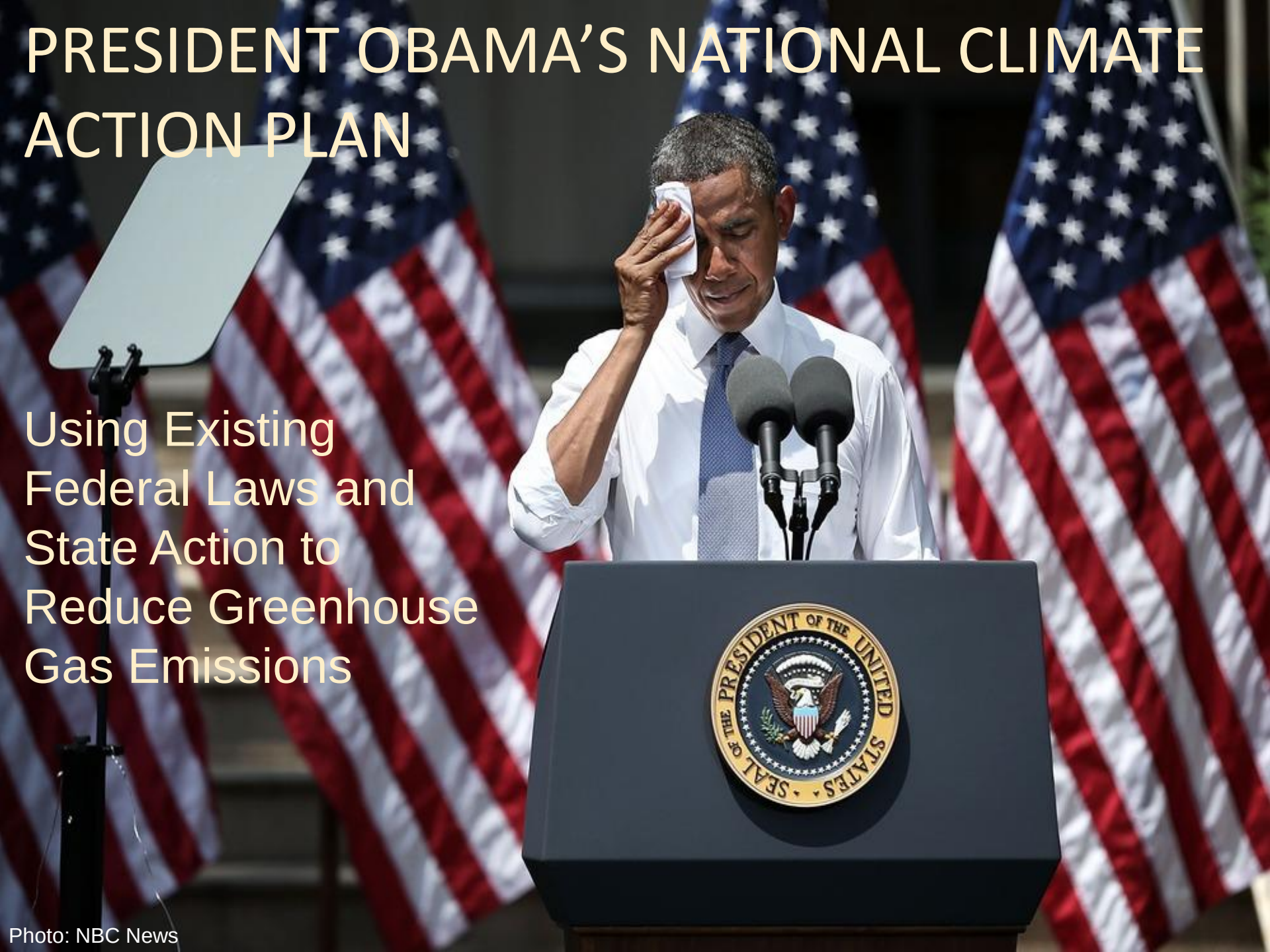
PRESIDENT OBAMA'S NATIONAL CLIMATE ACTION PLAN

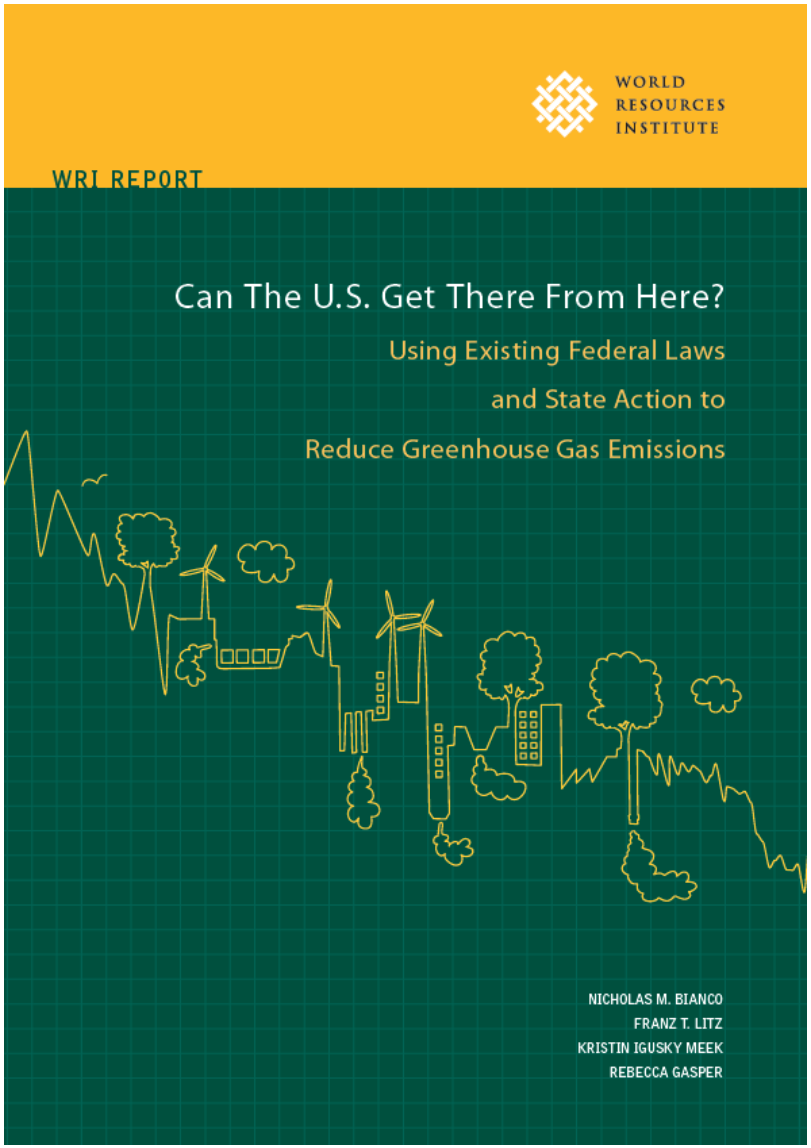


Using Existing Federal Laws and State Action to Reduce Greenhouse Gas Emissions

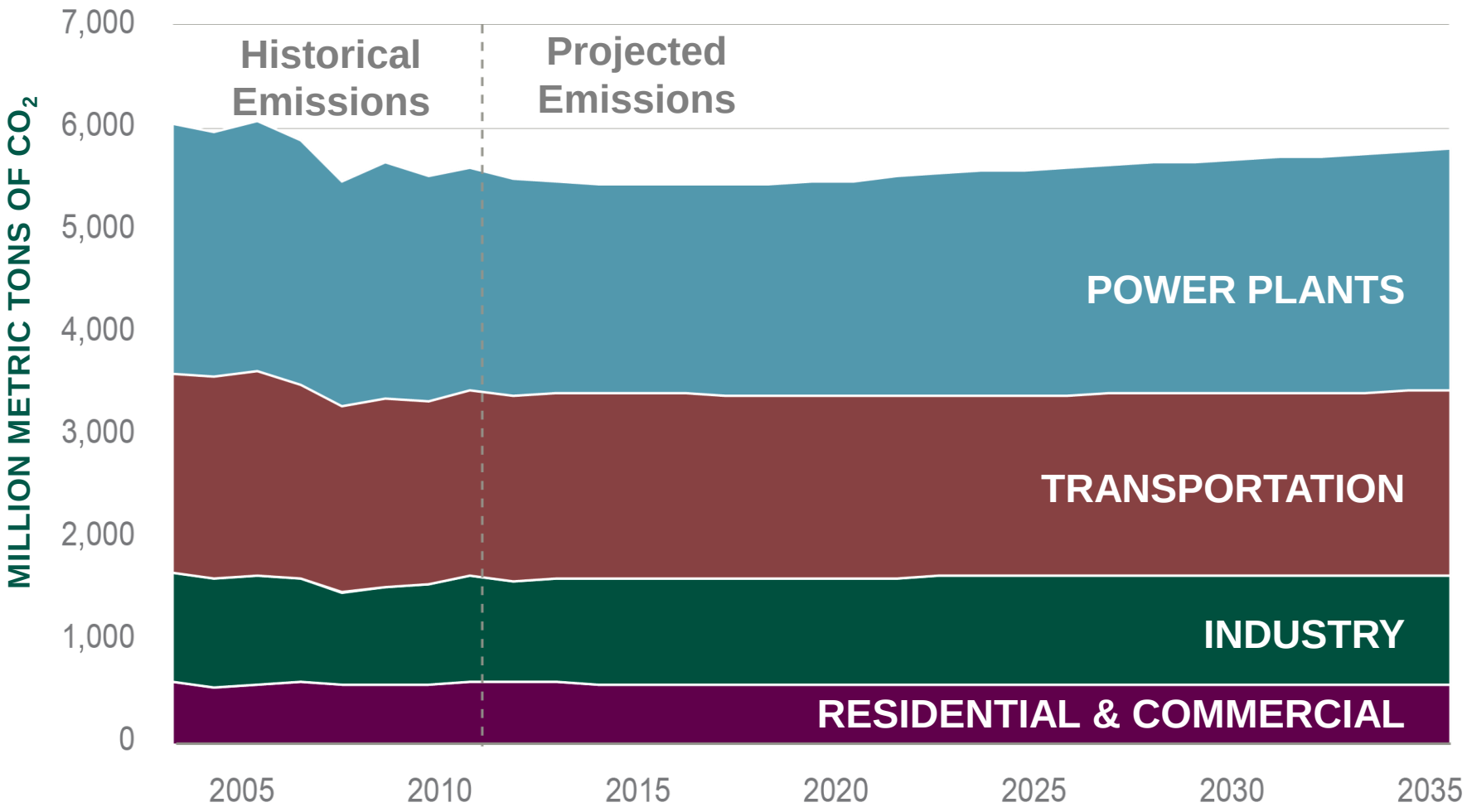
Photo: NBC News

KEY FINDINGS

- Not yet on track
- Have the tools to get there
- Near term opportunities:
  - Existing power plants
  - Hydrofluorocarbons (HFCs)
  - Natural gas systems
  - Energy efficiency



ENERGY EMISSIONS HAVE FALLEN
BUT, THIS TREND IS NOT EXPECTED TO CONTINUE



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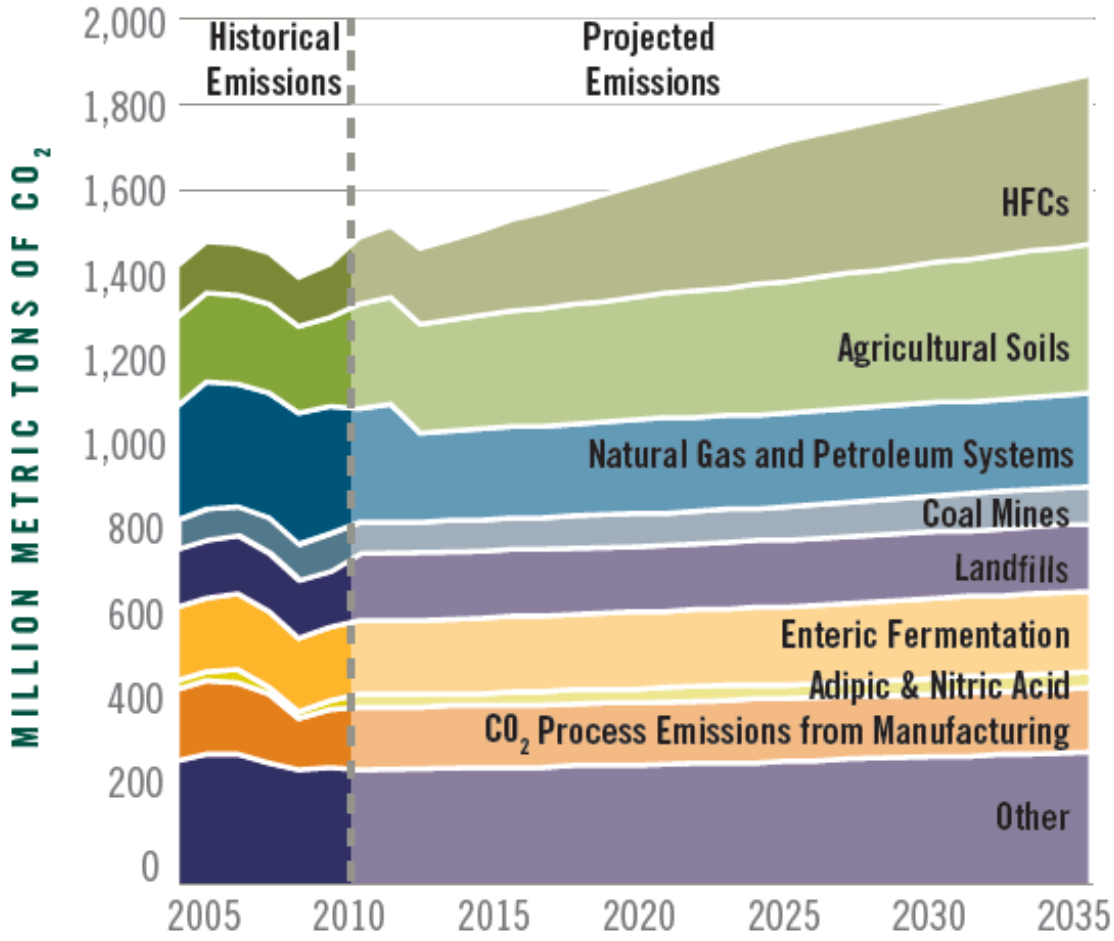
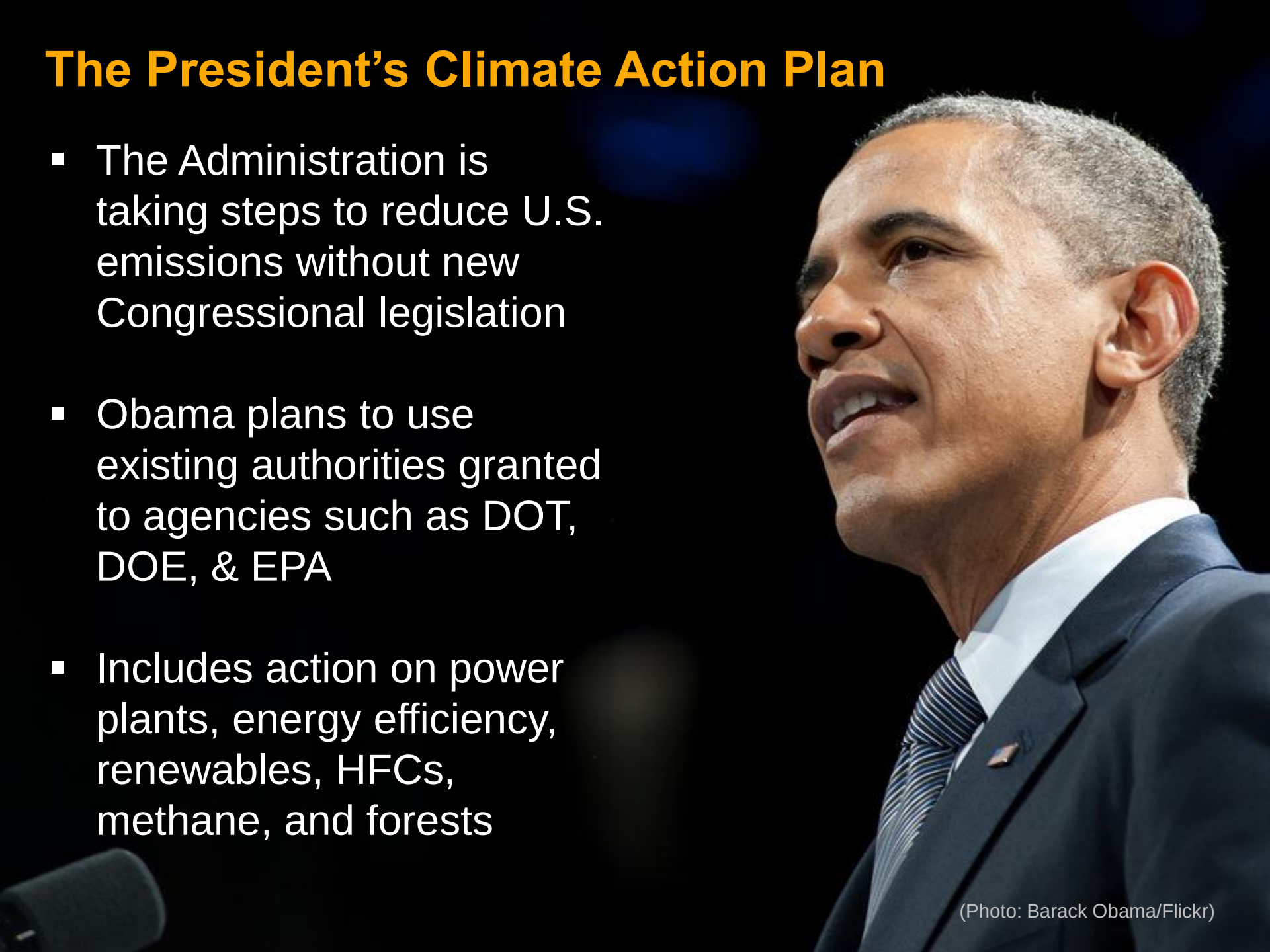
NON-ENERGY AND NON-CO_2 EMISSIONS ARE EXPECTED TO RISE

- Account for 22% of U.S. emissions
- Projected to increase 18% above 2005 levels by 2020, and 36% by 2035



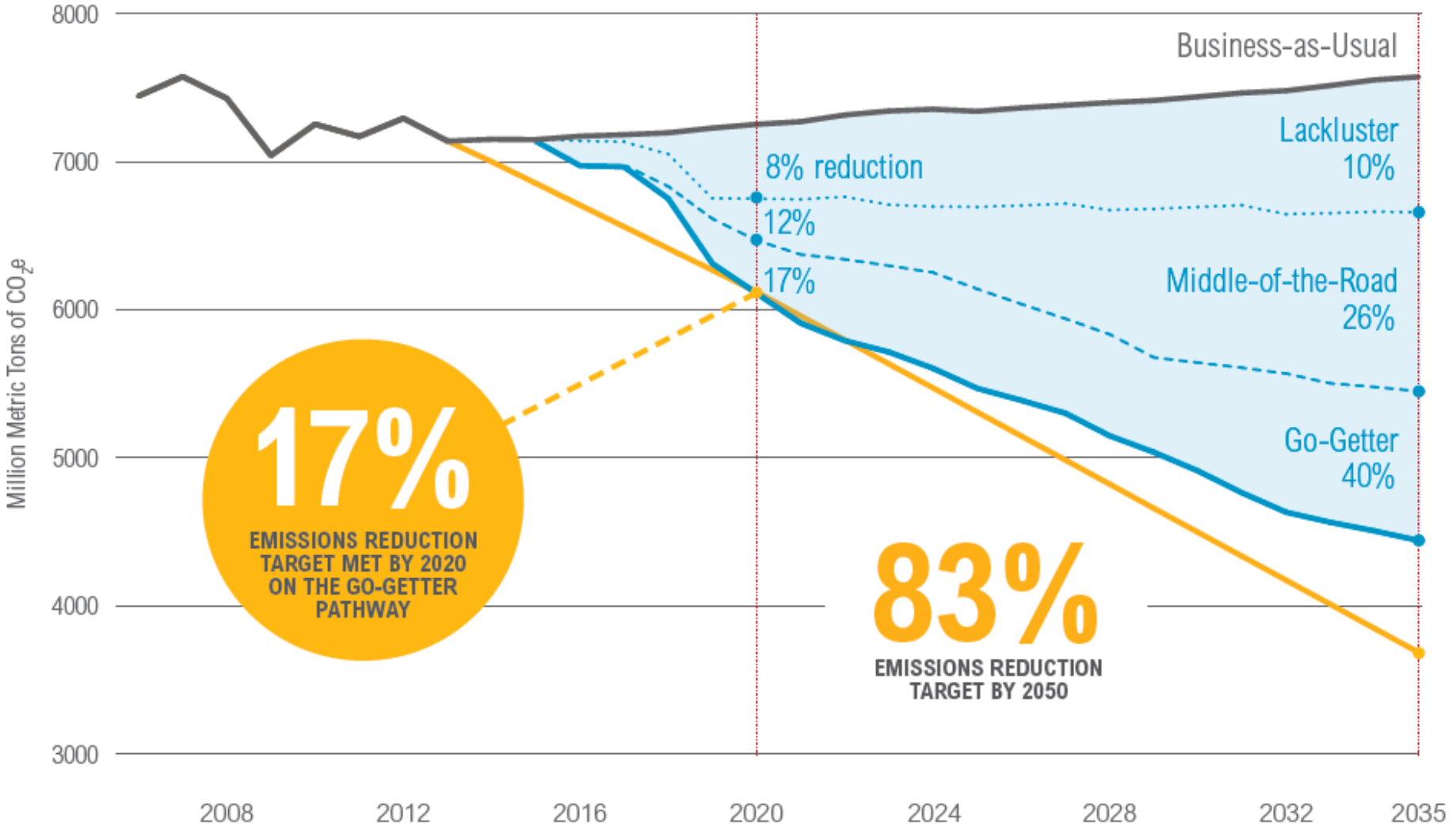
The President's Climate Action Plan

- The Administration is taking steps to reduce U.S. emissions without new Congressional legislation
- Obama plans to use existing authorities granted to agencies such as DOT, DOE, & EPA
- Includes action on power plants, energy efficiency, renewables, HFCs, methane, and forests



(Photo: Barack Obama/Flickr)

U.S. GHG REDUCTIONS USING EXISTING FEDERAL AUTHORITIES



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NEAR-TERM OPPORTUNITIES

- Existing power plants
- Hydrofluorocarbons (HFCs)
- Natural gas systems
- Energy efficiency

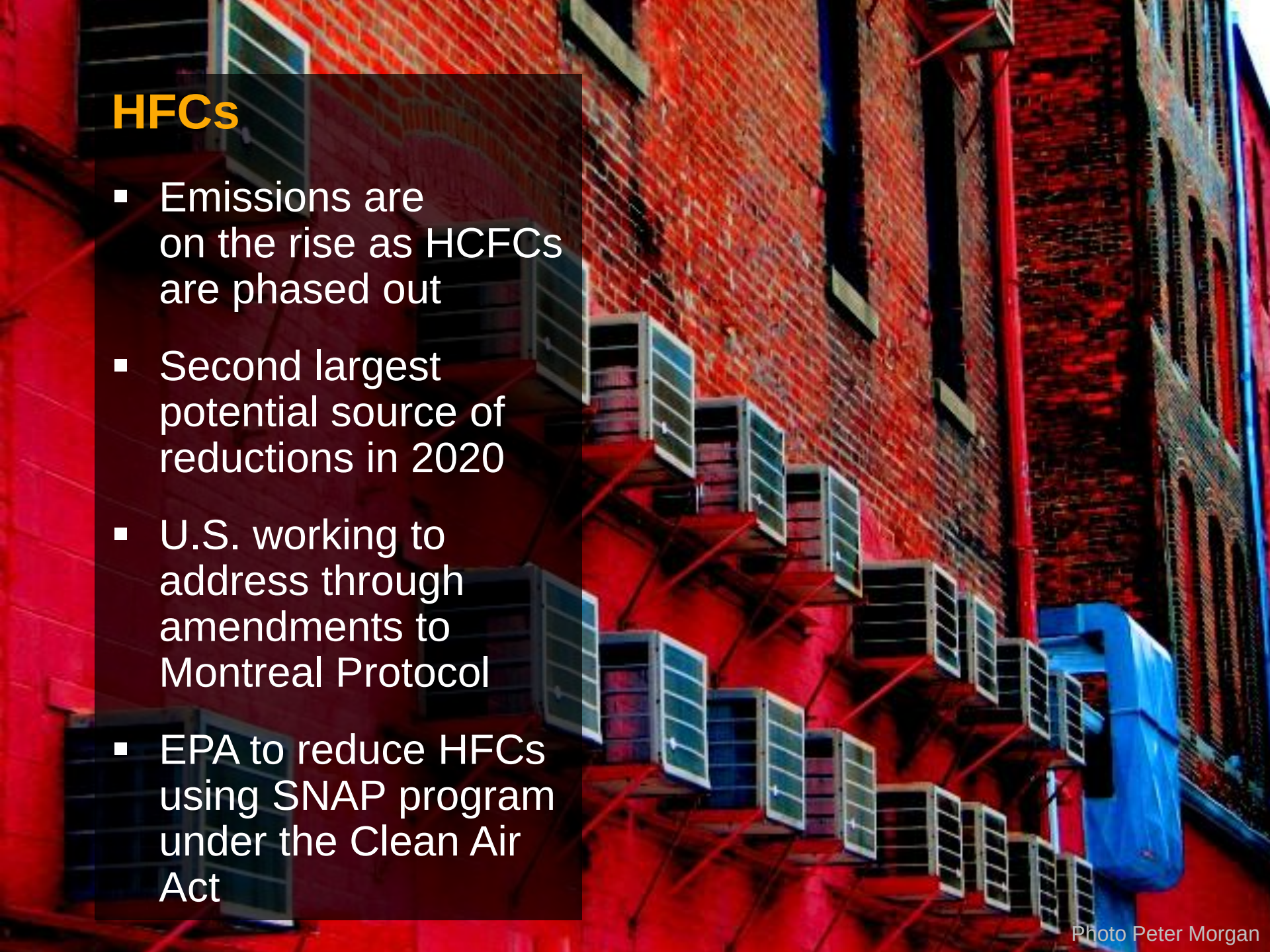
POWER PLANTS

- 1/3 U.S. GHG emissions
- Largest potential source of reductions
- EPA tasked with establishing GHG emissions standards for existing power plants, and finalizing standards for new plants

COMPLIANCE OPTIONS FOR 111(d)

- On-site reductions through:
  - Efficiency improvements
  - Fuel-switching or co-firing
  - Utilization of waste heat
  - Carbon capture and storage
- Off-site reductions through:
  - Improved dispatch
  - New low and zero-carbon generation
  - Demand-side efficiency
  - Combined heat and power
- Does not allow for out-of-sector reductions (e.g., offsets)

Photo Haglun DC



HFCs

- Emissions are on the rise as HCFCs are phased out
- Second largest potential source of reductions in 2020
- U.S. working to address through amendments to Montreal Protocol
- EPA to reduce HFCs using SNAP program under the Clean Air Act

Photo Peter Morgan

NATURAL GAS SYSTEMS

- 4% total emissions
- Reductions expected due to new air pollution standards
- More is possible if EPA sets standards for methane emissions
- President’s plan calls for interagency working group on methane, but more is needed

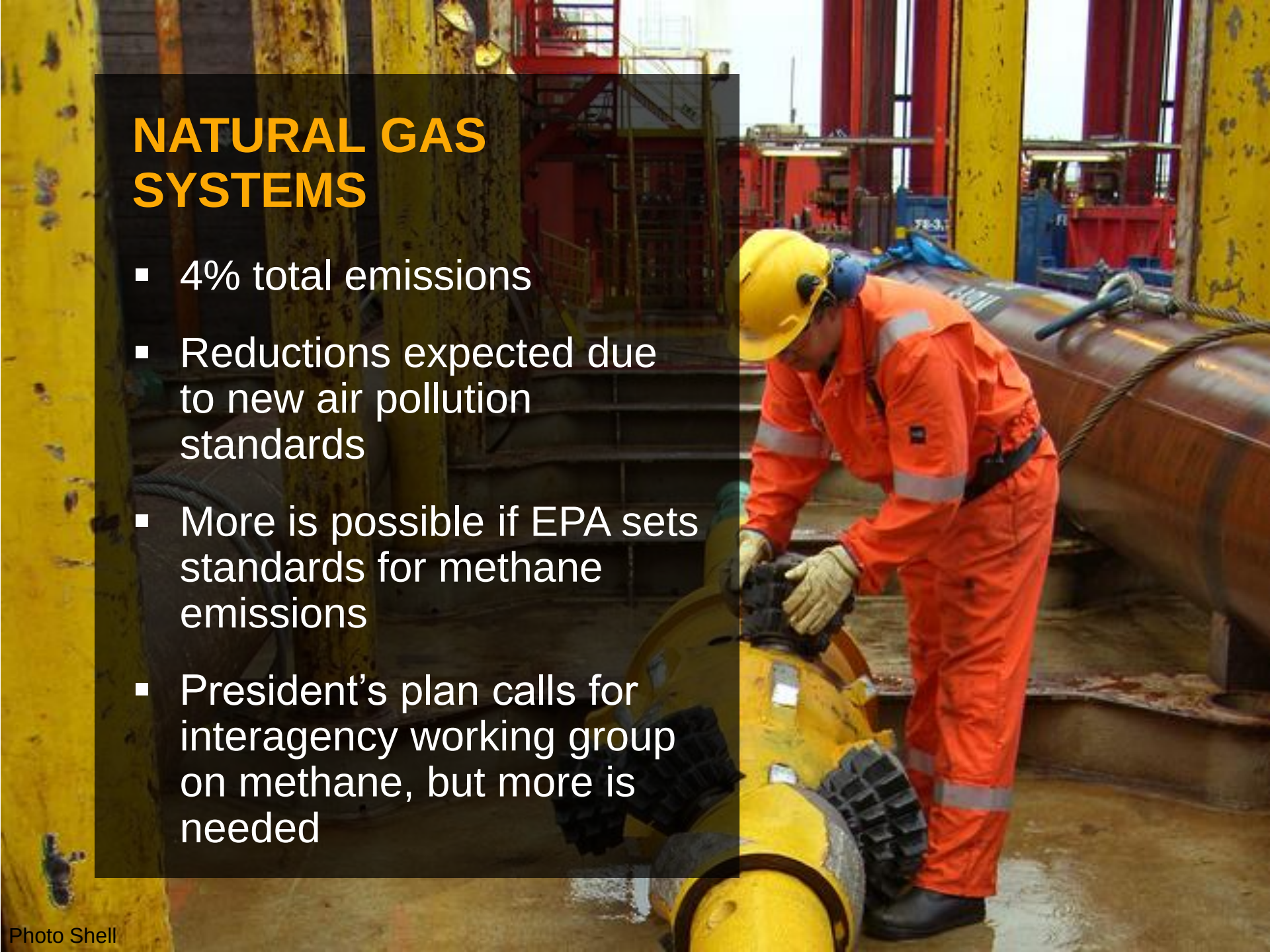
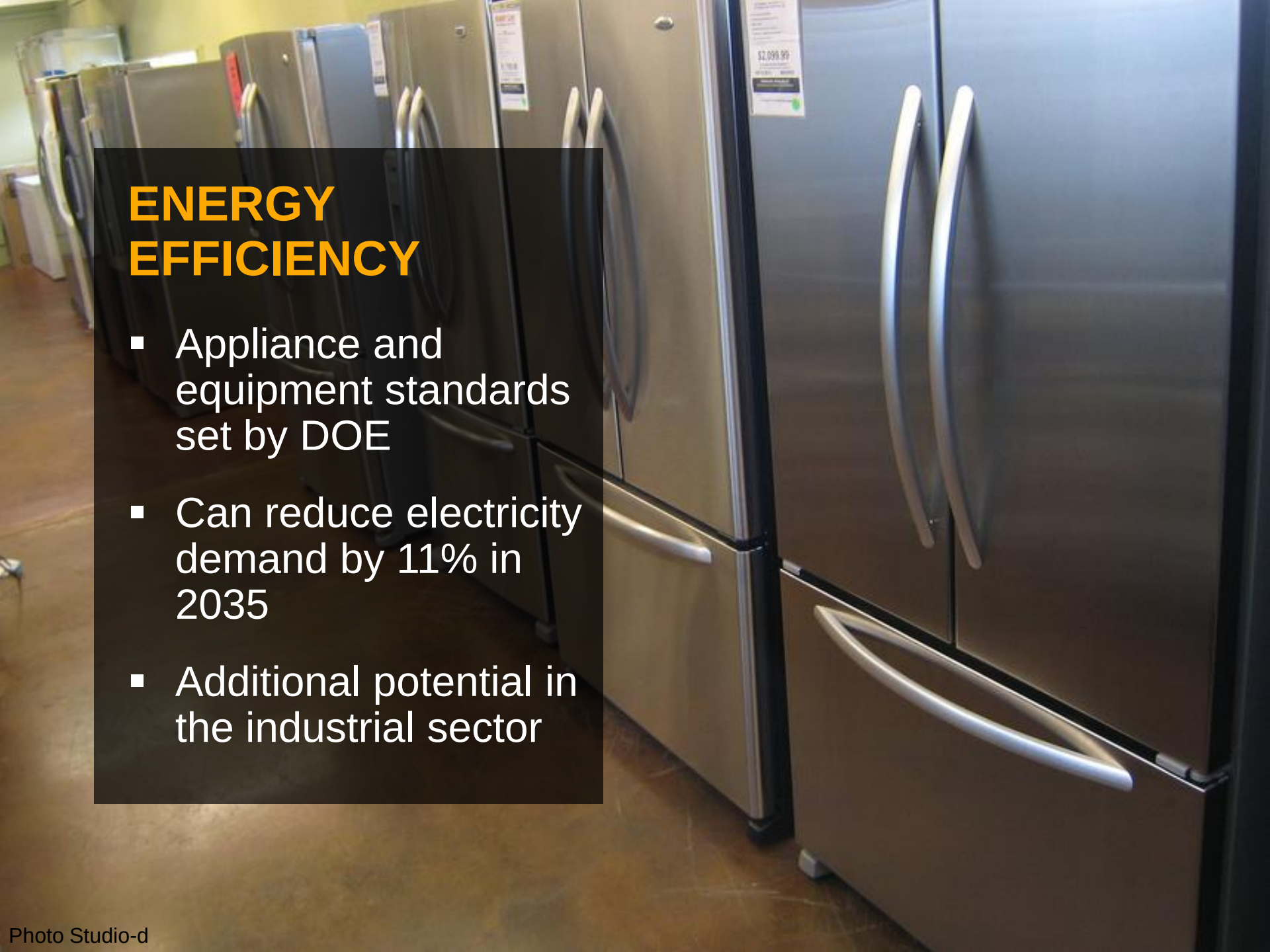


Photo Shell



ENERGY EFFICIENCY

- Appliance and equipment standards set by DOE
- Can reduce electricity demand by 11% in 2035
- Additional potential in the industrial sector

Photo Studio-d

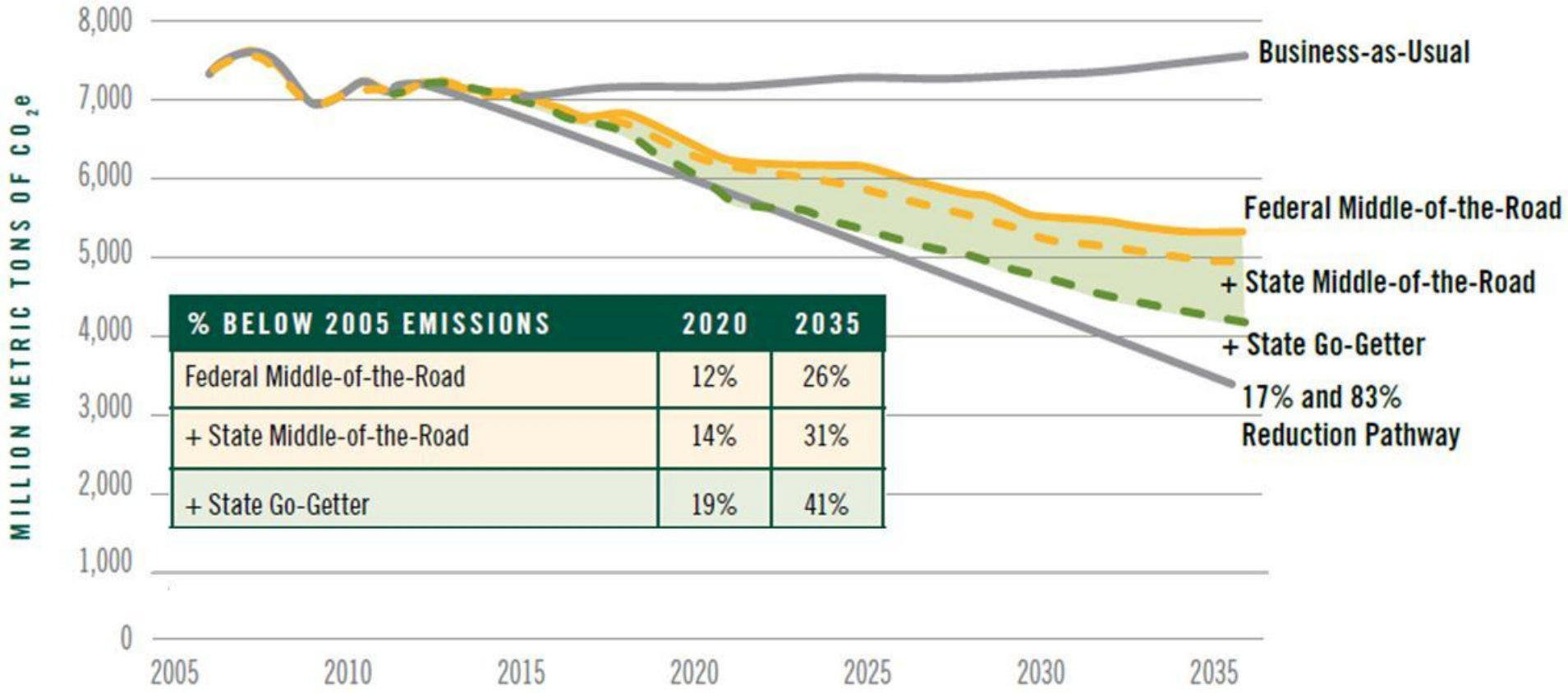
STATE LEADERSHIP

- 29 states with renewable standards
- 20 states with energy efficiency standards
- 10 states with cap and trade
- Can implement many of the same policies as federal agencies
- Examine additional transportation, end-use efficiency, and renewable measures

Photo Chris Christner

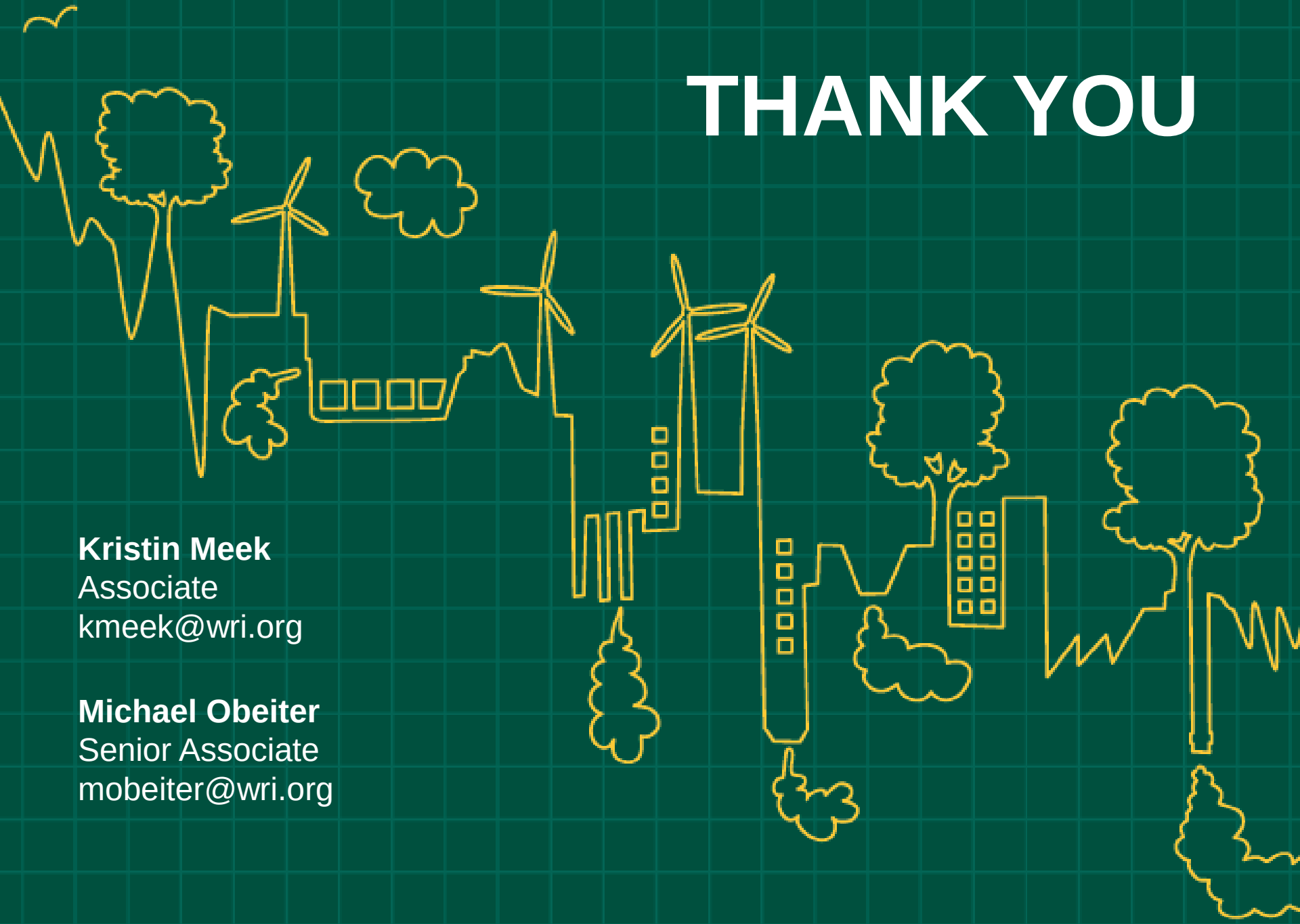
STATES CAN COMPLEMENT FEDERAL ACTIONS,

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%

THANK YOU



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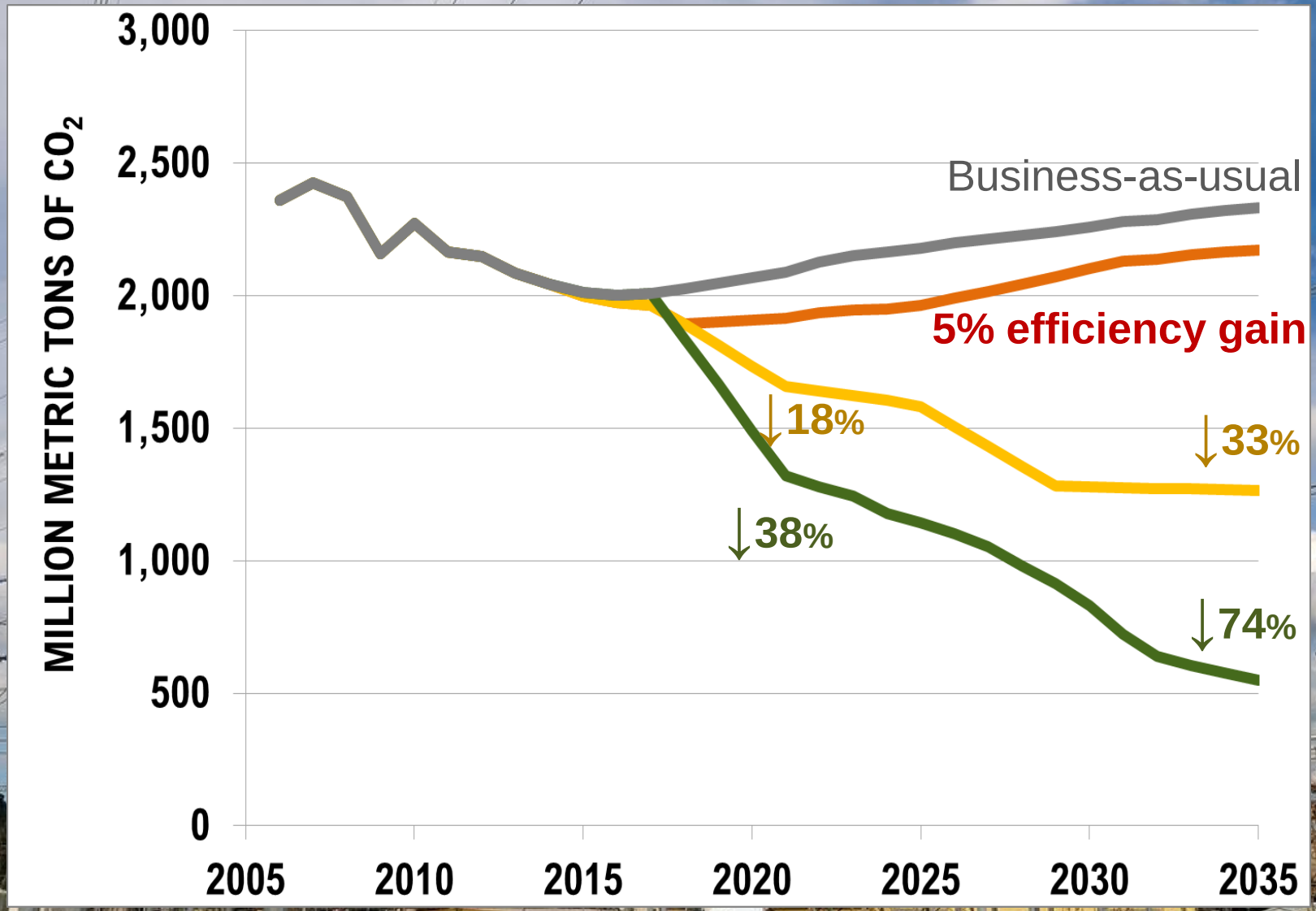
POWER PLANTS



HFC CONSUMPTION

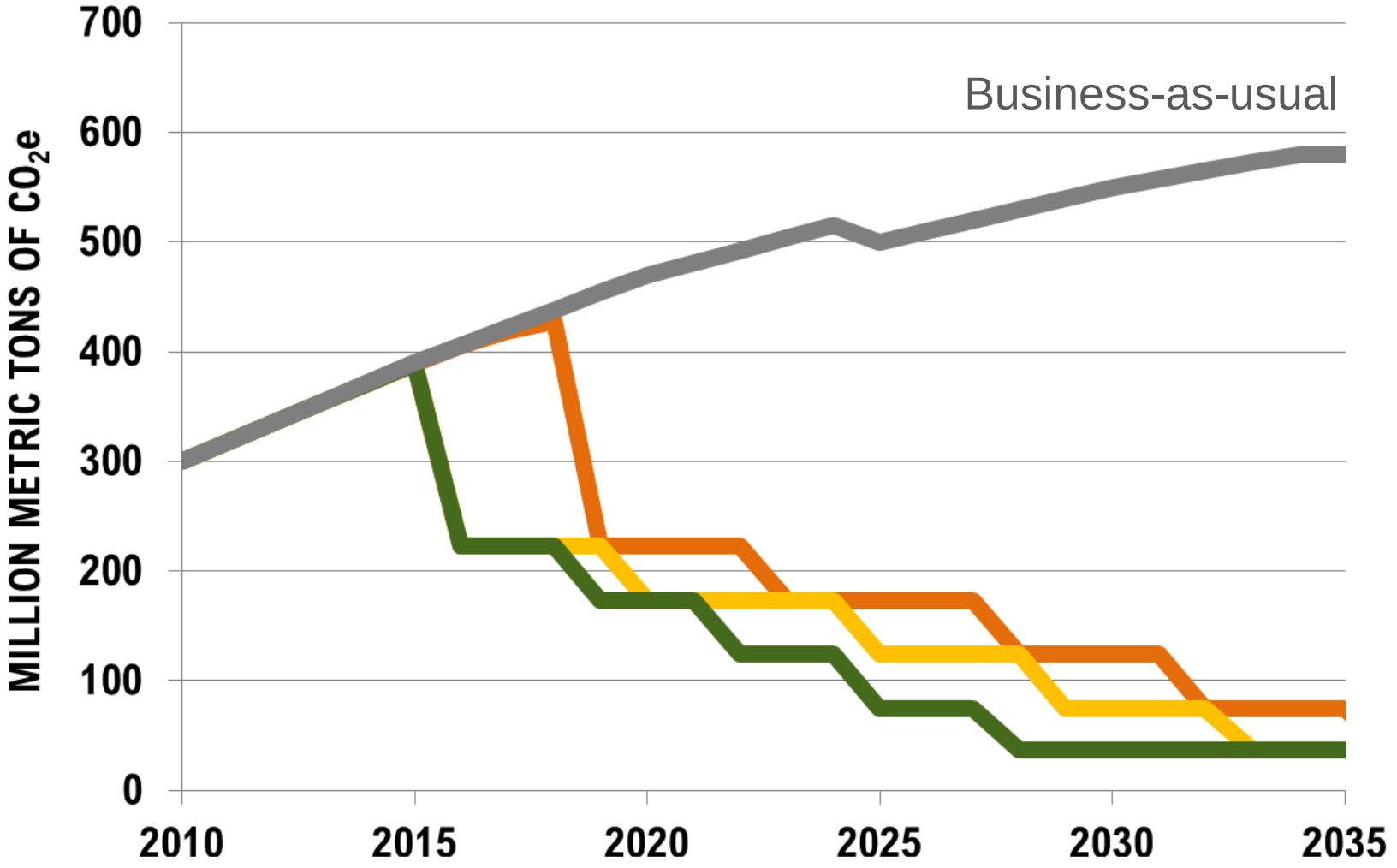
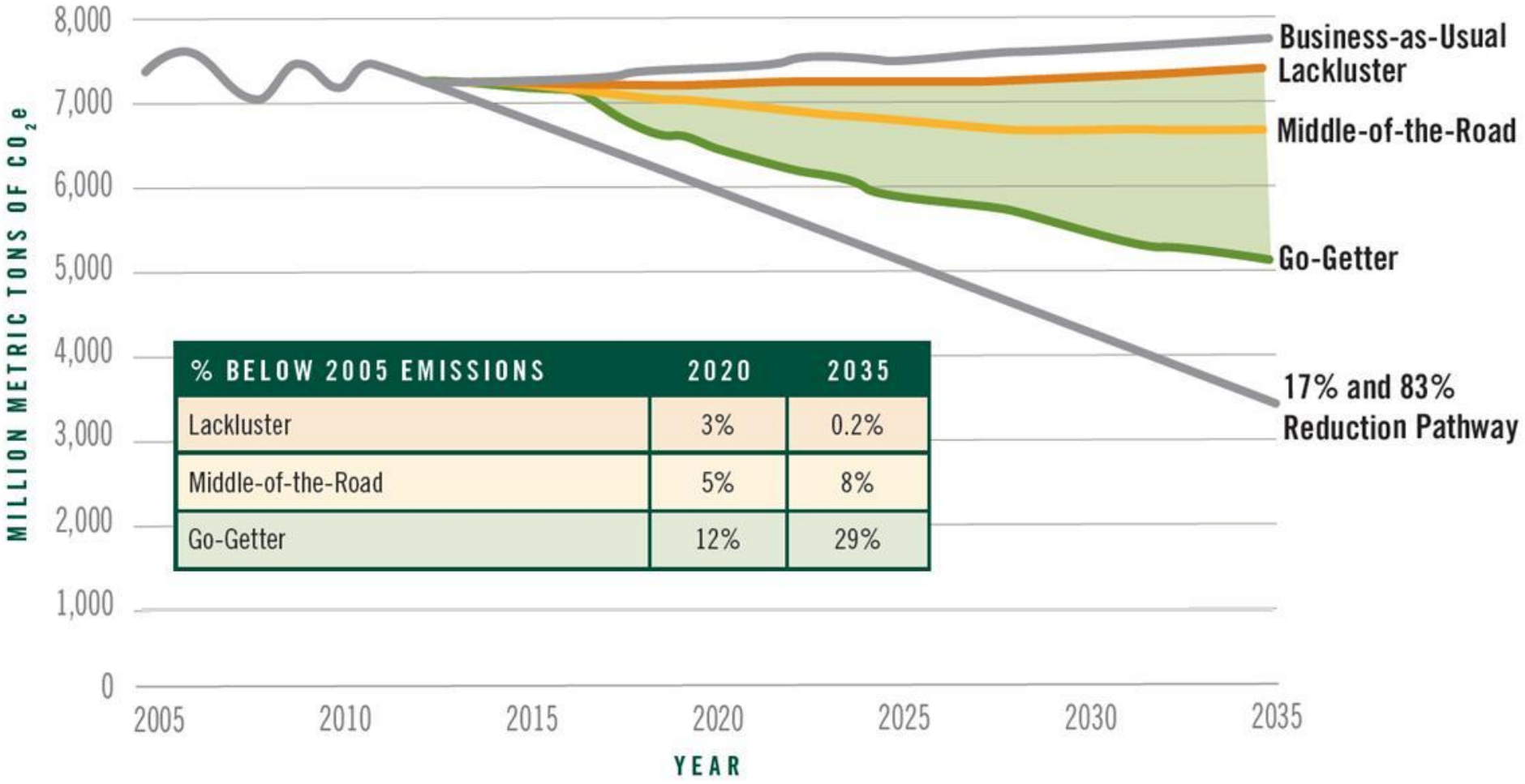


Photo Peter Morgan

Transportation

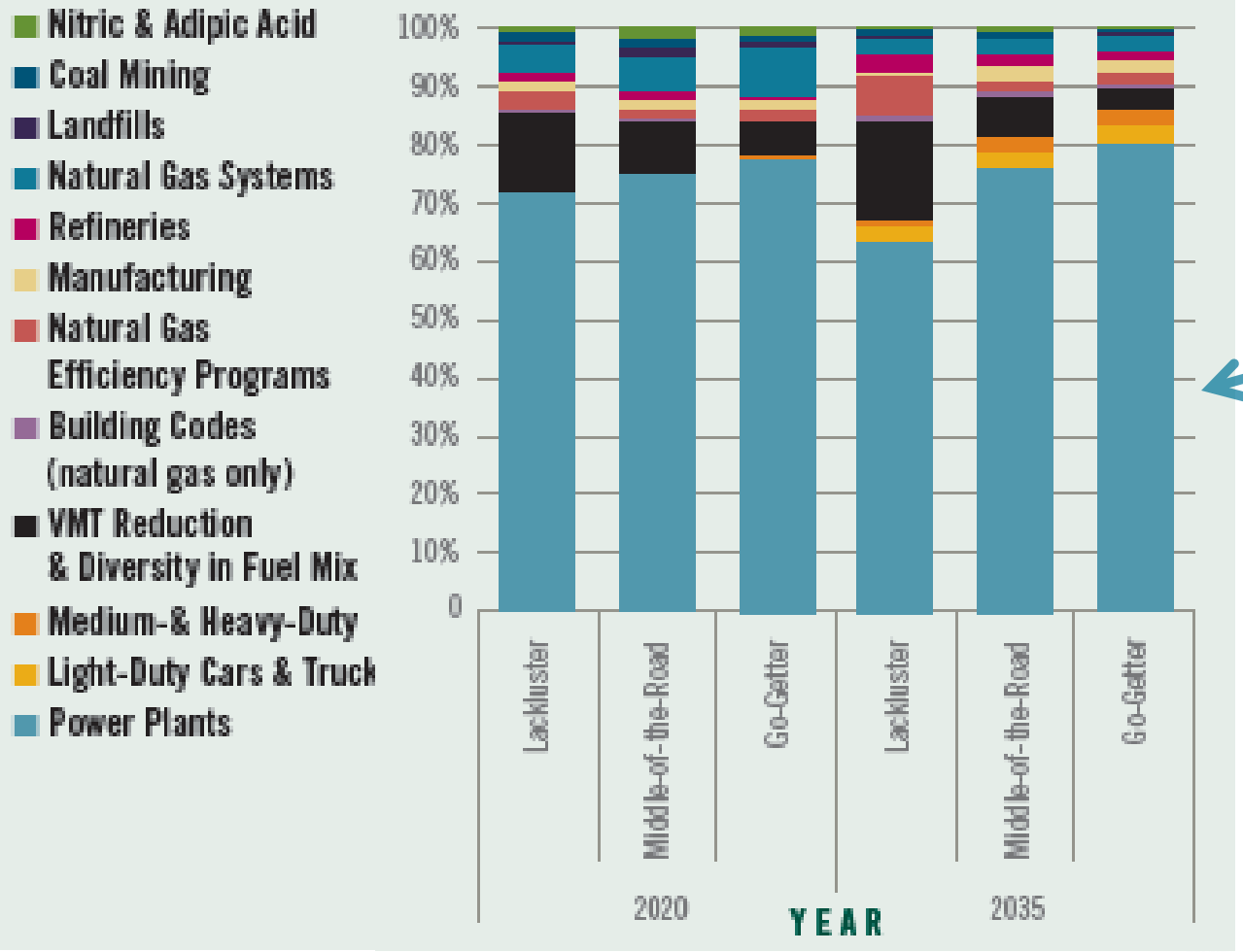
- Administration set historic standards
- Potential in later years for additional reductions

STATES ALONE CANNOT REDUCE EMISSIONS 17 PERCENT BELOW 2005 LEVELS



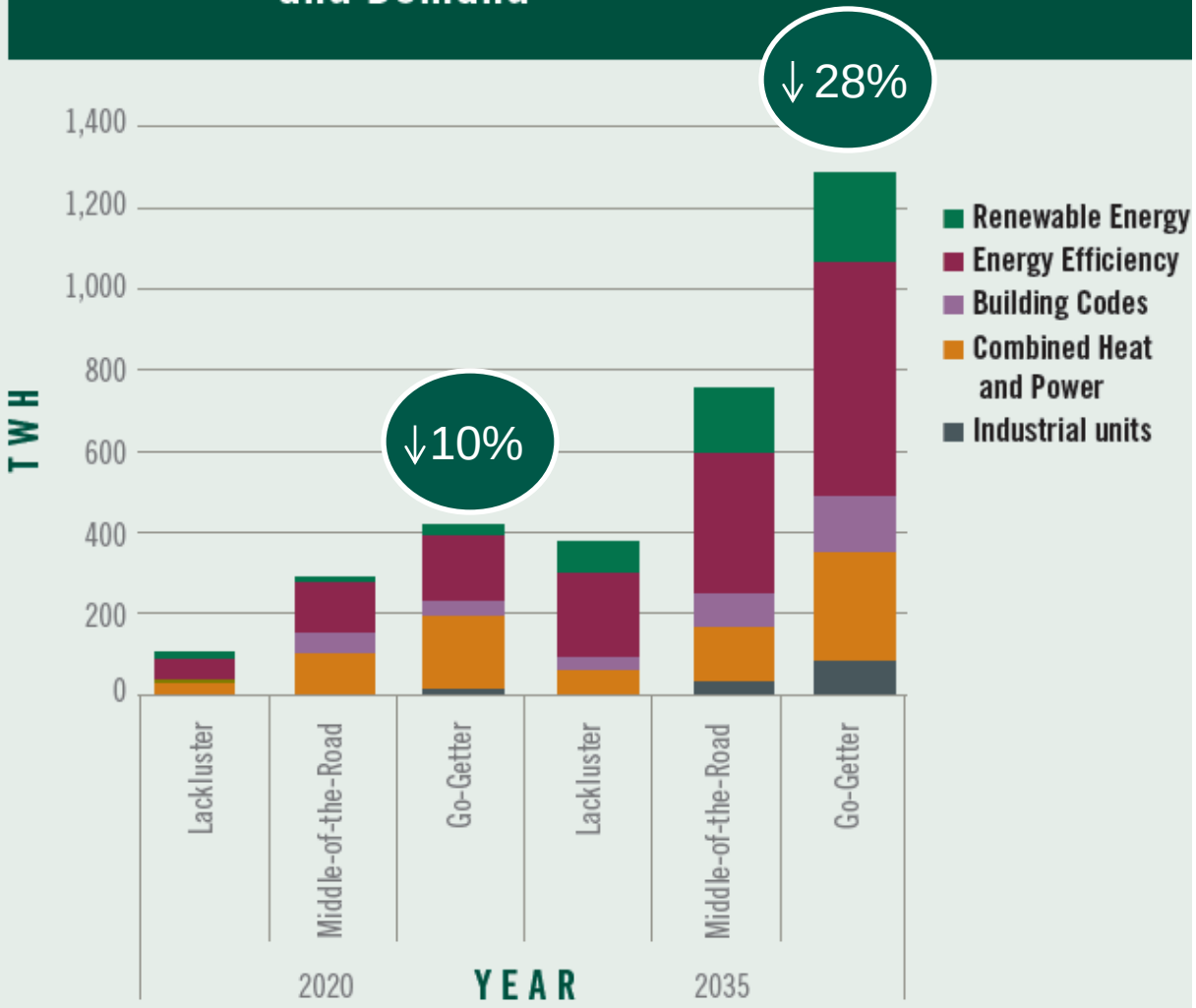
% BELOW 2005 EMISSIONS	2020	2035
Lackluster	3%	0.2%
Middle-of-the-Road	5%	8%
Go-Getter	12%	29%

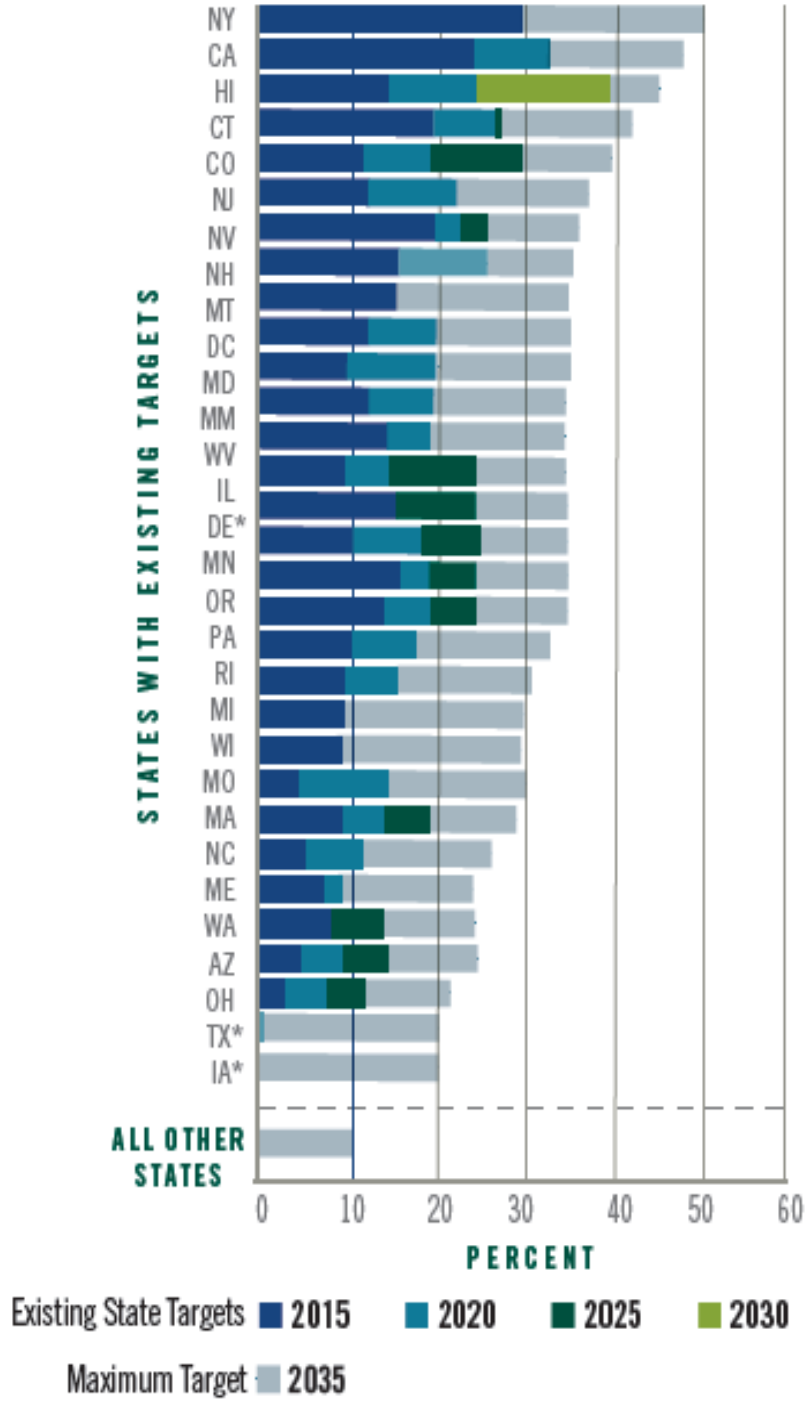
FIGURE S-6 Greenhouse Gas Emissions Reductions from State Action, as a percent of total reductions from state actions



State-level emissions reductions are largely from the power sector

FIGURE S-6 State Actions that Affect Electricity Supply and Demand





RENEWABLE GENERATION

States with targets:

- States responsible for 25-75% of electricity consumption increase their renewable generation by 1% per year beyond existing target

States without targets:

- States responsible for 10-50% of electricity consumption increase renewable generation by 0.5% per year starting in 2015