

SOLVING THE CLIMATE CRISIS

The Congressional Action Plan for a Clean Energy Economy and a Healthy, Resilient, and Just America

Which Policy Recommendations Did Energy Innovation Model?

Energy Innovation modeled a subset of recommendations from the Climate Crisis Action Plan that include quantifiable benchmarks or for which they could use existing literature to make reasonable assumptions about technology deployment and emissions reductions.

Some of the policy recommendations that would help reduce greenhouse gas emissions are not easily quantified.

(refer to the end of this document for more details)



SELECT COMMITTEE ON THE CLIMATE CRISIS MAJORITY STAFF REPORT OVERVIEW OF ENERGY INNOVATION MODELING RESULTS

To stave off the worst impacts of climate change, the world must reduce greenhouse gas emissions at an unprecedented pace. The Intergovernmental Panel on Climate Change (IPCC) concluded that global net anthropogenic carbon dioxide emissions must fall by about 45% from global 2010 levels by 2030 and reach net-zero by 2050 to have a chance to limit warming to 1.5°C.¹ The majority staff for the Select Committee on the Climate Crisis released a Climate Crisis Action Plan with hundreds of recommendations for congressional action to respond to the climate crisis. A crucial question is: Will these recommendations put the United States on a path to achieve net-zero greenhouse gas emissions by 2050? The majority staff for the Select Committee previewed its policy recommendations in the Climate Crisis Action Plan with the non-partisan think tank Energy Innovation: Policy and Technology LLC (“Energy Innovation”). Energy Innovation used their open-source Energy Policy Simulator² to model the emissions reductions and co-benefits from implementing a subset of these recommendations (see sidebar).

KEY RESULTS:

The Climate Crisis Action Plan will set the country on a path to achieving net-zero greenhouse gas emissions by 2050. The subset of recommendations modeled would reduce net U.S. greenhouse gas emissions by 37% below 2010 levels in 2030 and 88% below 2010 levels in 2050.³ The remaining 12% of emissions comes from the hardest to decarbonize sectors, such as heavy-duty and off-road transportation, industry, and agriculture.

The Climate Crisis Action Plan will lead the United States to reach net-zero carbon dioxide emissions before 2050, in line with the IPCC recommendations for limiting warming to 1.5°C.

The Climate Crisis Action Plan will avoid 62,000 premature deaths annually by 2050 by reducing fine particulate matter pollution.

In 2050, the estimated monetized annual health and climate benefits of the modeled policies exceed \$1 trillion (real 2018 U.S. dollars). By 2050, the cumulative net present value of the estimated monetized annual health and climate benefits are equal to almost \$8 trillion (real 2018 U.S. dollars) at a 3% discount rate.

¹ Intergovernmental Panel on Climate Change (IPCC), Special Report on Global Warming of 1.5°C (October 2018).

² Energy Innovation: Policy and Technology LLC, Energy Policy Simulator, <https://www.energypolicy.solutions/>.

³ This is equivalent to 43% below 2005 levels by 2030 and 89% below 2005 levels by 2050. We used the 2010 reference point because the IPCC uses 2010 levels when it describes near-term emissions reduction goals to limit warming to 1.5°.

KEY RESULTS CONT:

The recommendation to enact a **Clean Energy Standard** to decarbonize the electricity sector would create roughly 530,000 jobs annually.⁴

SECTORS WITH CONTINUED EMISSIONS IN 2050

In 2050, the model shows that remaining greenhouse gas emissions are concentrated in **industrial processes, heavy-duty and off-road (freight rail, shipping, and aviation) transportation, and agriculture**. The Select Committee's report includes additional policies to address these hard-to-abate sectors, such as robust RD&D, new incentives for advanced fuels, and incentives for farmers, but these recommendations were too speculative for Energy Innovation to model.

This modeling exercise also underscores how difficult it is to eliminate emissions economywide; illustrates that a full suite of policy solutions is necessary; and shows that climate action needs to happen now for new technologies to progress along the learning curve in time for widespread deployment before mid-century.

ADDITIONAL BACKGROUND ON MODELED POLICIES

Energy Innovation modeled the Select Committee majority staff's recommendations from multiple sectors:

o Electricity – clean energy standard; improving planning, cost allocation, and siting to expand transmission; energy efficiency resource standard; clean energy tax credits

o Transportation – vehicle emissions standards, zero emission sales mandates for light- and heavy-duty vehicles, low carbon fuel standard, zero emission vehicle tax credits

o Buildings – rebates for building electrification, incentives for net-zero emissions building code adoption, net-zero emissions federal buildings requirement, energy performance requirement for federal facilities, energy efficiency tax incentives, rebates for home energy retrofits

o Industry – tradable emissions performance standard, low-emission heat standard, carbon capture, Buy Clean program for federal procurement, methane abatement from oil and gas systems, HFC phasedown, increased product efficiency and recyclability, industrial efficiency tax credits

o Agriculture – climate stewardship practices, advanced grazing management, improved nutrient management

o Natural climate solutions – large landscape conservation, reforestation and forest restoration.

To model the Select Committee's more qualitative policy recommendations, Energy Innovation developed assumptions informed by existing research. The purpose of the modeling exercise is to demonstrate the potential impacts of these policies.

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VISIT [CLIMATECRISIS.HOUSE.GOV/CLIMATEMODELING](https://climatecrisis.house.gov/climatemodeling) FOR MORE INFORMATION

UC Berkeley Center for Environmental Public Policy, GridLab, and Energy Innovation: Policy and Technology LLC, 2035
Report: Plummeting Solar, Wind, and Battery Costs Can Accelerate Our Clean Energy Future, <https://www.2035report.com/>