ALL-IN FOR 2035

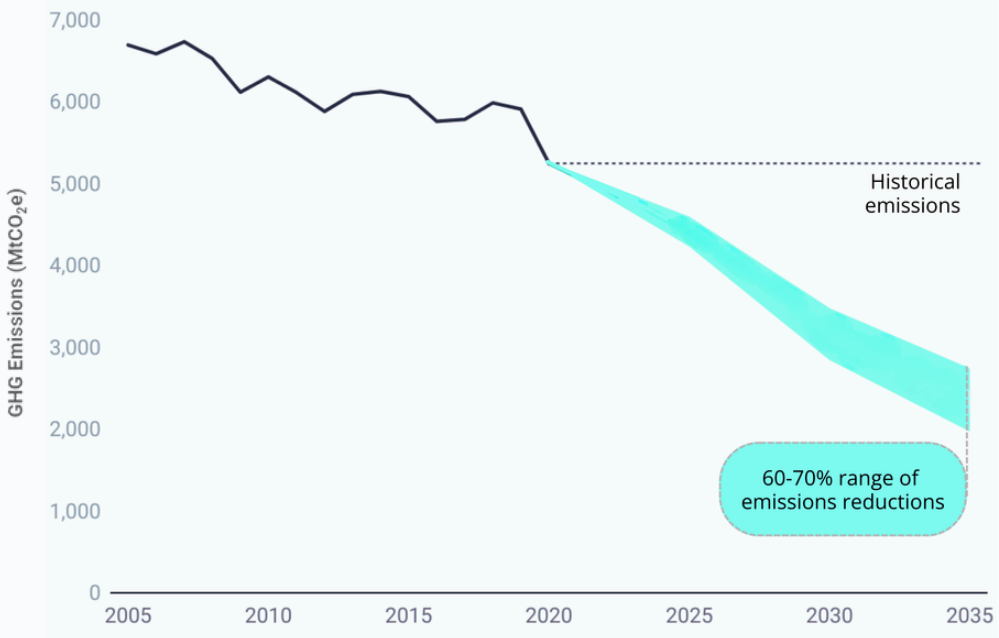
The United States can achieve a transformative national climate target by 2035 by leveraging the groundwork laid by states, cities, and businesses and implementing ambitious policies that prioritize climate action across all sectors of the economy. This comprehensive approach, combining bottom-up initiatives with federal interventions addresses the urgent need for greenhouse gas (GHG) emissions reductions while driving economic growth, enhancing public health, and positioning the United States as a global leader in climate action.

PARIS AGREEMENT GOALS AND A NEW U.S. CLIMATE TARGET

- **Under the next cycle of target setting under the Paris Agreement, all countries will be updating and submitting new climate targets for 2035** (aka, Nationally Determined Contributions or NDCs). Leveraging a globally recognized integrated assessment model, the *America Is All In* coalition's analytical approach led by the Center for Global Sustainability at the University of Maryland demonstrates how an all-of-society strategy can deliver an ambitious U.S. national climate strategy.
- **Rooted in the expanded and durable state, local, and private sector leadership** enabled by federal support, the *Enhanced Ambition* scenario integrates current policies with additional, enhanced action to achieve an ambitious and feasible national climate target.
- **Climate action matters across every sector**, including cross-sectoral policies such as state-level Renewable Portfolio Standards (RPS), electric vehicle (EV) sales targets, electrification of hot water and space heating appliances, and an expanded methane fee.

NEW AND EXPANDED POLICIES UNDER THE ENHANCED AMBITION SCENARIO

Overall	• Extension of climate policies under the Inflation Reduction Act (IRA) beyond 2031
Power	• Coal phaseout by 2030 • All states adopt renewable portfolio standards (RPS) and leading states enhance the ambition of existing RPS
Transportation	• Widespread adoption of electric vehicle sales targets (light-, medium- and heavy-duty) • Widespread adoption of vehicle miles traveled (VMT) reduction policies (e.g. public transportation, congestion pricing)
Buildings	• Enhanced energy efficiency resource standards • Mandates for zero-emissions heating and hot water
Industry	• Targets for carbon capture and storage (CCS) in the cement sector • Deployment of Direct Air Capture (DAC) technology starting after 2030 • Phasedown of Hydrofluorocarbons (HFCs) from industrial processes (i.e. commercial air conditioning, refrigeration)
Methane	• Expansion of the national $60 per metric ton ($CO_2$-equivalent) methane fee on oil/gas to coal and waste methane emissions
Land-use	• Afforestation and conservation of current stocks

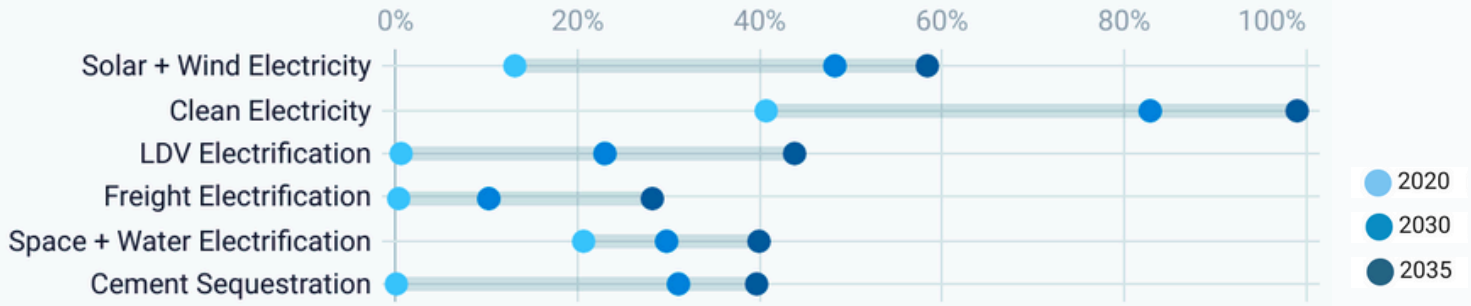


Greenhouse gas emissions trajectory under an Enhanced Ambition scenario. The Enhanced Ambition scenario can deliver 60-70% emissions reductions by 2035 from 2005 levels, depending on the level of policy uptake, technological development, and economic growth. The lower end of the range reflects lower policy uptake and slower technological development while the higher end of the range shows a faster energy transition with high policy uptake.

INITIAL KEY FINDINGS FROM OUR ENHANCED AMBITION SCENARIO

- **Solar generation will increase 7x and wind generation 4x by 2035**, with 96% of the generation mix powered by clean technologies.
- **By 2035, 83% of light-duty vehicle sales and 42% of freight truck sales will be electric**.
- **40% of water and space heating appliances will be electrified** by 2035, overall energy demand will decrease by 14%, and electricity demand rises by nearly 6%.
- **The industrial sector enhances annual sequestration to 77 $MtCO_2$** through cement, ethanol, and paper pulp CCS technologies.
- **With a methane fee that covers nearly all sources, including agriculture and waste,** methane emissions decrease by 29% by 2035.
- **Sequestration from our land sink increases by over 73 $MtCO_2$ by 2035** from 2021 levels through enhanced carbon sequestration from forests and climate-smart livestock management.
- **Critical to achieving emissions reductions is the full climate-smart implementation of key policies** which underscores the importance of supporting actions from non-federal actors.

Key metrics, in percentage terms, demonstrating the change between 2020, 2030, and 2035. Solar and wind electricity is measured by the share of electricity generation from solar and wind technologies. Clean electricity is measured by the share of electricity generation from solar, wind, geothermal, biomass, nuclear, hydro, and CCS technologies. LDV electrification is measured by the share of electricity in passenger car transport service. Freight electrification is measured by the share of electricity in freight truck transport service. Space and water heating electrification is measured by the share of electricity in total final energy from commercial and residential heating. Cement sequestration is measured by the percentage of cement sector process emissions that are captured by cement CCS.



POLICY & IMPLEMENTATION IN PRACTICE

- **Power Sector:** The Energy Infrastructure Reinvestment Program under the IRA provides substantial funds, up to $250 billion, to transition away from fossil fuels and invest in clean energy infrastructure. States and cities can utilize the loans made available by this program to support coal phaseout by 2025 and revitalize energy communities whose livelihoods are tied to declining fossil fuels.
- **Transportation Sector:** Ten states have adopted the Advanced Clean Trucks (ACT) rule, setting targets for zero-emission medium- and heavy-duty vehicles, with sales reaching 55% of pickups/vans, 75% of rigid/box trucks, and 40% of truck tractors by 2035. Electrify America received a $450 million investment to expand public charging infrastructure, while Minnesota aims to reduce per capita vehicle miles traveled by 20% by 2050.
- **Building Sector**: Miami-Dade County has goals to benchmark energy use from 1.3 billion building square footage communitywide by 2026, retune 1.1 billion building square footage communitywide buildings by 2030, and retrofit 167,500 homes to reduce energy costs 28% by 2030, prioritizing low to moderate-income homes. Free audits support benchmarking and efficiency strategies in partnership with the Department of Energy.
- **Industry Sector:** Microsoft's carbon-negative goal by 2030 involves carbon removal, with investments in 15 projects representing over 1.3 million metric tons of carbon removal including afforestation projects and carbon offsets. Criteria include carbon accounting, additionality, and environmental and social considerations, focusing on natural solutions and expanding engineered solutions like direct air capture.
- **Methane:** In 2023, Austin, TX renewed its commitment to zero waste by 2040 by releasing a new comprehensive plan featuring aggressive milestones needed to meet its target, including the development of a Household Hazardous Waste Facility, the implementation of universal recycling and composting requirements, and plans for an eco-industrial park at the closed City Landfill aim to co-locate remanufacturing and recycling facilities.
- **Land Sector:** New Mexico's Healthy Soils Program offers grants for projects aligned with soil health principles, including soil cover, minimal disturbance, biodiversity, living roots, and animal integration.

These findings reflect initial results based on integrated assessment modeling from the Center for Global Sustainability at the University of Maryland led by Alicia Zhao and a robust team of researchers. You can find more details on the assumptions and results in a pre-print, public submission on researchsquare.com.

Based on a series of listening sessions and comprehensive stakeholder engagement, a report will be released in September 2024, including more policy scenarios, updated assumptions, and implementation opportunities for a robust 2035 national climate target. Provide your feedback on the key policies modeled.

Learn more about America Is All In and the Center for Global Sustainability at the University of Maryland.