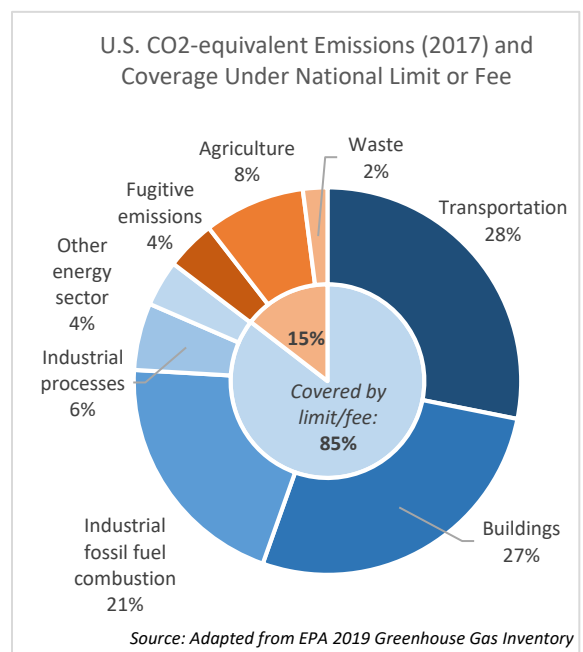


## Legislative Path to a 100% Clean Economy: A Portfolio Approach

To avoid the worst impacts of climate change, we must rapidly move to a 100% clean economy. That means by 2050 at the latest the U.S. should be emitting no more climate pollution than we can remove. Comprehensive federal climate legislation can meet this challenge by mobilizing investment and action across the entire economy – and holding us accountable to the goal.

Climate pollution comes from across the economy, and solving it will require a portfolio of policies. The centerpiece of a comprehensive approach should be a policy mechanism that ensures dramatic reductions in climate pollution across the U.S. economy in order to meet the 100% clean goal. This document lays out three ways to accomplish that aim.

In addition, targeted policies are needed to ensure just and equitable outcomes for all communities; unlock investment in new technology innovation; address barriers to clean energy and energy efficiency in key sectors like transportation, industry and buildings; support farmers and forest landowners in reducing emissions and increasing climate resilience; cut emissions of other greenhouse gases; and strengthen the nation’s infrastructure. These additional policies have a vital role to play in driving down emissions, even as the core policy mechanism ensures that we meet our goal regardless of the reductions produced by each element of the portfolio. A well-designed core mechanism can also serve as a magnet pulling clean energy into the entire economy, making complementary policies cheaper and easier to achieve. The result will be a whole that is greater than the sum of the parts – moving us more rapidly towards the goal of a 100% clean economy.



### Ensuring Dramatic Reductions in Climate Pollution

To transform our economy at the scale and pace needed, comprehensive legislation should include a core policy mechanism that ensures deep reductions in emissions across the economy to reach the 100% clean goal. This mechanism should cover as much of the economy as

practicable, recognizing that some sources are too diffuse, too hard to measure, or too small to be covered. It should improve public health and quality of life for all communities, and distribute costs and benefits in a way that promotes equity. Legislation should also provide for regular review of the nation's progress towards its emission goals and preserve the opportunity to strengthen and add additional emission reduction programs as needed.

Three options for a core policy mechanism are:

- *An enforceable nationwide pollution limit:* Congress sets a legally enforceable limit on total climate pollution from fuel combustion and industry – amounting to about 85% of U.S. greenhouse gas emissions. That limit gets tighter over time, reaching a 100% clean economy (net zero emissions) by 2050 at the latest. The policy should provide individual sources with flexibility over how to meet the nationwide limit, along with economic incentives to spur deep reductions as soon as possible and at the least cost.
- *A carbon fee with a climate backstop:* Congress enacts a fee on all climate pollution from fuel combustion and industry, again comprising roughly 85% of U.S. greenhouse gas emissions. To ensure that we meet the 100% clean goal, a declining pollution pathway consistent with net zero emissions by 2050 should be established, along with regular assessments of performance. If emissions are above the pathway, the fee automatically increases, providing a climate backstop. If the fee still does not produce the needed results, EPA would be directed to issue regulations to meet the goal.
- *A statutory goal of a 100% clean economy by 2050 with direction to federal agencies to act:* Congress establishes a national goal of net zero emissions by 2050 and direct EPA, with support from other federal agencies, to meet it. This could be achieved either through direct federal rules or through state action with federal guidelines, oversight, and backstop provisions.

#### Additional Portfolio Elements

The pollution pathway should be paired with targeted policies and programs to ensure that climate solutions deliver just and equitable outcomes for all Americans; spur technology innovation; address barriers to clean energy and energy efficiency in specific sectors; support farmers and forest landowners in reducing emissions and increasing resilience to climate change; cut emissions of other greenhouse gases; and strengthen the nation's infrastructure.

#### *Ensure Just and Equitable Outcomes*

- Direct funding to households in low-income and vulnerable communities to help insulate them from increased energy costs using existing channels including tax credits, Social Security, state human services agencies, Low Income Home Energy Assistance Program (LIHEAP), and Electronic Benefits Transfer.
- Accelerate reduction of hazardous waste, toxic chemical emissions, particulate matter, and other non-climate pollutants, especially in frontline and historically disadvantaged communities, by implementing and enforcing, and strengthening as needed, Clean Air Act protections.

- Ensure that workers and communities affected by the transition to 100% clean economy are given effective and equitable access to high-quality employment, training, and advancement. This is especially critical for individuals from low-income households or from communities historically overburdened by toxic pollution, and those adversely impacted or dislocated by technological change—notably including those in energy, transportation, and trade impacted sectors

#### *Spur Innovation in Breakthrough Technologies*

- Support innovative energy efficient and no- and low-emissions technologies across all sectors. Support ranges from robust appropriations for early stage R&D to demonstration projects, technology commercialization, investment and production tax credits, and innovative financing tools that can overcome market barriers
- Create and fund a coordinated, comprehensive effort to promote research, development, deployment and commercialization of carbon dioxide removal technologies and projects, including direct air capture
- Expand and increase appropriations for regional research partnerships to accelerate commercial deployment of carbon capture, utilization, and storage (CCUS), in particular to advance the environmental integrity of secure, long-term storage of carbon dioxide in saline formations

#### *Address Barriers to Clean Energy and Energy Efficiency*

##### Electricity and Natural Gas

- Invest in grid modernization efforts to increase grid reliability and resilience, through R&D and technical assistance programs to support grid operations, security and management; modernizing permitting procedures to facilitate new, environmentally responsible transmission development; and providing incentives for grid-scale energy storage and other technologies that increase grid flexibility
- Facilitate federal–state coordination on natural gas policy that supports a managed departure from natural gas use and an increase in zero emissions technology manufacturing and consumer availability

##### Transportation

- Establish clean car and clean truck standards that increase fuel economy of conventional vehicles and promote zero-emission vehicles, reducing climate pollution and saving consumers money at the pump and on maintenance
- Support a nationwide build-out of electric vehicle charging infrastructure for all classes of vehicles
- Catalyze a globally-leading domestic manufacturing base for zero-emissions medium and heavy duty trucks through a suite of policies including tax instruments and technology development assistance
- Expand public transit options while supporting the use of zero emissions technology within local government transit agencies and school districts

## Industry

- Launch a comprehensive research, development, and demonstration initiative focused on cutting carbon emissions from harder-to-abate sectors such as cement, steel and petrochemical production
- Institute a “Buy Clean” federal procurement policy targeting supply chain emissions
- Increase investments in industrial energy efficiency and electrification through targeted incentives and expanded technical assistance programs

## Buildings

- Strengthen energy efficiency standards for appliances and equipment, including by transforming standards to focus on emissions reductions instead of energy reductions.
- Incentivize the adoption and enforcement of stronger state building energy efficiency standards.
- Accelerate the rate of energy efficiency retrofits in residential and commercial buildings through tax incentives, investments in low-income weatherization, and targeted efforts to encourage adoption of electric space and water heating

## *Support Farmers and Forest Landowners in Reducing Emissions and Building Resilience*

- Create performance-based incentives for farming practices that improve soil productivity, reduce emissions, reduce the impact of farming on water quality, increase yields, and strengthen farms’ resilience to climate change
- Promote measures such as reforestation and sustainable forest management to ensure forests serve as a carbon sink and a source of low-carbon products and materials

## *Reduce Emissions of Non-CO2 Gases*

- Direct EPA to exercise existing authority to swiftly adopt ambitious pollution reduction goals for methane, a potent greenhouse gas, including from new and existing oil and gas operations as well as other sources such as landfills
- Ensure the phase-down of hydrofluorocarbons (HFCs), another potent greenhouse gas, either through legislation or through ratification of the Kigali Amendment to the Montreal Protocol, which calls for an 80% reduction in HFCs by 2047

## *Strengthen the Nation’s Infrastructure*

- Invest in protecting and enhancing America’s coastal communities, military assets, electricity grid, drinking water and wastewater infrastructure, and mass transit systems
- Ensure that investments in both built and natural infrastructure support the least-polluting and most climate-resilient approaches

For more information, please contact:

Elizabeth Gore, Senior Vice President, Political Affairs, [egore@edf.org](mailto:egore@edf.org)