



# U.S. CLIMATE STRATEGY

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*The William and Flora Hewlett Foundation invests in creative thinkers and problem solvers working to ensure people, communities, and the planet can flourish. Together with our partners, we are harnessing society’s collective capacity to solve our toughest problems — from the existential threat of climate change to persistent and pervasive inequities and to attacks on democracy itself. A nonpartisan philanthropy, the Hewlett Foundation has made grants in the U.S. and globally for nearly six decades, based on an approach that emphasizes long-term support, collaboration, and trust.*

*The Environment Program makes grants to address climate change globally and to conserve the U.S. West.*

## Acknowledgments

*This strategic refresh is the result of hundreds of hours of reading and discussion with grantees, academics, fellow funders, and other thought leaders. We thank everyone who took time to share their ideas and those who responded to our ideas as they were taking shape. We were inspired by the thinking of our Hewlett colleagues including Larry Kramer, Jen Harris, and Brian Kettenring who have begun to develop a framework for a more inclusive and sustainable political economic paradigm through Hewlett’s Economy and Society Initiative. We also learned from Hewlett’s Democracy team and the strategies they have developed to grow trust in U.S. governing institutions, which we see as critical to achieving U.S. climate goals. Finally, there are two people who shaped the direction of this strategy profoundly: Jane Flegal, who, as Hewlett’s U.S. Climate Program Officer, launched a strategic evaluation and a review of approaches to both industrial policy and industrial decarbonization; and Peter Teague, who conducted that literature review, synthesized dozens upon dozens of conversations, and helped put pen to paper to articulate a reimagined strategic direction for Hewlett’s U.S. climate grantmaking. Your input made us smarter about the strategy and will contribute greatly to how we support grantees to ensure a cleaner, more prosperous, and healthier future.*



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**Cover:** A worker at the Lone Star Wind Farm near Abilene, Texas. (Credit: Robert Nickelsberg/Getty Images)

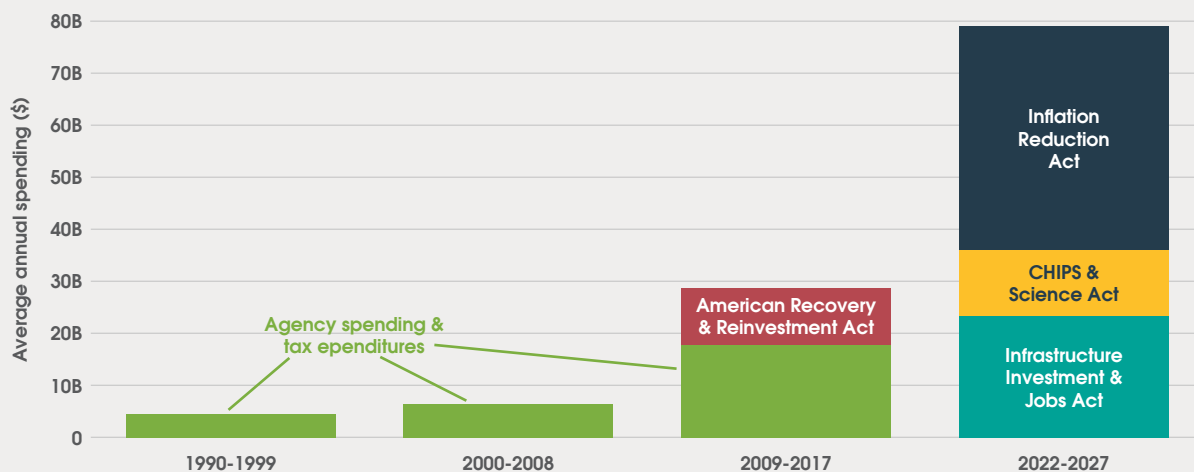
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# Introduction

Moments of great turmoil can lead to paralysis, but they can also shake up settled orthodoxy and create space for new thinking. In a time when polarization threatens the nation’s ability to solve big problems, a surprising level of cross-partisan cooperation has enabled an approach to climate change that could speed the transition to a zero-carbon economy not just in the U.S., but globally. Over the past few years, the U.S. Congress has approved climate-related investments of over two *trillion* dollars<sup>1</sup> and bipartisan majorities embraced effective government intervention in our society and the economy — to speed the development of COVID vaccines, reinvigorate U.S. manufacturing, and to better compete with nations, including China.

**FIGURE 1: Over the next decade, spending on climate will more than triple historic levels.**



Credit: RMI

Notes: Average annual spending, adjusted for inflation. Note that time periods shift from 2000-2008 to 2009-2017. This is to 1) consolidate the impact of the American Recovery and Reinvestment Act to one bar and 2) address missing data between 2018-2021. The analysis that includes these data ends at 2017.

To get a sense of the possibilities, consider that the \$90 billion in clean energy investments in President Barack Obama’s 2009 stimulus package produced a host of positive long-term impacts, including rapid growth in renewable power, big advances in battery technologies, and the commercialization of electric vehicles. Now imagine what new investments of more than \$2 trillion dollars can do to unleash private capital flows and radical improvements in the cost and performance of critical technologies.

The William and Flora Hewlett Foundation’s U.S. Climate strategy is evolving to seize opportunities presented by this moment. Building on the foundation’s most effective interventions from the past, we seek to craft an even more powerful and durable approach, aimed at creating a political economy that can sustain deep decarbonization even in the face of continued political volatility. We intend to use our experience as an early leader in climate philanthropy to realize the full potential of these significant shifts in thinking.

Our basic theory of change remains the same: By harnessing the power of government we can put the U.S. on a pathway to zero emissions by mid-century. We will continue to support research, education, advocacy, organizing, and strategic communications that produce state and federal policies that shift investment flows to clean technologies. We will also support strategic collaborations between the public and private sectors to identify and remove the most significant obstacles to a transition to a clean economy.

1. William D. Eggers, et al., “Executing on the \$2 Trillion Investment to Boost American Competitiveness,” Deloitte, <https://www2.deloitte.com/us/en/insights/industry/public-sector/infrastructure-bill-projects-agency-execution.html>.

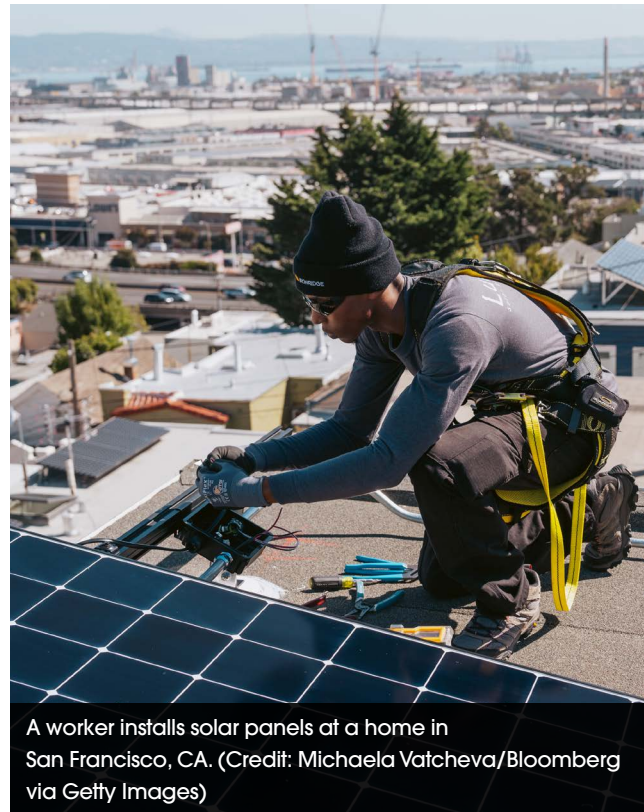
To help fulfill the promise of historic federal climate investments we will support organizations working to ensure successful implementation of the new laws. Focusing on implementation will enable us to deepen our support for groups focused on catalyzing technological progress, innovation, and accelerated deployment at the scale needed to put the U.S. on the path to a thriving economy that no longer produces greenhouse gas emissions. A cornerstone of our approach is building support for climate solutions by ensuring wider and more equitable distribution of the opportunities and benefits that a low-carbon economy brings. By spreading the gains, especially to communities that have historically been left behind — including Tribal, environmental justice, rural, and energy transition communities — we aim to help organizations build momentum for additional and accelerating decarbonization strategies over time.

Philanthropy and the civil society it supports are uniquely positioned to help implement the laws effectively, but also build on them to generate momentum for future investments and policies. To understand how, it's important to identify and name what has changed in our approach. The focus on political economy leverages government investment and intervention to harness private ambitions and market forces to public purpose. It aims to boost decarbonization by promoting the growth prospects of the clean energy and related sectors, while at the same time advancing the development of the wider economy. This strategy is increasingly being taken by both U.S. allies and competitors — a 21st-century version of industrial policy that clears space to employ and combine a variety of tools in different ways, including research and development, tax and regulatory policy, public investment, infrastructure development, trade policy, and even direct public ownership of clean energy assets.

To create a virtuous cycle, public interventions can be shaped to favor domestic supply chain development, high-wage job creation, and a broad distribution of benefits. Successful interventions will create supporters by developing strong economic alternatives for workers, communities, companies, sectors, and regions dependent on a high-emissions status quo.

Hewlett's strategy will focus on the role government can play as both a market maker and market participant. We believe that addressing climate requires the scale that only government — driving markets, business, and our broader society — can achieve. While the U.S. has always included public investment in its approach to addressing climate change, investment has been secondary to regulatory and market-based policies aimed at encouraging the private-sector to lead the shift to cleaner technologies. We believe that the new U.S. strategy, which leverages and supports *all* government tools, will be essential to achieving success.

Several decades of experience make clear that markets alone cannot and will not produce action at the scale and speed needed to address the climate crisis — no more than markets alone could develop, produce, and distribute a vaccine for COVID. There is a necessary and proper role for government, with its mandate to act in the public interest; its capacity for speed, scale and coordination; and its ability to accelerate market action. By focusing our efforts on the effective design and distribution of public investment, as well as goal-setting and regulatory action, philanthropy can help design interventions that simultaneously address other critical issues that are also beyond the reach of the private sector acting alone: inequality and shared prosperity, energy access and reliability, environmental justice and equity, economic competitiveness, and national and global security.



A worker installs solar panels at a home in San Francisco, CA. (Credit: Michaela Vatcheva/Bloomberg via Getty Images)

In support of this agenda, Hewlett’s strategy will focus on collaborations between different levels of government and between public, private, and civil society actors. A resilient clean energy economy in the U.S. will originate in successful community, state, and regional projects — enabled by ambitious federal goals, investments, and regulation — with the best models and projects informing future national policy. After the flurry of federal climate legislation, with public and private investment flowing, and with an ambitious near-term road map for administrative rulemaking largely determined, a large number of projects planned and already in the pipeline are likely to get built. Many of these will be in places with neither experience nor strong constituencies for climate action or large-scale development. These places will benefit from foundation-funded work to coordinate efforts, improve lines of communication, engage communities and workers, and ensure that community-level environmental and economic benefits are realized.

We will support grantee organizations in their efforts to help scale deployment of clean energy technologies including solar, wind, transmission, and storage, as well as electric vehicles and zero-carbon fuels across the range of economic sectors. We will also support groups that focus on the research, development, and deployment of newer technologies, such as advanced nuclear, geothermal, carbon capture, carbon removal, and hydrogen, which will likely be necessary to reach the hardest-to-abate sectors on a 2050 timeline.

Even as we fund organizations working on a wide range of technologies, we believe that technological advances cannot come at disproportionate cost to communities that already suffer the results of historic injustices, underinvestment, and lower incomes, as is true for too many communities of color. We look to the recently developed “Best Practices for Equity and Governance”<sup>2</sup> for the Greenhouse Gas Reduction Fund as encouraging guidance for how government, private industry, civil society, and philanthropy can consider responsible engagement and decision making with communities. We are thus supporting groups helping to build communities’ capacity to analyze and grapple with potential impacts, and support outcomes that are consistent with the visions those communities’ have for their own healthy and prosperous futures.

If successful, our strategy can do more than just help people and communities across the U.S. It could also reassert the country’s claim to global climate leadership, improve the performance and lower the costs of clean energy technology, and motivate additional climate action by both allies and competitors around the globe.

Although the potential for positive impact is great, success is by no means guaranteed. We know from experience that U.S. backsliding could slow the global effort, and future threats may include something more serious than the recalcitrance we’ve experienced in recent history. Threats to undo federal progress and upend the global order in which international climate action has been designed and negotiated must be taken seriously.

Recognizing the potential for reversals, however, our strategy — like the new federal policies themselves — is designed to be resilient to political change. Investments have already created financial and economic realities, as well as stakeholders around the country who are likely to resist any effort to reverse course. We intend to make sure the momentum that’s been gained is not lost by ensuring that public funds continue to leverage private sector investments, individual projects are successful, and the benefits accrue to companies, workers, and communities across the political map. We will support work to give the new policies the running room they need to help encourage the next wave of federal policies to emerge. We will also fund work at the state level to advance new climate policies as states absorb federal dollars for deployment.

We believe this strategy evolution comes at the right moment for the foundation to take a powerful role in these efforts, to help inform climate progress at all levels of government to deliver hoped-for benefits and build political ambition in the direction of faster decarbonization in the years and decades ahead.

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2. Sylvia Chi, “Greenhouse Gas Reduction Fund: Best Practices for Equity and Governance,” Just Solutions, May 9, 2023, <https://justsolutionscollective.org/greenhouse-gas-reduction-fund-best-practices-for-equity-and-governance/>.



A member of International Union of Painters and Allied Trades District Council 11, Local 195 installs a wind turbine in Rhode Island. (Credit: Climate Jobs National Resource Center)

## Methodology

Throughout the process we have sought to learn from grantees and other experts, as well as from previous strategies, and apply those insights to the rapidly evolving landscape in which we are operating.

Our research phase focused on understanding the policy, technological, economic, and social landscapes at the federal and state levels. We used both interviews and published documents as sources. We talked with more than 80 foundation grantee partners, academics, researchers, advocates, organizers, environmental justice leaders, current and former government decision makers, labor leaders, businesspeople, and investors. We engaged people from across an ideological spectrum, from many different parts of the U.S., working at the international, national, state, and local levels. We asked the interviewees to talk about their areas of expertise, but we also allowed the conversations to range across subjects.

We read the work of experts and examined perspectives on how to make progress across an expansive scope of views and subjects, including current thought leadership and histories of grassroots power and racial justice movement building, political and economic theories, philanthropic climate strategies, transportation, and energy system forecasting, as well as histories of decarbonization and energy transitions. We met on a regular basis with members of the foundation's Climate, Economy and Society, Democracy, and Effective Philanthropy teams.

We started with an online workshop, with a core group of grantees and other experts, designed to test an emerging theory of change, and have worked with a cross section of grantee organizations, learning by doing, seeking feedback, and engaging supporters, as well as detractors, of the general approach. We also worked with consultant Tori O'Neal to engage with climate equity and environmental justice leaders to dive deeper on the intersections of race, climate change, community health, and economic well-being.

# A look back: previous U.S. strategies and lessons learned

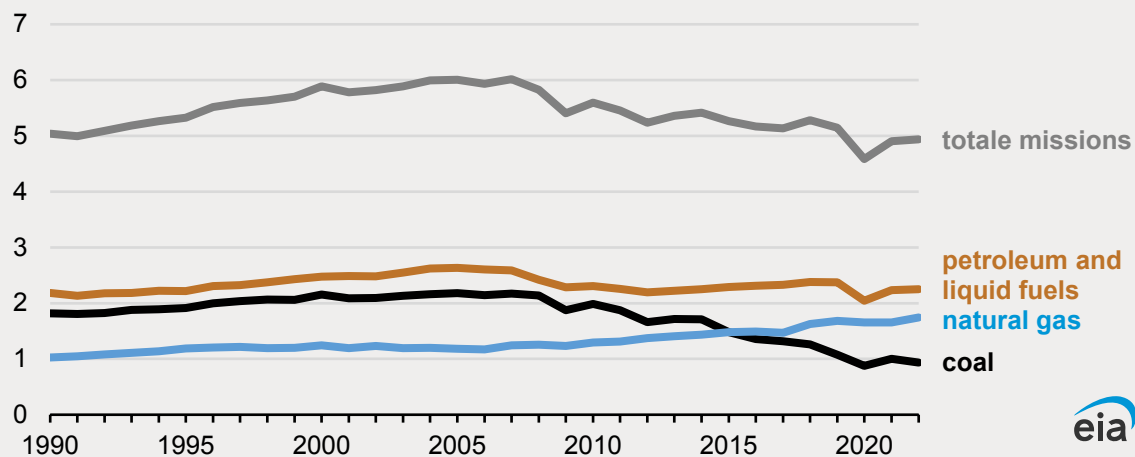
Over the years, Hewlett’s U.S. Climate portfolio has employed four overlapping approaches. The first approach, which began in 2007 and continues to this day, focuses on working with technical experts and advocates to advance policies favoring renewable and efficient energy in the power sector. We concentrated mostly on state regulatory and legislative venues in the beginning, though the foundation has also worked with federal agencies and supported (unsuccessful) efforts to adopt an economy-wide carbon pricing system at the federal level.

Several factors conjoined to make this a sensible way to start. The shale gas revolution produced cheap, abundant natural gas, which incentivized a shift from coal to gas for electricity and industry. Sierra Club’s Beyond Coal Campaign accelerated these market forces by calling into question the health impacts of breathing dirty air and the economics of continuing to pay for a more expensive fossil fuel. Obama-era air regulations provided still another driver in the shift away from coal.

In addition to the rising cost of burning coal, a combination of declining costs and expanding markets for renewables soon made it possible to compete with gas as the lowest-cost energy source. Clean energy investments in President Obama’s 2009 economic stimulus package (following earlier but smaller investments made during the administrations of presidents Carter, Reagan, and both Bushes) produced rapid innovations in wind, solar, and battery technologies that improved performance and radically reduced costs. Those public investments catalyzed larger private sector investments in the U.S. that, combined with industrial policy in Germany and then China, further reduced the cost of renewable technologies. States drove demand for zero-carbon electricity by passing and ratcheting up clean energy standards, requiring increasing shares of electricity from renewables and other zero-carbon technologies.

While this approach contributed to declining U.S. emissions (see the graphic below), it is subject to three criticisms: First, progress was too slow to meet the timeline needed to avoid catastrophic global climate change; second, the policies adopted did nothing to ensure jobs and other benefits would stay in the U.S., thus failing to deliver what was promised to American workers, companies, and communities; and third, partly as a result of the prior two, this approach failed to build broad support for ambitious climate action.

**FIGURE 2: Annual U.S. carbon dioxide emissions from energy consumption by fossil fuel source**  
billion metric tons of carbon dioxide (1990 — 2022)



Credit: EIA







Alliance for Tribal Clean Energy Board Member, Robert Blake (Red Lake Nation), speaks about a rooftop solar array on a Red Lake Nation school building. (Credit: Chéri Smith/Alliance for Tribal Clean Energy)

Beginning in 2012 and continuing to the present, the foundation layered a second approach atop this first one. Informed by political analyses pointing to huge numbers of Americans overlooked by climate advocacy, this approach put racism, sexism, and a lack of community support into the mix as barriers to climate progress. Our second approach thus looked to build power for climate action for people of color and lower-income communities, which have often suffered because of policies that concentrate pollution in their backyards.

Although funded at lower levels than the first approach, this second approach played a part in shifting the climate discourse from one centered on emissions and market-based solutions to one focused more broadly on questions of racial justice and political economy. Grantees were instrumental in raising the climate ambitions of policymakers and connecting climate to other causes. This strategy also played a key role in the Biden Administration's commitment that at least 40% of overall benefits from federal investments in climate and clean energy be directed to historically underinvested in and underserved communities, in addition to securing \$60 billion in funding for environmental justice in the Inflation Reduction Act.

Where this approach could be strengthened — not just at Hewlett, but more broadly — is through pairing these organizing strategies to prevent pollution with strategies to concurrently build a clean energy economy at the scale needed to stabilize our climate. The challenge is to devise affirmative strategies for cutting emissions that also contribute to more resilient and thriving communities.

A third approach, which we first employed in 2017, takes advantage of Hewlett's unique ability to move to scale quickly, promising new approaches in underfunded parts of the philanthropic landscape. This ability is a product of our unallocated and opportunity funds, combined with our experience and reputation for fostering philanthropic collaborations. Examples include the Clean Cooling Collaborative, which sprung from an opportunity to phase out potent HFC greenhouse gas emissions used in cooling; the Carbon Removal Initiative, designed to help take carbon management strategies to scale; our creation of a Climate Communications Opportunity Fund to expand communications capacity in the climate advocacy space; the Global Methane Hub — a \$200 million initiative to scale global strategies to reduce methane pollution; and Invest in Our Future, a \$240 million initiative to leverage and accelerate the impact of historic climate investments in the U.S. In each of these instances, we were able to provide substantial funding quickly, and then use that to attract additional funders to important but underdeveloped areas of work.



An all-electric truck on the line at Ford Motor Company's electric vehicle center in Dearborn, Michigan. (Credit: Sarah Rice/ Getty Images)

Such investments are significant, but their irregular nature makes them difficult to incorporate at a programmatic and staffing level: Are these one-time grants to seed a new effort, or are we committing to a new strategic priority that will require ongoing investment of grant dollars and staff time? As it stands, such interventions can help propel progress on discrete issues, but they create unclear expectations in the field and can lead to commitments that stretch program staff and funding too far to manage effectively.

Most recently, we began exploring a fourth approach: expanding the menu of available clean technologies by pioneering an industrial policy that both grappled with the sources of emissions where low-cost, market-ready solutions do not yet exist and a new approach to climate policy that became the political economy approach described in this paper. As the Intergovernmental Panel on Climate Change has repeatedly made clear, renewable energy alone is insufficient to decarbonize sectors like steel and concrete production, shipping, and heavy transport. Indeed, non-weather dependent power sources are also necessary to decarbonize electricity generation. In response, beginning in late 2019 and early 2020, Hewlett's U.S. grantmaking expanded to make more grants to support groups working on technology and innovation policy in areas including advanced nuclear, carbon capture and storage, carbon removal and storage, and hydrogen.

Each of these strategic approaches delivered benefits and helped reduce emissions by helping to scale clean energy technologies, shift investment flows, build power for new stakeholders, and develop new philanthropic approaches. Yet they have, so far, been insufficient to meet our nation's global commitments. To do so, we believe (building on lessons learned over the past 17 years), we must support an approach that emphasizes the role of government, in partnership with industry and communities, in averting the worst impacts of climate change and focusing on the concrete and immediate ways in which climate policy can improve peoples' lives.

# Looking ahead

Hewlett will remain committed to helping put the U.S. on the path to 50% greenhouse gas emissions reduction by 2030 and net-zero emissions by 2050. These targets, while quite ambitious, reflect the scientific consensus of what is needed to limit warming to well below 2 degrees Celsius. We will advance that commitment with a new focus on strategies to build a political economy that can sustain the pace of change needed well beyond the five-year time frame considered in this document.

Philanthropy — and Hewlett in particular — is well positioned to support efforts to address the significant technical, material, environmental, and social challenges involved in ensuring that federal climate investments empower communities and workers and preserve, and even enhance, habitats and landscapes, while accelerating decarbonization. The result would be the realization of possibilities that the recent spate of historic legislation creates but does not guarantee.

In broad strokes, Hewlett will support work required to successfully implement the new climate laws and to ensure the U.S. can fulfill its climate commitments. This work will include: (1) bringing sufficient levels of expertise to shape the execution of implementation strategies that are new to Hewlett's approach; (2) creating capacity at the state and local levels to develop projects and seize opportunities; (3) removing barriers to clean technology deployment; and (4) building a broader sense of shared economic opportunity in the transition so that these policies are durable and lead to the adoption of additional policies.

Within those categories we will prioritize our funding according to how much proposed work will:

- Reduce U.S. and global GHG emissions over medium and longer time frames.
- Deliver greater equity to working people, including communities of color, which face unequal barriers to opportunity, and legacy fossil fuel communities and regions.
- Create positive shifts in public support for a clean energy economy by expanding and diversifying the communities that benefit from climate-related investments.
- Generate effective narratives about the transition to a clean energy economy.
- Leverage public investment and catalyze private investment.
- Demonstrate a need for philanthropic support.

**Specifically, Hewlett will support grantees — including identifying and funding new partners — that are advancing strategies that will do the following.**

**Reduce U.S. emissions by:**

- Maximizing the impact of the four major policy tools the U.S. Congress has chosen to apply to the decarbonization challenge: (1) demonstration projects to move experimental technologies from lab to market; (2) supply loans and tax credits that incentivize companies to make things; (3) generate policies that help create markets for new products; and 4) protective policies that insulate industries that are just getting started or are still growing from foreign interference and lack of access to markets due to the power of incumbent technologies.
- Ensuring that investment “carrots” are successfully integrated with regulatory “sticks” such as the IRA methane emissions fee and existing regulatory policy measures in the Clean Air Act.
- Integrating federal policies with state incentive and regulatory policies — for example, binding commitments for 100% clean energy or clean car and truck standards that are more ambitious than those promulgated by the federal Environmental Protection Agency.
- Combining policies in scores of ways, including those that jointly help private companies with both domestic solar panel and lithium-ion battery manufacturing; that support the commercial viability of green hydrogen production and carbon sequestration; that incentivize offshore wind energy generation enabled by a domestic supply chain and that use the labor force trained in offshore oil production.

- Expanding the range of available zero-carbon options by bringing together philanthropic, public, and private investments in the technologies needed to decarbonize industrial manufacturing, heavy-duty trucking, aviation, global shipping, and food production.

#### Reduce global emissions by:

- Successfully implementing an investment-centered model that can be replicated by other countries.
- Promoting investments that lower costs and improve performance in the U.S. to help create affordable technologies that could help other countries decarbonize their economies.
- Supporting policy design and development that leverages America's low-carbon advantage in sectors including steel and cement to win support for low-carbon trade policies.
- Building grantee capacity to help manage the potential for international conflict that comes with countries adopting more expansive roles for government in their economies.
- Developing U.S. foreign and trade policy that facilitates cooperative competition in clean technologies, as opposed to counterproductive protectionism.

#### Deliver greater equity by:

- Creating new stakeholders while mitigating losses as workers, communities, and companies transition away from energy from unabated fossil fuels.
- Assisting fossil-dependent communities to develop diversified economies that offer stability and the revenue streams necessary to support robust public services.
- Building strategies that provide low-carbon jobs, including ones that leverage the existing skills of fossil energy workers.
- Incentivizing established players in the energy economy to invest in low-carbon business lines.
- Resourcing those most impacted by legacy pollution and climate change to influence and advance solutions.
- Helping to implement decarbonization policies that increase the well-being of communities that have been historically excluded from the benefits of infrastructure investments.
- Investing in equity-focused organizations, particularly those serving Black, Indigenous, and communities of color, and supporting a broad range of capacities from policy thought-leadership to community engagement.

#### Build public support by:

- Ensuring the successful implementation of pilot programs in states and communities that support zero- and low-carbon technologies with additional benefits that include high-quality jobs, clean air and water, and revenues to support a range of public services.
- Creating feedback loops that incorporate lessons from the most effective pilot programs into future policies.
- Focusing policy design and implementation on the need to deliver clean, reliable, and affordable zero-carbon energy.
- Leveraging support for a broad portfolio of climate solutions to bring industrial, labor, and regional constituencies to the table in a positive way.

**What we will not fund:** To provide adequate funding to advance this U.S. Climate strategy, we have made the difficult but necessary choice to not include stand-alone efforts on resilience and adaptation, which is a priority for our Western Conservation strategy in the U.S. We also elected not to pursue direct investments related to agriculture and forestry, though Hewlett does support a separate agricultural funder collaborative that is advancing work in that sector, and (also through the Western Conservation portfolio) has work on forest protection and wildfire.



Union workers helping to build the clean energy economy. (Credit: Climate Jobs National Resource Center)

## Navigating through complexity

As much as there is cause for optimism there are also reasons to be cautious about the chances of meeting our 2030 and 2050 goals. Much of the impact of the new federal legislation hangs on the nation's ability to site, permit, and build a massive expansion of energy infrastructure, including clean power generation and transmission, CO<sub>2</sub> and hydrogen pipelines, and CO<sub>2</sub> storage facilities. Transmission represents a unique vulnerability, key as it is to our ability to build solar and wind projects, produce clean hydrogen, or capture and store CO<sub>2</sub> at scale. Researchers at Princeton's ZERO Lab conclude that we will lose over 80% of the potential emissions reductions of new federal legislation if we fail to double the current pace of transmission expansion in this decade.

State and local government, as well as private landowners, have significant power over key decisions in our federal system, making it difficult to accelerate planning, siting, permitting, and cost allocation practices that regularly impede the real-world pace of the energy transition. Proposed clean energy projects are facing increasing opposition, often based on misinformation about impacts to wildlife, property values, health, and more, making these projects another front in the culture wars. More than 100 ordinances, across 31 states, blocking new renewable energy development have been passed, slowing progress, killing projects, and making clean energy more expensive.

We also recognize that the new strategy creates the potential for additional tensions and conflict with U.S. allies and competitors. Some European leaders, concerned that federal clean energy policies designed to favor U.S. domestic production will harm European companies and workers, are responding with ambitious government interventions of their own. At the same time, increasing nationalism, supply chain disruptions, and inflation have contributed to a more aggressive approach to economic competition with China — a shift that has damaged the West's ability to cooperate with China on climate, even when it would benefit both nations to engage on the issue.

Because the U.S. accounts for only about 11% of global GHG emissions, it is imperative that our domestic strategies help advance the clean energy transition globally. Managed well, U.S. policies could help avoid counterproductive protectionism and instead facilitate engagement and constructive competition. Hewlett will look for ways that its U.S. program can help accelerate the development of an international clean energy innovation and deployment ecosystem to accomplish these goals.

Rapidly transitioning the U.S. and global energy economies from fossil fuels to zero-carbon energy are among the most complex challenges we've ever confronted. There are myriad trade-offs and difficult choices ahead. The foundation's commitment to finding solutions that are effective, equitable, and durable requires that we navigate a host of conflicting interests. For example, we support civil society organizations working with communities at the frontline of the climate crisis that oppose the fossil technologies (natural gas, primarily) that are currently used to back up variable wind and solar power and for industrial processes requiring intense heat. Some also oppose new technologies (advanced nuclear, carbon capture, carbon removal, and hydrogen) that, according to the IPCC, will be needed to decarbonize hard-to-abate sectors of the economy, including heavy manufacturing and long-distance heavy transport. Still other communities and organizations oppose wind and solar projects, and have blocked efforts to accelerate construction of infrastructure needed to move clean energy to towns and cities.

We believe the current path is untenable if we are to meet our ambitious climate targets. Finding ways to deploy the technologies and build the connective infrastructure we're going to need, while meeting the legitimate concerns of communities, will require that we engage across differences and find ways to listen, learn, and work together. We will need to identify and support the organizations that are best positioned to facilitate community engagement, that can develop the substantive and procedural frameworks that can help encourage negotiations and resolve conflicts, while also helping communities build power and capacity to fully engage on the issues that affect them. How far could the environmental justice provisions of the Inflation Reduction Act go to address these issues? How can we empower climate equity organizations and their allies to use the powerful tools that the Department of Energy has provided in its guidance to potential grantees on developing diversity, equity and justice plans, community engagement plans, and Justice40 tracking requirements? These will be key questions that Hewlett takes on for its own work as we ensure that the U.S. can help establish a low-energy economy that can benefit people across the nation.

In sum, there are more viable clean energy technologies, more widely shared beliefs that action is needed, a broader climate coalition, and a larger and more effective set of policy tools available to us than was true just a few years ago. The obstacles are, however, formidable. During a period of pandemic, war, growing income inequality, political polarization, democracy in peril, and a loss of faith in government, funders, including Hewlett, must support organizations that find ways to encourage the development of a politics that can sustain and accelerate technological deployment and continued innovation to match the scientific imperative.

## Five-year outcomes

For the purposes of this section, we assume that the major clean energy and climate provisions of recent legislation will remain in effect for the remainder of this decade. Much of that legislation passed with bipartisan support, and there is evidence that even those who initially opposed the legislation are seeing the benefits of these laws. Many jobs have been created, and there is considerable private capital invested in the ongoing success of these climate investments. It is plausible that even a hard turn toward authoritarian populism wouldn't be enough to force repeal of the laws. A shift in the policy landscape big enough to cause the repeal or nullification of those provisions would require us to reassess our strategy and redeploy resources in ways that would be dependent on the new circumstances.

While the strategy embodied in recent federal legislation is not new in U.S. history, it has been several decades since national industrial policy was attempted, and it has never been attempted at the scale necessary to manage climate change. Old knowledge will have to be reclaimed and new ideas will need to be applied to this challenge, which parallels the crafting of industrial policies used in the fight against fascism or to land a man on the moon. The unprecedented size and complexity of the opportunity we face means that we will need to be discerning about what constitutes philanthropy's optimum role and what the foundation takes on and what it doesn't. The following outcomes, while somewhat broad, reflect our preliminary thinking. They will get more specific as we learn more about our options and how the rest of the field responds to this moment.

**Outcome One:** Federal clean economy legislation enacted in 2020, 2021, and 2022 is being successfully implemented at a scale sufficient to produce and deploy the zero-carbon technologies needed for the U.S. to accomplish its decarbonization goals.

**Outcome Two:** Zero- and low-carbon technologies are being deployed at a rapid pace, creating a flywheel effect of lower costs, new economic opportunities, increased support among communities, growth of influential stakeholders, and the emergence of new and diverse champions in policymaking venues.

**Outcome Three:** Clean energy and climate policy is broadly perceived as successful in delivering real benefits to people across the U.S.

**Outcome Four:** The U.S. is on track to meet its commitment to the rest of the world to reduce emissions by 50%-52% by 2030 through the successful implementation of climate policies across a broad range of technologies, and prepared to deliver on more ambitious commitments for 2035 and 2050. These technologies drive economic and health benefits to lower-income and communities of color, as well as communities economically dependent on fossil fuels, resulting in consensus around technological solutions for the sectors hardest to address (industry, heavy-duty and long-distance transportation, and agriculture).



# Conclusion

Thanks to federal legislation enacted since 2020, this decade will see accelerating progress to address climate change in the U.S. There are more viable clean energy technologies, more widely shared beliefs that action is needed, a broader climate coalition, and a larger and more effective set of policy tools than was available just a few years ago. These new laws have the potential to reset America's relationship to the world, reassert the country's claim to climate leadership, and can motivate additional climate action by both allies and competitors. But their success is not guaranteed without philanthropic engagement and support.

Based on our experience with the positive long-term impacts of the \$90 billion in clean energy investments included in President Obama's 2009 stimulus package and the enthusiastic response to recent legislation, we can work to ensure that investments of 2 trillion federal dollars unleash large private capital flows and radical improvements in the cost and performance of a set of critical technologies. We can also help ensure benefits reach communities who can most benefit from them most.

Despite inevitable shifts in government leadership, the U.S. must scale deployment of our clean energy solutions now, while building the public support needed to sustain and accelerate our efforts. If done well, these investments will dramatically cut GHG emissions, while simultaneously creating significant numbers of high-wage jobs, revitalizing American manufacturing, contributing to the economic well-being of disadvantaged communities, improving national and global energy security, increasing the reliability of our energy system, and reducing air and water pollution.

While it is impossible to predict how much can be accomplished under rapidly changing policy and social landscapes, we know we will need to be ambitious, strategically focused, tactically agile, and committed to ongoing action over the next three decades. We will also need to be realistic, recognizing how hard it is to accomplish anything big at this extraordinary moment, and set our expectations with that in mind.

Somehow, with partisan tensions high and confidence in government at an all-time low, our federal government has managed to enact the largest climate action plan in U.S. history, much of it thanks to the hard work of many of our grantees and with bipartisan support. It did this against the wishes of the oil, coal, and gas industries, and some of the biggest political donors in the country. That speaks to both the current opportunity and the understanding that we must address one of the most pressing issues of our lifetime. If we maintain our focus and persevere through the challenges that will inevitably come, it's possible that the world can meet the seemingly impossible challenge of stabilizing the climate, while we secure the well-being of both people and nature.

We're excited to work with our partners — grantees and funders alike — to make this vision a reality.