



Policy and Analytical Perspectives

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North Carolina State University, Raleigh, NC



Forestry & Agriculture Greenhouse
Gas Modeling Forum

Outline

- Current policy landscape and EPA actions
- Role of land sector in climate mitigation goals
- EPA Analyses and other analytical considerations
- Increasing ambition



Current U.S. Policy Landscape

BIL (2021)

- Funding for ecosystem restoration efforts to support healthy national forests and grasslands

IRA (2022)

- Climate Pollution Reduction Grants
- Protect and strengthen the National Forest System as well as forests on non-federal land
- Investments to support farmers, ranchers, and forest landowners in deploying climate-smart practices
- Investment and production tax credits relevant to the land sector

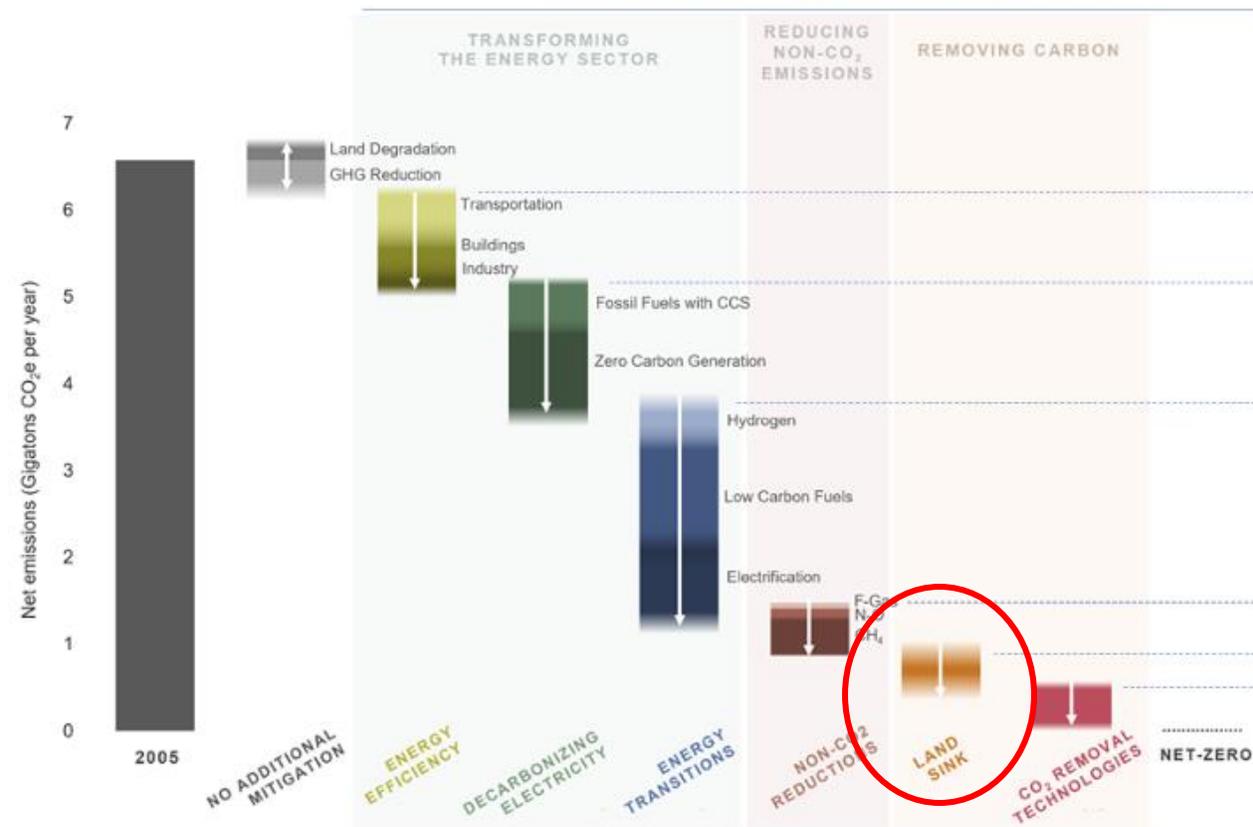
EPA

- Implementing IRA programs (CPRG grants, LEEP, Methane Emission Reduction Program, Waste Emissions Charge)
- AgStar voluntary program – focused on reduction of agriculture non-CO₂ emissions
- Office of Agriculture & Rural Affairs
 - Forge practical, science-based solutions that protect the environment while ensuring a vibrant and productive agricultural system
 - Farm, Ranch and Rural Communities Federal Advisory Committee (FRRCC)

Theme	IRA Provisions	Funding
Climate Pollution Reduction Grants	Climate Pollution Reduction Grants	\$5B
	Air Monitoring & Screening	\$205.5M
Funding to Address Community Air Pollution	Clean Air Act Grants	\$25M
	Funding to Address Air Pollution at Schools	\$50M
	Grants to Reduce Air Pollution at Ports	\$3B
Mobile Source Programs	Clean Heavy-Duty Vehicles	\$1B
	Diesel Emissions Reductions	\$60M
	Mobile Source Grants	\$5M
Methane Emissions Program	Methane Emissions Reduction	\$1.55B

Climate Mitigation Targets

- The forestry and agriculture sector plays a key role in national and subnational strategies aimed at reducing greenhouse gas (GHG) emissions
- CO₂ removals are critical to achieving long-term deep decarbonization
- By mid-century energy CO₂ declines as a share of total emissions and the remaining non-CO₂ and land-use sink numbers become a larger share.



II. SEQUESTER CARBON THROUGH FORESTS, SOILS, AND CO₂ REMOVAL TECHNOLOGIES

- ▶ Ramp up durable private land carbon incentives to support forest carbon-enhancing activities and soil carbon sequestration, underpinned by science-based carbon accounting protocols and policy frameworks.
- ▶ Quickly scale up forest restoration and expansion on federal lands.
- ▶ Reduce land use competition and land use change through research and policies to increase working land productivity and promote smart urban development.
- ▶ Support data collection and research to inform future policy, including mitigation “hot spot” mapping, quantification and breakthroughs for soil carbon potential, and improved U.S. GHG inventory capabilities.
- ▶ Support development and deployment of CO₂ removal technologies, including demonstrations and early-stage commercial deployment of carbon-beneficial BECCS.

Analytics and Other Considerations

USG National Communications

- Analysis supporting USG National Communications and other studies continue to show that agriculture and forestry both play key roles in achieving U.S. GHG mitigation goals.

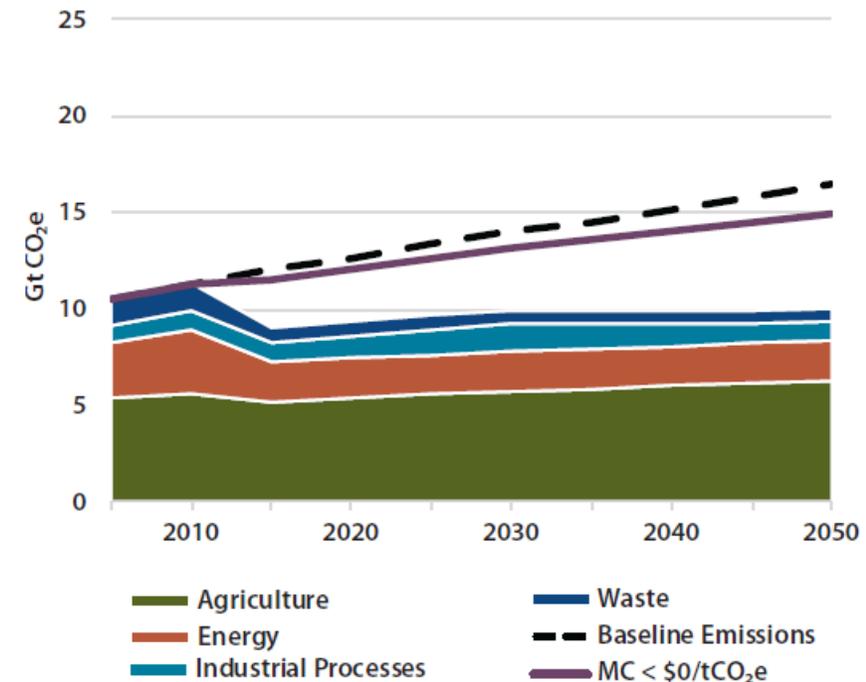
EPA analytics

- 2019 & 2022 Global & State-level Non-CO₂ GHG Mitigation Report (includes agriculture-related non-CO₂ and soil carbon from croplands) (update Q4 2024)
- Forestry & Agriculture Mitigation Report (forthcoming March 2024 release)

Modeling and other analytical considerations

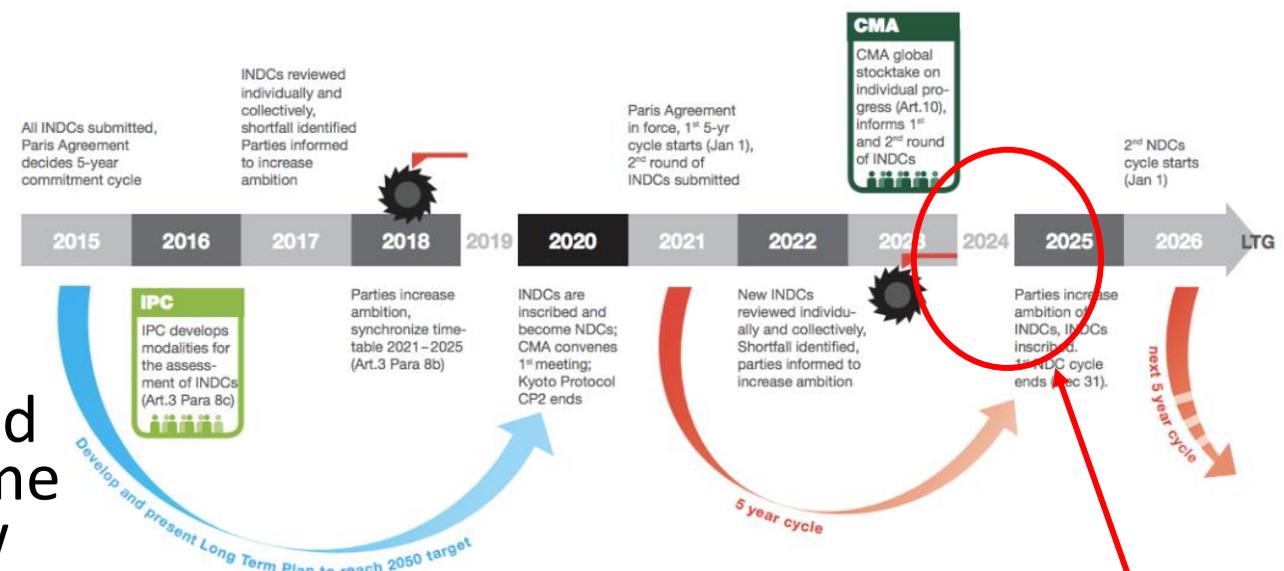
- Important to use science-based analysis supported by robust data sets
- Support efforts to reduce uncertainties/maximize environmental outcomes
- Need to consider model type employed against the policy context, scope and scale
 - Example: Ambition setting analysis that focuses on what is possible can be much higher level whereas analysis to support implementing policies requires much more detail

BAU Emission Projections and Residual Emissions by Sector



Increasing Ambition

- Paris “ratchet mechanism” is designed to steadily increase ambition over time to keep temperature rise “well below 2C”.
- 2025 NDCs are due early next year.
- What role can the land-sector play in increasing ambition?
- Now is the time to deploy models and analysis to understand the scale and scope of contributions of the land sector **as a whole** to potential increased ambition of long-term climate mitigation goals.



We are here!

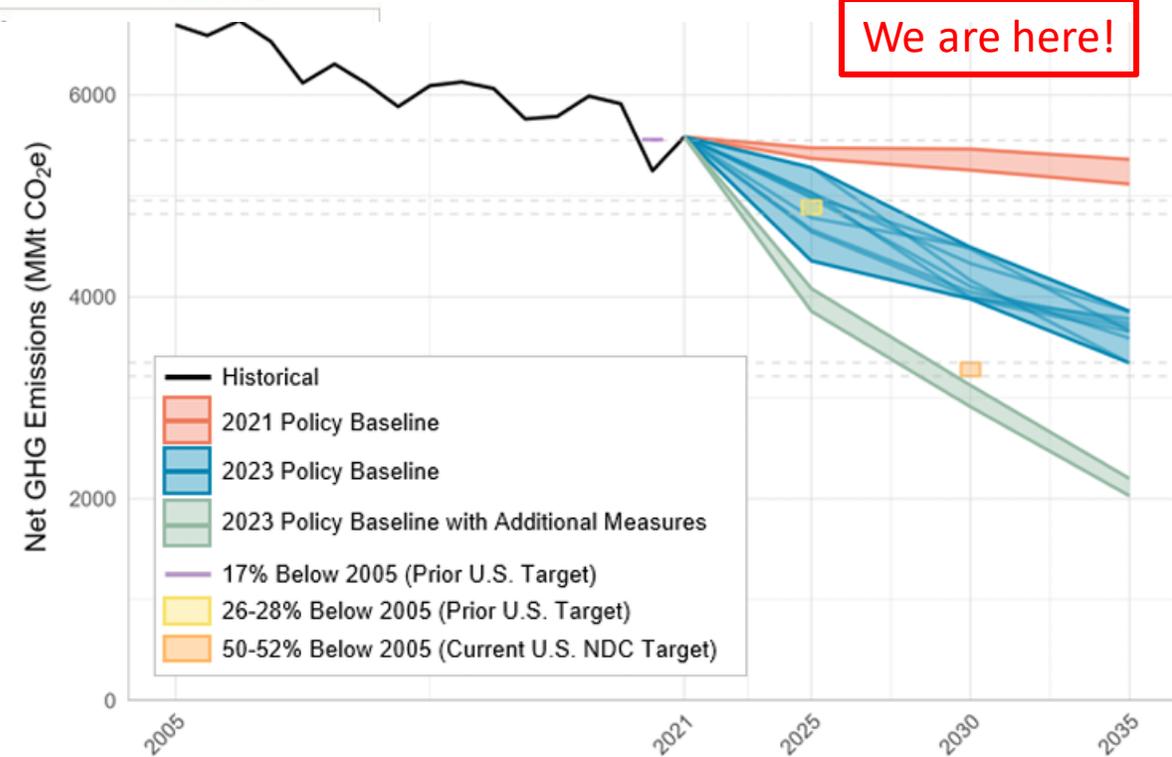
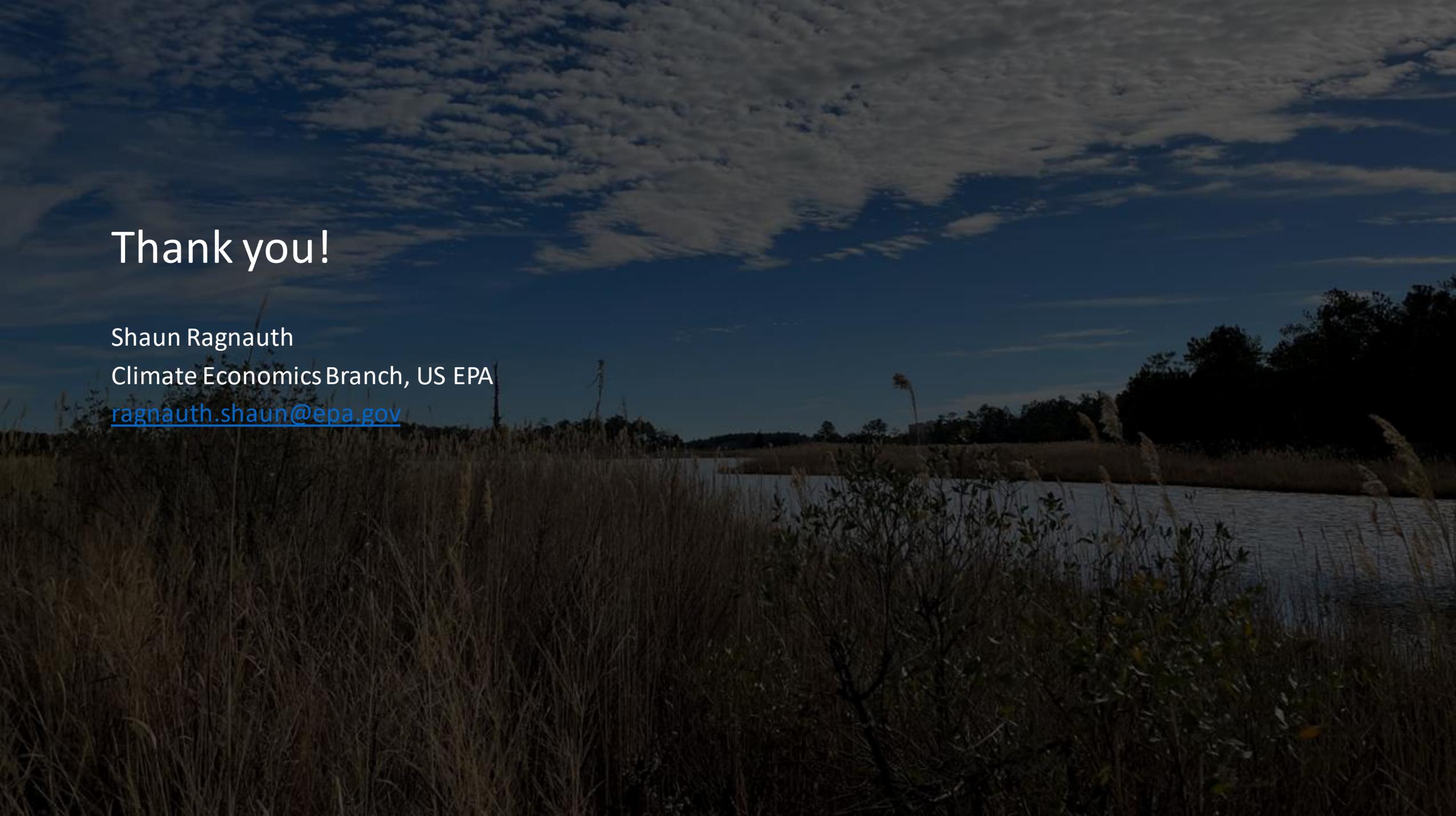


Figure 6. Net greenhouse gas emissions, historical (2005-2020) and modeled (2025, 2030, 2035).



Thank you!

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