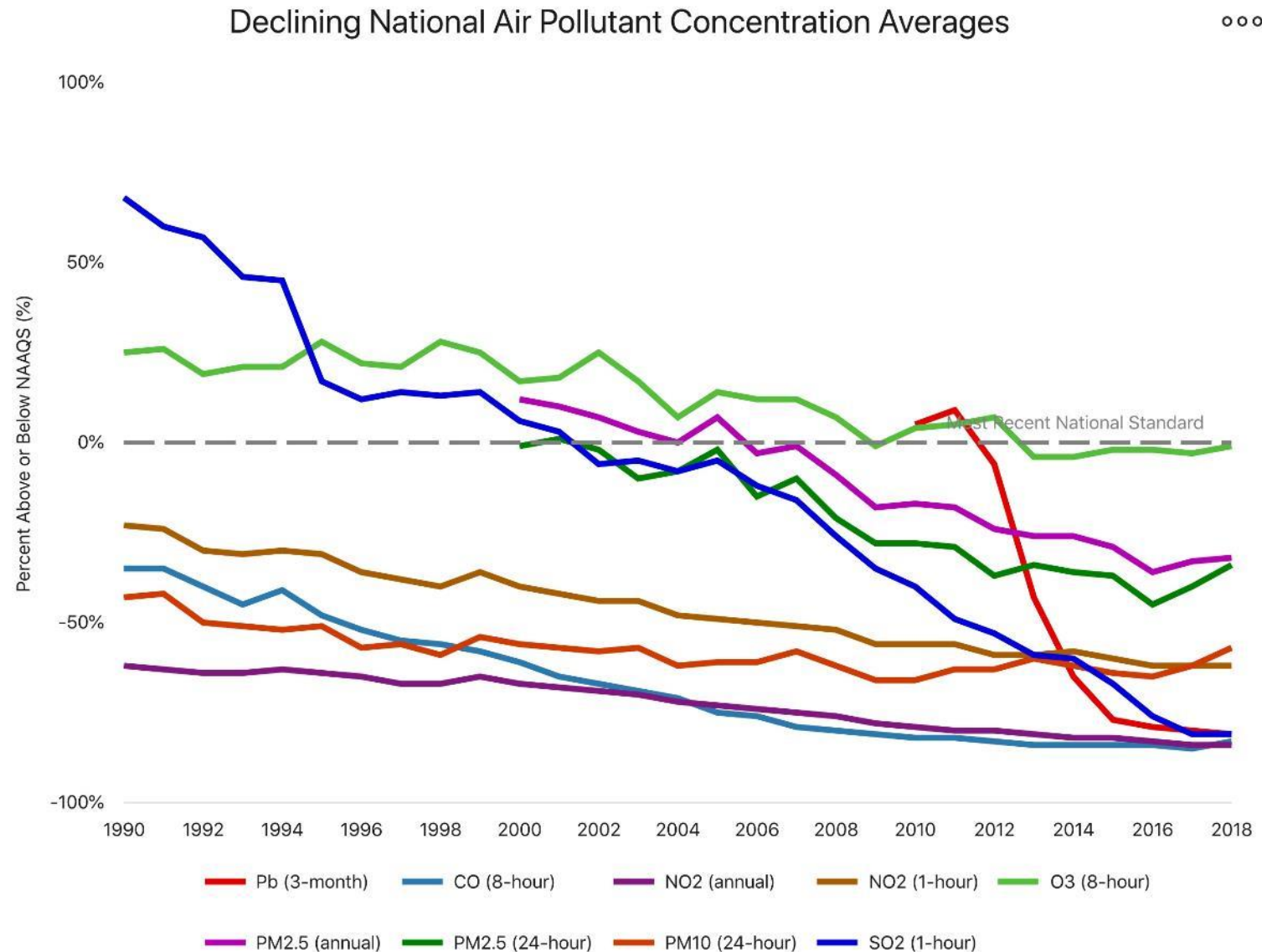


# We Made our Air Safe with Technology, Not Anti-Fossil Fuel Ideology

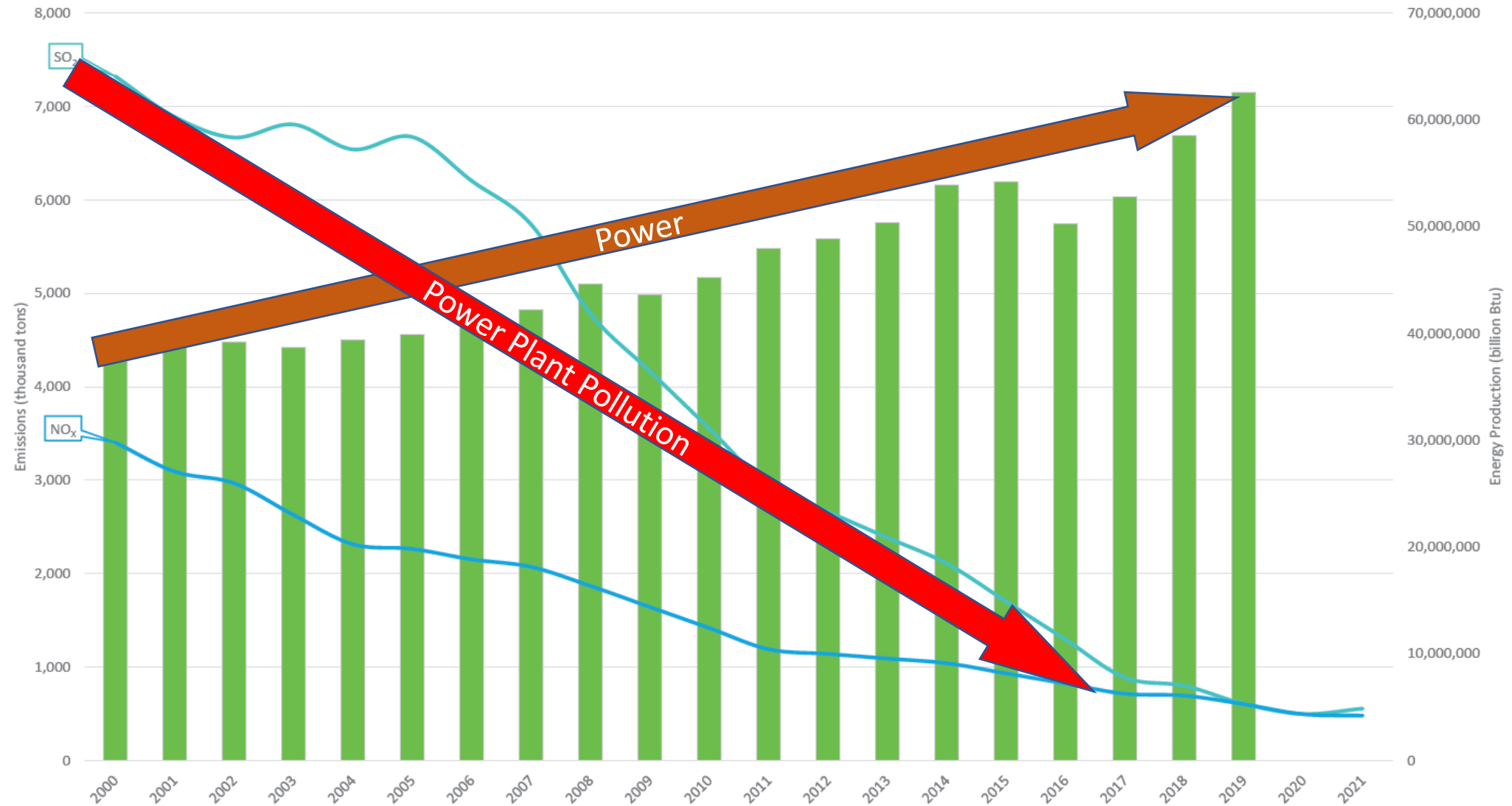


Sources: Environmental Protection Agency, [Air Trends Report 2018](#); Energy Information Administration, [Total Energy Data Browser](#)

# Then and Now: 50 Years of Success - *We Internalized the Externalities of Pollution*



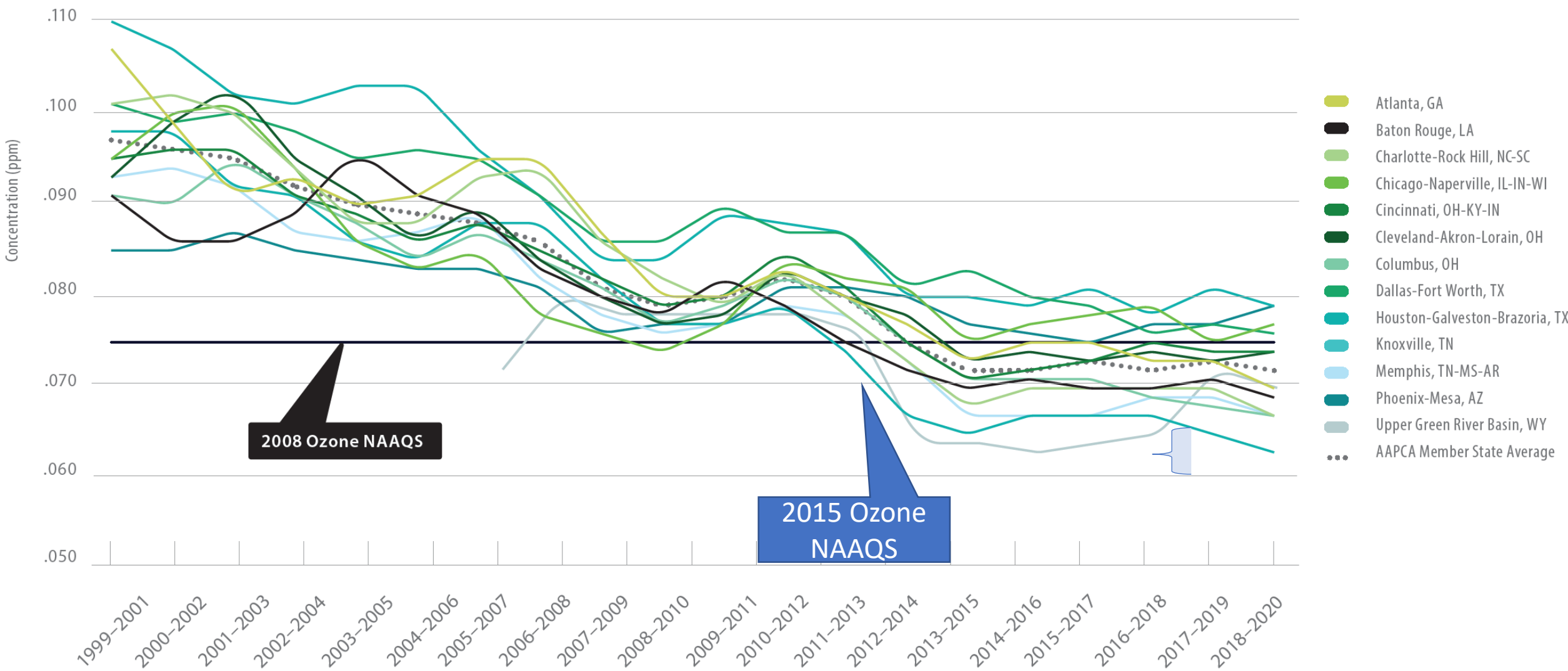
# Power Plant Emissions NOT Driving Air Quality Problems



Source: U.S. Energy Information Administration, **State Energy Data System (SEDS): 1960–2019**; U.S. EPA, **Air Pollutant Emissions Trends Data** (Data file: “State Tier 1 CAPS Trends, Criteria pollutants State Tier 1 for 1990–2021”).



# But Environmental Goal Posts (NAAQS) Are Moving (OZONE)





# Ozone Transport Rules - BACKGROUND



## 1997 Ozone NAAQS Transport ("Good Neighbor") History

- August 8, 2011 – EPA finalized CSAPR – deep additional reductions punitive to Texas and several other states
- December 30, 2011 – Rule stayed by D.C. Circuit then reversed on August 21, 2012
- July 28, 2015 – After SCOTUS upholds, allows TX challenge, then D.C. Circuit rules that Texas was “over controlled”
- January 2017 – EPA removes over-controlled states (TX) from “Group 3” in CSAPR

## 2008 Ozone NAAQS Transport ("Good Neighbor") History

- October 26, 2016 – EPA finalized CSAPR Update for 2008 Ozone Std
- December 21, 2018 – EPA finalized “close-out” of 2008 Good Neighbor requirements
- 2019-2020 – Wisconsin & New York cases lead to DC Circuit vacating close-out rule
- April 30, 2021 – EPA finalizes replacement close-out rule holding that no additional controls required

## 2015 Ozone NAAQS Transport ("Good Neighbor") History

- August 17, 2018 – TX submits “Good Neighbor” plan revision to State Implementation Plan (TX Transport SIP)
- February 22, 2022 – Without expressing concerns during the 3.5 years the TX Transport SIP was pending, EPA proposed to summarily disapprove it and, two weeks later, on March 11, proposed to impose its own Federal Implementation Plan in place of SIP submissions for 26 states, including Texas (Transport Rule FIP).
  - *Imposes reductions starting May 1, 2023; beginning in 2024-2026, imposes restrictive & dynamic budgets, caps on allowance banking, & daily max rates that will force massive loss of coal capacity in 2023-2028.*

# RELIABILITY IMPACTS OF PENDING EPA RULES

(COAL CAPACITY WITHOUT SCR = SUMMER CAPACITY LOST DUE TO TRANSPORT RULE)

## SPP:

8,184 MW by 12/2026  
(37% of Coal Fleet)

ADDED TO UNITS SLATED FOR PRE-2030

## RETIREMENT:

*37% of coal capacity will be lost*

\*Gas-fired capacity impacts are still being calculated but EPA's numbers appear assume a range between 16,856-19,461 MWs by 2026 due to SCR retrofit requirement.

## PJM:

6,626 MW  
by 12/2026

(15% of Coal Fleet)

ADDED TO UNITS SLATED FOR PRE-2030 RETIREMENT:

*33% of coal capacity will be lost*

## MOUNTAIN WEST:

8,892 MW  
by 12/2026

(38% of Coal Fleet)

ADDED TO UNITS SLATED FOR PRE-2030 RETIREMENT:

*44% of coal capacity will be lost*

## MISO:

16,996 MW  
by 12/2026

(34% of Coal Fleet)

ADDED TO UNITS SLATED FOR PRE-2030 RETIREMENT:

*51% of coal capacity will be lost*

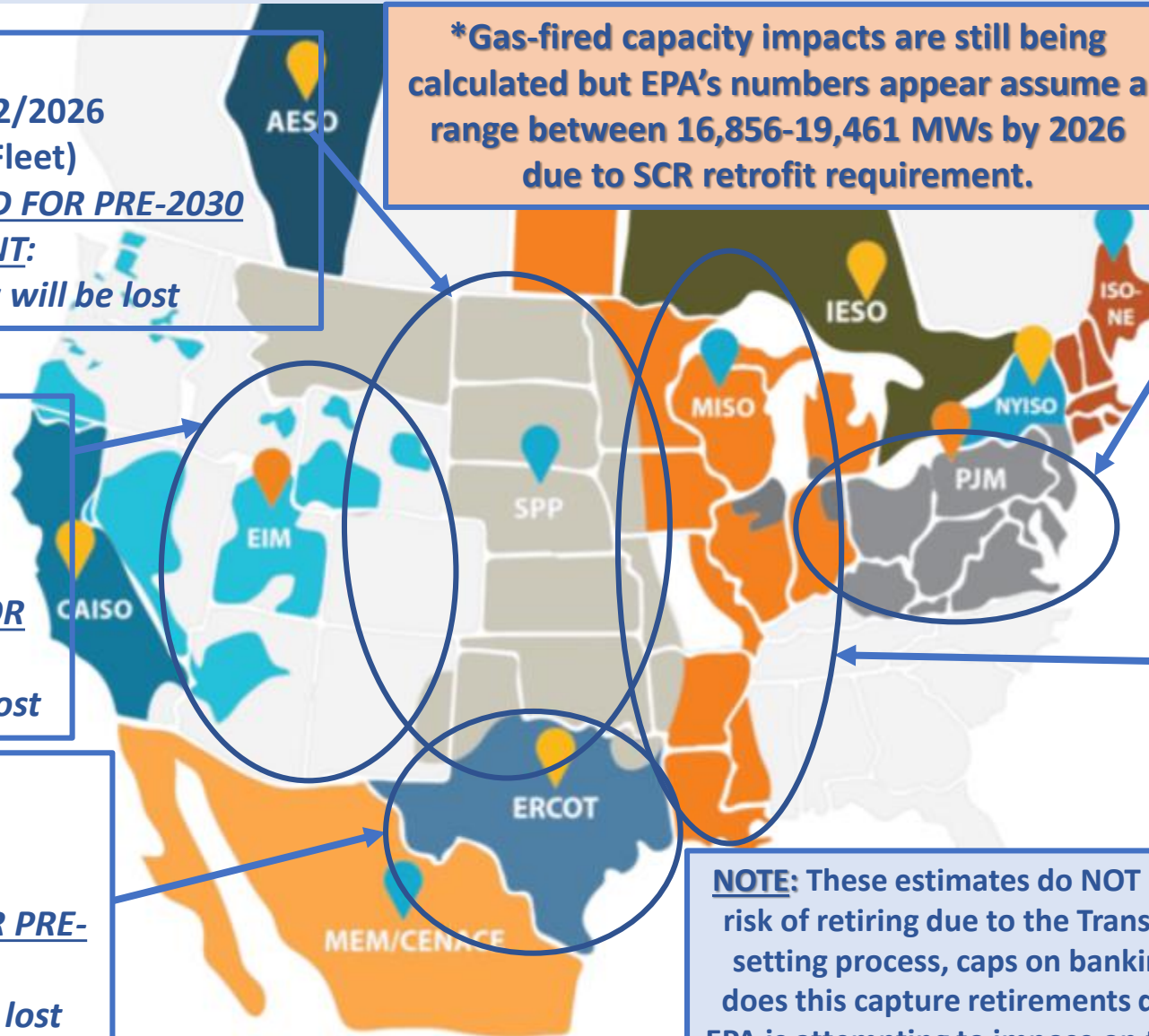
## ERCOT:

7,867 MW by 12/2026  
(55% of Coal Fleet)

ADDED TO UNITS SLATED FOR PRE-2030 RETIREMENT:

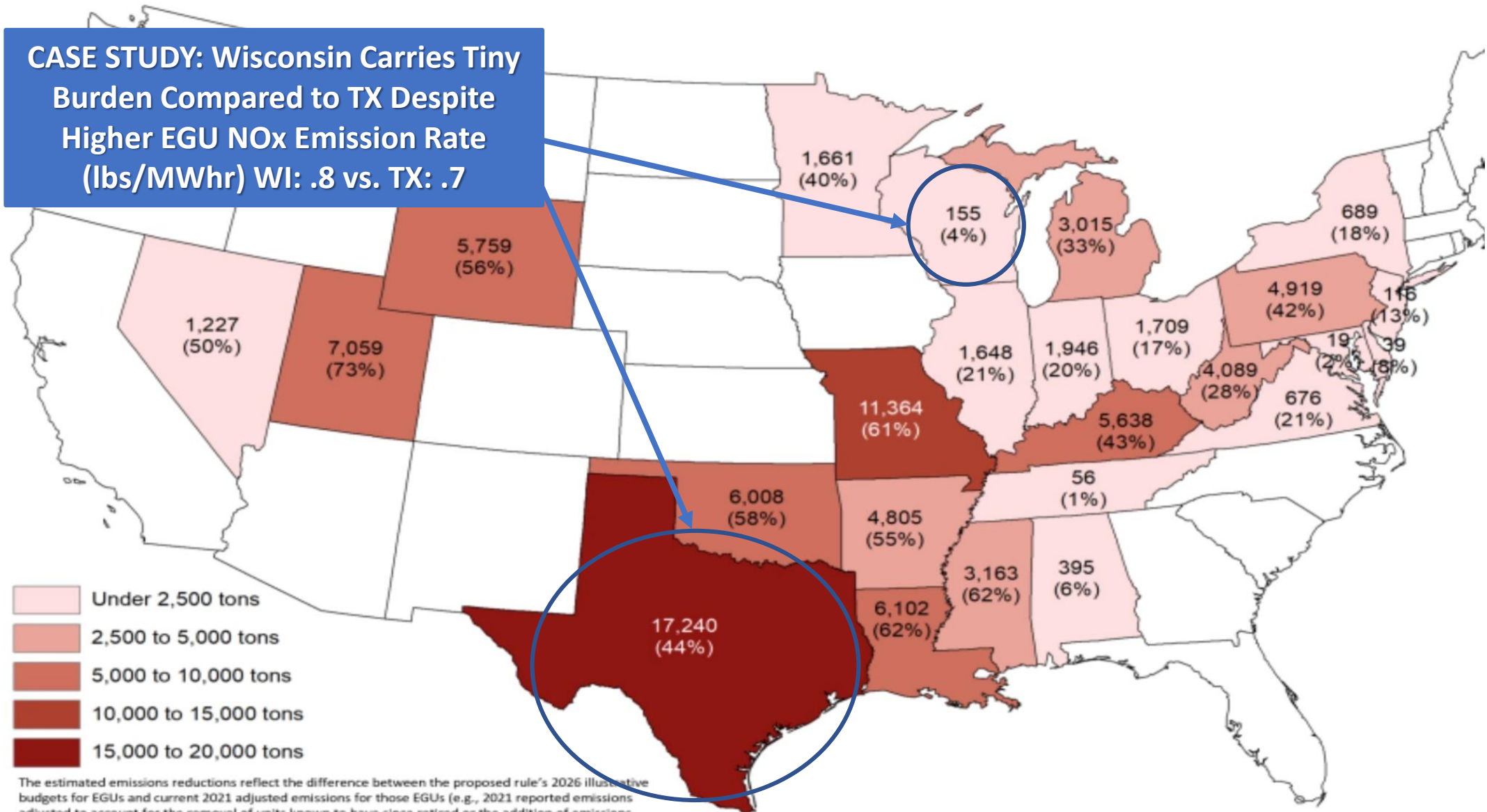
*55% of coal capacity will be lost*

**NOTE:** These estimates do NOT include SCR-controlled units that are also at risk of retiring due to the Transport Rule FIP's stringent & dynamic budget setting process, caps on banking & the daily max NOx emission rate. Nor does this capture retirements due to new interpretations of the CCR Rules EPA is attempting to impose on the states (i.e. this is the low end of impact).





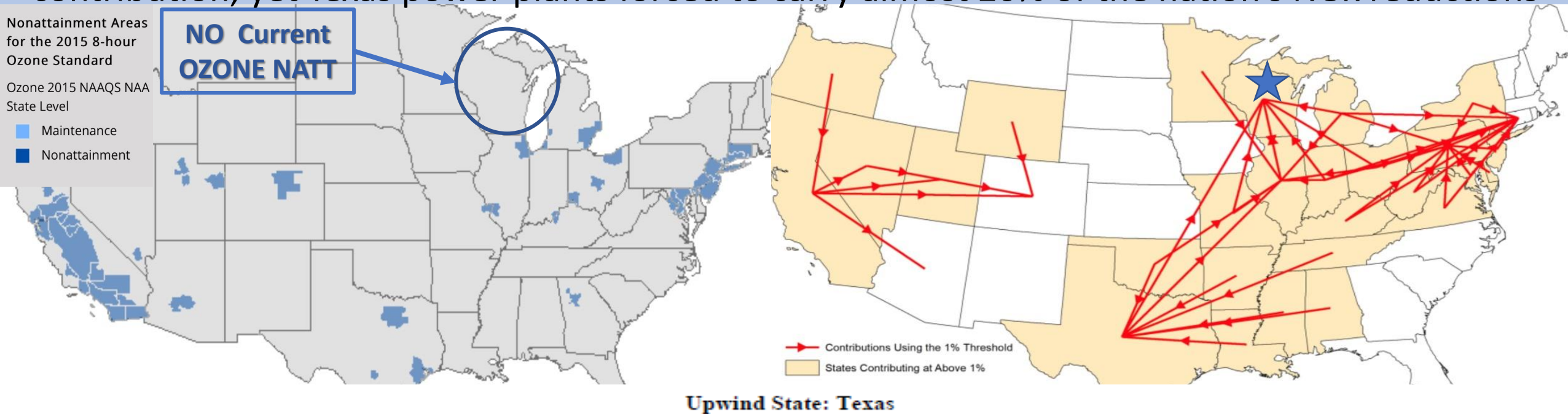
**CASE STUDY: Wisconsin Carries Tiny Burden Compared to TX Despite Higher EGU NOx Emission Rate (lbs/MWhr) WI: .8 vs. TX: .7**



The estimated emissions reductions reflect the difference between the proposed rule's 2026 illustrative budgets for EGUs and current 2021 adjusted emissions for those EGUs (e.g., 2021 reported emissions adjusted to account for the removal of units known to have since retired or the addition of emissions from under-construction new fossil plants). In other words, the estimated reductions reflect changes known to have happened and be happening in the power sector, as well as the impact of the proposed rule. Because these estimated reductions reflect the overall change from current levels of operation, they are higher, on average, than the values reflected in the regulatory impact analysis (emissions reductions relative to projected future levels of operation) and other communications materials for the proposal.

# “SIGNIFICANT CONTRIBUTION” TO “NEIGHBOR” OZONE Nonattainment?

EPA predicts 1.1 – 2.4% contribution from ALL SOURCES IN TEXAS to 2 monitors 5 states away (WI) (that are currently in attainment) & power plants are a tiny fraction of the already small contribution, yet Texas power plants forced to carry almost 20% of the nation’s NO<sub>x</sub> reductions



Downwind States	Receptors	2023 Avg DV	2023 Max DV	Receptor Status	2023 Contribution	2026 Avg DV	2026 Max DV	Receptor Status	2026 Contribution
IL	Chicago-Alsip	69.6	73.4	Maintenance-Only	0.86	68.7	72.5	Maintenance-Only	0.82
IL	Chicago-South	69.8	72.4	Maintenance-Only	1.46	69.1	71.7	Maintenance-Only	1.39
IL	Chicago-Northbrook	69.9	73.4	Maintenance-Only	1.15	68.9	72.4	Maintenance-Only	1.09
IL	Chicago-Evanston	70.1	73.0	Maintenance-Only	1.58	69.1	72.0	Maintenance-Only	1.49
WI	Kenosha-Water Tower	72.8	73.7	Nonattainment	1.72	71.7	72.6	Nonattainment	1.61
WI	Kenosha-Chiwaukee	69.2	72.3	Maintenance-Only	1.81	68.1	71.1	Maintenance-Only	1.70
WI	Racine	71.3	73.2	Nonattainment	1.34	70.2	72.1	Maintenance-Only	1.25

# Another Example:

## Wyoming “Significant Contribution” to CO

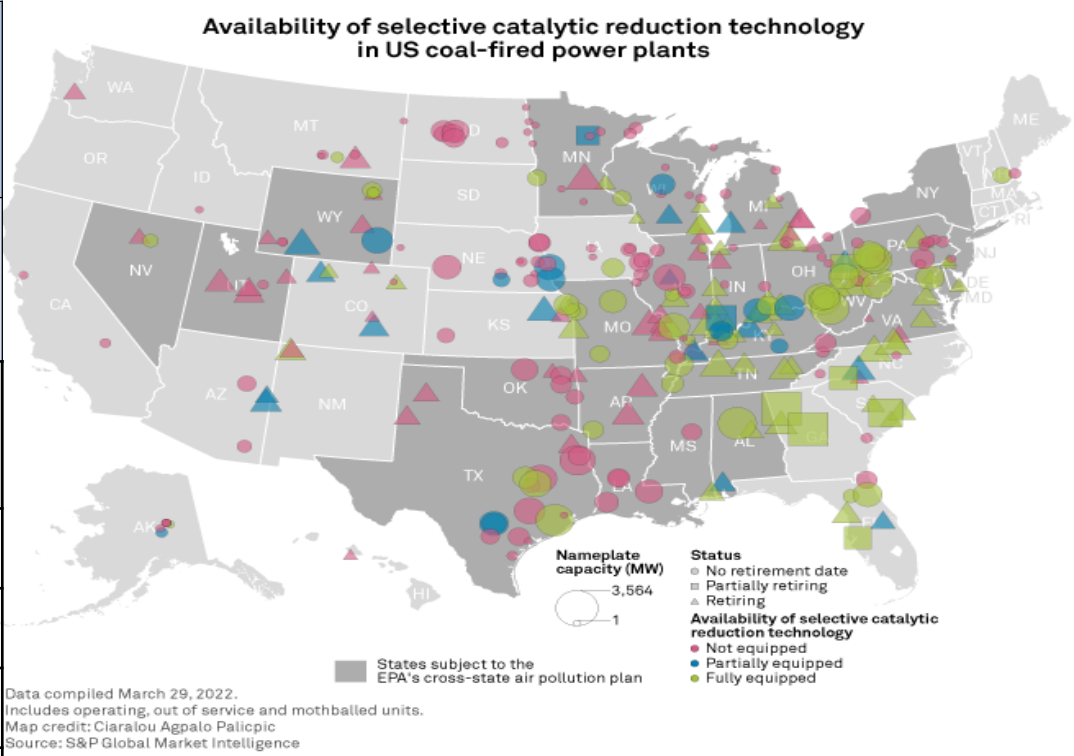
- EPA predicts 1-1.1% contribution to ONE nonattainment monitor (CO)
- On this basis, Wyoming forced to carry 6-7% burden of total NOx cuts.

Upwind State: Wyoming									
Downwind States	Receptors	2023 Avg DV	2023 Max DV	Receptor Status	2023 Contribution		2026 Avg DV	2026 Max DV	2026 Contribution
CO	Denver-Chatfield	71.7	72.3	Nonattainment	0.81		70.5	71.1	Maintenance-Only



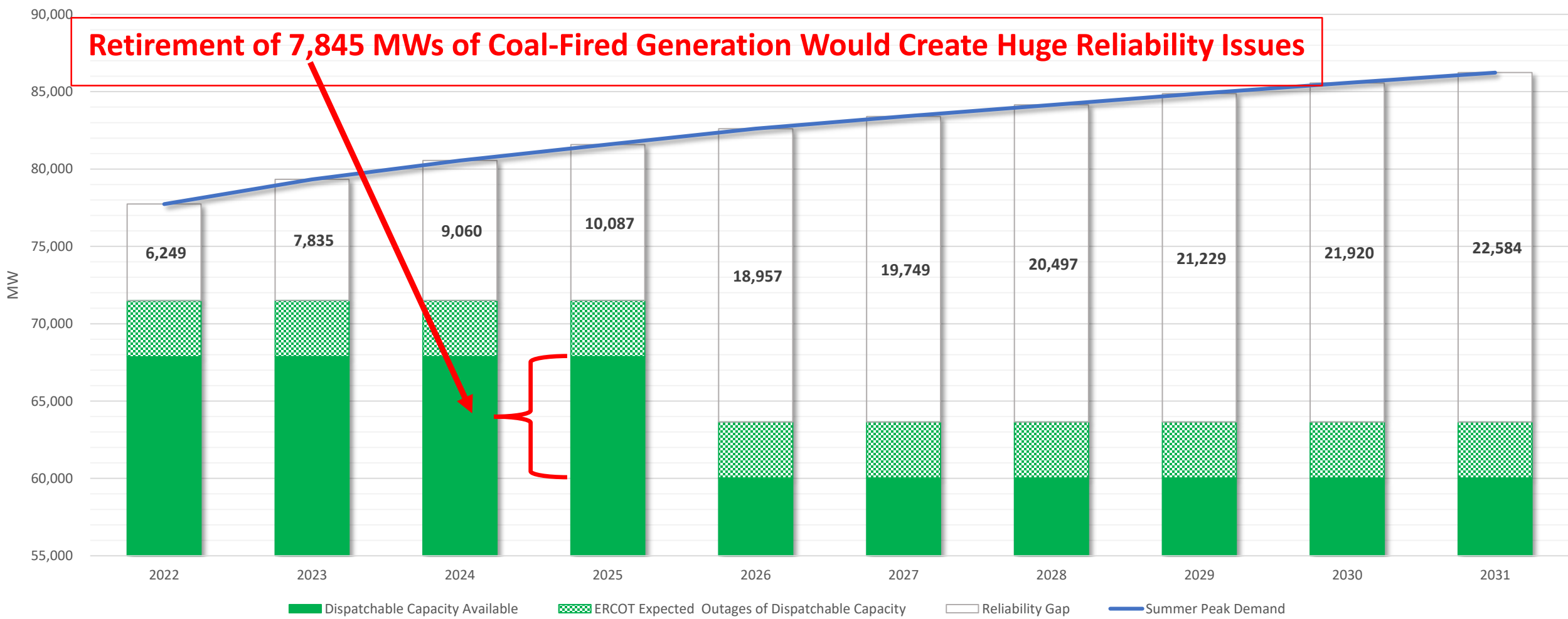
# CASE STUDY: TX - 12,092 MWs OF TEXAS COAL-FIRED CAPACITY TO RETIRE BY 2027 DUE TO TRANSPORT RULE

ERCOT Units (7,867 MWs without SCR)				Southwest Power Pool TX Units (4,225 MWs without SCR)			
Plant	Company	Initial Operation Date	Nameplate Capacity (MW)	Plant	Company	Initial Operation Date	Nameplate Capacity (MW)
Fayette 1	LCRA	Jun-79	615	Harrington 1	Xcel	Jan-76	360
Fayette 2	LCRA	May-80	615	Harrington 2	Xcel	Jan-78	360
Fayette 3	LCRA	Apr-88	460	Harrington 3	Xcel	Jan-80	360
Limestone 1	NRG	Dec-85	893	Tolk 1	Xcel	Jan-82	568
Limestone 2	NRG	Dec-86	957	Tolk 2	Xcel	Jan-85	568
Martin Lake 1	Luminant	May-77	793	Welsh 1	AEP	Mar-77	558
Martin Lake 2	Luminant	May-78	793	Welsh 2	AEP	Apr-80	558
Martin Lake 3	Luminant	Apr-79	793	Welsh 3	AEP	Mar-82	558
Coletto Creek	Luminant	June-80	622	Pirkey	AEP	Jan-85	721
Twin Oaks 1&2	Optim	Sep-90/Oct-91	350				
San Miguel	SMEC / STEC	Jan-82	410	Harrington 1	Xcel	Jan-76	360
Spruce 1	CPS	Dec-92	566	Harrington 2	Xcel	Jan-78	360



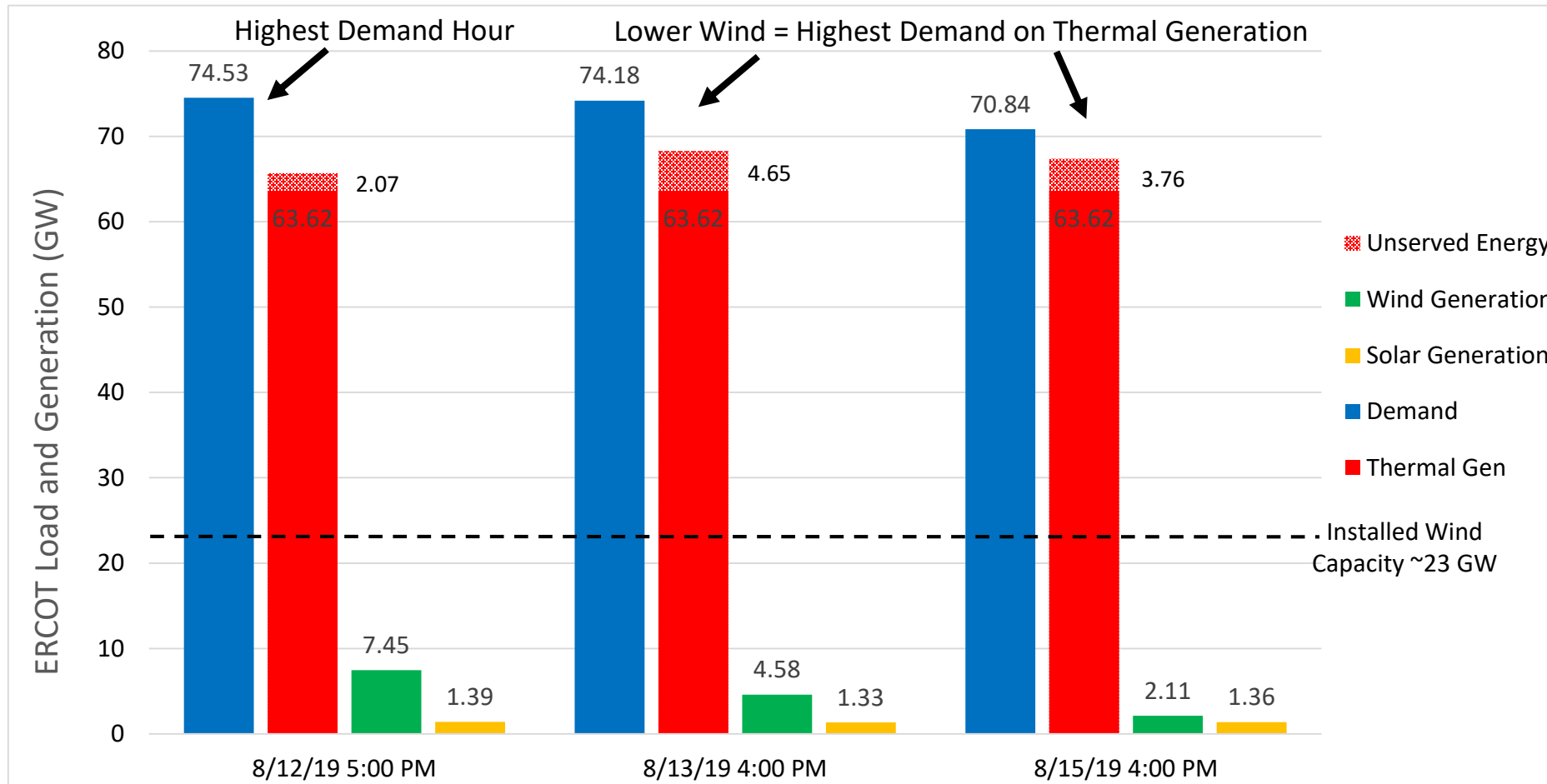
**5,277 MWs of GAS-fired generation would also be lost in Texas as soon as 2026**  
*(2380 in ERCOT alone)*

# ERCOT's Dangerous SUMMER Weather Dependence at Peak Will Grow Significantly if EPA Transport Rule is Finalized



Source: Dec. 2021 ERCOT Capacity, Demand, and Reserves Report

# Texas Would NOT Have Kept the Lights on in 2019 Without the Capacity the Transport Rule Would Retire



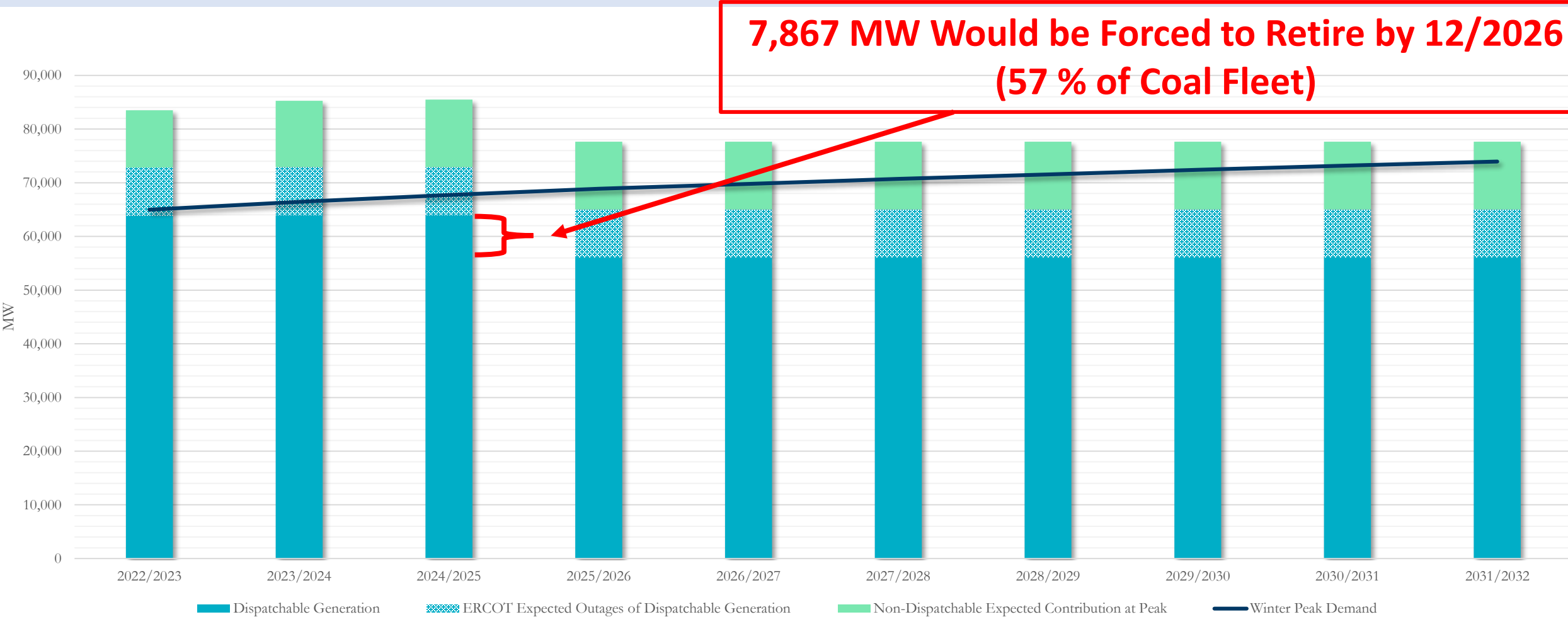
**August 13 and 15, 2019:**  
Level 1 emergencies, 1 GW away from Level 3 emergency

**August 14 and 31, 2020:**  
Close to a Level 1 emergency, possibly worse if not for reduced demand due to COVID-19

**June 14, 2021:**  
Conservation alert, close to Level 1 emergency.

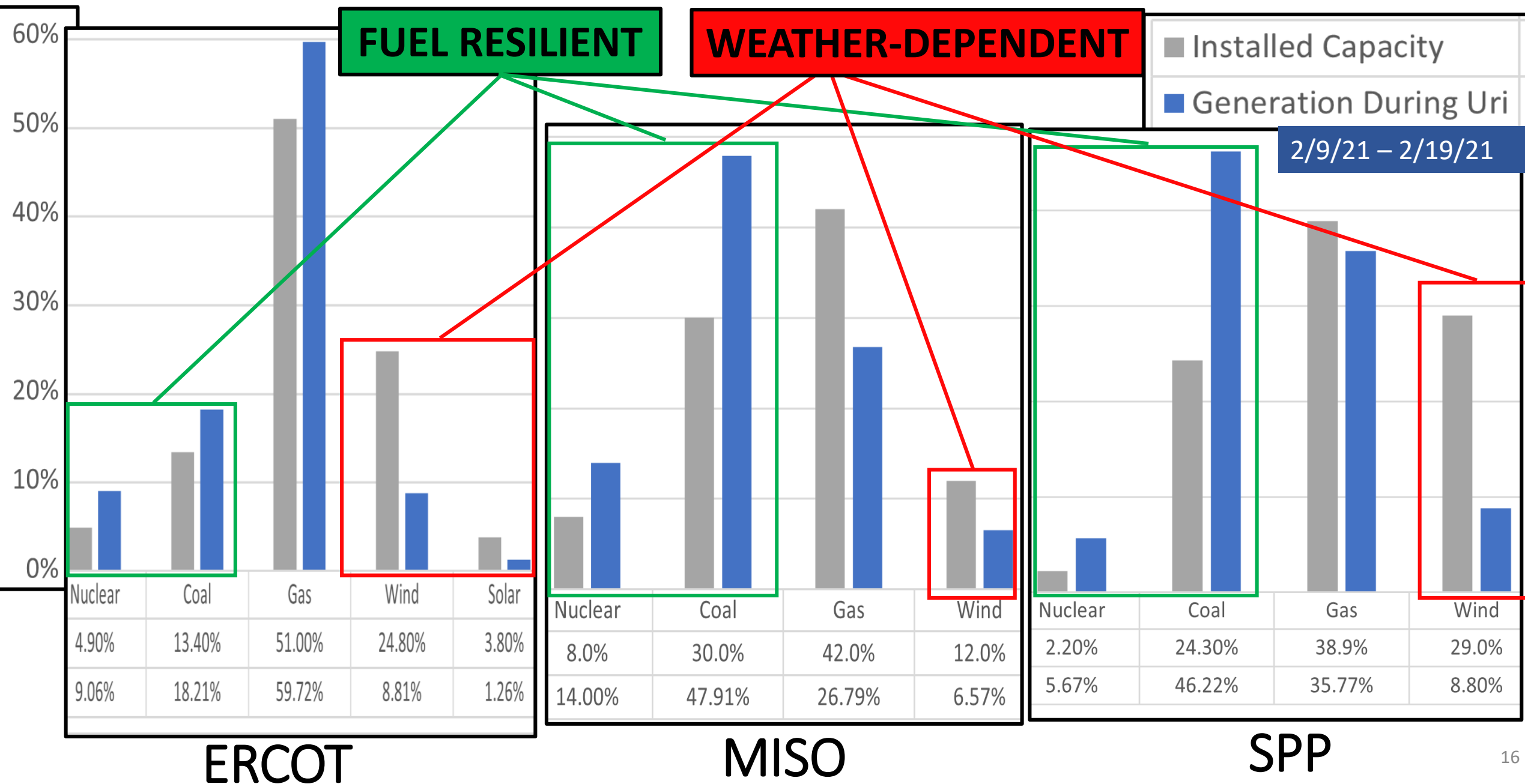


# ERCOT's Dangerous WINTER Weather Dependence at Peak Will Be at Critical Levels if EPA Transport Rule is Finalized



Source: Dec. 2021 ERCOT Capacity, Demand, and Reserves Report

# LESSON LEARNED FROM WINTER STORM URI –COAL FLEET IS ESSENTIAL TO GRID RESILIENCE



# Intermittent Resources Require Dispatchable Backup Supplies

