

Some Remarks on Implementation of NDCs

Snowmass, CO
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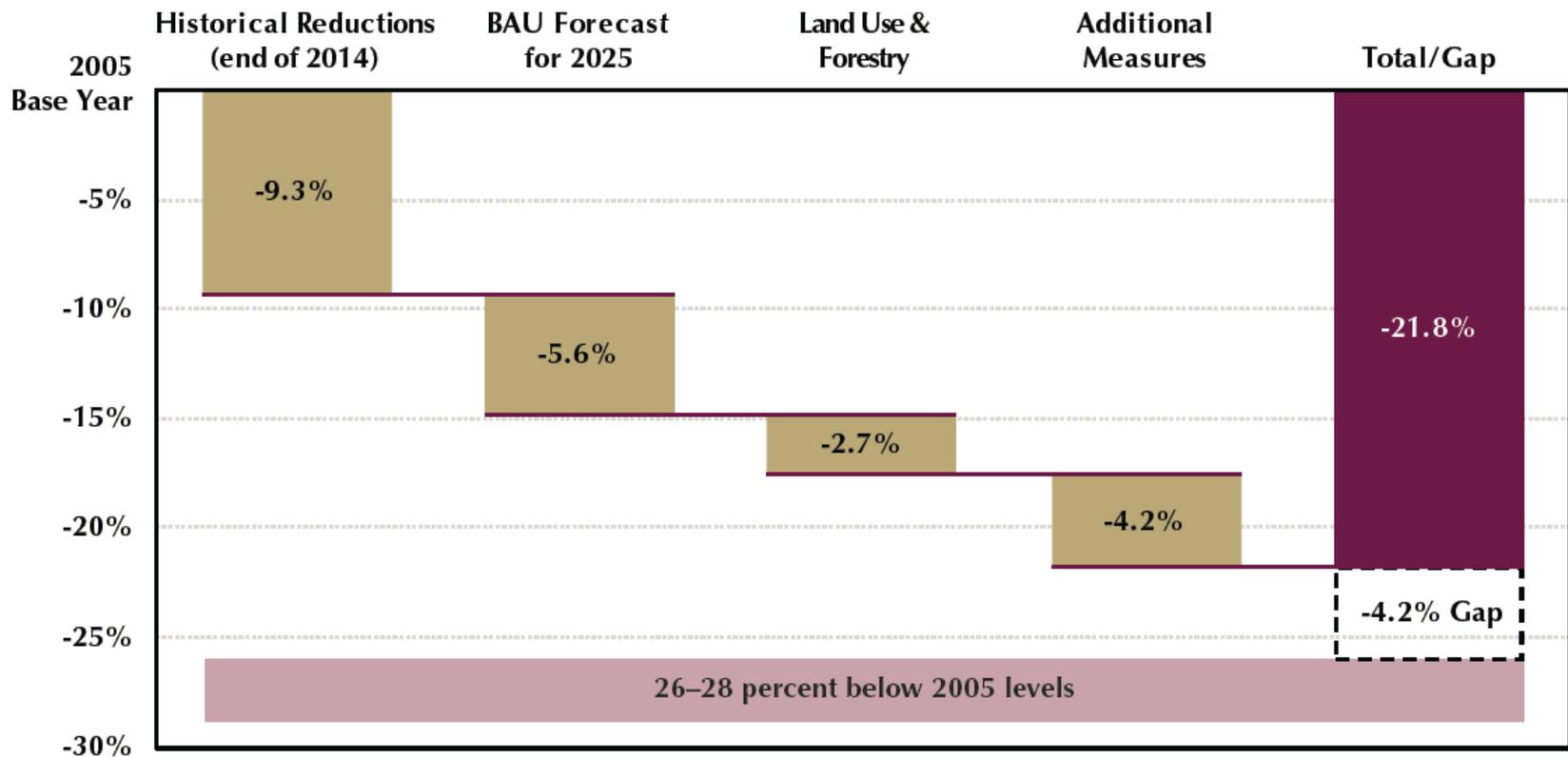
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Primary U.S. Policies and Measures

Target emissions 26-28% below 2005 levels by 2025

- Clean Power Plan
- Fuel economy standards – LDV and HDV
- Energy efficiency standards
- Methane standards
 - Oil & gas: new sources + [existing sources?]
 - Landfills: new + existing sources
- [Hydrofluorocarbons (HFCs)?]
- [Reform of the federal coal leasing system?]
- [Regional, state, and local actions + corporate actions]



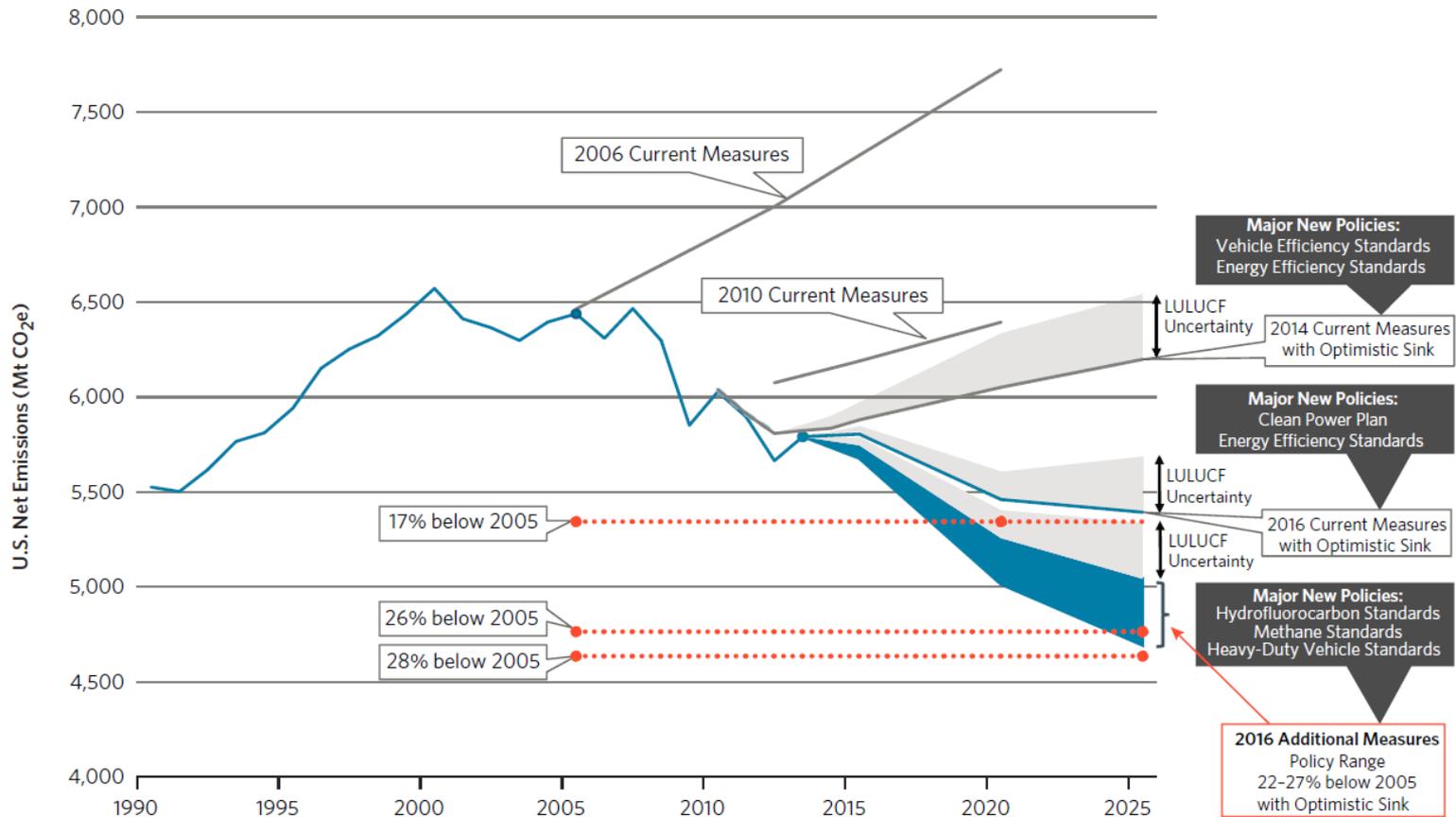
The U.S. goal under the Paris Agreement is a net reduction of greenhouse gas emissions of 26 to 28 percent below 2005 levels by 2025. The top line in this figure represents net U.S. emissions in 2005. From left to right, the bars represent emission reductions through 2014, projected reductions by 2025 under a business-as-usual (no new policies) scenario, potential reductions from the land use, land-use change and forestry (LULUCF) sector, and additional measures under the Climate Action Plan. In total, these would reduce emissions 21.8 percent from 2005 levels, leaving a “gap” of 4.2 percent.

Sources: EPA, EIA, State Department (2015)

Source: C2ES (2016)

Figure 6 **U.S. Emissions Projections—2016 Current Measures Compared with Potential Reductions from Additional Measures Consistent with the Climate Action Plan**

Also shown are previous projections from the 2006, 2010, and 2014 U.S. Climate Action Reports, which demonstrate the dramatic ratcheting down of projected U.S. emissions over the past decade.



Notes:

- The 2016 *Policy Baseline* scenario assumes that no additional measures are implemented after 2015.
- The range for the 2016 *Current Measures* scenario (gray shaded wedges) reflects uncertainty in projected net LULUCF sequestration rates, much of which will be determined by factors that cannot be directly influenced by policies and measures.
- The *Additional Measures* scenario (blue shaded wedge) incorporates post-2015 implementation of additional measures. The range for the *Additional Measures* scenario reflects both the LULUCF sequestration range (gray shaded wedges), as well as uncertainty regarding projected emission reductions from measures that will be implemented consistent with the *Climate Action Plan* (solid shading). The solid portion labeled “policy range” illustrates the range of emission outcomes that can be directly influenced by implementation of additional measures, assuming higher land sequestration levels.

Connecting NDCs to 2050 Goals

Critical importance of innovation as we look to 2050...

- Mission Innovation
 - Doubling of FY2016 U.S. clean energy R&D budget
- Breakthrough Energy Coalition
 - Private investment in early-stage innovations

Key questions relevant to this community:

What are the lag times of innovation? What is the speed at which diffusion can occur? Lowest-cost approaches? Interactions between pathways? How would this differ based on the level of development? Are there key technologies we should be more carefully considering today (e.g., BECCS)?