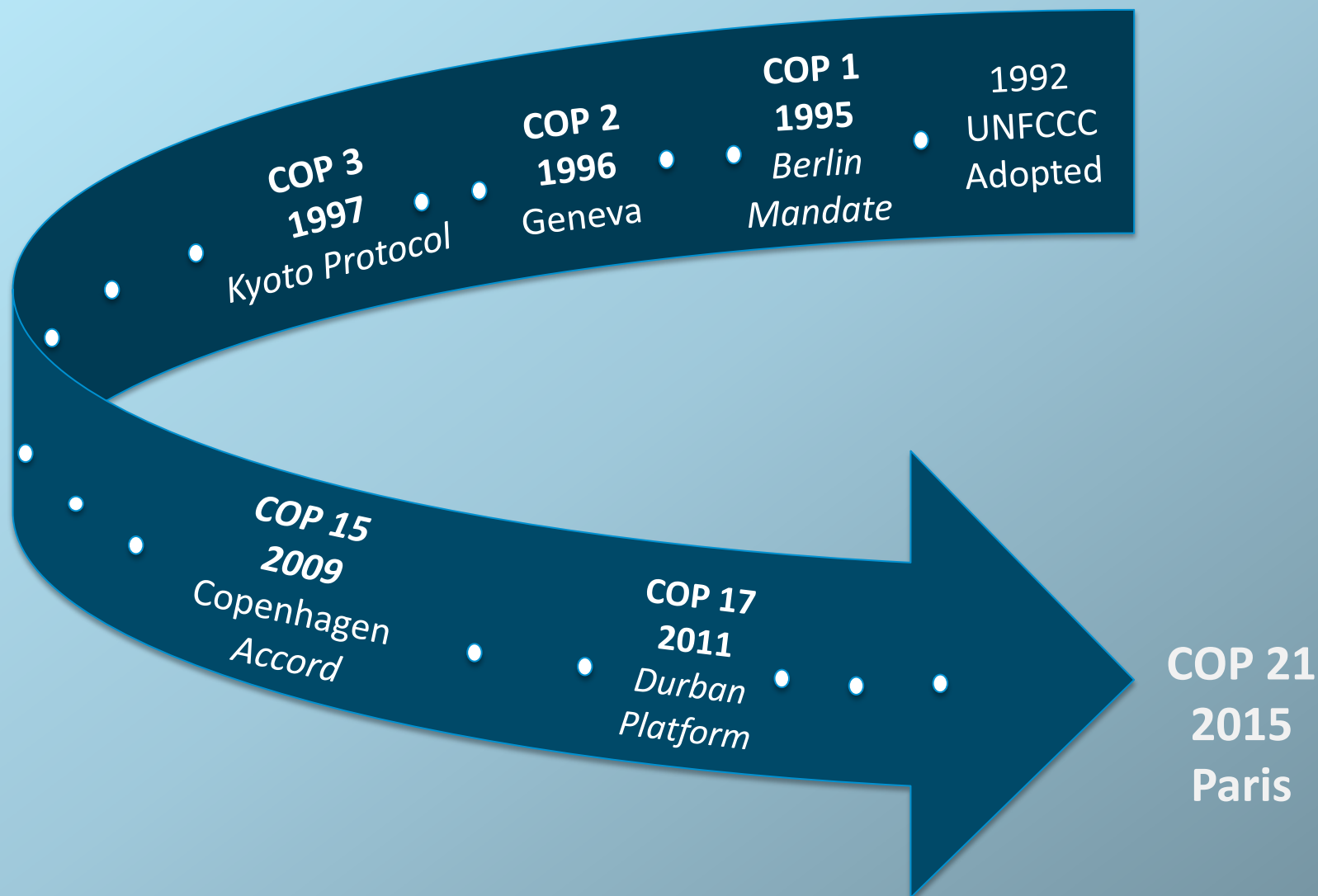
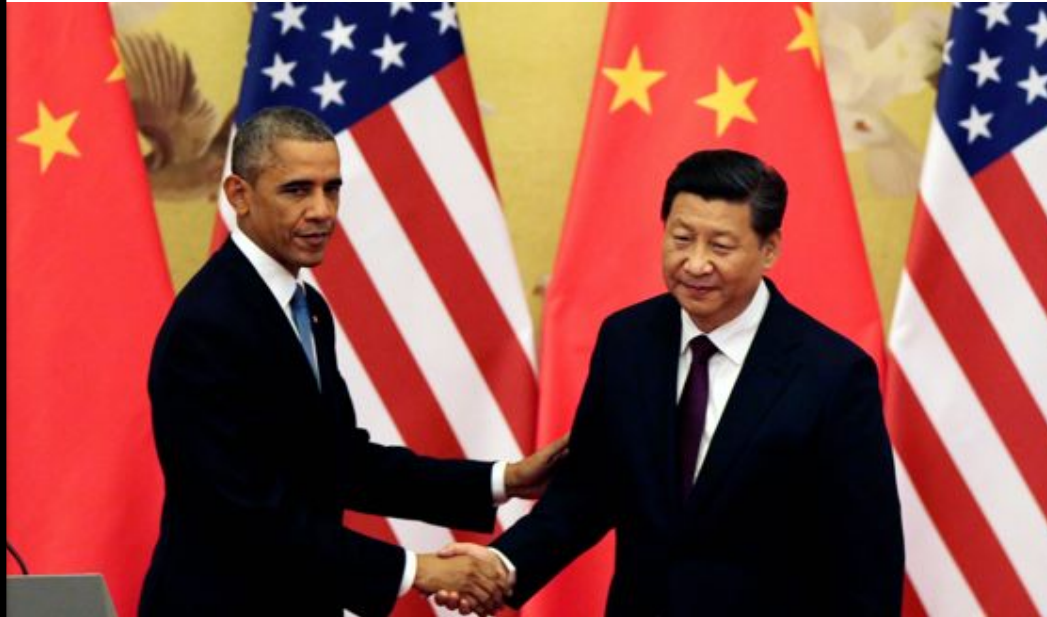


UNFCCC History: Pathway to Paris



Outlook for Paris:

- Tough going, but promising— an agreement appears within reach.
- Intended Nationally Determined Contributions (INDCs) outline specific policies and measures for greenhouse gas mitigation.
- Of the 195 countries that are parties to the negotiations, over 150 have submitted intended contributions to the UNFCCC.
- The UNFCCC Secretariat is compiling a report of anticipated cumulative effect of INDCs received to date, expected November 1st.



Joint U.S. - China Announcement: November 11, 2014

- Historic announcement – the culmination of months of bilateral discussions.
- Described as part of a longer range effort “to achieve deep decarbonization of the global economy over time.”
- Injected momentum into the global climate negotiations.

November 2014: United States and China set the stage for meaningful national commitments.



- **Economy-wide target of greenhouse gas reductions by 26-28% below its 2005 level in 2025.**
- **Accelerates previous target “in the range of 17 percent below the 2005 level in 2020.”**



- **Peaking CO₂ emissions around 2030, with the intention to try to peak early, and**
- **Increasing non-fossil fuel share of all energy to around 20 percent by 2030.**

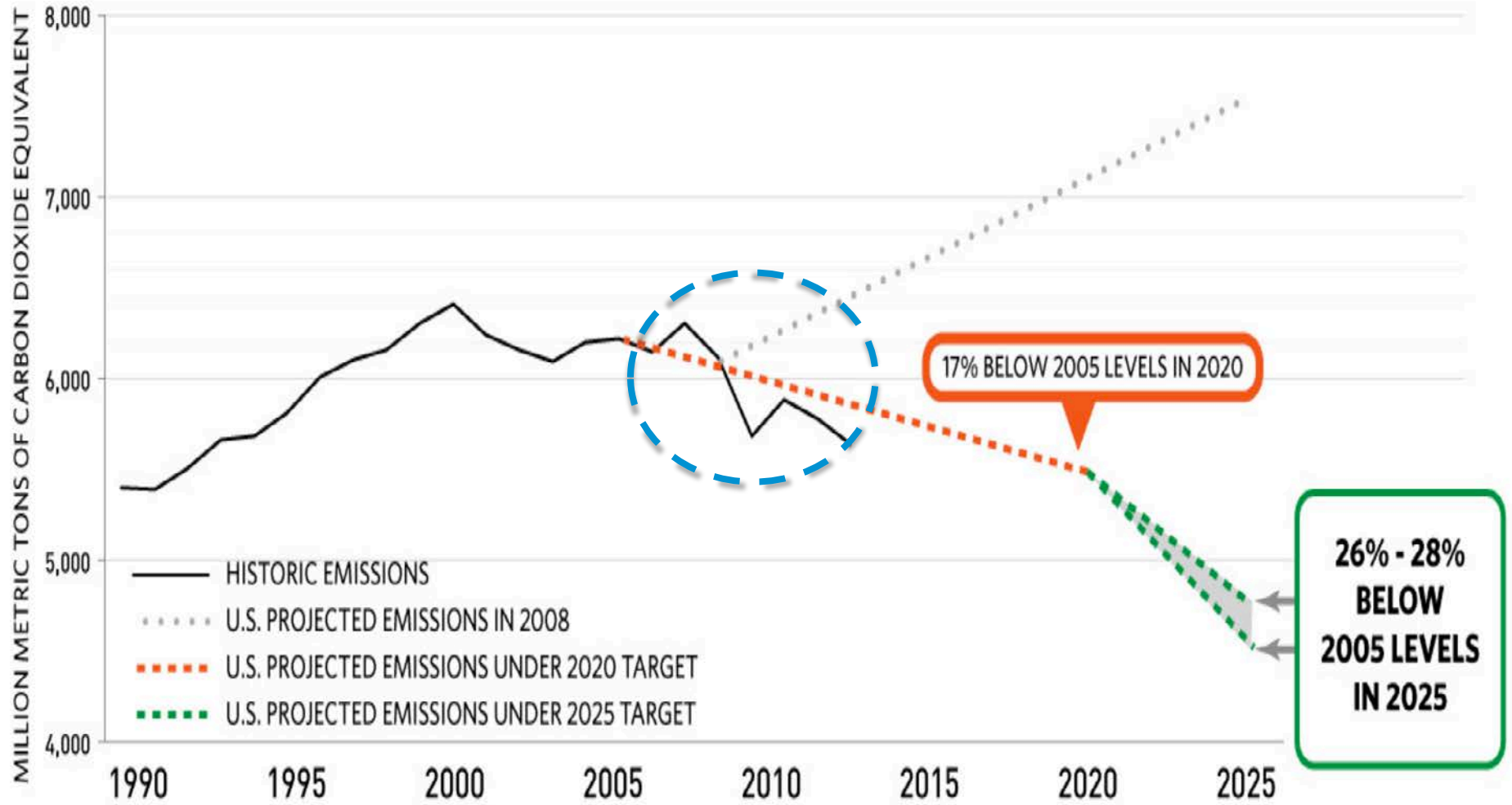
U.S. has gained strong credibility due to its declining emissions profile.

Post-2009 regulatory actions noted in the INDC submission:

- ***Fuel economy standards*** for light-duty vehicles for MY2012-2025 and for heavy-duty vehicles for MY2014-2018.
- ***Energy conservation standards*** for 29 categories of appliances and equipment as well as a commercial building codes.
- ***Approved alternatives to HFCs*** with high global warming potential.

Increased use of natural gas in power generation sector, not noted in the official submission, but a critical factor for U.S. negotiating stature.

U.S. EMISSIONS UNDER 2020 AND 2025 TARGETS



U.S. Policies to Accelerate Reduction Profile

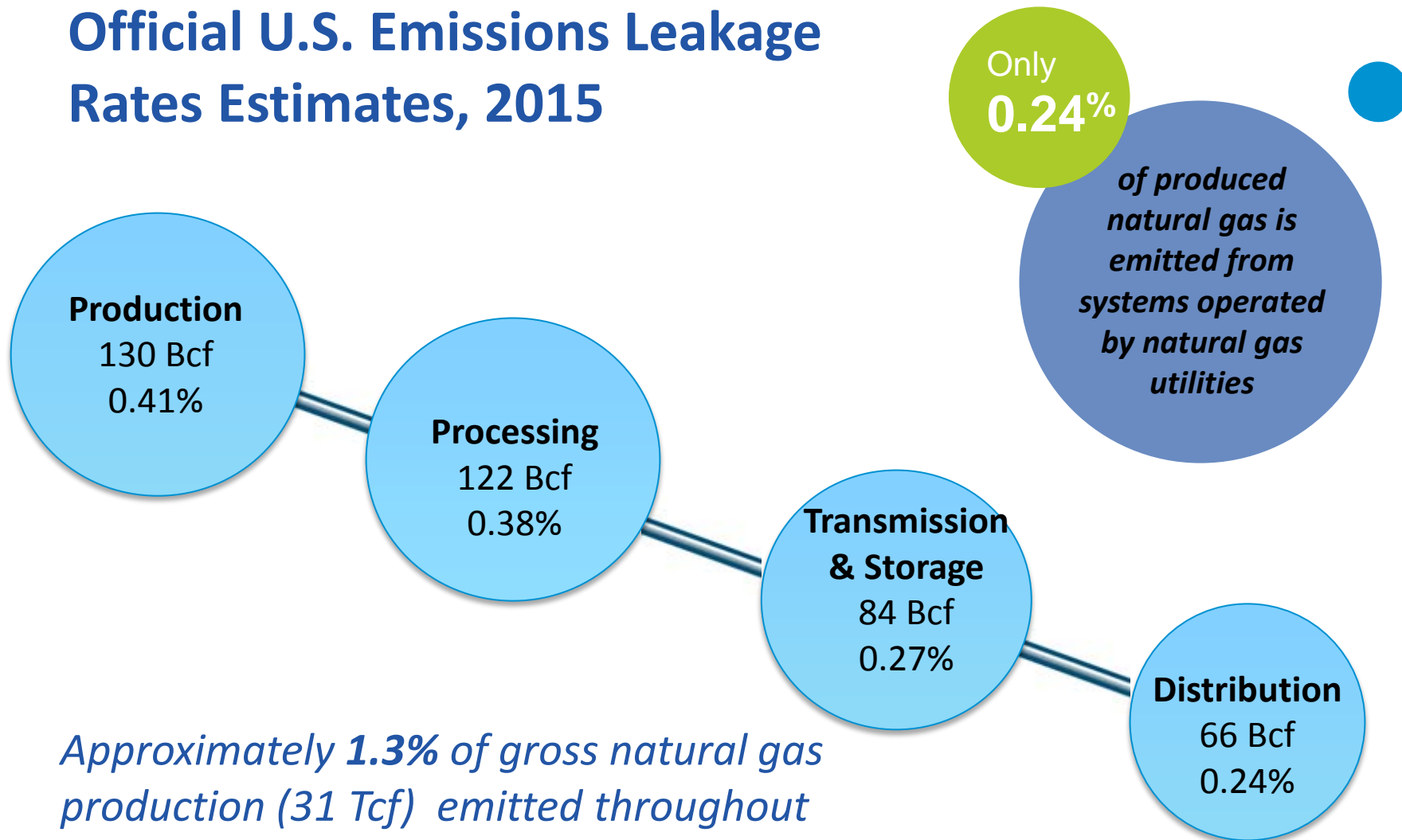
- ***Round Two for Heavy Duty fuel economy standards.*** *New standards will allow NGVs to compete on a level playing field.*
- ***Ambitious agenda for new appliance efficiency standards.*** *Residential gas furnaces in process; residential water heaters to follow; first-ever standards for pipeline compressors expected.*
- ***Regulation of methane emissions from natural gas production; landfills.***
- ***Clean Power Plan: 32% reduction of GHG from power generation nationally.***

“Responsible development of natural gas is an important part of our work to curb climate change and support a robust clean energy market at home.”

Gina McCarthy
EPA Administrator



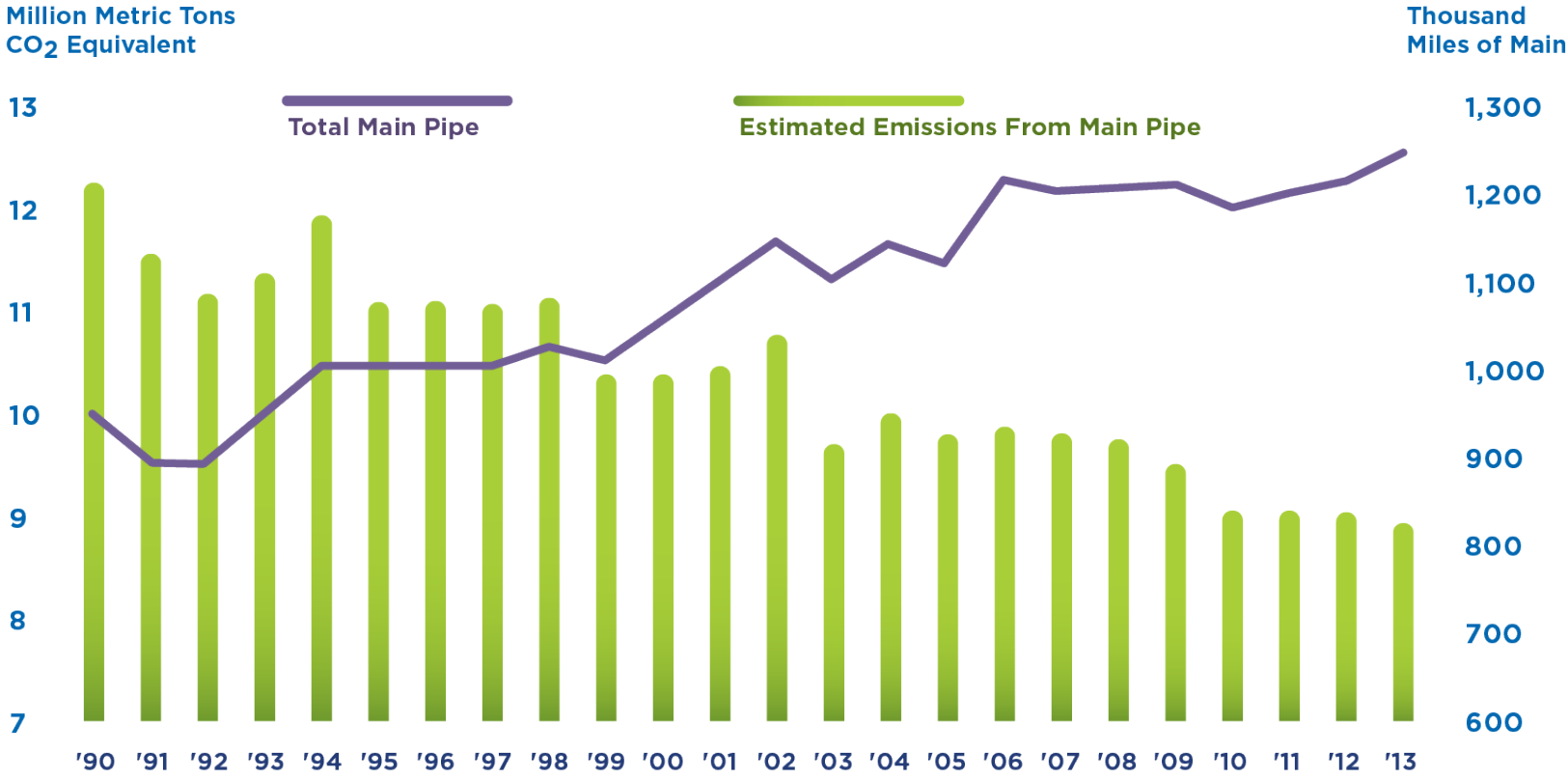
Official U.S. Emissions Leakage Rates Estimates, 2015



*Approximately **1.3%** of gross natural gas production (31 Tcf) emitted throughout the supply chain.*

Source: U.S. Department of Energy and U.S. Environmental Protection Agency

Emissions Have Declined Even as Pipelines Have Expanded



Replacing pipelines with protected steel and plastic materials can reduce emissions more than 95%.



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