



FACTSHEET

# A 100 Percent Clean Future

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Climate change is the greatest challenge facing the United States and the world over the next decade and beyond. In October 2018, the issue took on new urgency when the Intergovernmental Panel on Climate Change (IPCC) issued a stark appraisal of the latest climate science: Humanity has only three decades to completely reinvent the global economy in order to eliminate net greenhouse gas pollution and hold global warming to 1.5 degrees Celsius above preindustrial levels. Every year of continued emissions raises the peak temperatures that carbon pollution will inflict on the Earth, threatening destruction that can never be undone. The United States can and must address this crisis by putting people to work building the necessary infrastructure to overcome the threat; and confronting the economic, racial, and social injustices and inequalities that persist today.

Success is within reach and it's now possible to visualize a 100 Percent Clean Future. The American public is demanding action, and it's time for political leaders to summon the courage to act. While the Trump administration has dismantled nearly all federal climate policy, state leadership has risen to the challenge with innovative and ambitious new policies. The combination of the following three pillars—100 percent clean, worker-focused, and environmental justice—should serve as a model for federal action, building on the initial efforts at the state level.

- **A 100 percent clean target.** Nine states across the country, along with the District of Columbia and Puerto Rico, have enacted policies to move toward a 100 Percent Clean Future by 2050 or earlier, including through clean electricity standards and aggressive economywide emission reduction targets.
- **A worker-focused approach.** Many states have included initial plans for a worker-centered transition that would ensure the jobs necessary to build a clean future are good-paying, quality jobs.
- **An environmental justice commitment.** Some states have also taken preliminary steps to develop policies that would advance environmental justice, including by identifying and cutting disproportionately high levels of toxic pollution in economically disadvantaged communities and communities of color.



For more detail, see also, [“A 100 Percent Clean Future”](#)

In the Center for American Progress report, which is broken down into two sections, CAP presents a framework for a 100 Percent Clean Future that delivers on the goal of net-zero greenhouse emissions economywide by 2050 and net-negative emissions thereafter to limit global warming to 1.5 degrees Celsius above preindustrial levels. This report outlines not only the policies that are needed to cut greenhouse gas emissions but also the coalitions and principles that will make them a reality. A successful strategy for action will require a much closer collaboration with labor and environmental justice advocates to incorporate their perspectives and expertise. To accomplish this transition as quickly as the science demands, the report calls for strong economywide targets, sets sector-by-sector benchmarks for success, estimates the emission reductions these would deliver, and discusses how to spur the rest of the world to follow along.

Part 1 discusses the coalitions and principles needed to enact enduring and effective federal climate policy. These conclusions are drawn from a review of the Trump administration's reversal of federal climate policy, the increasing clarity of scientific warnings, and the recent success of ambitious state climate policy. In particular, the report highlights the successful model of 100 percent clean targets, a worker-focused approach, and efforts to begin repairing environmental injustice.

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## 10 new policy principles for building a 100 Percent Clean Future

- 1. The goal is net-zero economywide emissions no later than 2050.** Stabilizing global warming will require net-zero greenhouse gas emissions by 2050 and net-negative emissions thereafter.
- 2. Interim emission goals must be ambitious, achievable, and effective.** The IPCC report's implied floor for action is to cut U.S. emissions to at least 43 percent below 2005 levels by 2030.
- 3. Climate action must put people first.** Any plan must ensure that the new jobs of a 100 Percent Clean Future are located here in the United States and provide workers fair wages, good benefits, and a voice on the job. Any plan must ensure a just and fair transition for workers and communities impacted by economic transformation.
- 4. All communities deserve to be pollution-free.** Greenhouse gas mitigation strategies that also reduce toxic pollution should be favored and climate mitigation must be part of a comprehensive agenda to address the cumulative impacts of decades of environmental injustice.
- 5. U.S. innovation must lead the way.** The United States must prioritize the development and deployment of solutions in hard-to-decarbonize sectors and negative emissions technologies.

6. **There is no one silver bullet.** The climate agenda requires a broad program of complementary policies. Sector-specific deployment policies, trillions of dollars in direct federal spending, an economywide price on carbon, and mandatory emissions reductions in communities historically overburdened by pollution are all necessary.
7. **All emissions-free solutions can play a role.** Some technologies will require additional safeguards and considerations, but policy must not rule out the carbon reduction value of the existing nuclear fleet, potential advanced nuclear technologies, carbon recycling and sequestration, and negative emissions technologies.
8. **State leadership must be rewarded and reinforced—not preempted.** The federal government should avoid preempting state authorities to advance additional ambitious and equitable climate policies themselves, and federal policy should reward the early action the states have already taken.
9. **The United States must drive international climate action.** In addition to rejoining the Paris agreement, the United States must use all of its diplomatic, trade, and financial influence to drive global action.
10. **Climate policy must be built to last.** The executive branch can accomplish a lot through administrative action, but to successfully act at the scale and speed required, Congress must also overcome its current disfunction and pass climate legislation. Policy changes must be legally durable and politically popular, including by providing direct benefits to communities.

Part 2 recommends a sustained, concerted, and urgent policy program to reduce greenhouse gas emissions to at least 43 percent below 2005 levels by 2030 and to reach net-zero greenhouse gas emissions no later than 2050, consistent with the requirements identified by the IPCC report on limiting warming to 1.5 degrees Celsius. This report makes policy recommendations for international, economy-wide, and sector-specific action, proposing specific benchmarks within each sector of the economy and quantifying the emission reductions that these would deliver. This is just one piece of a broader agenda to mitigate emissions; adapt to climate change; advance environmental, economic, and racial justice goals; and create high quality jobs.

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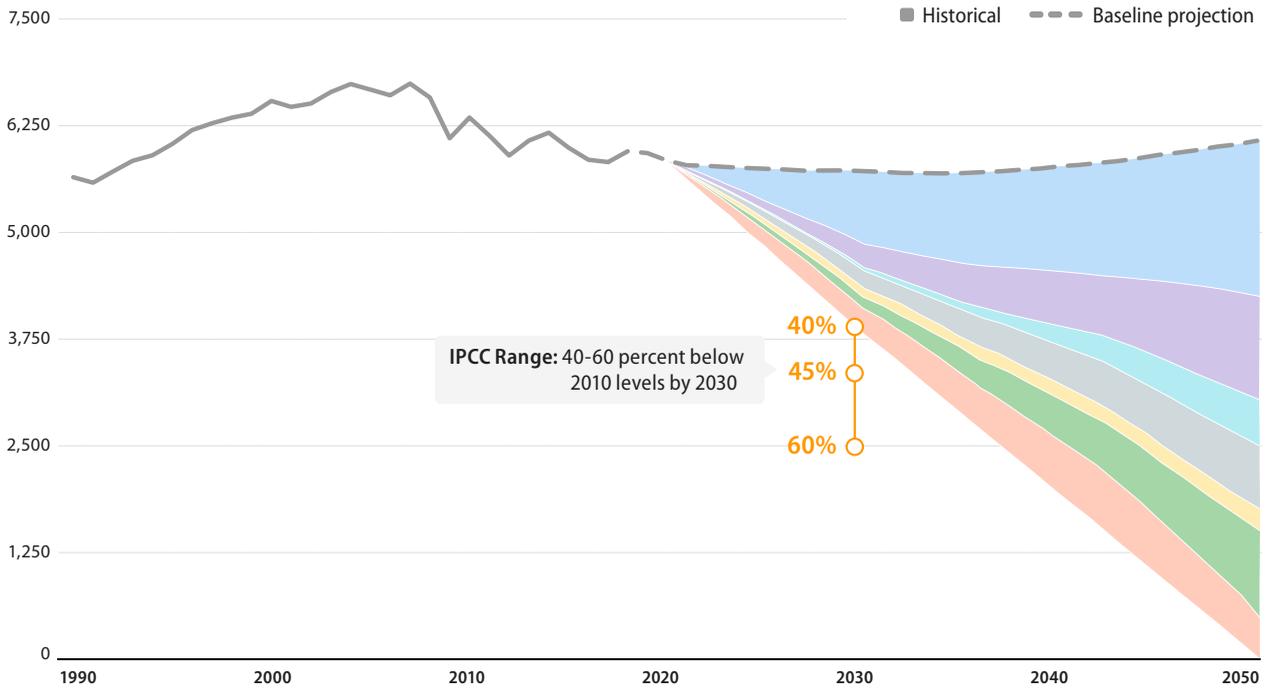
## Six sector-specific benchmarks achieve roughly 90 percent of required emissions reductions

- **Clean electricity.** Achieve at least 65 percent clean electricity generation by 2030 and 100 percent no later than 2050. This would cut economywide emissions by an estimated 13 percent of 2005 levels in 2030 and 27 percent in 2050.
- **Electric vehicles and smart growth.** Reduce urban vehicle-miles traveled to 18 percent below baseline in 2030, reach 100 percent zero-emissions sales for new light-duty vehicles no later than 2035, and reach 100 percent zero-emissions sales for new medium- and heavy-duty vehicles no later than 2040. This would cut economywide emissions by an estimated 4 percent of 2005 levels in 2030 and 18 percent in 2050.
- **Electric appliances and buildings.** Ensure that all new buildings and appliance sales are electric and highly efficient by 2035. This would cut economywide emissions by an estimated 1 percent of 2005 levels in 2030 and 8 percent in 2050.
- **Clean manufacturing.** Reduce manufacturing sector emissions at least 15 percent by 2030 and set in motion a longer-term technology development and deployment agenda for deep decarbonization. This would cut economywide emissions by an estimated 3 percent of 2005 levels in 2030 and 11 percent in 2050.
- **Agriculture and waste.** Invest \$120 billion by 2030 to drive emission reductions, carbon sequestration, and innovation in agriculture. This would cut economywide emissions by an estimated 2 percent of 2005 levels in 2030 and 4 percent in 2050.
- **Lands and negative emission technologies.** Protect 30 percent of U.S. lands and oceans and adopt climate-smart practices on an additional 100 million acres of farmland and rangeland by 2030. Deploy natural and technological solutions to sequester 1 gigaton of carbon dioxide by 2050. This would cut economywide emissions by an estimated 2 percent of 2005 levels in 2030 and 15 percent in 2050.

Additional policies beyond these benchmarks will be necessary to meet the economywide greenhouse gas reduction goal. The report recommends an innovation agenda for research and development, the formation of a National Climate Council within the White House, a price on carbon, an international strategy of diplomacy, trade, and finance, and many more policy options. The report also calls for additional modeling and scientific analysis to validate emission reduction pathways in the United States under a variety of technological, economic, and political conditions, including analysis of the geographic and racial distributional impacts and the effects on various forms of pollution.

**FIGURE 1**  
**100 percent clean future benchmarks**

Approximate emission reductions from baseline



Change in greenhouse gas emissions by 100 percent clean benchmarks, as a share of 2005 emissions level

	2030	2050	
<b>Reductions achieved, 2005–2017</b>	-13%	-13%	Clean electricity
<b>Projection of current trends, 2018–2050</b>	-2%	+4%	Electric vehicles and smart growth
Clean electricity	-13%	-27%	Electric appliances and buildings
Electric vehicles and smart growth	-4%	-18%	Smart manufacturing
Electric appliances	-1%	-8%	Agriculture and waste
Smart manufacturing	-3%	-11%	Lands and negative emissions technologies
Agriculture and waste	-2%	-4%	Further improvements
Lands and negative emissions technologies	-2%	-15%	
Further improvements	-5%	-7%	
<b>Economywide</b>	<b>-43%</b>	<b>-100%</b>	

Source: See the Appendix in "A 100 Percent Clean Future" for complete notes on methodology, available at <https://www.americanprogress.org/?p=475605>.

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