Radical Emission Reductions in the US West?

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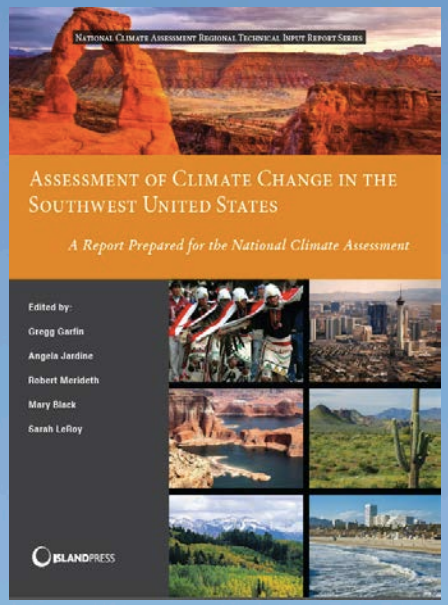

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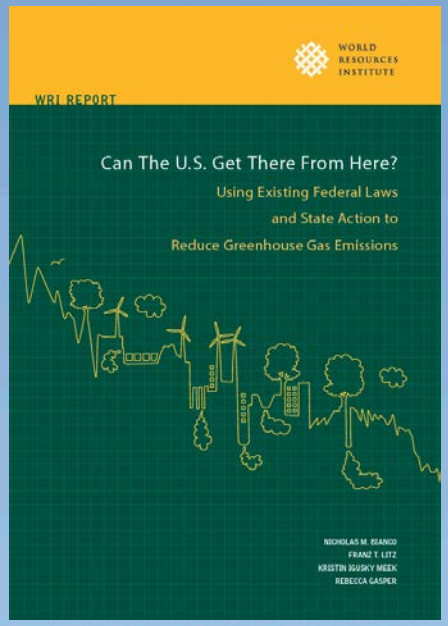
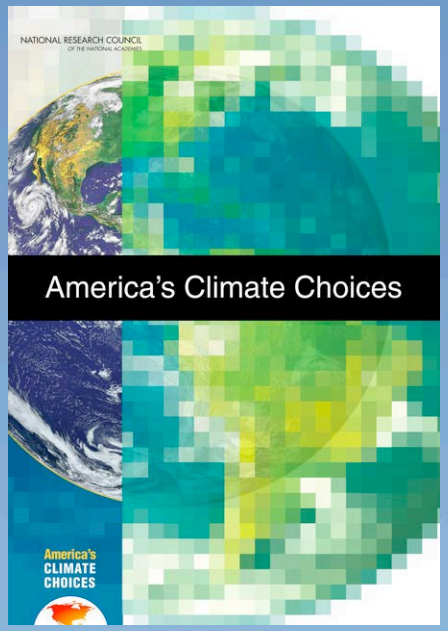
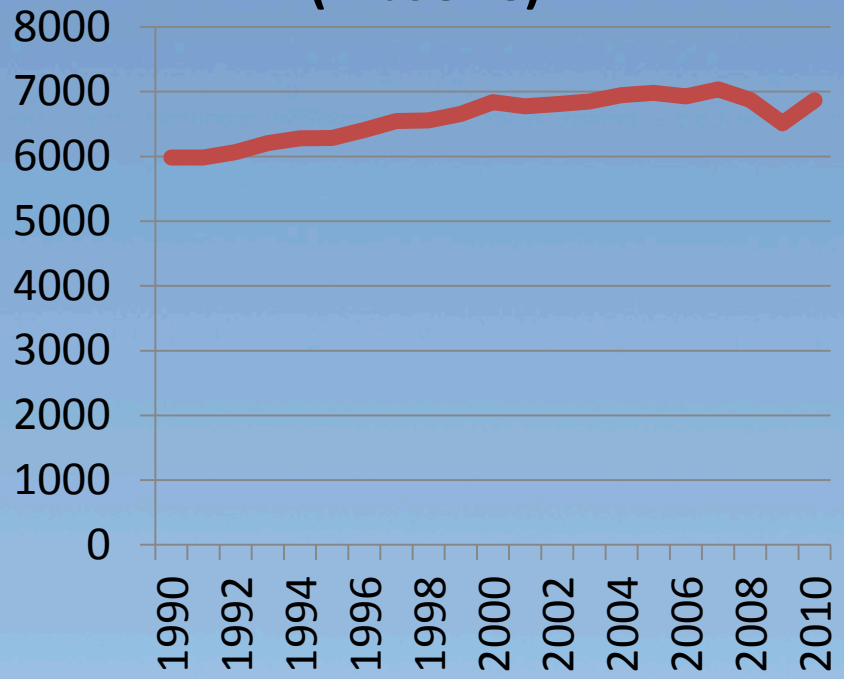


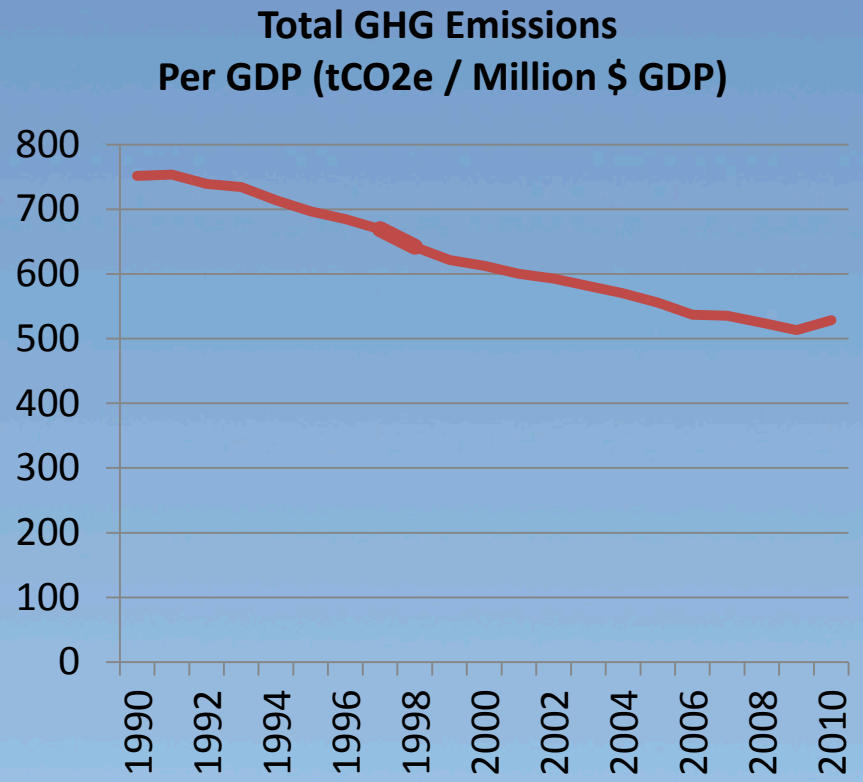


http://nas-sites.org/americasclimatechoices/

http://www.wri.org/publication/can-us-get-there-here

US: Trends in greenhouse emissions

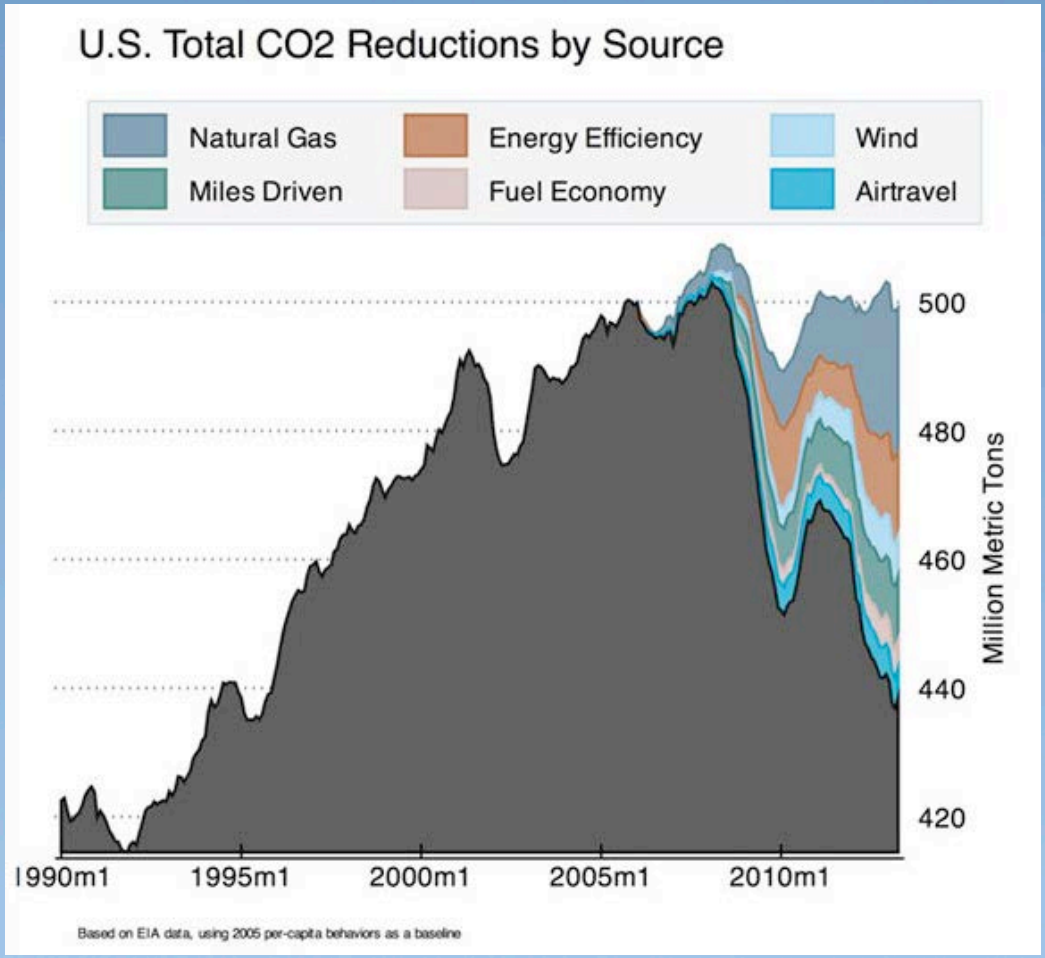




- *11.5% above 1990*
- *15% of world total in 2010*
- *80% fossil fuels*
- *40% power, 30% transport*

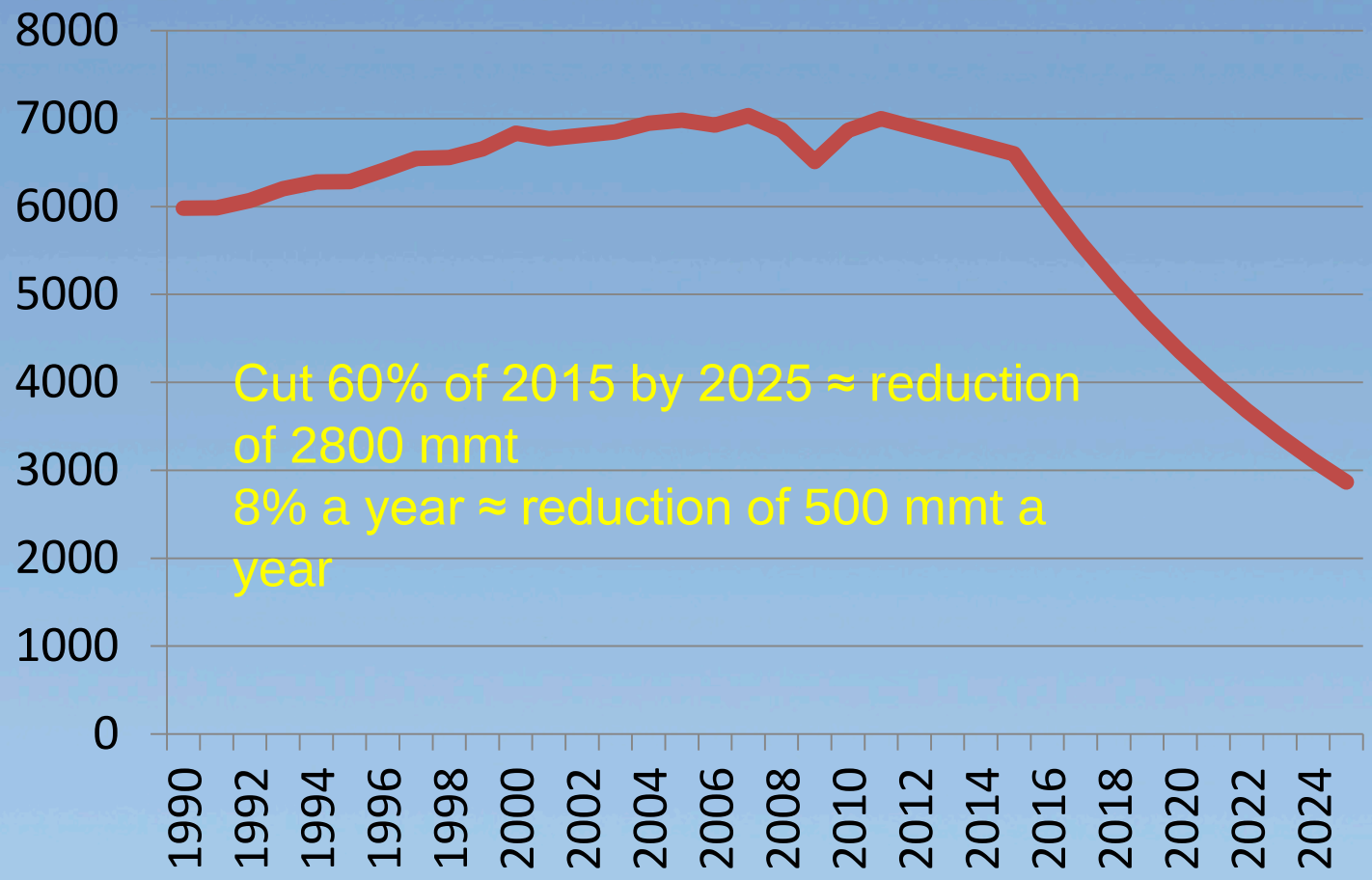
Data source:
http://cait2.wri.org/

Rising share of gas, efficiency and renewables in US



http://www.yaleclimatemediaforum.org/2013/05/whats-behind-the-good-news-declines-in-u-s-co2-emissions/

What would a radical emission reduction look like for US?

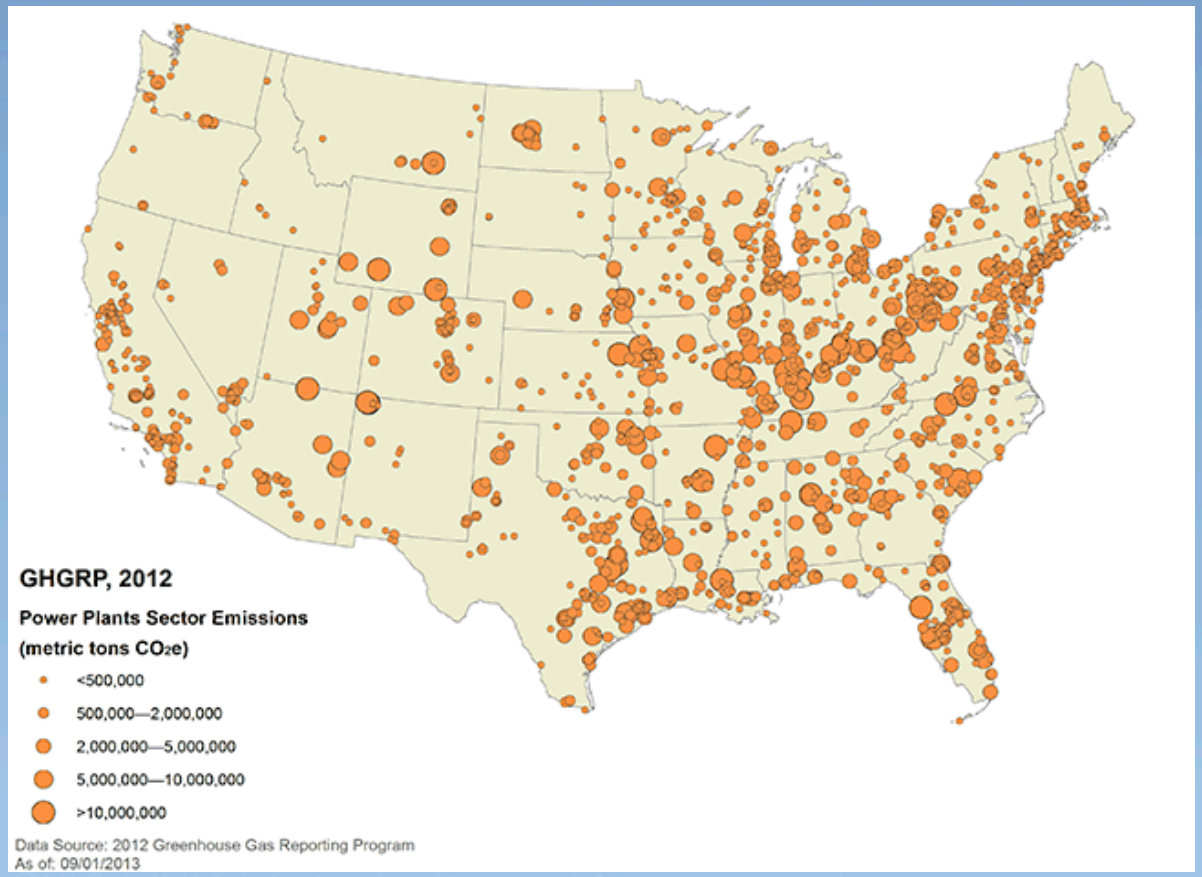


Reducing emission options

- Coal closure…
- Replaced by renewables…
- Reductions using existing Federal (and state) authorities
- Lower cost abatement potentials

Major point sources (EPA 2013)

- Reporting if over 25,000 mt CO2e



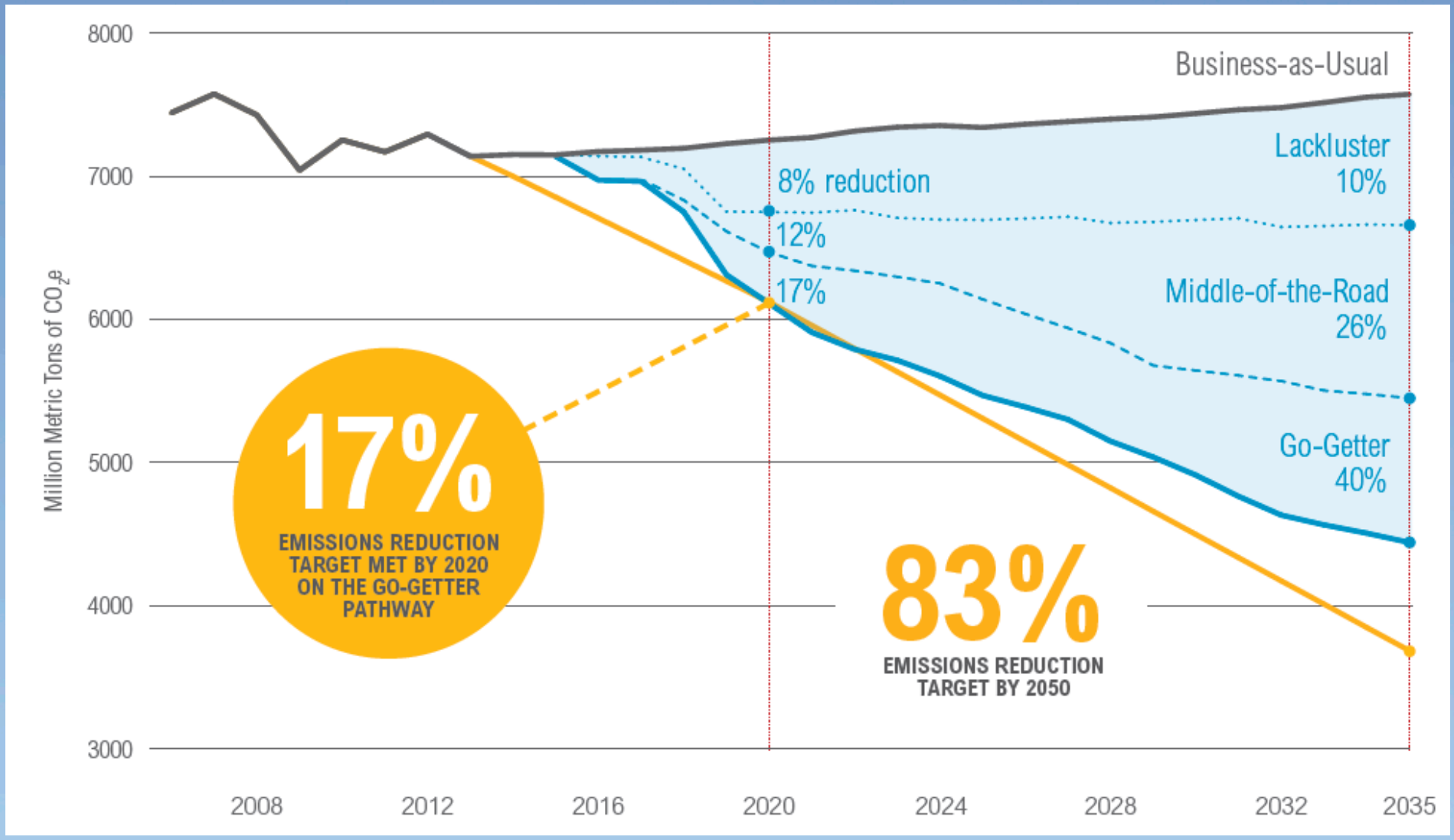
Reducing emissions? Ending coal?

- 8000 facilities produced 3013 mmt (2012)
- 2/3 power plants
- 10% produced 75% emissions

Radical actions

- Closing 40 generating plants would save 500mmt (7%)
- Closing 100 plants would save 1000 mmt

U.S. GHG REDUCTIONS USING EXISTING FEDERAL AUTHORITIES



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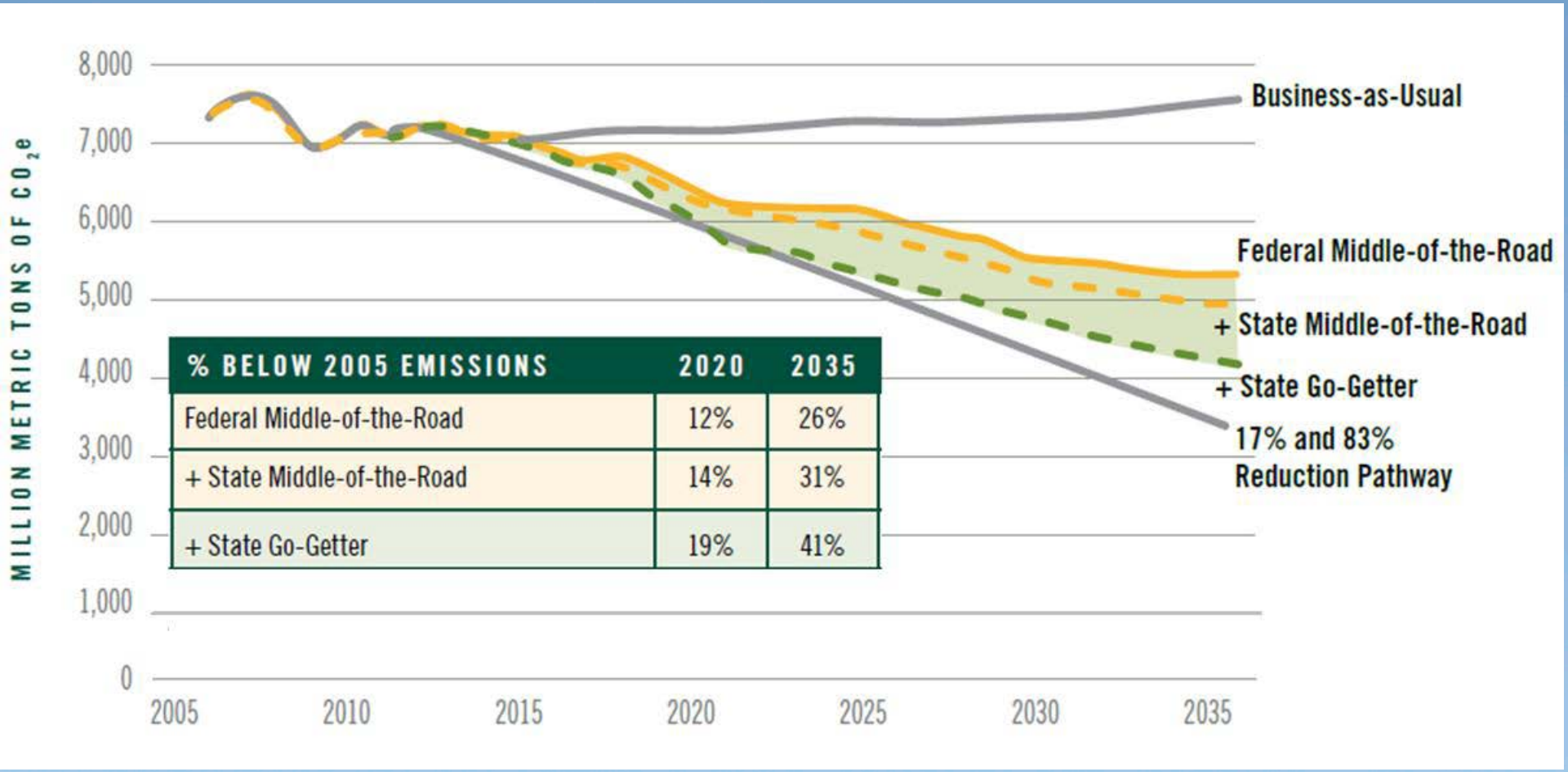
STATES CAN COMPLEMENT FEDERAL ACTIONS,

but alone cannot reduce emissions 17 percent below 2005 levels



% BELOW 2005 EMISSIONS	2020	2035
Federal Middle-of-the-Road	12%	26%
+ State Middle-of-the-Road	14%	31%
+ State Go-Getter	19%	41%

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Near term opportunities (WRI)

Federal action

- EPA standards for power plants (under Clean Air Act)
  - Establish 74% cut in existing power plant emissions by 2035
  - New plants require CCS equivalent 90% capture rate
- Regulate HFCs under Clean Air Act
- Reduce natural gas emissions through EPA standards (esp methane)
- Higher energy efficiency standards
  - Appliances
  - Autos CAFÉ 54.5 mpg by 2025 (doubling efficiency)

State action

- Renewables obligations, low carbon fuels, energy efficiency, building standards, CHP

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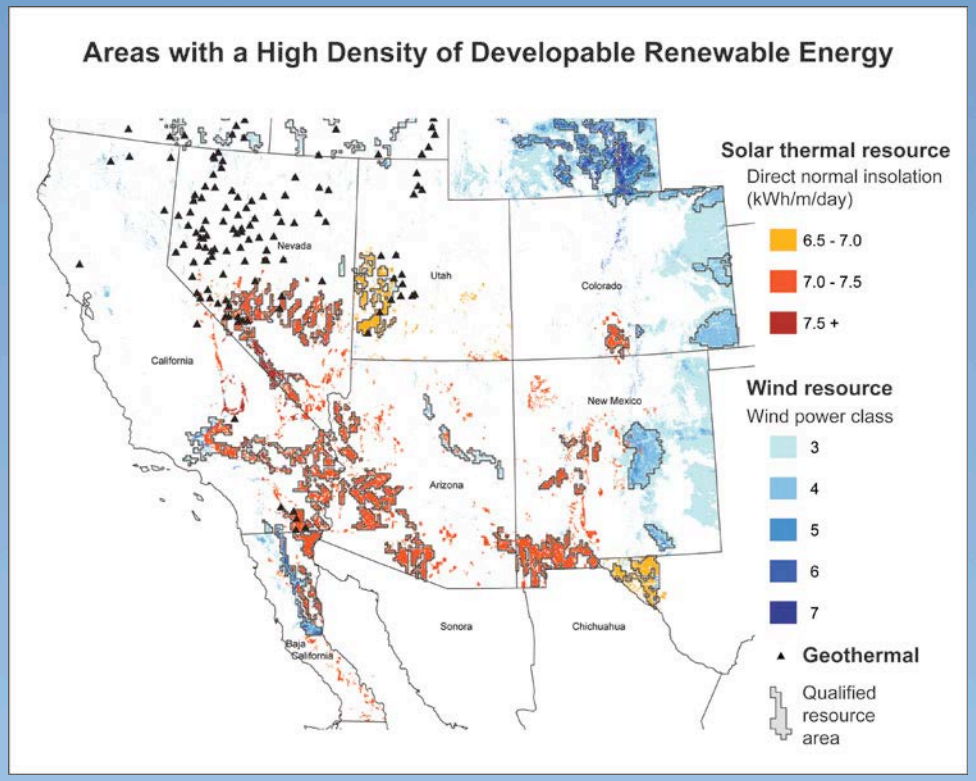
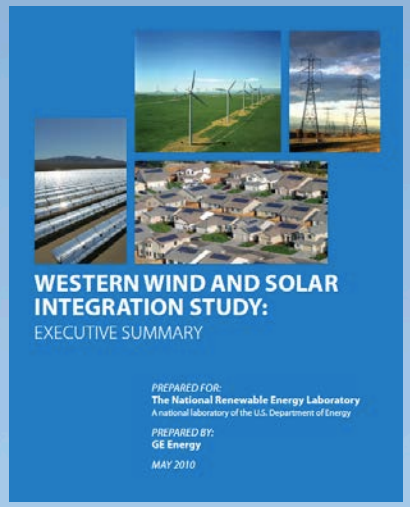
Renewable Potential



- Large wind and solar potential across west
- Integration of 35% wind and solar into western grid possible w/o major infrastructural change
- Would reduce emissions 25-45%



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Challenges

- Well funded opposition to emission reductions
- Controversies over nuclear in a low carbon portfolio
- Energy mix and distribution issues
- Embodied emissions
  - increases US emissions by 10%+
- Equity in the low carbon transition

Controlling GHG point sources in the SWUS: Implications in and for Indian country

Thank You!