



ARE NET ZERO EMISSIONS POSSIBLE FOR THE UNITED STATES?

Across the globe, climate change has certainly become a buzz-worthy topic, with many countries working towards reducing greenhouse gases and reversing humankind's impact on the environment. We often hear about the concept of "net zero." Achieving net zero means that a country has no new greenhouse gas emissions or can offset emissions using decarbonization or carbon capture technology. This article outlines the United States' net zero climate goals, reviews the most recent legislative climate initiatives, and discusses the vital role of innovation in reaching net zero emissions.

AMERICA'S NET ZERO GOAL

Per President Biden's campaign commitment, the United States rejoined the Paris Agreement when he was sworn into office. By recommitting to the Paris Agreement, Biden outlined [America's goal](#), "to tackle the climate crisis at home and abroad, reaching net zero emissions economy-wide by no later than 2050."

In the days since, Biden has enhanced his commitments to the environment and set the goal of cutting net greenhouse gas emissions [in half by the year 2030](#). If lawmakers can achieve this, it would put emissions back at 2005 levels.

THE LATEST CLIMATE LEGISLATION

A critical aspect of achieving the net zero climate goal is government support, as federal legislation can place limitations on emissions, provide grants for research and development, and offer tax incentives for clean energy. Reversing climate change and protecting the environment is one of the cornerstones of President Biden's agenda, and we have seen his commitment through several legislative initiatives, including the Infrastructure Investment and Jobs Act, Build Back Better, and the Inflation Reduction Act.

INFRASTRUCTURE INVESTMENT AND JOBS ACT

In October 2021, Congress passed a [\\$1 trillion Infrastructure Investment and Jobs Act](#), which aims to fund research and development for renewable and clean energy. Billions of dollars were allocated to work on technological advancements for decarbonization, hydrogen fuel, and nuclear power. The bill also provided \$7.5 billion to expand the network of electric vehicle chargers, which goes a long way toward making EVs a carbon-friendlier choice and a more practical investment for consumers.



BUILD BACK BETTER & THE INFLATION REDUCTION ACT

The Infrastructure Act was just the start of cementing America’s commitment to net zero. President Biden’s \$3.5 trillion subsequent spending plan, known as Build Back Better, aimed to advance funding for social initiatives and environmental issues. According to [Stephen Naimoli from the Center for Strategic and International Studies](#), “you can think of the two bills as complementary” since the infrastructure act focused on creating new technology while the Build Back Better plan concentrated on furthering existing technology.

Unfortunately, after much negotiation and several amendments, including a reduction in cost to \$2 trillion, the Build Back Better act failed to gain congressional approval in early 2022. Later that summer, though, Democrats struck a deal to include aspects of the plan into a new bill, which was then approved by Congress.

In August 2022, President Biden signed the Inflation Reduction Act (IRA) into law, boosting the economy while giving Democrats and environmental advocates a win. The [bill claims](#) to be, “the most significant climate legislation in United States history,” providing \$370 billion for clean energy investment and climate change programs. This includes tax credits for renewable energy sources, generating demand for energy from solar and wind sources, and funding for decarbonization through carbon capture and hydrogen technology.

HOW DOES RECENT LEGISLATION CONTRIBUTE TO AMERICA’S NET ZERO GOAL?

As [stated in Forbes](#), modeling shows that the Inflation Reduction Act provides enough investment and incentive to push greenhouse gas emissions 43% lower than 2005 levels by the end of this decade. This allows President Biden to meet one of his climate goals and goes a long way towards helping the United States become net zero by 2050.

While America is beginning to reduce its carbon footprint, it is too early to declare success on our net zero efforts. Further action, specifically in the form of innovation, is likely needed to ensure that the country reaches its goal.

THE ROLE OF TECHNOLOGY

According to the [Decarb America Research Initiative](#), the United States needs to rely heavily on technological advancement to reach net zero emissions by 2050. Innovation can help to increase the availability of and manage the cost of clean energy options. This can significantly affect climate efforts as the price tag can hinder public support for renewable energy projects.

Technology makes greener energy sources more accessible and can also enhance decarbonization programs, which are still necessary to offset greenhouse gases emitted from nuclear energy and fossil fuels. Modeling by Decarb America suggests that it is impossible to achieve the net zero goal without employing “technologies for actively capturing or removing and sequestering carbon.” And even then, the agency believes there is “no technology ‘silver bullet’ to decarbonizing the entire economy,” requiring both carbon capture and a variety of clean energy sources to move in the direction of net zero.

The organization’s report also points out that “technology breakthroughs do not happen in a vacuum, and historically they haven’t been brought about by the private sector alone. The track record in energy-system innovation suggests that massive public investments in research, development, and demonstration will be needed to commercialize advanced energy technologies and deploy them at scale.” This is where we will hopefully see the latest climate legislation and federal funding pay off.

TAKEAWAY

As countries worldwide scramble to reduce their carbon footprints, the United States is making progress towards its net zero goal. While recent legislation may not encompass all the climate change initiatives many had hoped for, the new laws should still be enough to meet the goal of halving carbon emissions by 2030.

Achieving net zero by 2050 is mainly reliant on the use of both decarbonization and renewable energy. For the strategy to be successful, further technological advancement is needed, though. Providing significant funding for innovation and R&D, the Infrastructure Act and the Inflation Reduction Act have laid the groundwork for federal support and the potential for further innovation.



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