THE NEWDEAL FORUM
WORKING GROUP

Climate Solutions

Policy Proposals for Growing a Clean Economy and Protecting Communities: A Guide for State and Local Policymakers

A Note from Colorado Governor Jared Polis

As I write in the midst of the most serious public health crisis in more than a century, the importance of smart, decisive leadership from states and cities has never been clearer. So many of the most innovative solutions to our recent challenges have come from statehouses and city halls – from providing relief to small businesses to keeping people housed during the economic collapse. While the devastating impacts of COVID-19 and the massive government response required can be overwhelming, we must not lose sight of other challenges that threaten the livelihoods and long-term wellbeing of Coloradans and all Americans. We must marshal the same level of urgency and courage as so many have demonstrated during the pandemic to make difficult decisions in response to the biggest risk to our planet: climate change.

Decades of rapidly increasing temperatures, rising sea levels, more frequent wildfires, and the dismaying combination of major floods in some areas with alarming droughts in others can make anyone pessimistic about the future. The enclosed policy agenda and corresponding examples from dozens of states and cities provide much-needed optimism about our ability to stem the damage of climate change while building a more prosperous, equitable, and healthier society.

A commitment from Washington to a robust clean economy and sustainable future is critical, but as we have seen during the past few years, lack of federal leadership does not need to freeze America's progress. I'm proud of the progress we have made in Colorado in just the past few years: swiftly transitioning to renewable energy and energy efficiency; reforming our oil and gas regulations to protect health and safety and reduce emissions; working towards putting nearly one million electric vehicles on the road by 2030, with the infrastructure to support them; and much more. These advancements have been made possible because the executive branch, legislators, and partners in city and county governments came together in a common mission. Leaders of every level and branch of government can make a difference.

This report demonstrates that effective solutions exist to not only reduce the emissions that degrade our air and water and cause global warming, but also to adapt our communities to be resilient and prosperous amidst a changing climate. It highlights the leadership that all of us in elected office should strive to emulate. And it recognizes that solutions must specifically take into account the disproportionate impact of warming temperatures and pollution on people of color and other disadvantaged groups.

I urge my counterparts in state and local governments across the country to use this document as a guide for identifying potential opportunities to act and finding appropriate models on which to base their work.

Jared Polis
Governor, State of Colorado
NewDEAL Honorary Vice Chair

A Note from the Working Group Co-Chairs

Climate change impacts every corner of America. Norfolk, VA, sits on 144 miles of flooding coastline. Rising heat threatens Wisconsin's rich agricultural land as Milwaukee and Madison grapple with pollution-exacerbated injustices. It seems climate change causes problems as varied as the 50 states and thousands of cities and towns in our nation.

But for every climate-induced problem, there's a solution. Increasingly cheap green energy can protect power supplies while cutting emissions. Resiliency programs can use science to safeguard vulnerable populations. And a growing number of Americans want to put their shoulder to the wheel for a safer, cleaner, more just future.

That's why we're so excited about this report. Forward-thinking leaders across the nation, many of whom partner with us as members of the NewDEAL network, along with concerned citizens, have shown that solutions exist to cut emissions and protect against climate change. They have built a blueprint for the kind of climate leadership needed to tackle an immense, planetary problem. This report gathers what they've learned. It pairs policy recommendations with real-life examples and best practices.

There's Boise, ID, with a goal and plan to hit 100% green energy by 2030. And Phoenix, AZ, where leaders and community members have ambitious plans to protect against the rising heat. St. Petersburg, FL, is updating its building codes and constructing affordable housing for a sustainable, livable city. Other leaders in statehouses and city halls are making bold changes from Dallas, TX, to Princeton, NJ. We explain how Norfolk learned how to live with water and Wisconsin built a strong, diverse climate coalition.

The resulting report not only shows what can be accomplished; it lays out what must be done. We urge our fellow leaders to find the ideas and policies that can help transform and protect their communities. Constituents rightly demand a future that's green, resilient, and equitable. This report explains how to get there.

Mandela Barnes
Lieutenant Governor,
Wisconsin

Andria McClellan
Councilmember,
Norfolk, VA

From Our Partners

"In responding to the crises of climate, COVID and racial equity, there has never been a greater need for leadership. This report highlights inspiring leadership and climate action taking place across the country, including from so many state and local elected leaders from the NewDEAL network, from Montgomery AL to Boise ID; from Louisville, KY to New Bedford, MA. New and innovative programs, policies, and partnerships launched by state and local leaders are delivering on the promise of a more sustainable and inclusive economy. Now the opportunity is to share this roadmap of real-world progress on climate and to scale climate action across the country."

– Amb. Anne Slaughter Andrew, ***NewDEAL*** *Board Member*

"There's no denying it: climate change is real and it requires bold action. The American people are not just demanding action – but also leadership – to counter the major threat to our health, economic prosperity, and to all future generations. Policymakers at every level of government must find innovative solutions to this climate crisis. I applaud the work of the NewDEAL Forum in developing these ideas to grow a clean economy and protect communities across our nation."

– ***New Democrat Coalition*** *Chair Congressman Derek Kilmer (WA-06)*

"We must have action from every level of government to sufficiently address climate change. Even as the Trump Administration clings to denial and willful inaction, city halls and state legislatures are stepping up and enacting ambitious climate and clean energy policy. This report highlights many of the creative approaches states and municipalities have taken to slash their climate pollution, clean up their air and water, and adapt to climate change. These governments are recognizing that strong, equitable climate policies not only benefit the environment, but also promote public health, job growth, and environmental justice."

– Josh Freed, Senior Vice President for the Climate and Energy Program, ***Third Way***

"Tackling climate change and building resiliency is an enormous challenge that requires support and action at all levels of government as well as from businesses and individuals. Implementing key strategies and recommendations from the NewDEAL Forum Climate Change report for cleaner electricity, transportation, buildings and energy efficiency, targeted to state and local policymakers, is a critical piece in meeting that challenge."

– Doug Vine, Senior Energy Fellow, ***Center for Climate and Energy Solutions***

"Reversing the perilous trajectory of our changing climate requires extraordinary leadership. At NRDC, we are committed to elevating the vital role of state and local officials in setting our country and our world on a better path. They are in a unique position to establish the fastest path to zero emissions as well as a clean economy in their communities, and to move quickly to protect their residents from an already-warmer world. I applaud the NewDEAL Forum for putting forward a terrific resource for these leaders to identify steps they can take immediately to contribute to the fight against global warming."

– Shelley Poticha, Managing Director, Healthy People & Thriving Communities,
Natural Resources Defense Council

Introduction

The United States is at a crossroads. There's the direction we've been headed, where emissions steadily rise and climate action isn't prioritized. Low-income communities and people of color stand to disproportionately bear the impacts of this dangerously heated world. It's a bleak future of massive storms, regular power outages, and worsening inequality.

And then there's the direction described in this report. In that future, clean energy rapidly scales up along with citizen engagement. Climate change still impacts the country, but communities use the latest science to prepare for the coming storms. Historic inequalities are addressed. Leaders and residents build a robust, green economy that works for everyone. In short, the world's planetary crisis is turned into the biggest innovation opportunity of the century.

This better, safer future isn't just possible -- it's already happening in cities and states across America. In the absence of federal action, local leaders have stepped in to set ambitious clean energy goals, expand solar access to low-income residents, clean up transportation, make polluters pay, and build greener, more energy-efficient cityscapes. They joined the Paris Agreement, emphasizing the importance of America providing global leadership on climate action and signaling the urgency with which a future Administration must rejoin the agreement. In a time of shrinking budgets, they've found ways to tie good climate policy to good health and economic policy, while safeguarding vulnerable communities. They've invested in communities and put serious money into next-generation technologies. And, given growing voter support for climate action, they've built strong coalitions for smart, equitable change.

In this report, we show how leaders have instituted these bold, innovative policies and programs. We pair policy recommendations with examples of communities that have put them in place. And, to make this better future even easier to envision, we share the stories of model cities and states that are leading the charge. Input from the leaders of these communities, as well as from the other state and local officials listed in this report, helped produce and shape these policy proposals.

The report offers recommendations in three key areas: (1) reducing emissions; (2) building resiliency; and (3) fostering widespread support. The special challenges faced by communities of color – and the steps policymakers should take to address them – are a theme throughout each section. Key policies to address environmental justice are emphasized through a blue font color.

This report, and the recommendations within it, are meant to provide a practical agenda for state and local leaders who are committed to combating climate change. To truly build a more sustainable, resilient, and just America, leaders must work together across regions and collaborate on the city, state, and federal levels. While not an exhaustive list of policies and innovations, these recommendations, along with examples of places that have implemented them, are a roadmap for working together towards that better future.

Section 1:

Reducing Emissions

In order to avoid the most damaging consequences of climate change, we must rapidly and dramatically slash greenhouse gas emissions. Securing a livable climate means transforming every sector of American life, from how we power the grid to how major industries operate. This requires significant investment, innovative policy, and thoughtful collaboration across the economy and all levels of government.

Luckily, we know how to do this. As action stalled on the federal level, and the Trump Administration reneged on the Paris Agreement, states and cities across the nation began cutting emissions and fostering a greener, more stable economy. These local governments, often led by NewDEAL Leaders, created policies and programs that are working on the ground today. In addition, they joined the Paris Agreement, called on the Administration to rejoin the international community, and started fostering the international partnerships on which America must lead. And their actions can have a multiplying effect, spurring new collaborations and bolder goals as governments hit their emission reduction targets ahead of schedule.

It's high time to learn from their climate efforts. Given the stakes of a warming climate, local, state, and federal officials must all act with urgency to secure a healthier, more just, and sustainable future. Spreading these community-tested policies throughout the country will do just that.

Policy Goals

- State and local leaders must steer dramatic greenhouse gas emission reductions in their communities.
- Environmental justice must be central to decision making in order to protect vulnerable populations, equitably share the benefits of reducing emissions, and address legacy pollution.
- Climate efforts should include both sector-specific strategies as well as solutions that reduce emissions across all sectors (like carbon pricing).

Policy Recommendations

Smarter emissions data

Without data on the problem, it's impossible to figure out solutions. Elected officials should encourage -- and even require -- the collection and reporting of climate data within their jurisdiction. They should measure progress, and use data to highlight inequities of where the emissions are being produced to support the importance of environmental justice initiatives. A new law in Colorado, spearheaded by NewDEAL Leader **State Senator Kerry Donovan**, illustrates good practices.

Key Strategies and a Model for Progress

- **Directing a government agency to collect greenhouse gas emissions data** (often the departments overseeing public health and/or environmental regulations). Colorado's air quality control commission will track emissions across sectors and the state. While some industries like steel producers and oil companies already report emissions to the EPA, Colorado will fill data gaps by requiring reporting from all major polluters, including previously uncovered sources like utilities and natural gas distribution companies.
- **Forecasting future emissions levels** based on data trends and policy changes. Updated forecasts and progress tracking will help Colorado cost-effectively meet its climate goals. The new program complements another recent Colorado law that requires utilities to consider the climate impacts of new projects.
- **Establishing regular, public reporting** of the data.The Colorado commission will publish its findings on its website through 2030.

A MODEL CITY: BOISE, IDAHO

Boise, ID, has the bold goal of 100 percent clean electricity by 2035.
A community-wide transition takes thoughtful planning and strong leadership. Reaching that goal in 15 years in a red state requires real ambition.

After city leaders signed off on the target and a plan in 2019, Boise beefed up energy efficiency programs and studied how to continue growth of the largest direct-use geothermal energy system in the country. Leaders talked to the local utility about retiring its coal plants, resulting in an expedited retirement schedule. They reformed zoning codes to make solar easier to put up, leading to a boom in installations. And Boise kicked off plans for big, utility-scale renewable energy projects. Building on progress to date, next steps include an equity-based Climate Action Plan to set aggressive greenhouse gas reduction goals.

Even in a firmly red state, **Mayor Lauren McLean** finds common ground with Republicans over a shared love of Boise. "Our climate work aligns well with western values of self reliance and independence," the longtime NewDEAL Leader and former city council member says. McLean built conservation and sustainability into city planning, making zoning changes to keep her growing city dense. And she ties good climate policy to a strong economic future for the City of Trees. Boise's clean energy plan is estimated to bring in $610 million in benefits and the city is also considering development of an accelerator program to establish Boise as a leader in the emerging climate economy.

Cleaner electricity

The price of solar has fallen by nearly 90 percent over the last decade. Wind energy prices have dropped by 70 percent. Still, clean energy requires strong state/local policy to fully transform the U.S. electricity system, and ensure traditionally disadvantaged communities can benefit from renewable sources. Innovative state and local leaders are setting examples of forward-thinking policies.

Key Strategies

- **Creating plans for cities and states to move to 100% clean energy sources on ambitious timeframes.**
- **Requiring utilities to sell the highest percentage of clean energy as possible** under clean energy standards, including through renewables and other technologies (see Invest in Innovation, page 13).
- **Modernizing the grid and mandating energy storage targets for utilities.**
- **Working across jurisdictions and with regional partners to support large clean energy projects and increase transmission line infrastructure.**
- **Improving energy security and clean energy access, particularly for low-income residents.**
- **Supporting community choice aggregation,** which gives greater local control and accountability over where electricity comes from. These programs are alternatives to utility monopolies and enable individuals and businesses to pool together to purchase green energy.
- **Dismantling regulatory hurdles** to rooftop solar, solar co-ops, offshore wind, geothermal, and other clean energy projects.
- **Requiring the natural gas industry to capture methane leaks.**
- **Making the transition to clean energy a workforce development opportunity** for quality, high-paying jobs.

Models for Progress

- More than 160 cities have committed to going carbon-free, including Concord, N.H., where leaders like Councilmember Rob Werner are executing plans for 100% clean electricity by 2030.
- In the last five years, 14 states and D.C. strengthened their clean energy standards.
- New Jersey is building storm-resistant microgrids & requiring 600 megawatts of energy storage by 2021.
- A new law in Nevada, authored and advocated by Assemblymember Daniele Monroe-Moreno, requires utilities to expand solar options for low-income residents, nonprofits, and disadvantaged businesses through a mix of utility-scale solar and community solar projects.
- Eight states have laws enabling community choice aggregation.
- Boise, ID, updated zoning codes and streamlined the permitting process for a major boost in solar installations (see A Model City box on page 7 for more on Boise).
- In 2020, Colorado strengthened its regulations for oil and gas drilling despite the U.S. EPA's 2019 rollback of methane rules.
- New Bedford, MA, under the leadership of Mayor Jon Mitchell, aims to be America's offshore wind capital, through investments in port infrastructure and job training programs. Massachusetts offshore wind projects could generate nearly 10,000 jobs over 10 years and $2.1 billion for the state economy.

Cleaner electricity, continued

Key Strategies

- **Ending fossil fuel subsidies.**
- **Exploring divestment and clean investing.** Oil and coal aren't just hard on the planet; they're an increasingly shaky financial commitment, too.
- **Vocalizing support for federal tax incentives and recovery money for clean energy.**

Models for Progress

- One study's low-end estimate put direct state-level annual incentives at $5.8 billion. A New York state bill would require an annual analysis of fossil fuel tax incentives, paired with a sunset provision for the expenditures.
- Over 30 U.S. cities have moved investments away from fossil fuel holdings. Illinois Treasurer Michael Frerichs spearheaded a new law to encourage local and state governments to integrate sustainability into policies and decision-making when managing public funds.
- The 2009 Recovery Act was the largest single investment in renewables and serves as an example for how stimulus during recessions can spur green investments. Leaders should prioritize advocating similar federal funding, and be prepared with shovel-ready projects for any stimulus funds.

A MODEL CITY: ST. PETERSBURG, FLORIDA

St. Petersburg, FL, plans to grow smarter, from new green affordable housing all the way up to a denser, more equitable cityscape.

The Sunshine City already has a strong building record: In 2014, St. Petersburg had 830 boarded up homes. An innovative program to fix up dilapidated buildings brought that number to 277 in 2017. In addition, city employees work with volunteers to offer free home repairs to elderly, disabled, and low-income residents.

Now, under NewDEAL Leader **Mayor Rick Kriseman**, the Florida city plans to reach 100% clean energy by 2035. St. Petersburg has already begun retrofits in municipal buildings, but over the long run, it will build a $30 million program to spur major energy and cost savings. The city will update construction codes and procurement policies to boost electric vehicle infrastructure and fleet purchases. In addition, St. Petersburg will establish Property Assessed Clean Energy financing, expand solar in low-income areas, use density bonuses to encourage garage apartments and carriage houses, and increase green, affordable housing.

Importantly, St. Petersburg's roadmap focuses on including Black citizens and businesses in decision making. With an eye on Florida's long-standing racial inequities, St. Petersburg will engage communities of color to ensure a clean and just transition for all Sunshine City residents.

Smarter buildings

Buildings contribute nearly a third of U.S. greenhouse gas emissions. Substantially decarbonizing this sector requires reducing the energy demand of both existing buildings and new construction. Efforts must be made to dedicate funding for efficiency in low-income areas. These strategies can transform cities, neighborhoods, and homes to save energy and money.

Key Strategies

- **Retrofitting old homes and government facilities** to reduce energy use and bring down costs.
- **Creating a strategy to measure, track, and reduce building energy use** by raising the energy awareness of developers and residents, setting ambitious reduction standards, and requiring buildings to improve performance.
- **Requiring strict energy efficiency standards in new buildings.**
- **Encouraging all-electric standards in new construction or ensuring that new buildings can be converted later.**
- **Electrifying cooling and heating by offering rebates and incentives** for electric heat pumps, air conditioners, and water heaters.
- **Adopting a Buy Clean standard,** which requires government agencies to take suppliers' emissions into account when buying steel and cement.
- **Managing chemical refrigerants from air conditioners and refrigerators,** which have over 1,000 times the heating capacity of CO2.
- **Expanding the use of "intelligent" building components** that help adjust power usage based on demand and supply (like smart meters).
- **Making energy-saving tech accessible to all income levels.**
- **Supporting affordable housing and establishing strong green building standards for new units.**

Models for Progress

- Rhode Island provides low cost financing for retrofits of municipal buildings.
- Boston, MA, requires medium- and large-sized buildings to report their annual energy use. Every five years, these buildings must either conduct a major energy audit or make large efficiency improvements. In D.C., the carbon emission standard requires a minimum threshold of energy performance no lower than the local median ENERGYSTAR score by property type.
- Dallas, TX, under Mayor Eric Johnson, will require all new buildings to be net-zero starting in 2030.
- Dozens of localities in California have policies that encourage or require all-electric new buildings. Monterey Bay Community Power created a direct incentive program as well as other benefits.
- A New York state initiative uses aggregate purchases to drive down the cost of these technologies and connects potential consumers with installers.
- California considers carbons emissions in the infrastructure bidding process.
- The EPA's voluntary Responsible Appliance Disposal program helps states and cities properly dispose of these chemicals.
- Chicago installed over 4 million smart meters in residences, leading to insights into peak loads and how different neighborhoods use electricity.
- A Harlan County, KY, program covers the upfront cost for energy efficiency updates, allowing residents to slowly pay back improvements through savings on their bills.
- St. Petersburg, FL, is expanding sustainable, affordable housing (see A Model City box on page 9 for more about St. Petersburg).

Smarter transportation

In 2017, transportation emissions surpassed those from electricity generation as the top source of carbon emissions in the U.S. In order to effectively cut emissions, electric vehicles, mass transit, and other alternatives must be scaled up to replace gasoline-powered cars. Future-focused transportation policy and smart community planning can make these options practical and affordable for residents, with special effort given to ensure clean options are available in communities of color and other populations who traditionally have less access.

Key Strategies

- **Supporting stronger fuel efficiency standards** in line with Obama-era rules that aimed for about 54 miles/gallon by 2025.
- **Establishing state-level clean truck rules** that gradually ramp-up fuel standards and eventually require all new trucks sold in the state to be zero-emission.
- **Facilitating the extension of electric vehicle charging networks** by streamlining permitting needed to add new charging stations, and offering public funds to support private efforts.
- **Requiring electric vehicle charging stations and bike racks in major projects.**
- **Incentivizing electric and hybrid cars** through rebates, tax credits, lower registration fees, charging networks, and special access to carpool lanes.
- **Investing in mass transit and electric buses.**
- **Addressing the last-mile problem,** where the last leg of a trip keeps public transit out of reach for many residents.
- **Revisiting zoning codes that make it difficult to build walkable neighborhoods.**

Models for Progress

- Over a dozen states follow California's fuel guidelines and attorneys general from 23 states, D.C., and four cities have joined a lawsuit to defend national clean car rules, opposing a new EPA rule that dramatically reduces fuel efficiency goals. A CA deal with four automakers would require cars to reach 50 miles/gallon by 2026.
- The new California Clean Trucks Rule will mean more than half of the trucks sold in the state are zero-emission by 2035, with all trucks zero-emission by 2045, recognizing 2 million diesel trucks result in 70 percent of state's smog-causing pollution. Nonprofit CALSTART predicts that medium and heavy-duty zero-emission vehicle models will grow 78 percent in 2020.
- Michigan awarded $1.7 million in grants in 2017 to support public and private entities to build 36 new fast-charging stations.
- A handful of cities and towns across Colorado have built EV requirements into parking and building codes.
- Colorado aims to have 1 million electric vehicles on the road by 2030 and encourages their adoption through fast-charging infrastructure investments, purchasing incentives, and the adoption of zero emission buses and heavy-duty vehicles.
- Lincoln, NE, is phasing out old diesel buses for clean and more reliable electric buses under Mayor Leirion Gaylor Baird.
- Under Mayor Chris Cabaldon, West Sacramento, CA, partners with ride-sharing service Via to link residents in transit-scare neighborhoods.
- Minneapolis, MN, ended single-family zoning, a move that will boost density & affordable housing.

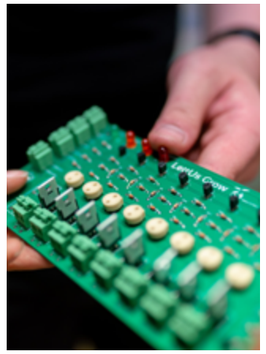
Smarter transportation, continued

Key Strategies

- **Encouraging affordable, dense housing near mass transit.**
- **Studying and addressing historical disparities in transportation equity.** The average American spends more on transportation than on food or healthcare, and unequal investments mean growing inequities in regions across the U.S.
- **Adopting congestion pricing in traffic-choked areas.**
- **Collaborating regionally to foster greener transportation options,** especially in rural areas.
- **Building protected bike lanes**, as safer streets increase bicycle ridership.
- **Prioritizing road and highway repair and maintenance over new lane construction,** as these projects improve traffic safety and create more jobs while highway expansion only invites more driving and more emissions.
- **Investing in intercity passenger rail as an alternative to flying,** including by bringing together states within a region to provide new or expanded rail services.

Models for Progress

- Under Mayor Michael Hancock, Denver, CO, provides below-market interest rate loans to affordable housing developers who build close to transit lines.
- San Francisco, CA, worked with neighborhood groups to improve transit in low-income neighborhoods and communities of color. The Muni Service Equity Strategy works with neighborhood stakeholders to identify the biggest service needs in the community.
- New York City's planned cordon pricing for parts of Manhattan could bring in $1.1 billion a year for improving transit and $100 million in health cost savings while cutting car emissions in the area by 7 percent.
- Seven Western states, from Montana down to Arizona and New Mexico, will work together to create a charging corridor for electric vehicles.
- A study found that separated bike lanes led to 44 percent fewer fatal crashes in places like Portland, OR, and San Francisco, CA.
- The New Jersey Department of Transportation has spent 57% of its highway funding on repair and maintenance work over the past decade, and as a result has seen the condition of its roads improve.
- Alabama, Louisiana, and Mississippi have come together to form the Southern Rail Commission, leveraging federal funds to bring back Southeast regional rail service that has been suspended since Hurricane Katrina.



Invest in innovation

Even with concerted efforts to reduce carbon emissions, it is uncertain that our current technologies will scale dramatically or fast enough to avert serious environmental damage. State and local governments are investing in emerging technology that could help close the gap.

Key Strategies

- **Researching, testing, and procuring advanced technologies,** including providing support for research into next-generation nuclear, captured and stored carbon, and hydrogen.
- **Creating low carbon fuel standards markets** in large states or regional coalitions, which provide financial incentives for captured and stored carbon.
- **Engaging industry to adopt energy- and emissions-saving technology.** A full 10% of global emissions come from energy-heavy industries including fertilizer, steel, and concrete.
- **Applying for authority to enforce EPA regulations for safe underground carbon storage.**

Models for Progress

- The federal USE IT Act would boost research, provide funding, and improve the permitting process for captured and stored carbon. Advanced nuclear designs that are safer than conventional nuclear or burn radioactive waste are popping up around the U.S. The passage of the Nuclear Energy Leadership Act by Congress would help bring these designs to market.
- California's low carbon fuel standard market allows direct air capture technology to participate.
- Hawaii is testing CO2-injected concrete for paving infrastructure. The passage of the federal Clean Industrial Technology Act would incentivize innovation in this sector, including through carbon capture, innovative building materials, and alternative fuels like hydrogen.
- North Dakota has received this "primacy" authority and at least two other states have applied. These states will be able to advance carbon storage projects much faster than other states which have to wait for EPA to act directly.

Making polluters pay

Policymakers must consider efforts that bring together all climate solutions. Carbon pricing requires polluters to pay for the climate damages that their activities or products create, encouraging innovation and private sector investment. The resulting revenue can be reinvested in climate solutions that return economic and social value to communities. Specific efforts should be made to invest in lowering energy costs and improving efficiency in traditionally disadvantaged communities. State and local governments worried about leakage or efficiency of such a program should consider regional or cross-state coalitions. The two dominant forms of carbon pricing are cap-and-invest and carbon fees.

Cap-and-invest systems

Cap-and-invest (previously known as cap-and-trade) systems require major polluters to submit permits equal to the pollution they emit. The government auctions off a limited number of these permits that decreases yearly, called a "cap". This offers the government certainty over resulting emissions by controlling the number of permits available over time, and raises significant revenue via the auctioning of permits.

Carbon fees

Carbon fees require major polluters to submit direct payments according to their emissions, rather than permits. The price of pollution is typically scheduled to predictably rise over time, and can be structured as a tax or fee, typically depending on the desired use of revenue. This approach provides more stable revenue than cap-and-invest, but with less certainty over resulting emissions.

Key Strategies

- **Ensuring effectiveness by scheduling an emissions cap or fee trajectory** that will deliver sufficient contributions to climate goals.
- **Designing adjustment mechanisms and review periods** to maintain a stable program over time.
- **Ensuring the system is equitable** and doesn't concentrate pollution in vulnerable communities and benefits in already healthy neighborhoods. Highlighting this need, one study on California's cap-and-invest found that the companies that purchased allowances to pollute were disproportionately located in front-line communities.
  - » **Establishing equitable investment principles** to maximize environmental and socioeconomic benefits in disadvantaged communities.
  - » **Protecting low- and moderate-income households from economic strain** by returning revenue directly to vulnerable households.

A Model for Progress

California's cap-and-invest system helped the state reduce emissions to 1990s levels in 2016, four years ahead of schedule. One study finds that $4.1 billion invested from the revenue has brought in an estimated $19.7 billion in health and climate benefits to the state. Since August 2017, 60% of investments have been located in and directly benefiting disadvantaged and low-income communities.

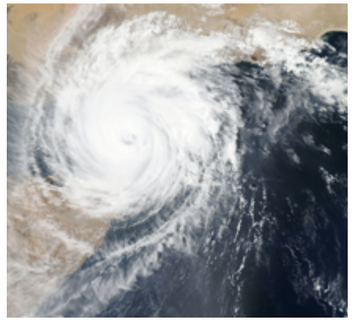
California's Low Carbon Fuel Standard also operates as a cap-and-invest system. The program cleans up the transportation sector by incentivizing the use and production of cleaner, low-carbon fuels. Distributors of high-carbon fuels can bank and trade credits, but the LCFS encourages energy innovation and cutting emissions while boosting electric vehicles.

Section 2:

Building Resiliency

A hotter climate has already led to more frequent and intense weather, including flooding, hurricanes, wildfires, heatwaves, and megadroughts. These extreme events threaten critical infrastructure, including power grids, rail systems, roads, and water supplies. Cities and towns, designed for a safer climate, face regular batterings under 100-year storms. Uncertainty plagues agriculture in the U.S. and abroad; food shortages and weather disasters could cause the forced migration of 143 million climate refugees by 2050. Frontline communities, already vulnerable from decades of pollution and neglect, stand to bear the worst impacts of dangerous weather.

Cities and states must prepare for climate impacts by instituting forward-thinking, equitable policy. By listening to both science and impacted populations, innovative state and local leaders are creating stronger, more just communities. Following their recommendations will help build a resilient America.



Policy Goals

While working to reduce greenhouse gas emissions, policymakers must also act with urgency to prepare for the impacts of climate change.

Leaders must evaluate, promote, and fund resiliency initiatives that limit damage from extreme weather.

State and local leaders must build climate resiliency in their communities and adapt everything from infrastructure to building codes to zoning in order to protect against climate threats.

Neighborhood engagement must be prioritized; policy must protect vulnerable populations while avoiding displacement, and the burdens of mitigation and adaptation must be shared equitably.

Finance resiliency

The costs of climate change are rising, particularly due to damage from extreme weather events like hurricanes and wildfires, while those least able to afford them will bear the most serious consequences. As these events grow in frequency and severity, it's imperative for state and local governments to invest in resiliency efforts. This work, however, can be expensive, and requires new funding streams and creative uses of existing resources.

Key Strategies

- **Using funding from existing federal sources,** like FEMA's Hazard Mitigation Assistance.
- **Utilizing HUD Community Development Block Grants.**
- **Repurposing state revolving funds or existing fees** (like stormwater fees) for resiliency efforts.
- **Allowing Property Assessed Clean Energy (PACE) financing for use on resiliency projects.**
- **Exploring new bonding options,** like green and resiliency bonds.
- **Creating new resiliency-focused infrastructure banks.**
- **Allocating money from carbon pricing for resiliency efforts.**

Models for Progress

- A benefit-to-cost analysis on mitigation grants from FEMA, EDA, and HUD found six dollars in benefits for every dollar invested. Florida communities apply for resiliency, preparation, and mitigation funding connected to flooding and hurricanes.
- HUD made $6.875 billion available for nine states, on the condition that the projects are designed to reduce overall risks. Texas received $4.38 billion to recover from storms like Hurricane Harvey and to reduce the risk of future damages.
- Miami Beach, FL, will use stormwater utility rates to invest $650 million in flood-resistant infrastructure and a drainage system.
- Virginia allows building improvements like flood mitigation and dry proofing basements to be funded through PACE.
- San Franciscans voted for a $425 million bond to help pay for a new seawall.
- In 2018, the Rhode Island Infrastructure Bank released a strategy for funding climate resiliency with support from bank board member Rhode Island Treasurer Seth Magaziner. The National Green Bank Act would establish a federal effort to finance mitigation and adaptation efforts.
- Delaware has invested money in sea-level rise and flooding protections through funds from the Regional Greenhouse Gas Initiative's CO2 Budget Trading Program.

Equitable planning

Climate change will have an outsized impact on low-income people and communities of color. Higher temperatures lead to more premature or stillborn births, particularly for Black mothers and their babies. Frontline communities face both encroaching pollution and rising sea levels. State and local officials have worked to strengthen both the economics and resiliency of communities through thoughtful investment and planning.

Key Strategies

- **Avoiding displacement of existing neighborhoods, residents, and businesses** through careful planning and built-in policy flexibility for vulnerable communities.
- **Prioritizing neighborhood planning and engagement for equity and sustainability;** let communities help drive their climate adaptation efforts.
- **Building rural resiliency** through investment in farmers, sustainable agriculture programs, and rural communities.
- **Instituting community emergency response plans,** especially for vulnerable populations.
- **Working with public health officials and departments to identify and quantify the health costs of failing to mitigate climate change.**
- **Studying the health and quality-of-life impacts of pollution on different communities,** with the knowledge that climate change is already having an outsized impact on low-income communities and communities of color: Black Americans are 75 percent more likely than white Americans to live in polluted communities.

Models for Progress

- About 20% of California's 2018, $4 billion resiliency bond was earmarked to fund wildlife, drought, and flooding projects in disadvantaged communities.
- A grassroots effort led by Portland, OR communities of color brought together a wide array of local businesses, organizations, and neighborhoods to fund climate resiliency through a 1% surcharge on large retailers.
- A Center for American Progress report found that protecting farmland from development and encouraging cover crops would deliver huge savings in soil health and flooding and help keep family farms viable.
- After Hurricanes Sandy and Irene overwhelmed the emergency systems in Princeton, NJ, Mayor Liz Lempert instituted outreach and support plans for vulnerable community members as well as a public education campaign.
- Salt Lake City, UT, has held regular climate and health symposiums to discuss local impacts. New Orleans, LA, hosted community conversations and mapped health needs in the face of extreme storms.
- Under Mayor Greg Fischer, Louisville, KY is measuring air pollution's impacts in urban areas. The Green Heart Program plants trees and preserves green space, and then quantifies the health and environmental benefits through rigorous study.

Plan for flooding and sea-level rise

Addressing the threat from extreme flooding involves both adapting current buildings and infrastructure in flood zones, as well as updating zoning laws and building codes so that future building is more resilient. State and local leaders are acting on a wide variety of policies to protect against extreme flooding.

Key Strategies	*Models for Progress*
• **Providing disclosure of updated flood zone information and previous flood claims prior to real estate transactions**, while helping property owners understand their flood risk by providing data and information in easy-to-use and publicly available tools.	• Stream sensors, floodplain maps, and a free online tool keep Iowans up-to-date on flood risks.
• **Providing new, creative funding mechanisms** to help private building owners to fund flood and other resiliency improvements. Programs must be implemented with consumer protections to ensure loans are made to borrowers who can afford them.	• Since 2010, thousands of Floridians have used PACE financing to safeguard their homes against severe storms and hurricanes.
• **Updating zoning laws** to reflect higher flooding resiliency requirements.	• Norfolk, VA, requires applicants to address resiliency through risk reduction, stormwater management, and energy (see A Model City box on page 19 for more about Norfolk).
• **Mandating resiliency measures in transportation, insurance, and construction codes,** including through updating precipitation models for current conditions amid climate change impacts.	• St. Petersburg, FL, is upgrading its codes, starting by requiring the use of regionally specific climate science in city development project planning and the prioritization of resiliency upgrades in city operational budgets.
• **Supporting federal efforts to reform flood insurance markets and ensure that property owners can purchase coverage** at affordable rates while having access to the capital necessary to flood-proof their homes and businesses.	• The bipartisan State Flood Mitigation Revolving Fund Act of 2019 would drive down flood insurance premiums by creating a low-interest loan program to help property owners better flood-proof their homes and businesses.
• **Investing in green infrastructure** like porous pavement and rain gardens.	• After Hurricane Sandy, Hoboken, NJ replaced concrete with green space and installed underground stormwater tanks.
• **Encouraging managed retreat** from high-risk areas.	• Thousands of Houston homeowners requested their county to use FEMA funds to buy their Hurricane Harvey-flooded homes.

Wildfire resiliency

Since 2000, more than a dozen fires have caused over a billion dollars in damages in the U.S., occasionally burning through Christmas. With climate change, fire season will continue to grow longer as more frequent megafires threaten communities and fill the air with unhealthy smoke. Policymakers are increasingly trying to limit the damage from these disasters.

Key Strategies	*Models for Progress*
• **Studying fire risks and updating zoning to limit building in severe risk areas.**	• Santa Fe, NM gives greater scrutiny to applications and limits development in a high-risk district within its Wildland-Urban Interface.
• **Requiring buffer zones and fire-resistant building materials** in at-risk homes.	• Boulder County, CO, conducts on-site assessments to help homeowners figure out fire risks and requires wildfire-resistant measures in building codes.
• **Following the science on sustainable forest management** and supporting wildlife prevention and ecosystem resiliency projects that will help prevent major carbon releasing events while keeping local residents safe.	• In Northern California, tribes increasingly use the millennia-old practice of controlled burns to keep forests healthy.
• **Raising public awareness can build support for wildfire management projects in the broader community,** like prescribed fires.	• Wildfire prevention education in Florida brought $35 in benefits for every dollar spent, according to one study.

A MODEL CITY: NORFOLK, VIRGINIA

Norfolk, VA, sits on the frontlines of climate change.
The Hampton Road city is on sinking land and has 144 miles of coastline. Norfolk experiences increasingly intense precipitation and significant tidal flooding due to sea level rise. And, as the home of the world's largest naval base and one of the nation's busiest seaports, the city is critical to national and economic security.

Luckily, Norfolk is a bold model for how to "live with the water." Since sea-level rise doesn't care about city limits, Norfolk fostered relationships with regional partners. The city started working with the public and private sector to secure funding, including a $120 million resiliency grant from the Department of Housing and Urban Development. And Norfolk partnered with the Army Corps on a major flooding study while soliciting extensive community feedback.

Norfolk encourages new development in safe areas while protecting existing neighborhoods with pumps and seawalls. The city's updated zoning requires elevated buildings, limited parking, open space, and impervious pavement in flood-prone areas. Norfolk put $5 million into an accelerator for resiliency technology that other cities could purchase. Norfolk's combination of retreat and adaptation makes the city a global leader in realistic and economically innovative planning.

City Councilmember Andria McClellan was key to Norfolk's resiliency efforts. "It is difficult to tackle such an existential threat as sea level rise," the NewDEAL Leader said, "But, we have focused on community engagement, regional collaboration, and innovative zoning and business opportunities to ensure our city becomes the coastal community of the future."

A MODEL CITY: PHOENIX, ARIZONA

Phoenix, AZ, has a heat problem -- and a plan to address it.

In 2019, the Phoenix region experienced 103 days over 100 degrees and the country's highest number of heat-related fatalities. Extreme heat is particularly dangerous in tree-barren, concrete-heavy, low-income neighborhoods, where communities of color endure even hotter temperatures than wealthier areas.

Without a strong plan, the city could face failing infrastructure and megafires. Inequalities could worsen and deaths could increase as aging public housing fails to keep out the heat and air conditioners shudder to a stop during power outages.

Luckily, Phoenix is rising to the challenge. NewDEAL Leader **Mayor Kate Gallego** plans to make Phoenix "the most sustainable desert city on the planet."

Phoenix will coat 36 miles of streets with cooling materials, expand its tree canopy, and help spread solar and microgrids to safeguard the city's energy supply. The city is developing cool corridors so residents will always be within walking distance to shade. Phoenix is working with researchers to develop a heat exposure simulation model to guide heat mitigation investments. Resident-driven heat action plans are tailored to each neighborhood's needs, including shade structures at bus stops, check-ins with vulnerable residents, and volunteer-led tree planting.

In a time of budget shortfalls, Phoenix has secured funding for its efforts, including a $100,000 grant from Bloomberg Philanthropies. A $30 million Choice Neighborhoods Implementation Grant from HUD will revitalize one low-income, sunbaked neighborhood and make its public housing safer for the rising heat.

Protect against extreme heat

Extreme heat kills more Americans than any other type of weather. As the U.S. experiences more frequent and longer heatwaves, and average daily and nighttime temperatures continue to rise, up to 28,000 more people could end up in the emergency room for heat-related illness every year by 2050, costing up to $52 million for treatment. The harm is especially focused among low-income residents and people of color who are less likely to have the resources to combat the heat. State and local leaders are working with their communities to find innovative solutions.

Key Strategies

- **Addressing urban heat islands,** where parts of cities are several degrees hotter than surrounding areas due to air patterns, a lack of green space, heavy industry, and heat-absorbing concrete.
- **Adopting materials for cooler buildings**, including cool roofs and pavement.
- **Planting trees to reduce pollution and cool the air** in urban areas and supporting community greening programs that foster educational partnerships.

Models for Progress

- Phoenix has created a first-of-its-kind model to address urban heat (see A Model City box above for more about Phoenix).
- New York City provides no-cost cool roof installations to nonprofits and low-income people, and found that in older buildings, the energy savings paid for the replacement in five years.
- Louisville, KY, aims for 45 percent tree canopy coverage and maximizes planting for health outcomes.

Section 3: Fostering Widespread Support

Climate change is finally a top concern for voters. A Third Way poll found significant support for addressing climate change including progressive voters and rural residents. More and more Americans recognize that cutting emissions and building resiliency can spur economic recovery while safeguarding the planet.

But these Americans aren't just needed at the ballot box. They are key to driving the very change they desire. Local governments typically contribute only 5% of emissions. Without strong community buy-in, wider CO2 reductions fail. And without public participation and input, policies could have unintended consequences for vulnerable populations. Addressing climate change requires both institutional leadership and public engagement. Here's a guide for building community dedication, spurring job growth, and creating long-lasting positive change.

Policy Goals

State/local leaders should look for opportunities to tie sustainable policy to strong, equitable economic growth.

Policymakers must be mindful of the interactions of various policies across issue areas, especially on the implications of these intersections for vulnerable communities.

Community engagement is critical to long-term change and resiliency.

State and local governments must engage a wide swath of constituents and communities in policy discussions and implementations, especially communities that have been historically underserved.

Invest in communities

As the U.S. transitions away from a fossil fuel economy -- and the instabilities and injustices caused by using dirty fuels -- opportunities emerge to create a cleaner, more resilient, and economically just system. Congressional conservation efforts could create up to 717,000 jobs. On the state and local level, leaders have been implementing positive change without having to wait for national action.

Key Strategies

- **Ensuring a just transition for communities impacted by shuttered power plants and the resulting loss of jobs and tax revenue.**
- **Investing in green jobs** and ensuring clean energy job training and education is available, especially for disadvantaged communities.
- **Putting money in job-creating restoration projects.**
- **Increasing access to credit and community wealth through working with local banks and protecting against predatory lending.**
- **Engaging with businesses to develop solutions that address communities' unique climate challenges and identifying means to green the economy.**

Models for Progress

- In Tonawanda, NY, leaders cushioned the blow of a closing coal plant by lobbying for bridge funding and engaging the labor community.
- Wisconsin, a state long impacted by manufacturing job losses, plans to grow the state's renewable energy sector to bring back higher-wage jobs (see A Model State box on page 23 for more about Wisconsin).
- Rebuilding reefs, restoring coastal wetlands, and replanting public forests could create tens of thousands of jobs while cutting emissions and building resiliency.
- A major report recommended increasing credit access in Boston as many residents were unable to afford the upfront costs of energy- and money-saving technology.
- As more corporations roll out new plans to reduce emissions, electrify fleets, and increase efficiency, governments have an opportunity to work with business so that their goals overlap and that government resources are used as efficiently as possible.

A MODEL STATE: WISCONSIN

Wisconsin makes big climate moves through community engagement.

In 2019, Wisconsin Governor Tony Evers and NewDEAL Leader **Lieutenant Governor Mandela Barnes** took office in a state where the previous administration was infamously unfriendly to both environmental and labor issues. Scott Walker dismantled the Badger State's climate efforts and clashed with unions, leading to huge public protests. Governor Evers and Lt. Governor Barnes hit the ground running to build a robust, climate-friendly, worker-focused economy. And it's doing so by listening to Wisconsinites.

In the new administration's first year, Wisconsin committed to 100% carbon-free electricity by 2050. As chair of the state's new Task Force on Climate Change, Barnes brought together a diverse coalition of business, community, labor, youth, and Indigenous leaders to participate in the task force and the group scheduled listening sessions to gather ideas from constituents on how to best reach that goal.

As COVID-19 tore across the country, the Task Force quickly pivoted to virtual meetings that convened a broad swath of residents. Members of Organic Valley, an environmentally friendly and nationally successful co-operative of dairy farmers, hosted one meeting, focusing on the importance of farmers to Wisconsin's economy: they make up 10% of the overall workforce and are disproportionately impacted by both climate change and a strained national economy.

In addition to rural constituents, Barnes is concerned about low-income communities and communities of color. Barnes grew up in Milwaukee and had childhood asthma, so he has firsthand experience of how environmental factors can exacerbate health problems and racial disparities. Centering environmental justice groups and listening to constituents helps ensure that no Wisconsin community is left behind in the transition to a clean economy. Over the past year, the task force has learned from Indigenous organizations working on climate adaptations, organizations developing green jobs in predominantly Black neighborhoods, and tribal nations working on food sovereignty.

"For far too long, Black, Indigenous, and other communities of color have been left out of conversations about the climate crisis, further perpetuating our country's significant racial and economic inequities," says Barnes. "Centering environmental justice is key to building a future that is both equitable and sustainable—one where every child has access to clean air and water, regardless of their zip code."

Wisconsin is ready for big, smart changes that will help pull the state past the economic losses from the pandemic. Hundreds of attendees have listened and shared during each of the climate calls. And a Madison-based utility recently announced it would shutter a coal plant in 2022 and make major investments in solar energy. It's all a part of an administration that takes justice, climate change, and workers seriously.

Enshrine environmental justice

In order to avoid exacerbating injustice, leaders must be able to predict the impacts of climate mitigation and adaptation policy. This requires tools, local knowledge, and community input that can help guide decisions and avoid unintended consequences. Model Washington state legislation, shepherded by NewDEAL Alum **former Representative Kristine Reeves**, is an excellent example.

Key Strategies and a Model for Progress

- **Committing – by law – to ensuring that all residents have access to a safe and healthy environment.** The Washington legislation would enshrine this responsibility into law.
- **Requiring state/local governments to identify and prioritize consideration of the impact on vulnerable communities in the development, implementation, and enforcement of laws and policies.** The Washington bill establishes a task force to incorporate this strategy into state agencies' planning.
- **Challenging government agencies to develop a tool to assess the impacts of existing policies and policy proposals on vulnerable groups.** The Washington Department of Health would create a cumulative impact analysis tool.

Engage your community

Climate messaging has shifted over the years. Before 2008, Armageddon and starving polar bears dominated global warming discussions. The conversation moved to opportunities like green jobs between 2008 and 2016. Now, as ecoAmerica describes, the most salient messaging has to do with personal relevance. Climate change impacts people's homes, children, and communities. ecoAmerica shares tips on how to effectively talk climate change and foster collective support and private leadership for decisive action.

Key Strategies

- **Building rapport.** Conversations should start with people and stay with people. Finding common values will help forge connections. Leaders should acknowledge ambivalence while being clear on the real, local impacts of climate change.
- **Updating keywords.** Some ways of describing problems and solutions are more effective than others. Say "attracts new business" instead of "good for the economy." "Home" and "stronger communities" are more relevant than "country" and "resilient communities." And saying we "can" do something is more empowering and less punitive than saying we "should. " For more on keywords, check out Eco America's extensive research and tips.
- **Strengthening messaging.** Message discipline is critical when discussing climate change. Leaders should stay above the fray by describing the problem instead of labeling the opposition. Stories help listeners connect on the message. One powerful fact from a trusted messenger builds clarity and urgency.
- **Inspiring and empowering residents.** Leaders should emphasize unambiguous solutions and make the connection to personal benefits like economic growth, better health outcomes, and more secure communities. Sequence matters in these conversations; leaders should end with their "ask."

About the NewDEAL Forum

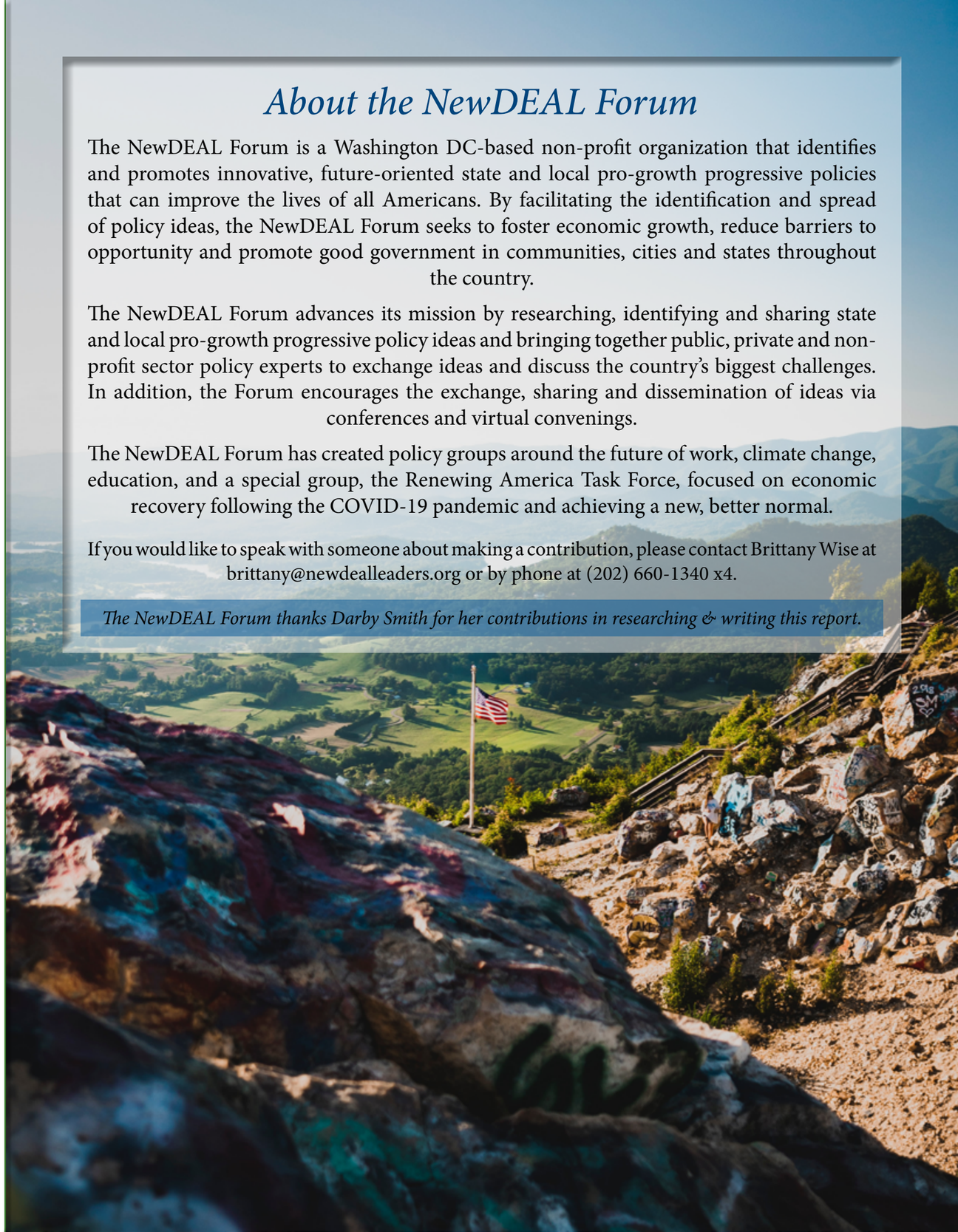
The NewDEAL Forum is a Washington DC-based non-profit organization that identifies and promotes innovative, future-oriented state and local pro-growth progressive policies that can improve the lives of all Americans. By facilitating the identification and spread of policy ideas, the NewDEAL Forum seeks to foster economic growth, reduce barriers to opportunity and promote good government in communities, cities and states throughout the country.

The NewDEAL Forum advances its mission by researching, identifying and sharing state and local pro-growth progressive policy ideas and bringing together public, private and non-profit sector policy experts to exchange ideas and discuss the country's biggest challenges. In addition, the Forum encourages the exchange, sharing and dissemination of ideas via conferences and virtual convenings.

The NewDEAL Forum has created policy groups around the future of work, climate change, education, and a special group, the Renewing America Task Force, focused on economic recovery following the COVID-19 pandemic and achieving a new, better normal.

If you would like to speak with someone about making a contribution, please contact Brittany Wise at brittany@newdealleaders.org or by phone at (202) 660-1340 x4.

The NewDEAL Forum thanks Darby Smith for her contributions in researching & writing this report.



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