

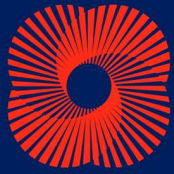


Council of Industrial Boiler Owners

Environmental, Energy & Sustainability Committee Meeting

December 8, 2021

Dan Byers
Vice President – Climate and Technology
Global Energy Institute
U.S. Chamber of Commerce



U.S. Chamber of Commerce

Emissions ambition

VS

Energy demand

2100 WARMING PROJECTIONS

Emissions and expected warming based on pledges and current policies



Nov 2021 update

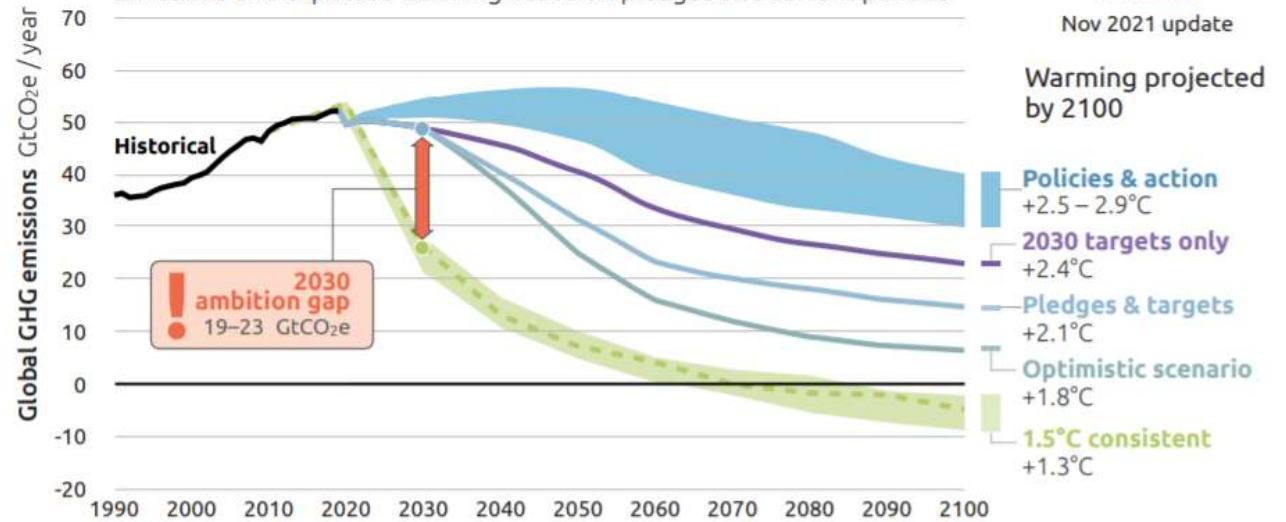
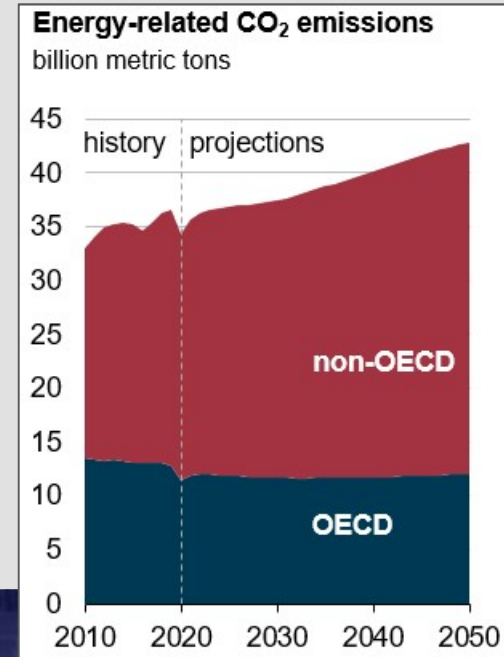
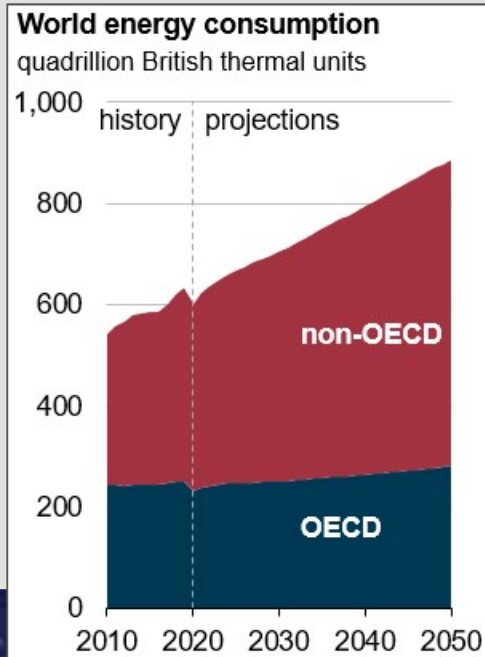
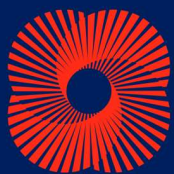


Figure 2 Global greenhouse gas emission pathways for CAT estimates of policies and action, 2030 targets only, 2030 and binding long-term targets and an optimistic pathway based on net zero targets of over 140 countries in comparison to a 1.5°C consistent pathway.



Source: Climate Action Tracker, EIA



COP26 Notable Outcomes

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● “Ambition Gap” closed by ~4 gigatons CO₂e

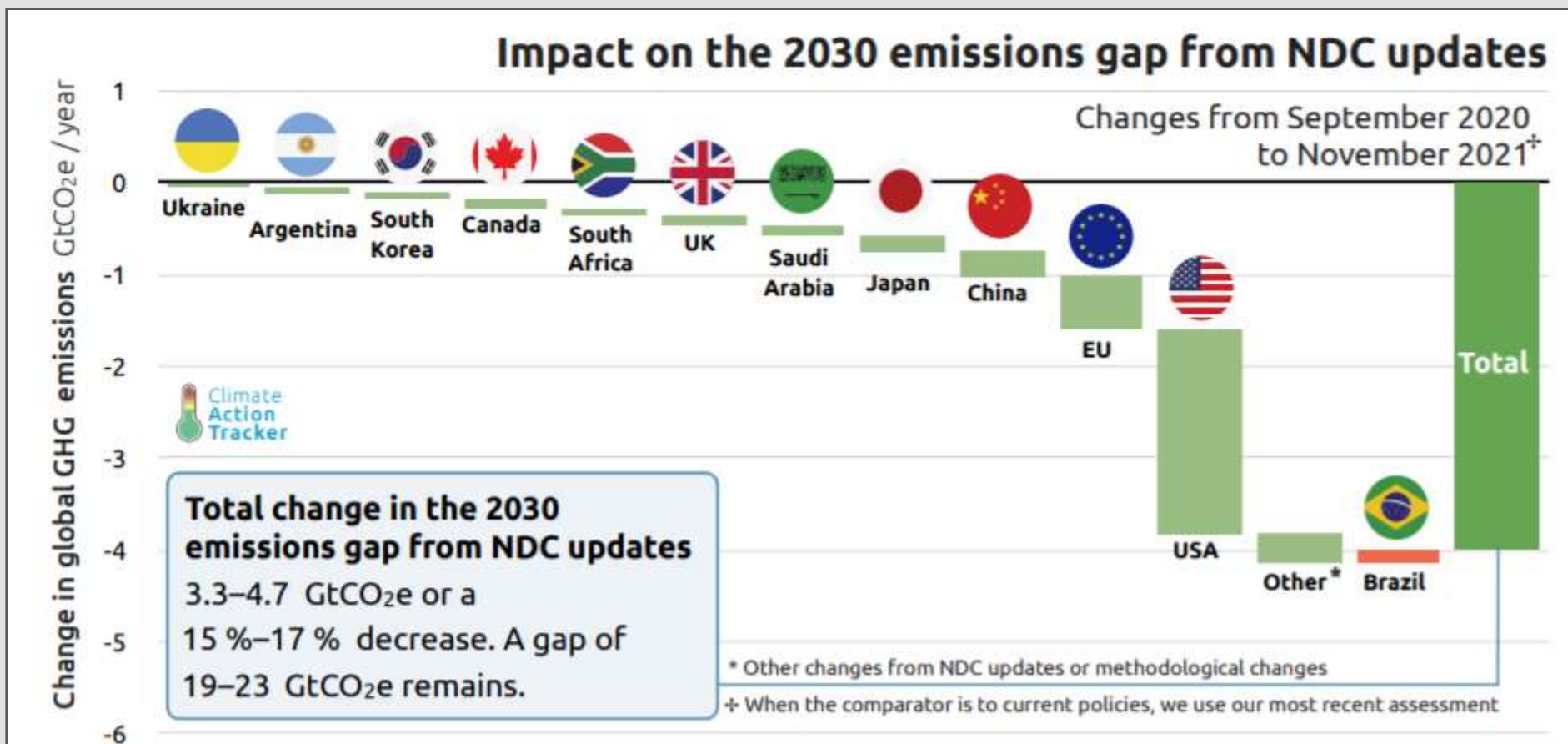
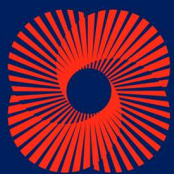


Figure 4 Impact of NDC updates since September 2020 on the reduction in the 2030 emissions gap.

Source: Climate Action Tracker

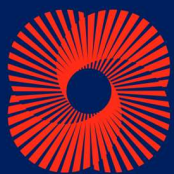


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COP26 Notable Outcomes

● “Glasgow Climate Pact”

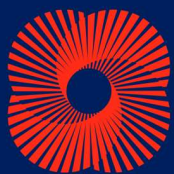
- Ambition: “*Requests*” countries “revisit” and “strengthen” NDCs by end of 2022 in order to “keep 1.5° alive.”
- Article 6: Final chapter of “Paris Rulebook” agreed to, setting accounting and transparency requirements that will enable credit trading between countries.
- Finance: \$100 billion target falls short; agreement to double funding for adaptation by 2025 and begin post-2025 finance discussions.
- Fossil Fuels: “*Calls upon*” parties to accelerate efforts to “*phasedown*” unabated coal and “inefficient fossil fuel subsidies”
- Loss and Damage: Creation of new “Glasgow Loss and Damage Facility” NOT agreed to. Instead, “*decides...to discuss*” going forward.



COP26 Notable Outcomes

● Side Agreements

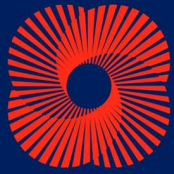
- Methane: 100+ countries commit to reducing economy-wide methane emissions 30% below 2020 levels by 2030.
- Reforestation: Glasgow Leaders' Declaration on Forest and Land Use: 140 countries commit to halt and reverse deforestation by 2030.
- Transportation: UK-led declaration committing to ban ICE sales by no later than 2040 (U.S., Germany, Japan, and China did not sign).
- Finance
 - U.S., EU, Canada pledge to halt international finance of unabated fossil fuel projects by the end of 2022, except in limited circumstances.
 - Glasgow Financial Alliance for Net Zero (GFANZ): 450 firms with \$130 trillion under management announce commitment to financing commitment for net zero.



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EU NDC Outlook

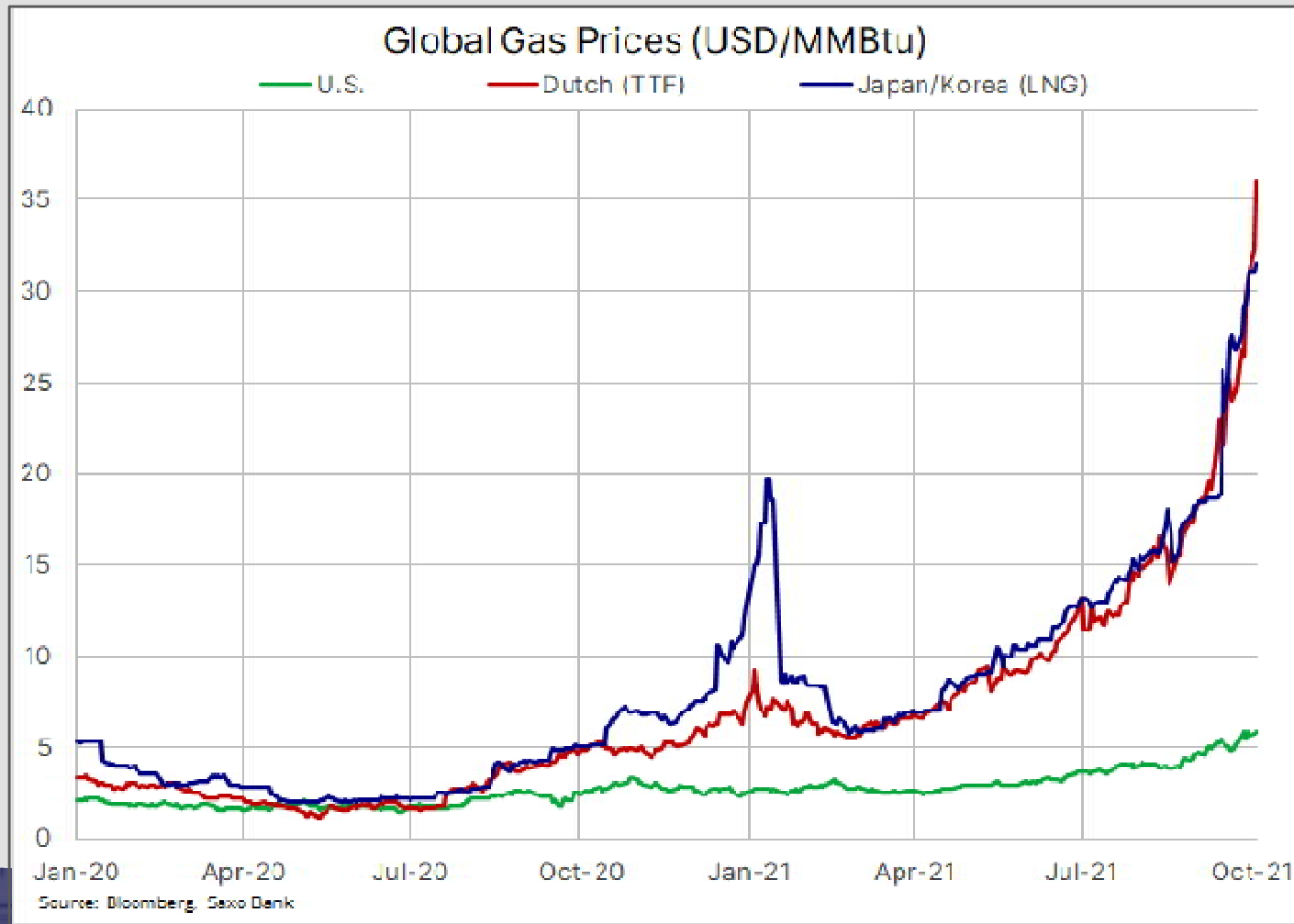
- **EU NDC**: commits to reducing net GHGs 55% below 1990 levels by 2030
 - **Path to implementation based on “Fit for 55” package that includes:**
 - A separate **ETS for buildings and road transport**
 - Phased introduction of a **carbon border adjustment mechanism (CBAM)** tariffs beginning in 2023 (initially applies to cement, aluminum, iron and steel, fertilizers, and electricity)
 - **Reduce energy consumption 9% below 2020 by 2030**
 - **Vehicle emissions standards** for new cars: 55% lower emissions than 2021 by 2030; ban on ICE sales by 2035
 - An increase of the **renewable energy target** to 40% generation share (from 20% currently)



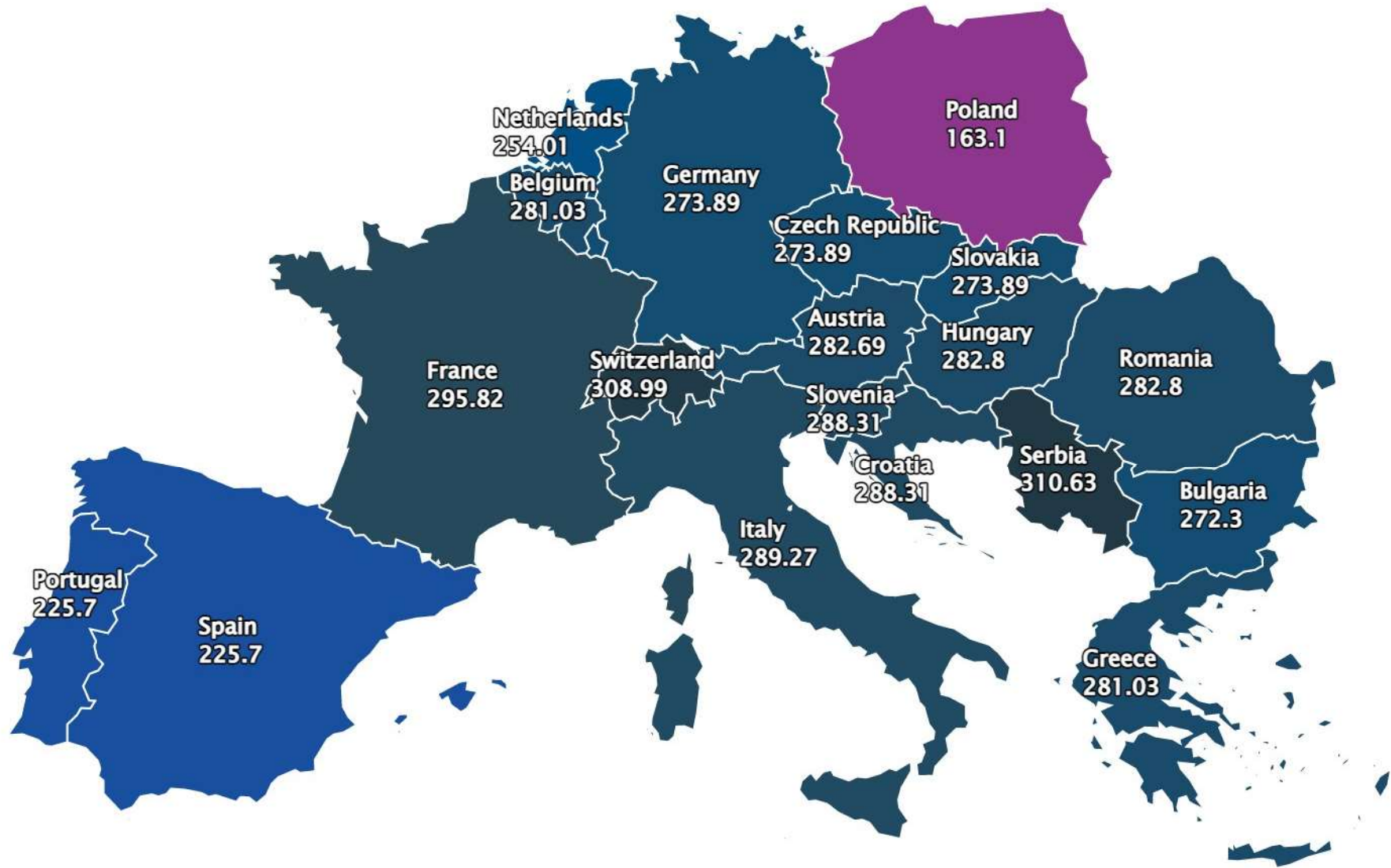
EU NDC Outlook

U.S. Chamber of Commerce

- Energy crisis threatens popular support for package and NDC



Day-ahead average prices for 2021-11-24



EUR/MWh

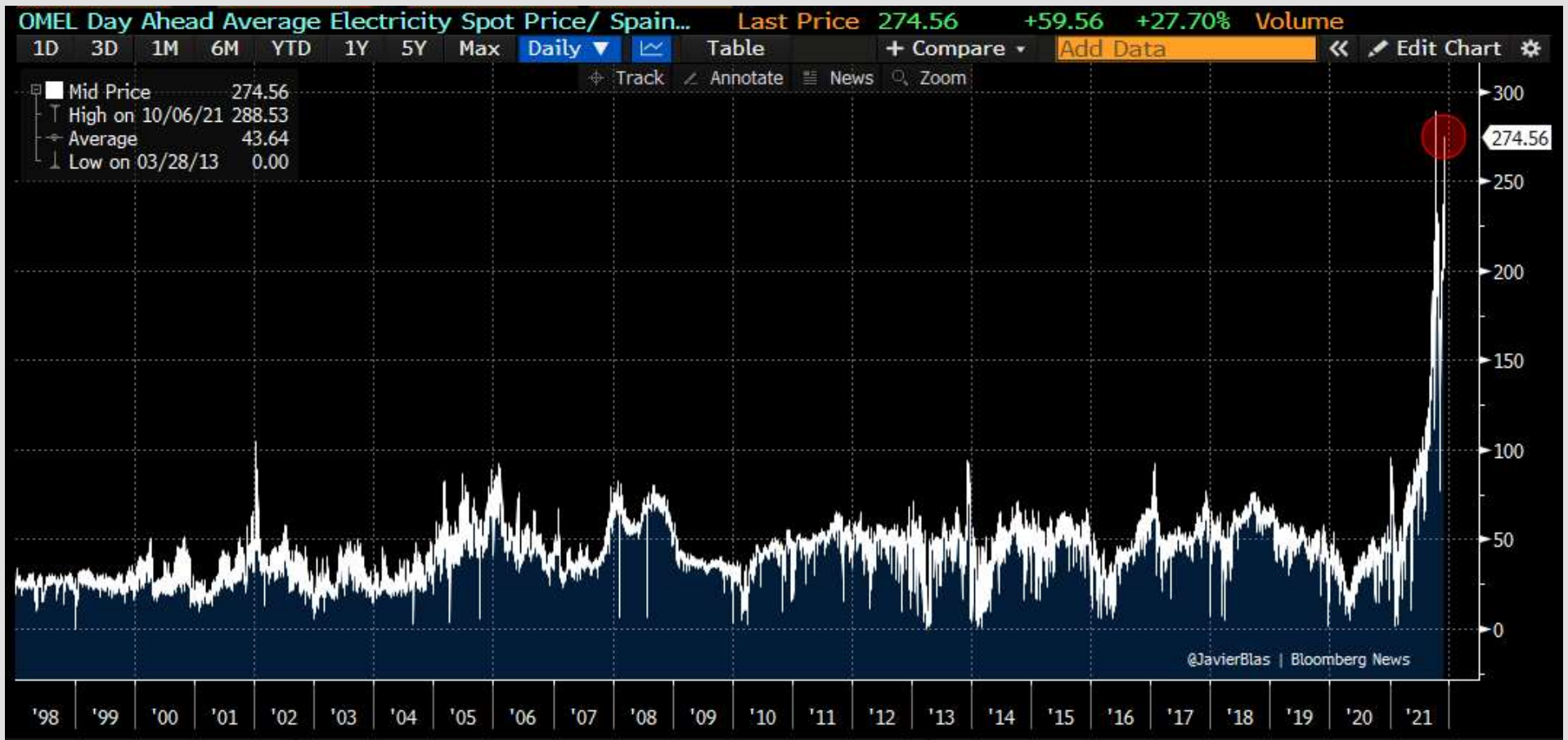


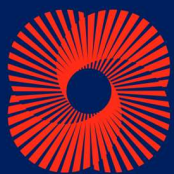


EU NDC Outlook

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- Example: Spot electricity prices in Spain topped \$310/MWh in November

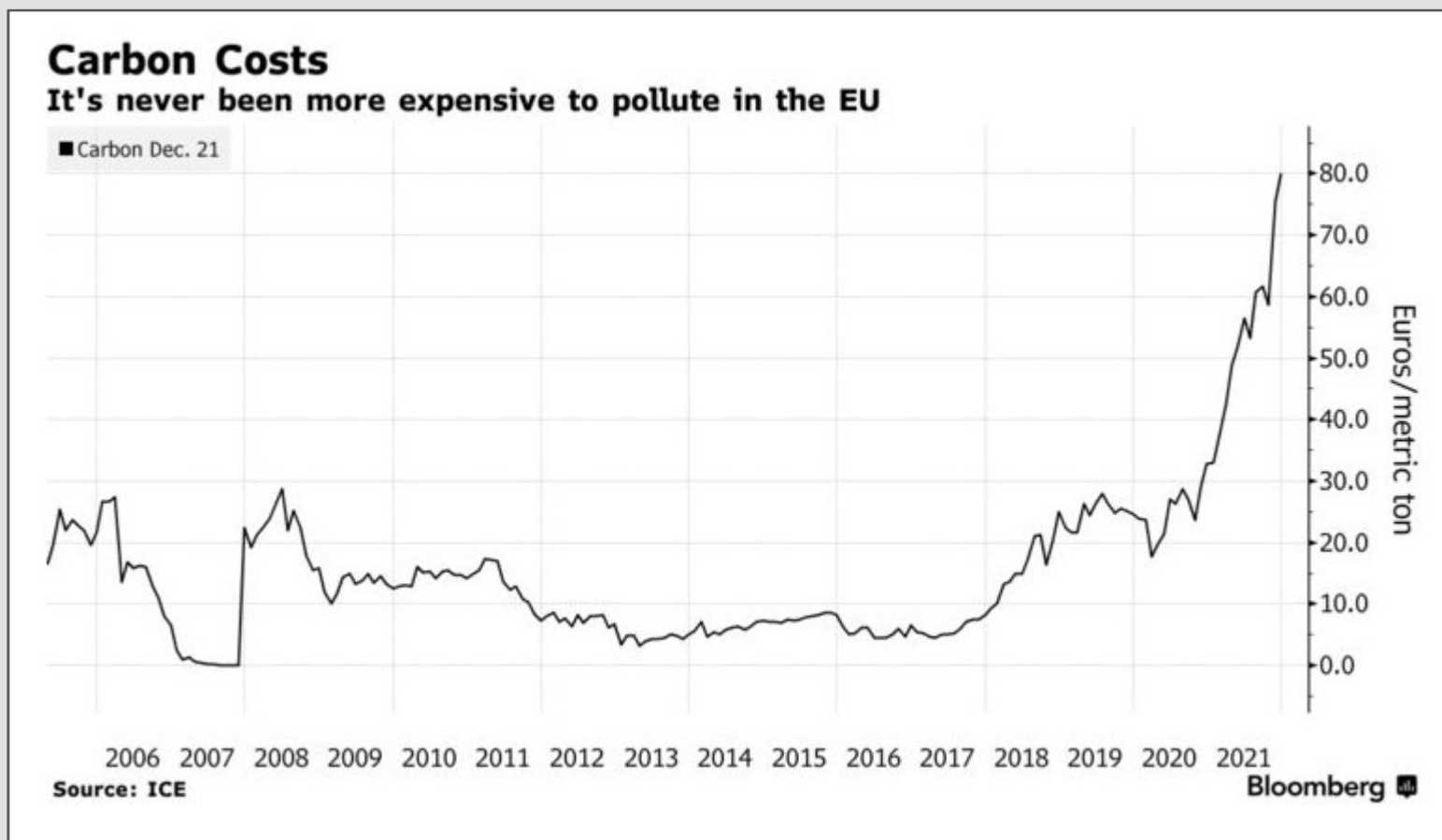




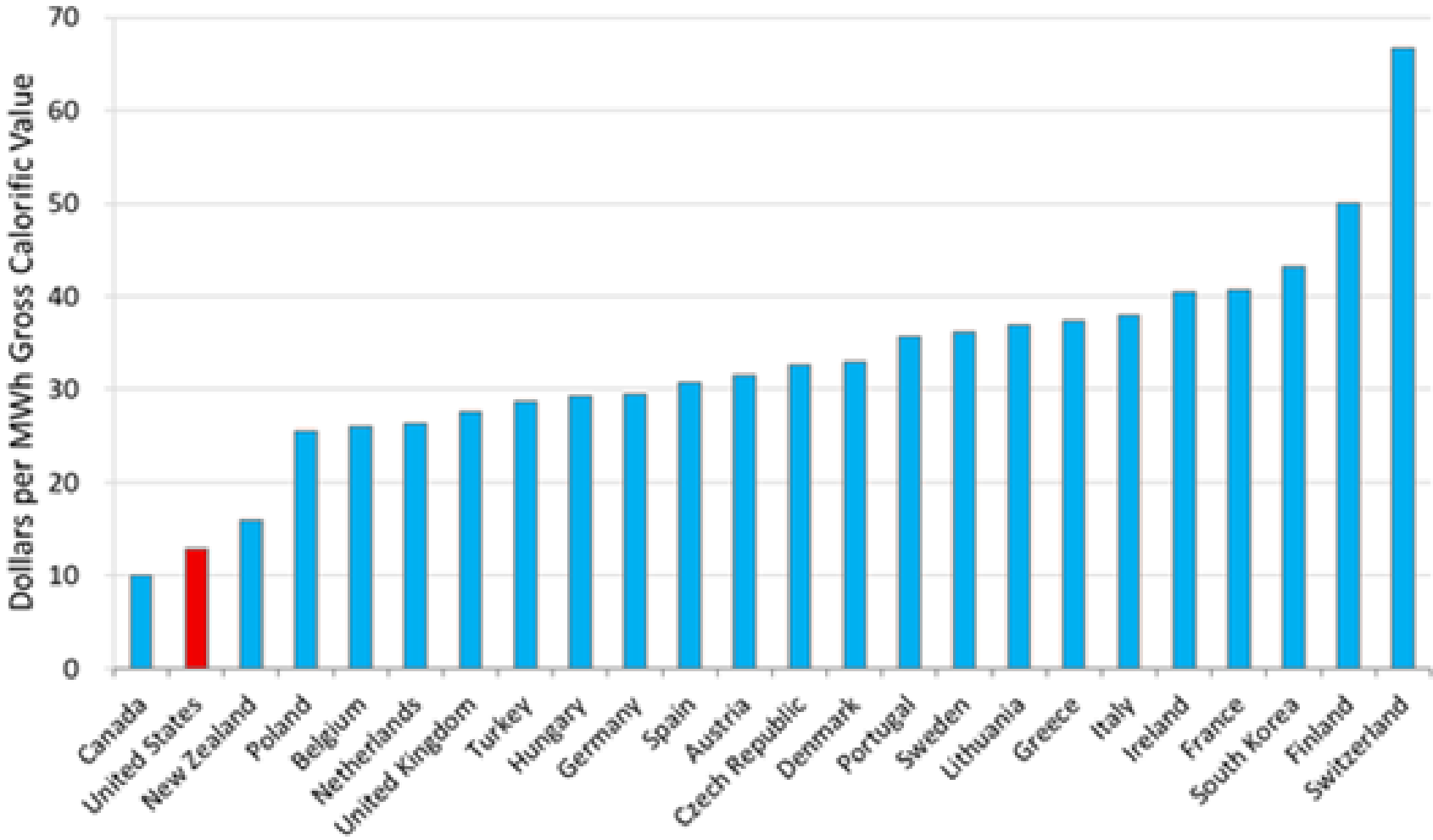
EU NDC Outlook

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- EU ETS prices have risen 140% this year to >\$90 per ton CO2



Natural Gas Prices for Industry



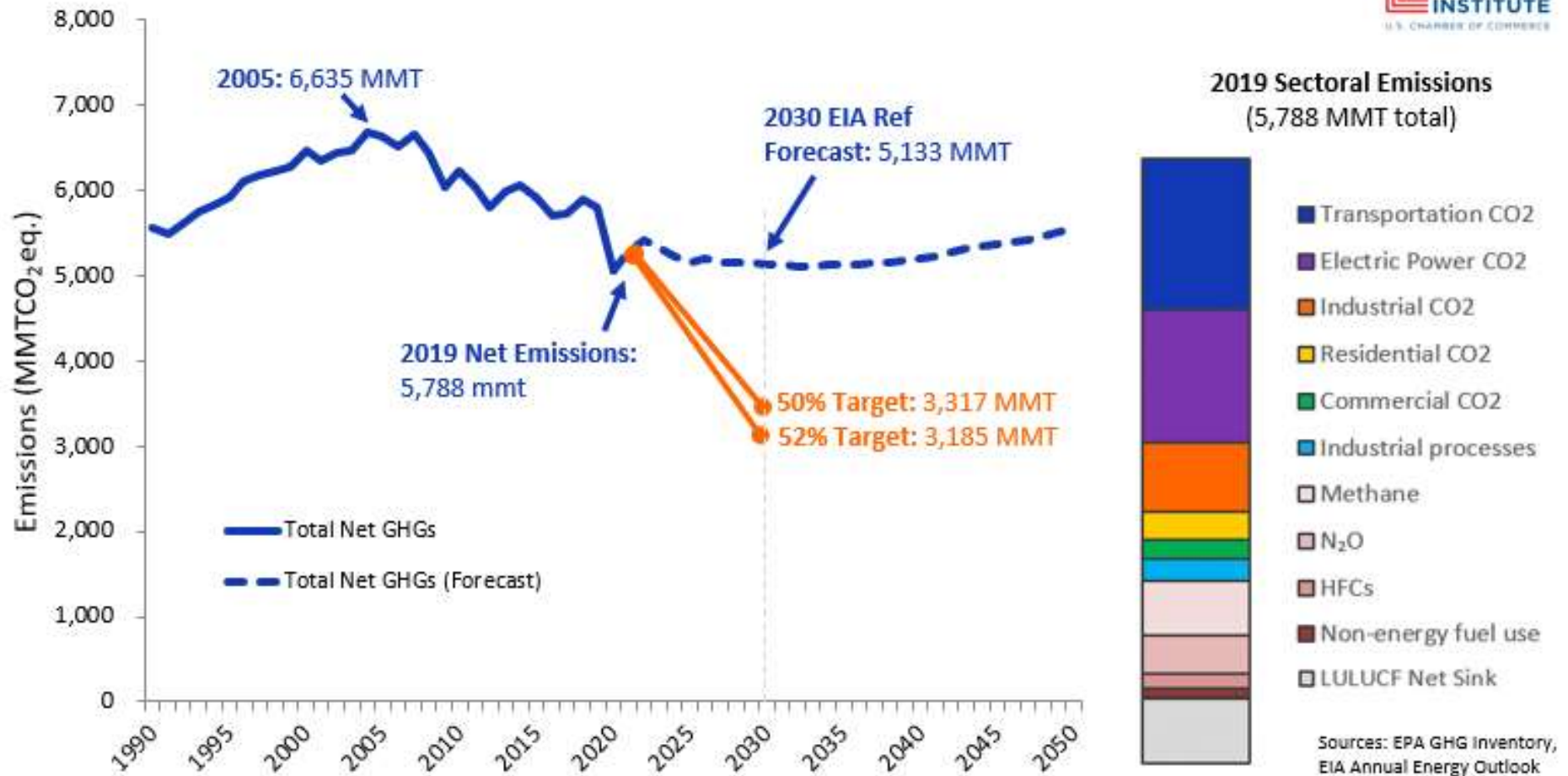
Source: IEA Key World Energy Statistics, 2020



U.S. NDC Outlook

U.S. Chamber of Commerce

Economy-Wide Net GHG Emissions and the Biden NDC

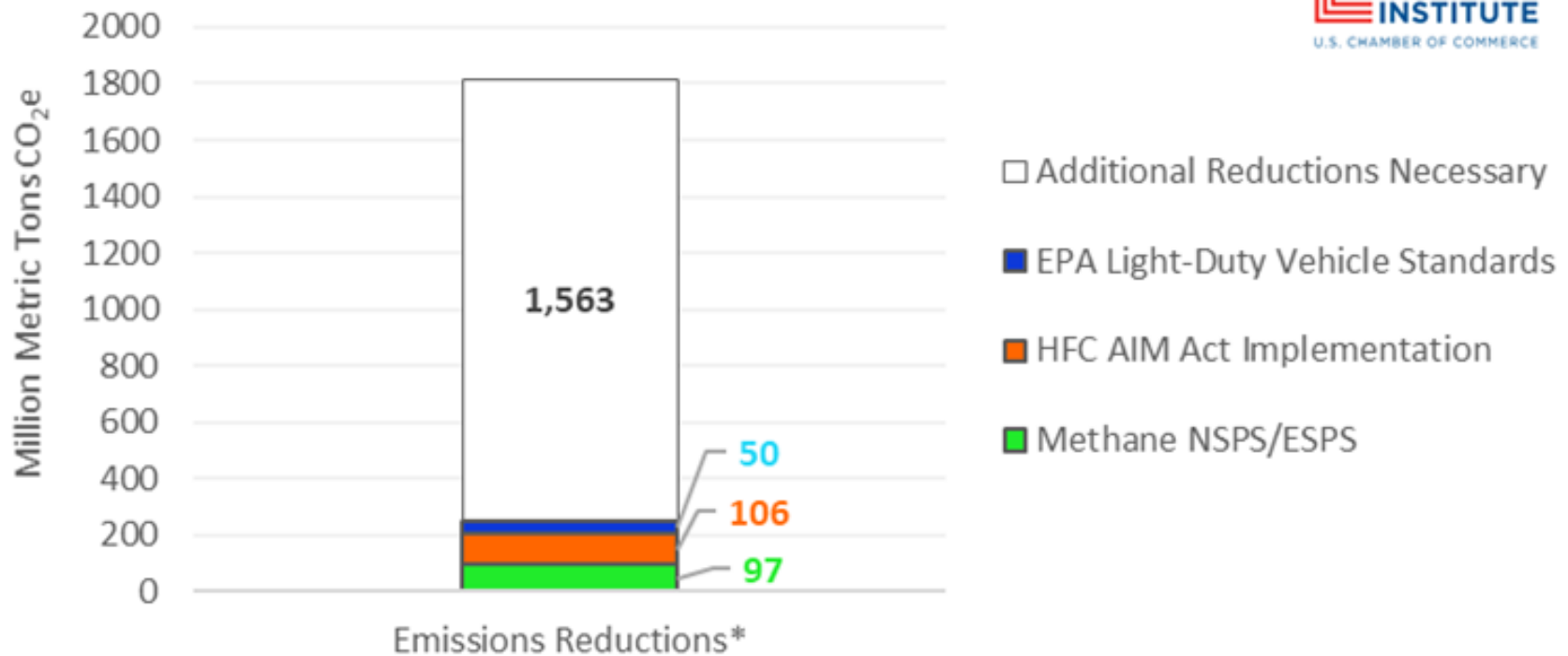




U.S. NDC Outlook

U.S. Chamber of Commerce

Path to 2030 NDC Achievement



**Estimates based on EIA AEO 2021 Reference Case Projection for 2030*