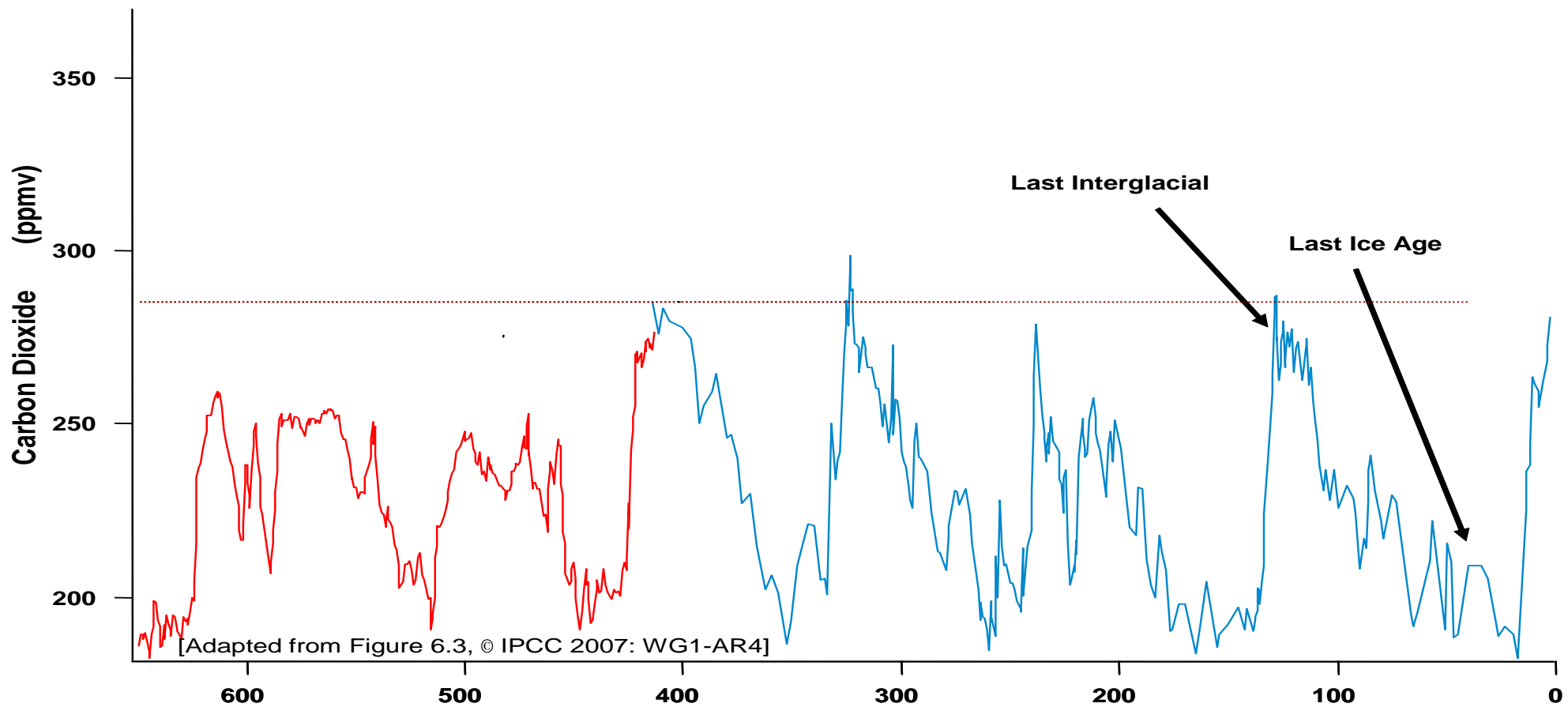


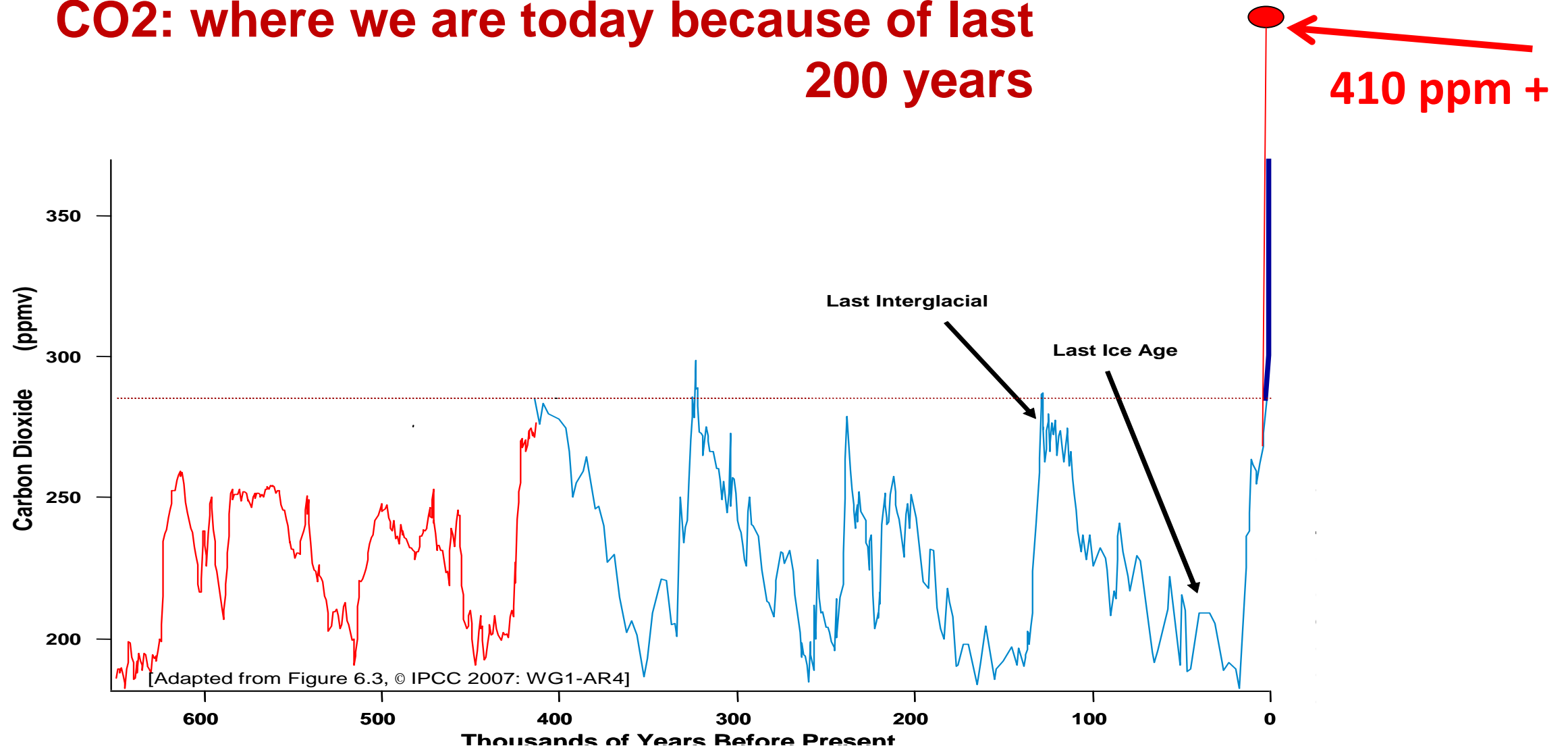


Climate Change, Coal Plants, and Transitioning to Cleaner Energy

Al Armendariz, Ph.D.
Sierra Club, U.S.A.



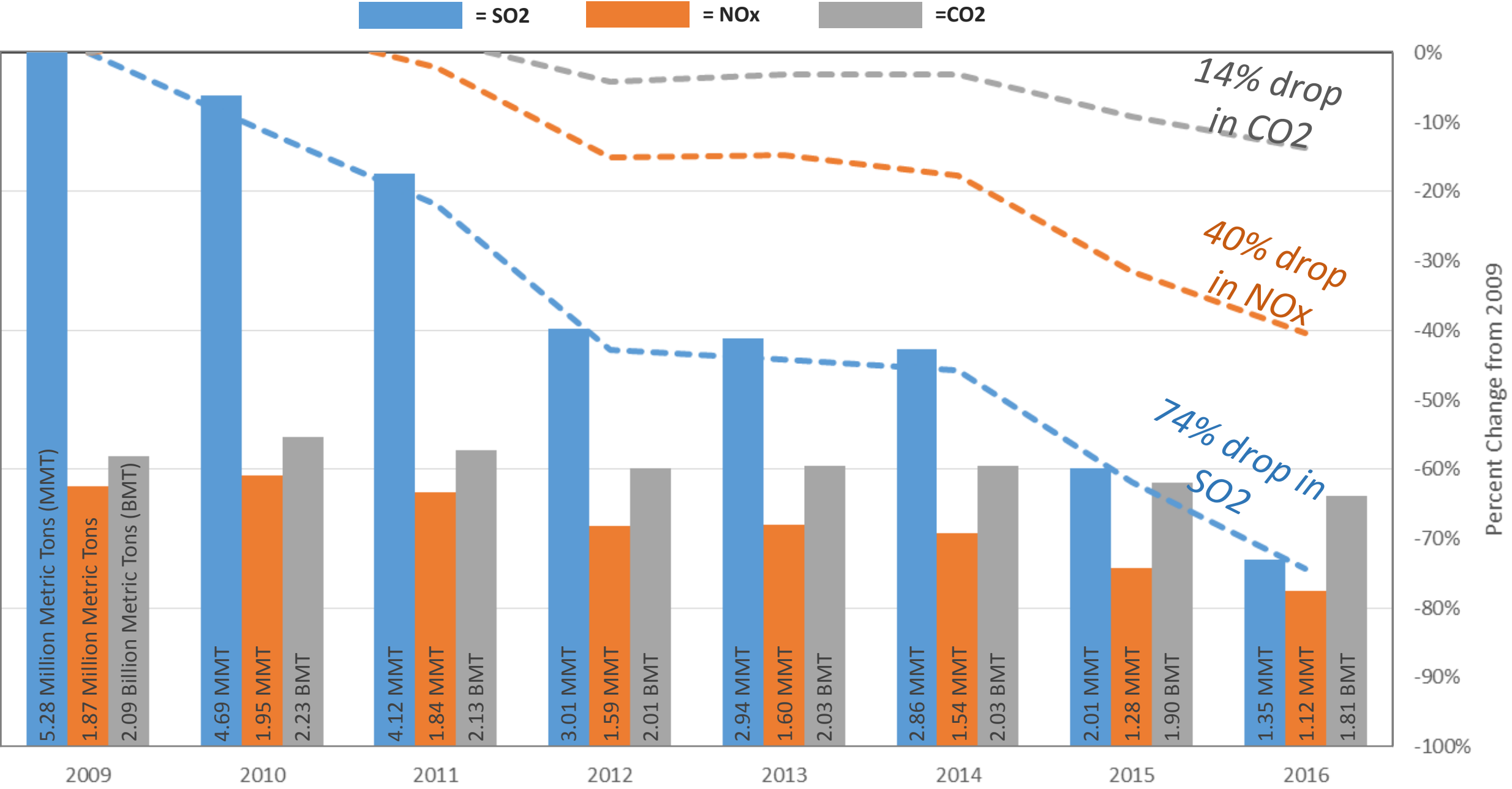
CO₂: where we are today because of last 200 years



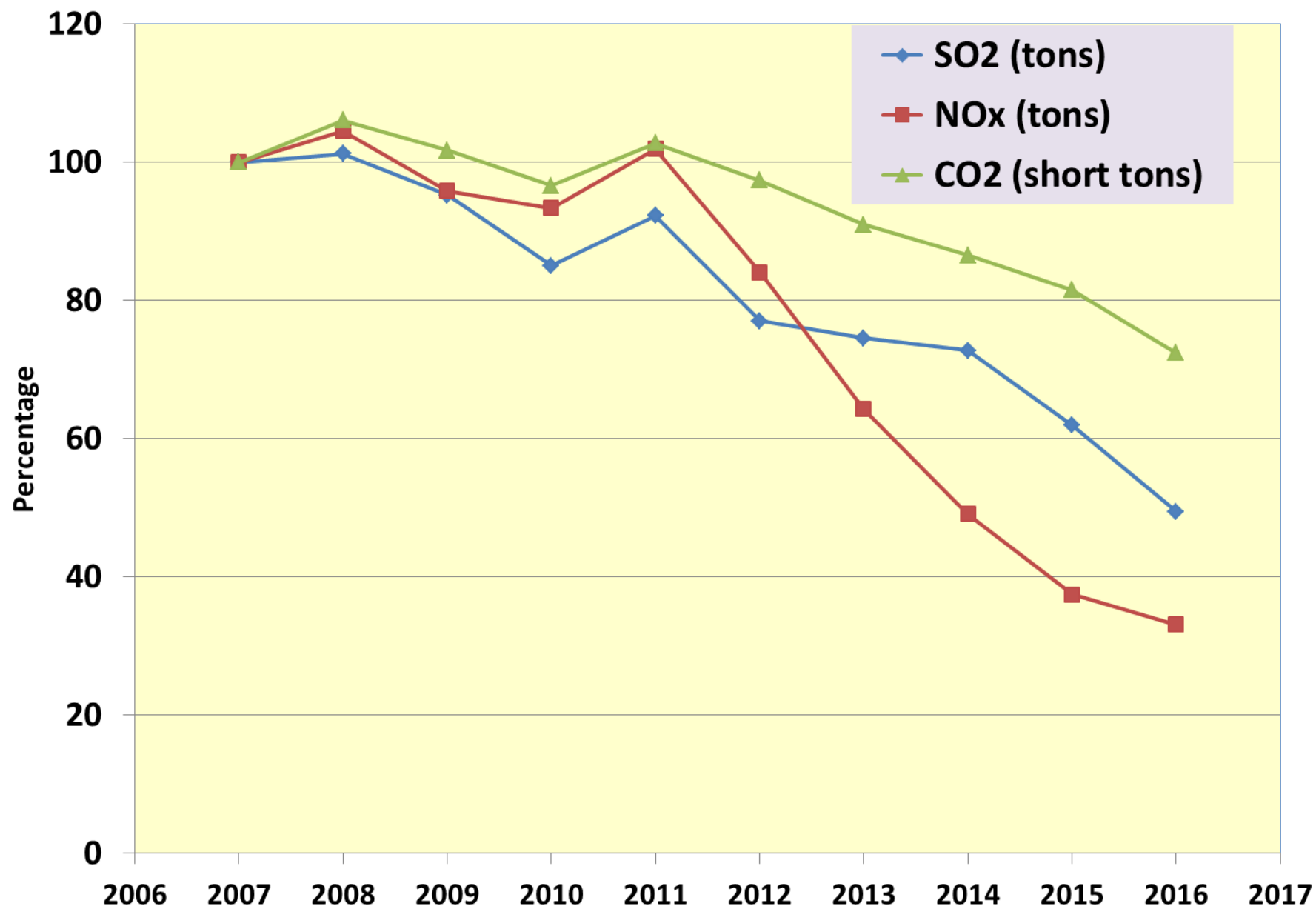
The Climate Movement after the Trump Election

- 1. Where are we post-Obama?***
- 2. What is the role of non-profit (non-governmental) organizations like Sierra Club?***
- 3. What is Trump trying to do?***
- 4. How we are fighting back?***

Emissions from Power Plants 2009-2016



Not Just Blue States – Oklahoma -- Emissions from Power Plants 2009-2016



Retired 34 of NAACP's 50 Worst Coal Plants

Top 10 Worst



11-20



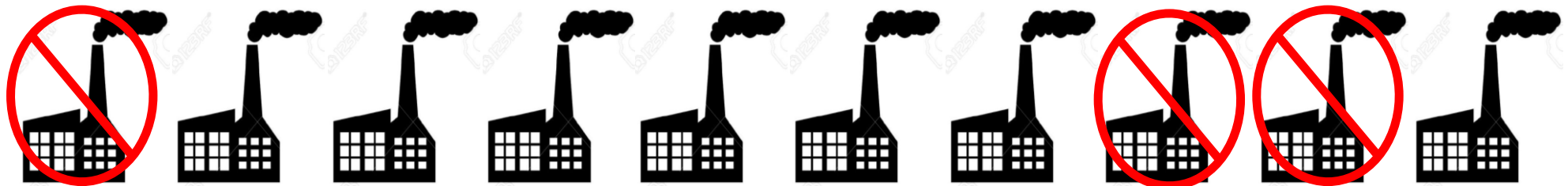
21-30



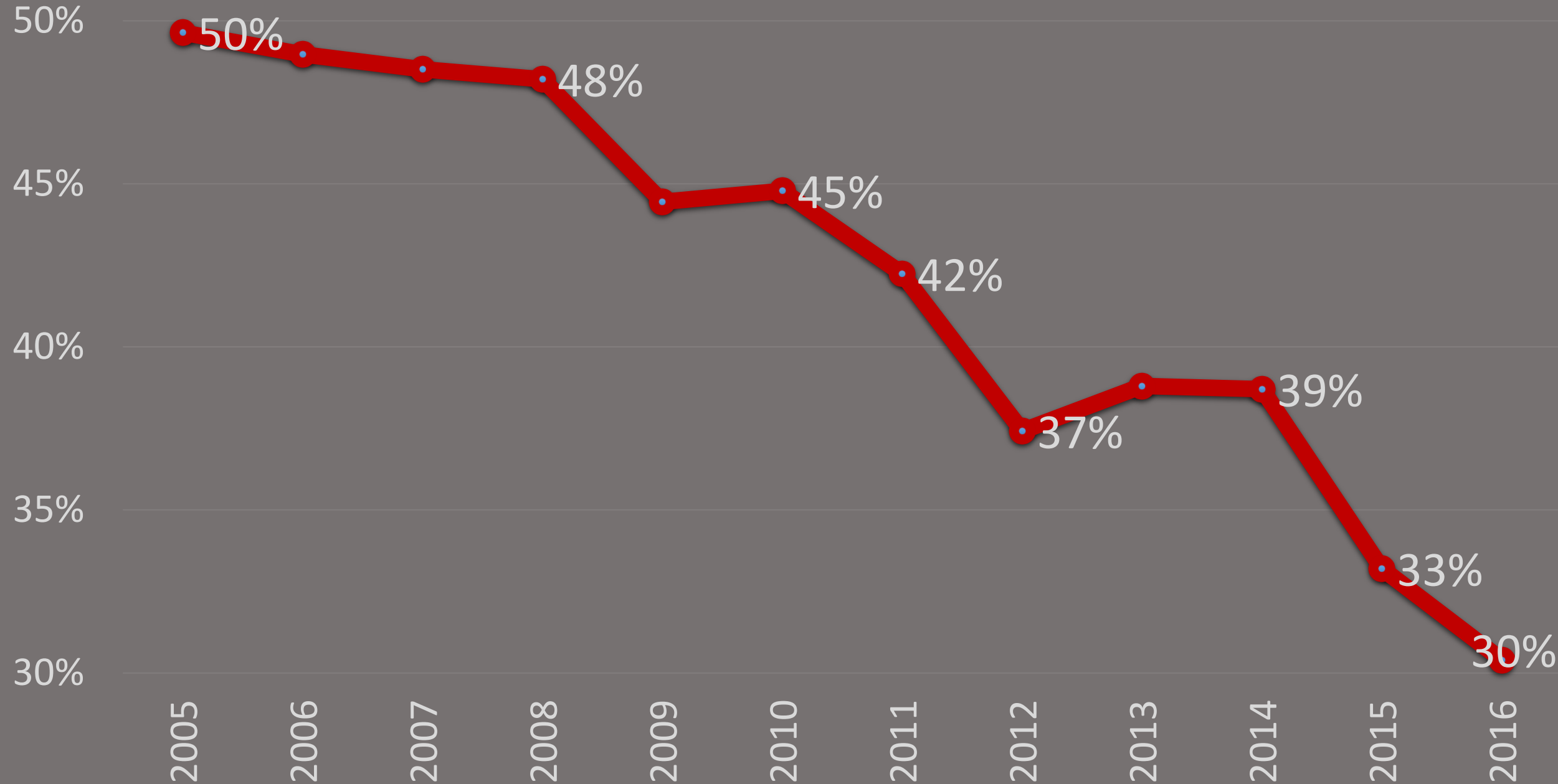
31-40



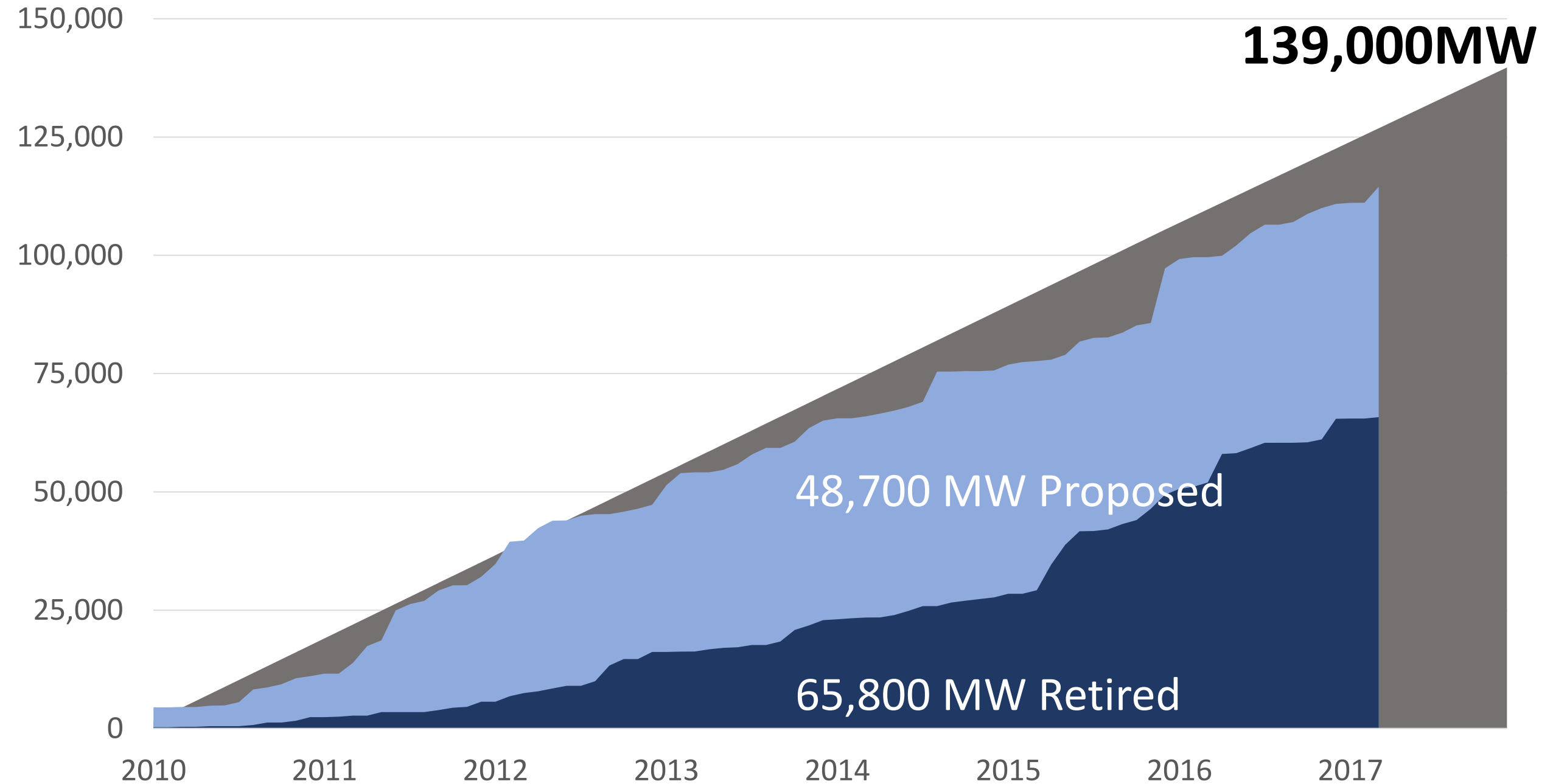
41-50



Coal's Market Share Has Plummeted



This Year: Retire/Secure Retirement of 40% of US Coal Fleet (MW)



Gas Plant Tracker Map

State: UT

Owner: Intermountain Power
Agency

Power Plant: Intermountain CC

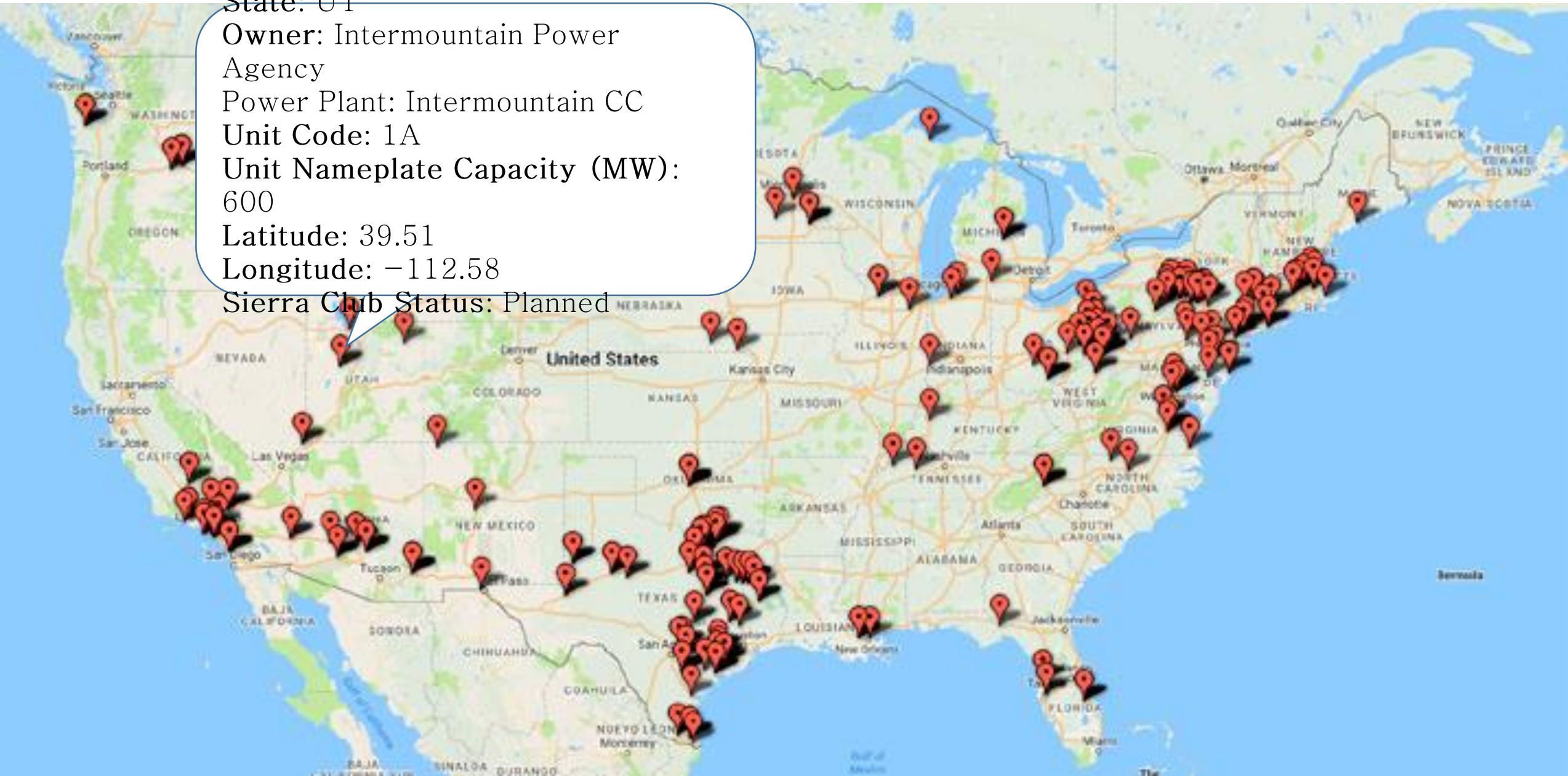
Unit Code: 1A

Unit Nameplate Capacity (MW):
600

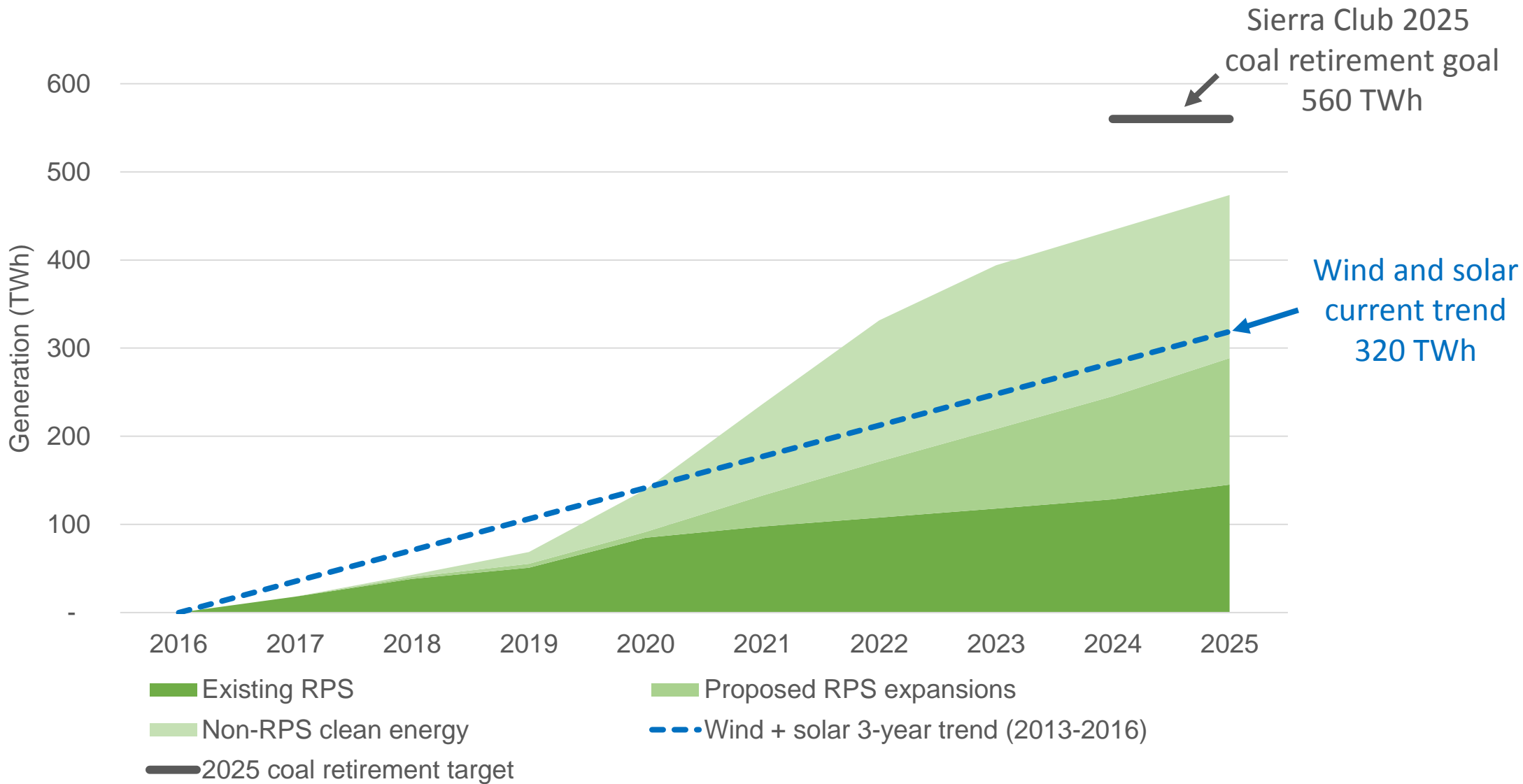
Latitude: 39.51

Longitude: -112.58

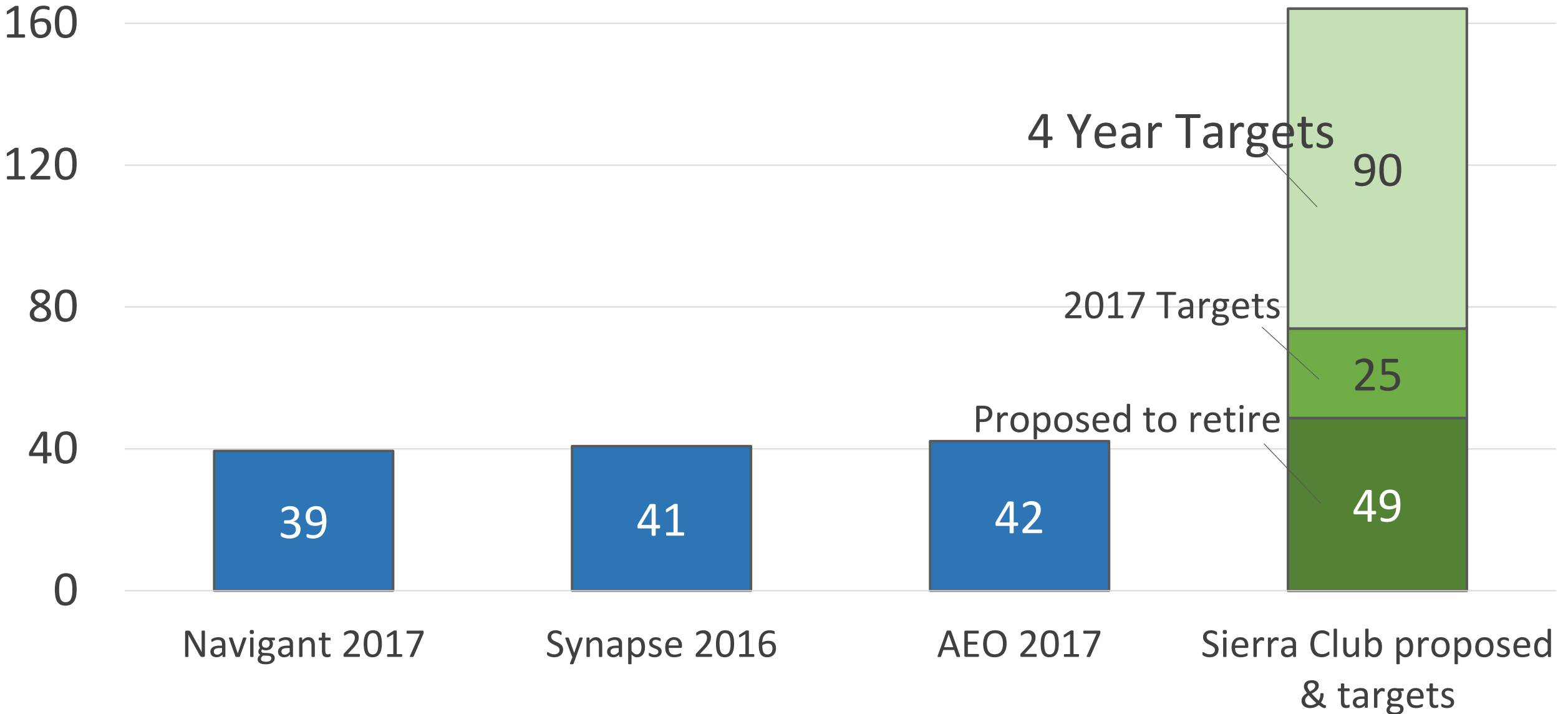
Sierra Club Status: Planned



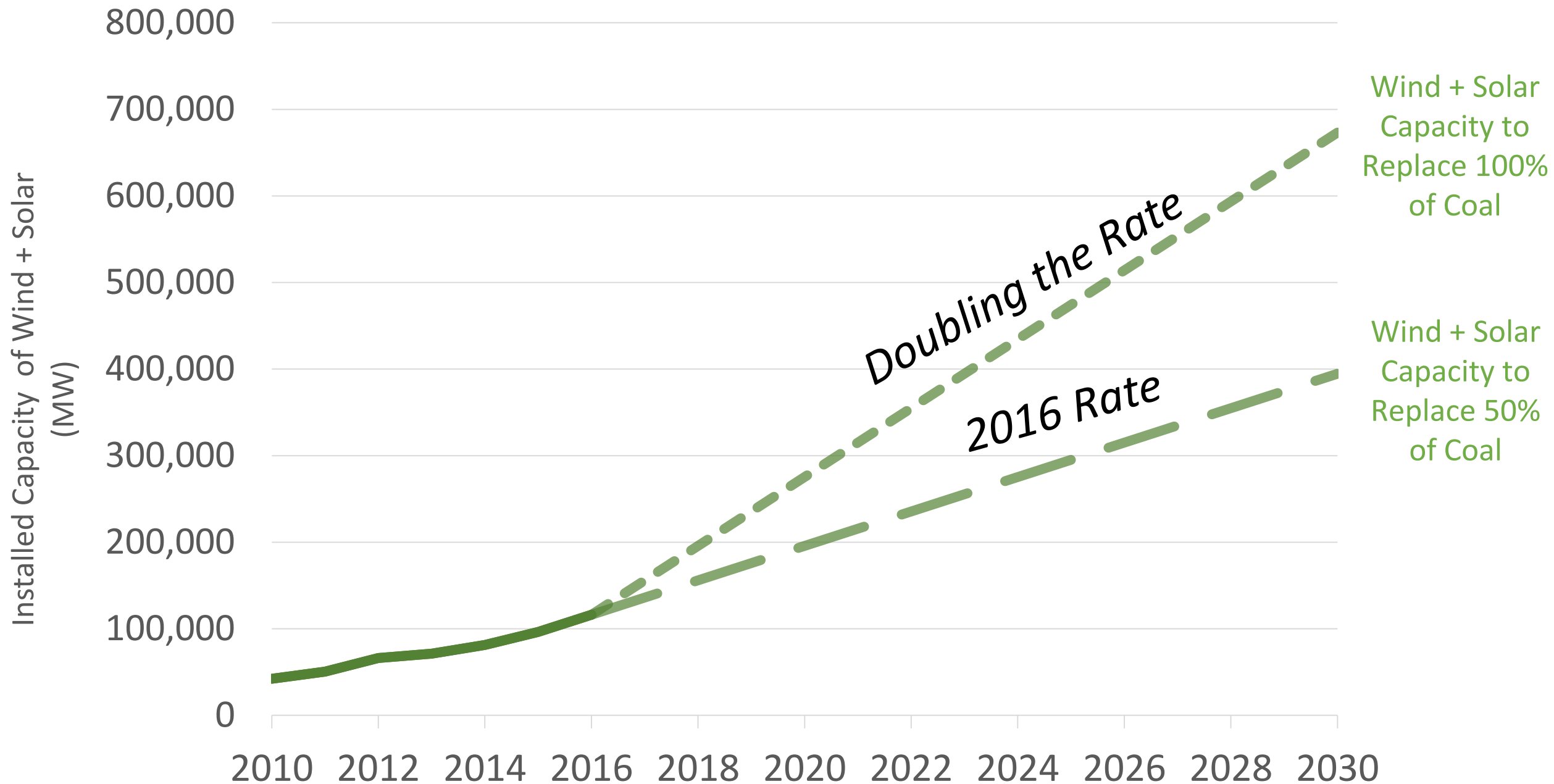
Sierra Club coal retirement target + clean energy (draft)



In Next Four Years Advocacy Can Drive at Least 3X more Retirements By 2030 than Economics Alone (draft)



To replace all the coal we need to double the rate of clean energy installs





The Climate Movement after the Trump Election

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4. How we are fighting back?

Trump Will Withdraw U.S. From Paris Climate Agreement

By MICHAEL D. SHEAR JUNE 1, 2017



PARIS

2015

Nations Unies

Conférence

News Releases from Headquarters

EPA to Review the Clean Power Plan Under President Trump's Executive Order

03/28/2017

BUSINESS

MAR 16 2017, 7:10 AM ET

Trump Rolls Back Obama-Era Fuel Economy Standards

by PAUL A. EISENSTEIN



THE
HILL

Trump signs bill undoing Obama coal mining rule

BY DEVIN HENRY - 02/16/17 03:54 PM EST

1



EPA acknowledges delaying methane rule might make more children sick, but will help industry

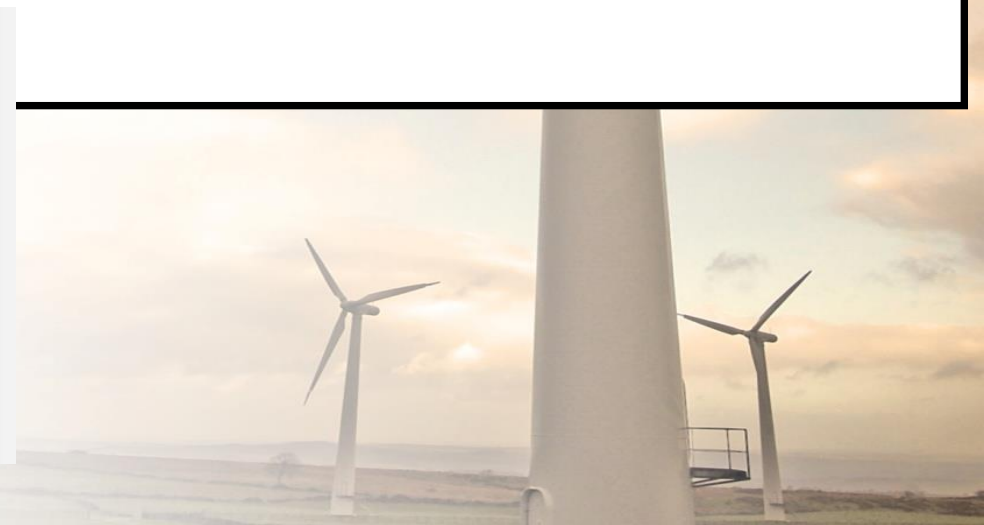
Scott Pruitt follows through on promise to oil and gas industry.

DOMESTIC

Secretary of the Interior
Department lifted the ban on new
coal leasing on federal land



Ananya Dutta 5 months ago 3 min read





Core CAA environmental protections

ozone (smog) air quality standard

New Source Review

regional haze standards

The Climate Movement after the Trump Election

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Court orders EPA to meet Texas haze deadline, calls out Scott Pruitt's stall tactics

"Cooperative federalism" has had plenty of time to take hold, court argues.

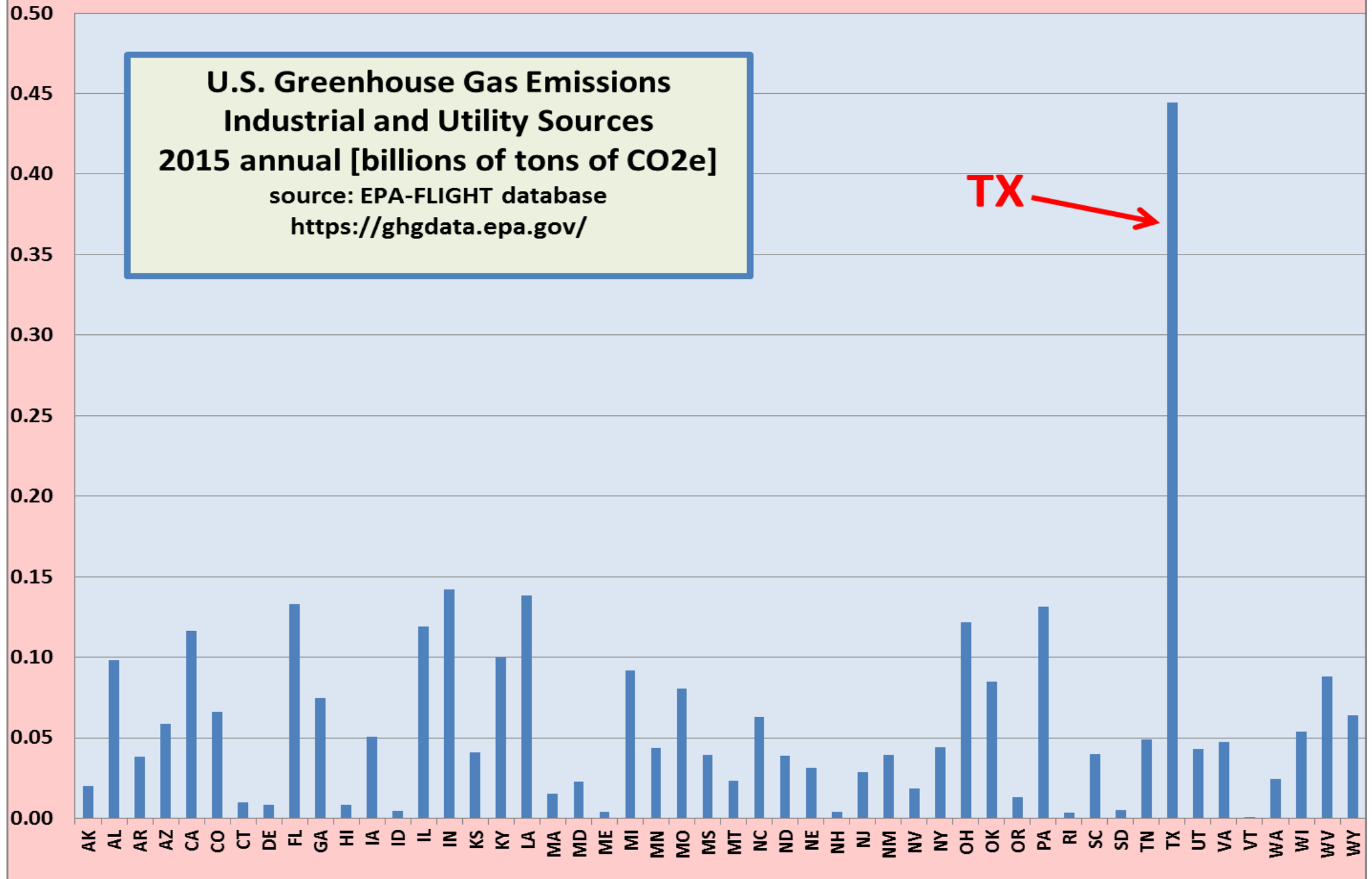
MARK HAND  SEP 1, 2017, 10:21 AM



**U.S. Greenhouse Gas Emissions
Industrial and Utility Sources
2015 annual [billions of tons of CO₂e]**

source: EPA-FLIGHT database
<https://ghgdata.epa.gov/>

TX →



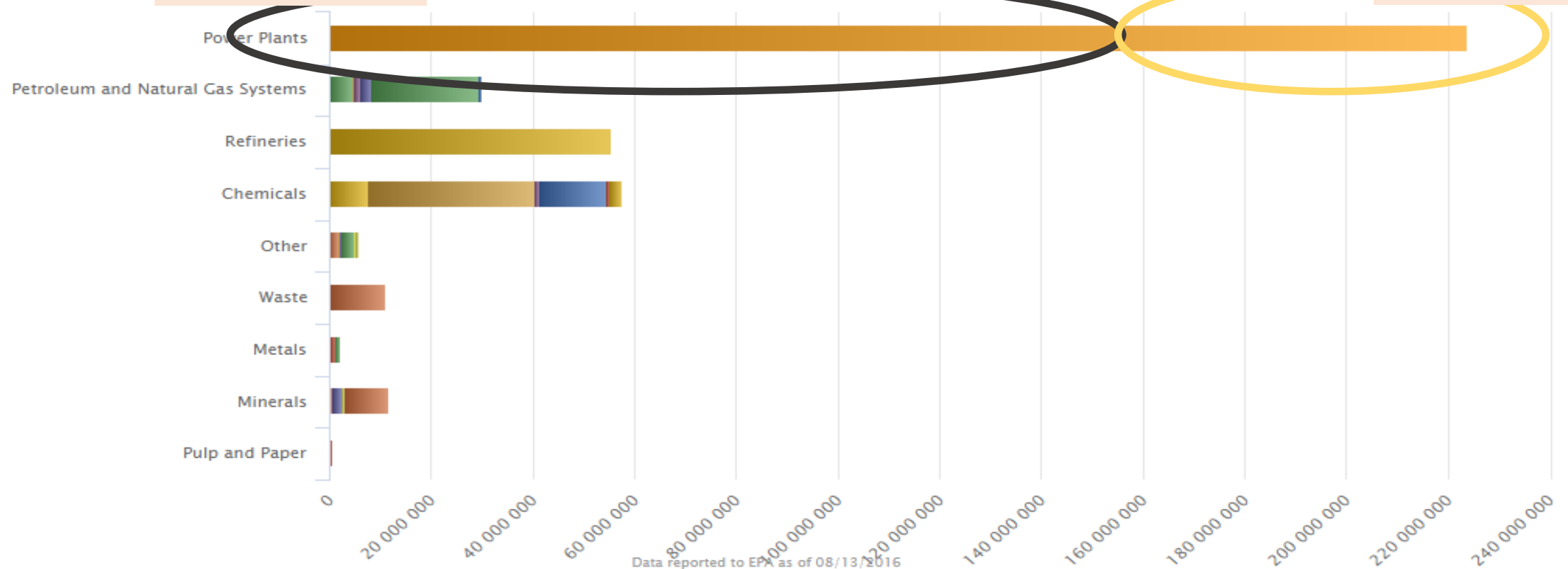
Texas – Direct GHG Emissions of Selected Gases Reported by Sector/Subsector in Metric Tons of CO₂e



[Print or Download Chart](#)

Coal plants

NG plants



Vistra to shutter East Texas coal-fired power plant

By James Osborne and Ryan Maye Handy | October 6, 2017 | Updated: October 9, 2017 1:37pm



Texas Shuttters More Coal-Fired Plants

By [Tsvetana Paraskova](#) - Oct 13, 2017, 6:00 PM CDT

Alternatives continue to bury Texas coal-powered plants

By John Austin CNHI State Reporter Oct 14, 2017



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Press Releases

America is Halfway to Moving Beyond Coal

Friday, October 13, 2017

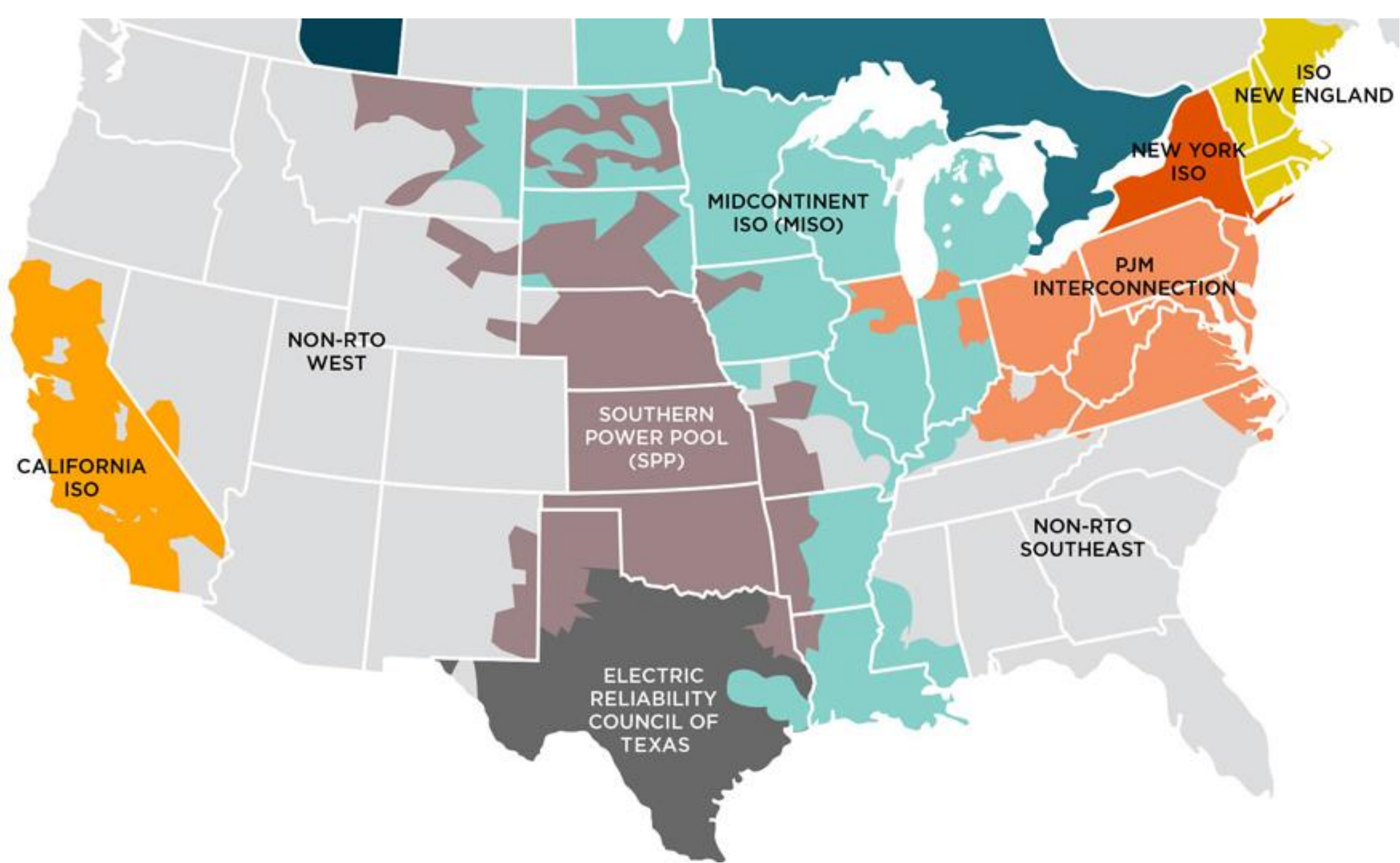
Cont

Subs



116





Cleaning Up Exports of US Coal – United Bulk Terminal Louisiana



Keeping North American Carbon Fuels Away From International Markets -- Proposed LNG Export Terminals



Winning in the Gulf, Next Steps – Big Oil – Refining and Petrochemicals – Reducing Toxic Emissions to Public Health



Dr. Martin Luther King Jr. : “We have not made a single gain on civil rights without determined legal and nonviolent pressure.”



We will win.

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Thank you. It is an honor to speak to you about our work. I am happy to answer any questions.