

Policy Report by Data for Progress

A GREEN NEW DEAL

A **PROGRESSIVE VISION** for **ENVIRONMENTAL
SUSTAINABILITY** and **ECONOMIC STABILITY**

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INTRODUCTION

The popularity of progressive policies has been rising steadily since the 2016 Presidential Election season and has increasingly moved the Democratic Party in a more progressive direction. Mounting concern over economic inequality, injustice, and the threats of climate change are leading an increasing number of progressive candidates to call for more dramatic action. They propose an equitable transition to a 21st century economy and clean energy revolution that guarantees clean air and water, modernizes national infrastructure, and creates high-quality jobs.

This plan is called a Green New Deal.

So far, a comprehensive progressive vision of a Green New Deal has not been presented. This report articulates a vision for a broad set policy goals and investments that aim to achieve environmental sustainability and economic stability in ways that are just and equitable. This proposal recognizes:

FIRST

A Green New Deal is necessary to **meet the scale and urgency** of environmental challenges facing the United States, based on the best available research.

SECOND

A Green New Deal can **bring job growth and economic opportunity**, with particular focus on historically disadvantaged and vulnerable communities.

THIRD

A Green New Deal is **popular among American voters** and can mobilize them in 2018.

FOURTH

A Green New Deal can be executed in a way that is **environmentally just** and **distributes benefits equitably**.

FINALLY

A Green New Deal is **financially feasible and necessary**.

What is a Green New Deal?

A Green New Deal is a broad and ambitious package of new policies and investments in communities, infrastructure, and technology to help the United States achieve environmental sustainability and economic stability.

The original New Deal was a series of financial reforms, farmer relief programs, public works projects, and other social programs enacted by President Franklin Roosevelt in the 1930's. The New Deal was an economic and job stimulus to meet the needs of the time, designed to put Americans back to work, restore dignity, and bring stability during the Great Depression. Even with its mixed effectiveness, the New Deal was not perfect and displayed an exclusionary racial bias whose effects are still felt today.

America faces different challenges today that are unsustainable and existential.

Despite the achievements in environment regulation over the past 50 years, incremental policy changes and small shifts in market trends are no longer sufficient to meet the scale and urgency of the problems facing Americans and the world today. American lives and livelihoods rely upon clean air and water; healthy forests, farms, and fisheries; and communities resilient to the worst effects of climate change—such as extreme weather, drought, and sea-level rise. The effects of pollution and exposure to toxins persist, and climate change worsens. On top of it all, these all affect low-income communities and communities of color disproportionately.

We need to shift to a new sustainable environment and economy.

Sustainability is about utilizing and preserving resources in ways that meet the needs of today's generation without sacrificing the ability of future generations to meet their needs.

A Green New Deal recognizes that economic stability is not independent of environmental sustainability.

The trade-off between the environment or the economy is a false one. The goal of a Green New Deal is to build the 21st century economy, which by design will mitigate the causes of climate change while building resilience to its effects, restore the American landscape, and improve access to clean air and water—all in ways that prioritize justice and equity, and grow the economy and jobs.

Environmental regulation and climate action often receive less attention because they are perceived to compete with other local priorities—such as crime, schools, jobs, and potholes. A Green New Deal is not a distraction from local priorities but works to solve many of them.

We agree on the problems, now we need to agree on the solutions.

Green New Deal Policy Overview

THESE ARE THE PRIORITY POLICY GOALS OF A GREEN NEW DEAL:

TRANSFORM TO A LOW-CARBON ECONOMY

- ▶ 100% Clean and Renewable Electricity by 2035
- ▶ Zero Net Emissions from Energy by 2050
- ▶ 100% Net-Zero Building Energy Standards by 2030
- ▶ 100% Zero Emission Passenger Vehicles by 2030
- ▶ 100% Fossil-Free Transportation by 2050

FULFILL THE RIGHT TO CLEAN AIR AND CLEAN WATER

- ▶ National Clean Air Attainment
- ▶ Cut Methane Leakage 50% by 2025
- ▶ National Lead Pipe Replacement & Infrastructure Upgrades
- ▶ Guarantee Access to Affordable Drinking Water
- ▶ Protect Two Million New Miles of Waterways

RESTORE THE AMERICAN LANDSCAPE

- ▶ Reforest 40 Million Acres of Public and Private Land by 2035
- ▶ Restore 5 Million Acres of Wetlands by 2040
- ▶ Expand Sustainable Farming and Soil Practices to 70% of Agricultural Land by 2050
- ▶ Cleanup Brownfields and All Hazardous Sites

STRENGTHEN URBAN SUSTAINABILITY AND RESILIENCE

- ▶ Establish a National Fund for Urban and Rural Resilience
- ▶ Expand Public Green Space and Recreational Land and Waters
- ▶ Modernize Urban Mobility and Mass Transit
- ▶ Zero Waste by 2040
- ▶ Capture 50% of Wasted Methane by 2040

PUT A GENERATION TO WORK

- ▶ Create 10 million new jobs over 10 years through employment and training programs associated with Green New Deal grants and projects

ENSURE A JUST TRANSITION

All Green New Deal grants and projects must comply with:

- ▶ Environmental Justice Standards
- ▶ Job Quality Standards

A GREENPRINT FOR A NEW DEAL

A Green New Deal is more than just renewable energy or job programs. It is a transition to the 21st century economy.

It is a holistic combination of solutions at every level—federal, state, and local—and addresses many problems simultaneously.

It does this because it must. It must meet the scale and urgency of the problems facing America and Americans.

It must also meet the level of progressive ambition looking to transform the economy and the environment in ways that achieve sustainability, equity, justice, freedom, and happiness.

This section details specific progressive goals and the type of policies and investments that are needed to advance them.

TRANSFORM TO A LOW-CARBON ECONOMY

The United States needs to reduce its annual greenhouse emissions from 2016 by 16 percent to achieve our 2025 reduction target communicated through the Paris Agreement¹, and 77 percent to reach our 2050 target.² To strive for the global goal of a 1.5-degree future, the U.S. should aim for zero net emissions by mid-century. This requires massive economic and technological transformation in how we create and consume energy, build structures, and transport people and goods. This transformation must accelerate now.

CLEAN & RENEWABLE ENERGY

✓ 100% Clean and Renewable Electricity by 2035

All electricity consumed in America must be generated by renewable sources, including solar, wind, hydro, geothermal, sustainable biomass, and renewable natural gas, as well as clean sources such as nuclear and remaining fossil fuel with carbon capture.

✓ Zero Net Emissions from Energy by 2050

We must end all emissions from fossil fuels. The full U.S. economy can and must run on a mix of energy that is either zero-emission or 100 percent carbon capture by mid-century.³ This includes residential, commercial, and industrial electricity; thermal energy; and transportation.

POLICIES

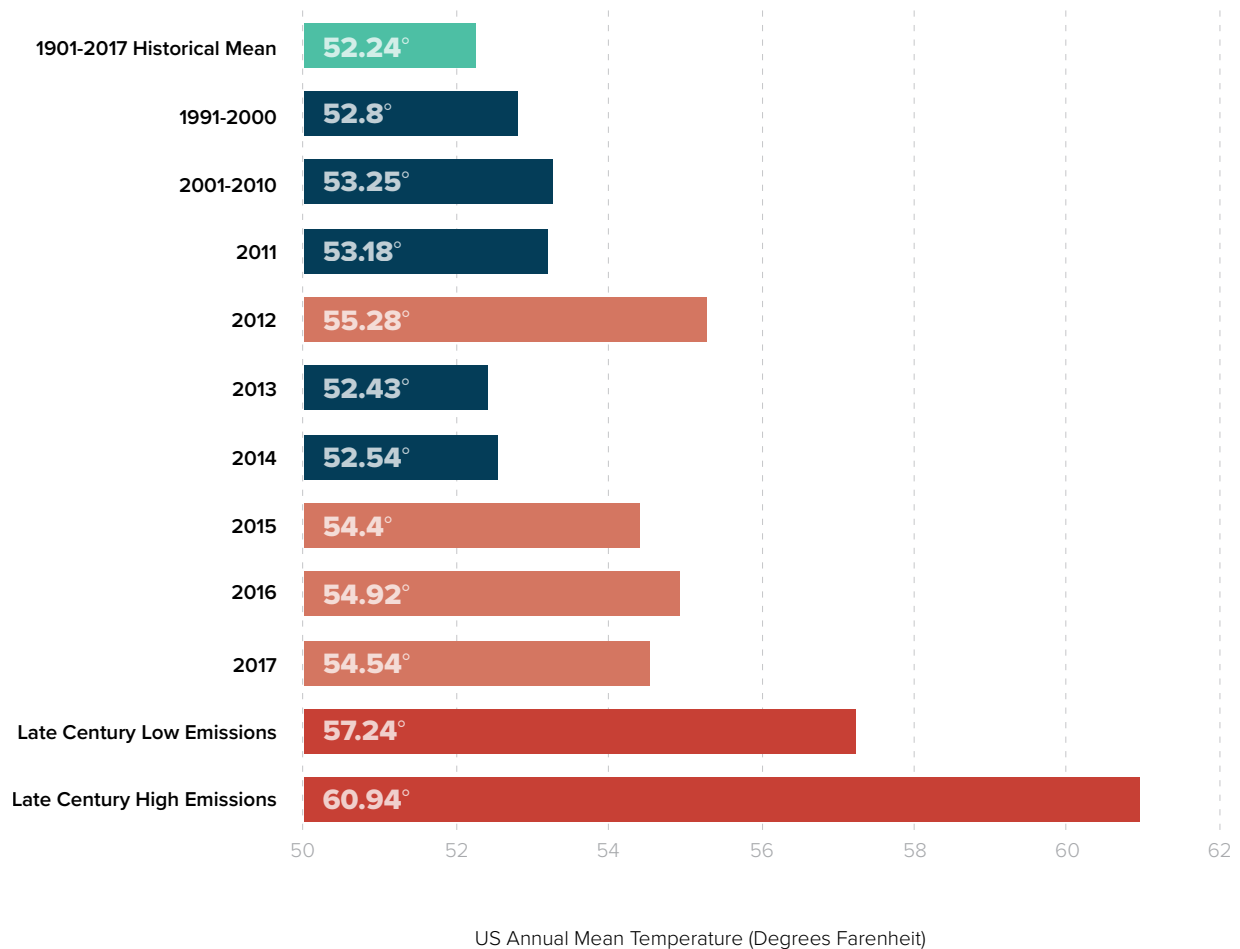
- ▶ Enforce the Clean Power Plan to regulate carbon dioxide emissions from power plants
- ▶ Establish high clean and renewable energy portfolio standards in every state
- ▶ Institute clean and renewable energy tax credits for new installations
- ▶ Modernize electricity regulatory structures and markets to encourage more renewables
- ▶ Set federal and state prices on carbon, particularly corporate pollution
- ▶ End fossil fuel subsidies
- ▶ Cease issuing new permits for fossil fuel projects without 100 percent carbon capture
- ▶ Phase out coal plants and exports of fossil fuels

INVESTMENTS

- ▶ Workforce development and training for clean and renewable energy
- ▶ Transition assistance for affected communities, including unemployment and healthcare
- ▶ Renewable and clean energy innovation and rapid deployment
- ▶ Loan guarantees and financing for utility scale projects
- ▶ National grid integration and modernization
- ▶ Small-scale and grid-scale battery storage innovation and deployment
- ▶ Negative emissions technology, including direct air and flue gas capture systems
- ▶ Carbon product innovation and commercialization
- ▶ Renewable natural gas innovation and deployment
- ▶ Fuel-switching support for industry and manufacturing, including electrification and biofuels

THE FOUR HOTTEST YEARS HAVE COME IN THE PAST SIX YEARS

CARBON DIOXIDE AND OTHER GREENHOUSE GASES EMITTED FROM OUR USE OF FOSSIL FUELS FOR ENERGY AND TRANSPORTATION ARE CAUSING U.S. AVERAGE TEMPERATURES TO INCREASE. DECARBONIZING OUR ECONOMY IMMEDIATELY MAY AVOID MORE EXTREME RISES IN THE FUTURE.



Source: NOAA National Centers for Environmental Information, Climate at a Glance: National Time Series

ENERGY EFFICIENCY

✓ 100% Net-Zero Building Energy Standards by 2030

Buildings can stand and operate for over 100 years, and current building standards are not in line with goals for deep decarbonization. Yet buildings also have the highest potential for low-cost emission reductions of all sectors. We must start constructing and retrofitting to the highest performance standards now to avoid locking in outdated technology and to reach these goals by mid-century. New technological innovation every year will push the potential of building and industrial efficiency, helping American citizens and businesses lower energy costs and be more competitive.

POLICIES

- ▶ Set net-zero energy and high-performance buildings standards for new commercial and residential construction and retrofit requirements for existing structures
- ▶ Establish energy efficiency resource standards for electricity and natural gas suppliers
- ▶ Ratchet up appliance, lighting, and equipment efficiency standards and establish tariffs on low-efficiency imports
- ▶ Expand energy efficient commercial building and home credits
- ▶ Expand energy efficient appliance and equipment rebates
- ▶ Phase out incandescent and compact fluorescent lighting

INVESTMENTS

- ▶ Workforce development and training for energy efficient design, construction, retrofitting, auditing, and appliance installation industries
- ▶ Efficiency technology innovation, demonstration, and deployment
- ▶ Public trust funds for community efficiency efforts
- ▶ Community residential and commercial weatherization programs
- ▶ Net-zero construction and high-performance retrofits for public buildings, universities, schools, and hospitals
- ▶ Industrial efficiency equipment and retrofit support programs

TRANSPORTATION

✓ 100% Zero Emission Passenger Vehicles by 2030

The technologies already exist; we only need to scale-up charging infrastructure and consumer incentives to transition 100 percent of sales to zero emission passenger and light duty vehicles by 2030, followed with a swift phase out of internal combustion engines.

✓ 100% Fossil-Free Transportation by 2050

To reach decarbonization goals, we must transition away quickly from the use of fossil fuels in aviation, heavy duty vehicles, and rail. Not everything can be electrified, meaning we must innovate and scale up the next generation of biofuels and carbon-neutral fuels.

POLICIES

- ▶ Zero-emission passenger and light duty vehicle standards
- ▶ Hybrid and electric vehicle purchaser credits
- ▶ Low-emission and biofuel standards for heavy duty vehicles
- ▶ Carbon-fee for aviation, maritime transport, and rail
- ▶ Biofuel producer credits
- ▶ Phase out oil exports and leases on public lands

INVESTMENTS

- ▶ National electric vehicle charging infrastructure, including highways, workplaces, and housing
- ▶ Public procurement of 100 percent electric vehicles
- ▶ Combustion engine vehicle buyback and recycling
- ▶ Electrification of mass transit, buses, rail lines, and train engines
- ▶ Modernized, affordable, accessible, and reliable public mass transit
- ▶ Second and third generation biofuel and carbon-neutral fuel innovation and deployment

CLEAN AIR AND CLEAN WATER NEED TO BE A RIGHT

While air and water quality have dramatically improved in the U.S. since the passage of landmark environmental regulations in the 1950s and 1970s, progress has slowed.⁴ Too many Americans live without access to consistent clean air and clean water. Air pollution from vehicles and smokestacks cause 200,000 early deaths each year and led to negative health effects such as asthma and lung disease.⁵ America's drinking water and waterways are threatened by aging infrastructure and pollution from fossil fuel production. We cannot guarantee clean air and clean water without cutting emissions and fossil fuel extraction.

CLEAN AIR

✓ National Clean Air Attainment

Forty-two percent of the U.S. population—over 130 million Americans—live in areas that still have not attained national Ambient Air Quality Standards as ozone and particulate matter pollution are still too high.⁶ While the EPA continually eases air quality regulations, 22 states do not meet ozone standards.⁷ Ground-level ozone, or smog, has worsened significantly in recent years as higher average temperatures and more days of extreme heat intensifies smog.⁸ Reductions in fossil fuel combustion and certain industrial activities will reduce ozone and particulate pollution across the country, especially in urban areas where air quality tends to be worse.

✓ Cut Methane Leakage 50% by 2025

Methane, a greenhouse gas 28-36 times more potent than carbon dioxide, is the second-largest industrial source of climate pollution from the oil and gas industry. Methane leaks from oil and gas production and distribution cost the U.S. economy approximately \$2 billion annually.⁹ These leaks are enough to power 6.5 million homes a year. Much of the pollution can be curbed with existing low-cost technologies that can improve air quality and reduce emissions.¹⁰

POLICIES & INVESTMENTS

- ▶ Fully enforce the strengthened National Ambient Air Quality Standards of 2015
- ▶ Strengthen and enforce Obama-era rules on methane leakage
- ▶ Establish and fund a national clean air attainment program to incentivize and support private companies to reduce harmful air pollutants and emissions¹¹
- ▶ Accelerate the pace of natural gas pipe replacement in leak-prone areas
- ▶ Require methane leak detection and mitigation systems for all oil and gas operations
- ▶ Invest in new technology to convert methane gas to methanol, a liquid that can be easily transported and allow for a low-cost option to capture methane leaked during drilling¹²

CLEAN WATER

✓ National Lead Pipe Replacement & Infrastructure Upgrades

America's problems with lead in drinking water extend well beyond Flint, Michigan. In 2015, 18 million people were served by water systems with lead violations.¹³ We need to remove lead service lines and fix other water problems with a prioritization of underserved communities. This requires meaningful investments in water treatment infrastructure upgrades across the nation. And yet, federal investment in local water infrastructure has declined from covering 63 percent of costs in 1977 to just 9 percent today.¹⁴ By investing in clean water infrastructure, it will stimulate the development of economically-critical projects that will create jobs and increase American economic competitiveness.¹⁵

✓ Guarantee Access to Affordable Drinking Water

To keep up with the mounting costs of water infrastructure needs, many utilities across the country have been increasing water rates. In some cities, the average monthly cost of water for a family of four has increased 30 percent since 2011.¹⁶ In 2015, 1 in 9 households in Detroit had their water shut off because of prohibitively high water bills. The EPA needs to establish more consistent and comprehensive standards on water affordability, protecting low-income residents from extreme price increases.

✓ Protect Two Million New Miles of Waterways

The quality of our water supply also depends on the restoration, conservation, and sustainable land management of forests and wetlands. The 2015 Clean Water Rule, if fully enforced, would extend protections to two million new miles of streams and tributaries, and 20 million acres of wetlands. Protecting our watersheds and waterways, particularly upstream, benefits our natural environment, human health, and food supplies, as well as enhances the resiliency of our built infrastructure. Waterways and their related forests and wetlands constitute a natural infrastructure that saves money and produces additional benefits such as reduced emissions, jobs, and habitat protection.¹⁷

POLICIES

- ▶ Ban hydraulic fracking to prevent harmful chemicals from entering groundwater and drinking water supplies
- ▶ Implement and enforce a bolstered Lead and Copper Rule, while letting citizens more easily sue for relief from contaminated water
- ▶ Reinstate and implement the Obama-era "Clean Water Rule" to limit pollution in a variety of streams, tributaries, and wetlands
- ▶ Guarantee access to clean and affordable water in all American households
- ▶ Ban unsustainable groundwater mining by large-scale agribusiness
- ▶ Promote agriculture practices that prevent agricultural runoff that contaminates water

INVESTMENTS

- ▶ Establish a National Infrastructure Bank and Clean Water Trust Fund¹⁸
- ▶ Provide long-term funding for the EPA's Water Infrastructure Finance and Innovation Act (WIFIA) program, an initiative to accelerate investment our water infrastructure by providing long-term low-cost supplemental loans for local and national projects¹⁹

RESTORE THE AMERICAN LANDSCAPE

It is hard to envision America without picturing its glorious landscape—whether it is the rolling plains and hills, wide rivers, snow-capped mountains, sandy coastlines, great lakes, or rich forests. The American landscape is not only our heritage but also a vital resource. Our lives and livelihoods rely upon the landscape for food, fiber, minerals, homesteads, protection, wildlife, and recreation. Clean air and clean water are not possible without healthy, robust lands. This landscape is our largest natural emissions sinks, literally absorbing millions of tons of greenhouse gases out of the air annually. We must tend to it.

FORESTS

✓ Reforest 40 Million Acres of Public and Private Land by 2035

America's forests are 25 percent smaller than they were when settlements began around 1630, and only a fraction of what remains is old-growth forest, while the rest is regrowth of deforestation.²⁰ Forested lands continue to come back slowly, but it is well below the pace needed. To reach a net-zero emission economy by mid-century, we must reforest land—in other words, the remaining emissions our economy still creates are canceled out by the emissions absorbed by land. Similarly, many forests are badly in need of restoration, threatened by drought, wildfire, and invasive species, which are only exacerbated by climate change.

POLICIES & INVESTMENTS

- ▶ Provide workforce development and training for reforestation programs
- ▶ Expand and defend public lands, public forests, and national and state parks
- ▶ Replant public forests, and support community and urban tree planting programs
- ▶ Incentivize and track private land easements and voluntary conservation
- ▶ Create public trust funds for reforestation efforts
- ▶ Promote conservation forestry on agricultural lands
- ▶ Provide sustainable agroforestry tax credits
- ▶ Promote and subsidize sustainable wood products
- ▶ Improve forest management standards



Expanding forests by 40-50 million acres by 2035 could achieve reductions of 600 million tons of carbon dioxide equivalent by 2050. With forests as part of a holistic plan, the full land carbon sink could offset up to 45 percent of economy-wide emissions annually by 2050.²¹

WETLANDS

✓ Restore 5 Million Acres of Wetlands by 2040

Wetlands—including swamps, marshes, and peatlands—are vital ecosystems for all types of wildlife and biodiversity. They support seafood, recreation, and tourism industries; protect American shorelines from storm surge; filter water; and absorb carbon. America has lost over half of its original wetlands.²² The rate of loss is increasing, and a third of what remains is in poor condition.^{23,24,25}

POLICIES & INVESTMENTS

- ▶ Provide workforce development and private land owner training for wetland restoration
- ▶ Establish more national and state wildlife refuges in wetlands
- ▶ Increase funding to Conservation Innovation Grants and other public and private wetland restoration and protection programs
- ▶ Create public trust funds for restoration efforts
- ▶ Expand wetland reserve easements and tax deductions for private wetland conservation

SUSTAINABLE FARMING & SOIL

✓ Expand Sustainable Farming and Soil Practices to 30% of Agricultural Land by 2030 and 70% by 2050

A thriving agricultural sector relies upon healthy soil. Healthy soil also supports carbon sequestration, flood protection, reduced erosion, and pest and plant disease control. Beyond the field, the excess use of pesticides and fertilizers affect soil and water quality, leading to such effects as deadly hypoxia and algal blooms in the Gulf of Mexico and the Chesapeake Bay. It also diminishes property values and recreational uses of nearby waters, costing the U.S. at least \$2.2 billion annually.²⁶ Sustainable farming and soil practices are not only practical but also economically beneficial to farmers.

POLICIES & INVESTMENTS

- ▶ Provide workforce development and farm owner training for sustainable farming and soil practices
- ▶ Update the Farm Bill to include requirements for sustainable farming and soil health practices
- ▶ Expand voluntary water and soil conservation projects and nutrient reduction programs
- ▶ Create public trust funds for sustainable agriculture efforts

- ▶ Provide financial and technical assistance for the installation of barrier and buffer zones, terraces, irrigation efficiency, and natural stormwater infrastructure
- ▶ Restore pollinator habitats
- ▶ Expand sustainable farming certification and verification programs and promote sustainable farming end products
- ▶ Create tax and other incentives for soil carbon sequestration and soil health practices



Increasing uptake of key soil carbon-beneficial conservation practices to 70 percent of U.S. cropland could result in an increased soil carbon sink of over 270 million metric tons CO₂e per year by 2050—this represents half of current agricultural emissions.²⁷

BROWNFIELDS & HAZARDOUS SITES

✓ Cleanup Brownfields and All Hazardous Sites

A brownfield is a previously occupied property of which its redevelopment or reuse is complicated due to the presence of a hazardous substance, pollutant, or contaminant. There are an estimated 450,000 brownfield sites in the United States and 1,343 sites listed on the Superfund National Priority List, which are locations with significant hazardous material contamination.^{28,29}

Neighborhoods adjacent to brownfields are more likely to be low-income and minority neighborhoods.³⁰ Cleaning up and redeveloping these sites is not only important for human health and the environment, but it can increase local tax revenues, grow jobs, lift property values, and ease development pressure off undeveloped lands.^{31,32}

POLICIES & INVESTMENTS

- ▶ Expand environmental workforce development and job training for assessment and cleanup
- ▶ Expand and streamline grant funding for brownfield assessment and cleanup grants
- ▶ Expand funding for Superfund site remediation
- ▶ Create public trust funds for cleanup and redevelopment efforts
- ▶ Build public-private partnerships for effective and economical cleanup and redevelopment
- ▶ Expand community planning grants for integrated revitalization of brownfield sites

URBAN SUSTAINABILITY AND RESILIENCE

Green is not just about environmentalism, it is about livability for the long-term. As more people move to cities, particularly along the coasts, risk of exposure to poor air quality and threats from climate change only increase. The right investments in sustainable and resilient infrastructure today will improve livability and reduce the economic and social costs of future disasters.

SUSTAINABILITY & RESILIENCE

✓ **Establish a National Fund for Urban and Rural Resilience**

Cities and communities across America need to upgrade their infrastructure now to withstand the effects of climate change, including extreme heat, increased rain and snow, sea level rise, and extreme weather. A national adaptation fund, and analogous funds at the state and local level, could support investments in urban and rural stormwater management, green infrastructure, community hardening, and disaster preparedness. This fund will supplement the expansion of existing infrastructure and urban planning grant programs for sustainable communities and smart growth.

✓ **Expand Public Green Space and Recreational Lands and Waters**

As cities and suburban areas grow, citizens need greater opportunities to access open and green space and outdoor recreation than exist today. Green space can enhance the beauty and environmental quality of a community, as well as improve emotional health and build a sense of community. This should also include the doubling in size of dedicated public recreational lands and waters, including, in part, National and State parks.

✓ **Modernize Urban Mobility and Mass Transit**

The growth of cities, the rapid change in vehicle technology, and the need for low-carbon transportation means that the way in which we move ourselves and goods from one place to another is going to change forever. This transition needs to be executed thoughtfully to meet the needs of cities and the scale of change required. Large investments are needed to increase access to safe pedestrian and bicycle travel, low-carbon bus rapid transit, and electrified light rail.



133 million people will live in counties directly on the shoreline by 2020,³³ and 41 million Americans live in 100-year floodplains. That number is expected to grow by 50 percent by 2050 as the size and population of floodplains expand.³⁴

WASTE

✓ Zero Waste by 2040

Waste is just a resource without a market. Many of the materials sent to landfills can be recycled back into nature or the marketplace. Zero waste is about modernizing how products are created and disposed of to reduce the amount of waste created in manufacturing and packaging and to increase resource recovery through recycling and composting. A Zero Waste economy will never be 100-percent free of waste, but it will exploit every opportunity to turn waste into a resource.

POLICIES & INVESTMENTS

- ▶ Expand funding to community recycling and composting centers and pick-up
- ▶ Promote new markets for sustainable, recycled, and recyclable products
- ▶ Revise food standards and establish incentives that can reduce food waste
- ▶ Establish bans on single use plastics and non-recyclable goods and packaging
- ▶ Expand public education for more effective sorting and product choice

✓ Capture 50% of Wasted Methane by 2040

Methane also enters the atmosphere through the decomposition of livestock manure, organic trash in landfills, and sludge from wastewater treatment facilities. This is money literally floating away. New and scalable methane capture systems can turn this waste into a valuable, carbon-neutral resource, saving Americans billions of dollars and reducing greenhouse gas emissions.

POLICIES & INVESTMENTS

- ▶ Fund innovation and demonstration of new methane capture and reuse systems for landfills, manure management, and wastewater treatment
- ▶ Promote markets for captured methane and “renewable natural gas” for use in energy and transportation systems

A GREEN NEW DEAL IS A JOB CREATOR

Accomplishing a Green New Deal requires millions of new living-wage jobs that provide dignity to families and renew our vision of America in the 21st century. It will grow the economy and revive our belief in a good American job.

The goal is to **create 10 million new jobs over the first 10 years** through employment and training programs associated with Green New Deal grants and projects. There are signs that the jobs of the future are green jobs:

- ▶ **In 2017, there were 800,000 Americans employed in low-carbon emission generation technologies, and 2.25 million employed in energy efficiency.** This compares to only 92,000 for coal-fired generation.³⁵
- ▶ **Solar jobs have grown 168 percent over the past seven years,** and wind turbine technician is one of the fastest growing jobs in America.^{36,37}
- ▶ One study estimates that **spending 2 percent of annual GDP** on the green economy could create over 15 million green jobs in 5 years.³⁸

A GREEN NEW DEAL ACHIEVES JOB GROWTH IN **THREE WAYS**:

1. **Private Sector Growth**

A Green New Deal can have a multiplier effect—every dollar of government spending generates more than a dollar in local economic growth. A Green New Deal will produce immense demand for new goods and services that the private sector can provide. This includes clean energy technology, energy efficient goods and appliance installation services, zero-emission vehicles and charging infrastructure, building construction and retrofits, environmental remediation and restoration, agriculture, forestry, tourism, and recreation—to name some. A Green New Deal creates signals that encourages private capital to move into these new and expanding markets, and new businesses will generate demand for more workers. This also means reinstating the Bureau of Labor Statistics' Green Jobs Initiative for accurate tracking of green job growth.

2. **Workforce Development and Job Training**

There is a mismatch between the number of green jobs required under a Green New Deal and the current availability of skilled labor in the market. That is why a key component of the Green New Deal is workforce development and job training to implement the priorities in each sector and provide Americans access to full-time, sustainable employment in these fields.

A Green New Deal will expand funding and programs that provide training, certification, and apprenticeships. Such programs help workers afford training that will increase their earning potential without taking on debt. They also reduce the burden on employers to find or train enough qualified workers. These include:

- ▶ Federal Training Grant Programs
- ▶ Public-Private Partnerships
- ▶ Faith-Based & Community Organization Partnerships
- ▶ Cooperative Research and Extension Services
- ▶ Vocational Training and Certification Programs
- ▶ Skilled Employment Apprenticeship Programs
- ▶ Higher Education Institution Partnerships
- ▶ Higher Education Internship and Fellowship Programs
- ▶ Federal Community Service Programs (e.g., AmeriCorps, Senior Corps, FEMA Corps, Public Health Corps)

3. **A Green Job Guarantee**

A job guarantee is more than just the direct hiring of workers by the federal or state governments, and more than an entitlement program like unemployment insurance. **A job guarantee is a legal right that obligates the federal government to provide a job for anyone who asks for one and to pay them a livable wage.** The more states and communities that participate in a federal job guarantee, the more public works projects can be completed across the country.

A Green New Deal requires a massive workforce for the construction, operations, and administration of projects, and a federal job guarantee program can ensure there are enough workers to meet that need. Below are non-exhaustive lists of real green jobs.


GREEN JOB PRIORITIES

MINIMAL EXPERIENCE OR ON-THE-JOB TRAINING

- ▶ Weatherization and energy efficiency improvements
- ▶ Waste removal and recycling
- ▶ Tree-planting
- ▶ Wetland restoration
- ▶ Brownfield restoration
- ▶ Pest management
- ▶ Soil health testing and remediation
- ▶ Invasive and exotic species removal
- ▶ Resilient road construction
- ▶ Pedestrian and bike lane construction
- ▶ Open and recreational space creation
- ▶ Building rehabilitation, remediation, and hardening
- ▶ Disaster preparedness training
- ▶ Sewer and water main upgrades
- ▶ Stormwater management
- ▶ Administrative support

SOME EXPERIENCE, EDUCATION, OR CERTIFICATION

- ▶ Energy auditing
- ▶ Building electrification
- ▶ Renewable energy systems installation - solar, wind, and geothermal
- ▶ Mass transport electrification
- ▶ Energy storage technology
- ▶ Grid modernization and resilience
- ▶ Water and wastewater treatment
- ▶ Electric vehicle and biofuel integration
- ▶ Landfill upgrades and methane capture
- ▶ Sustainable agriculture and soil restoration
- ▶ Community education
- ▶ Communications



AMERICANS SUPPORT A GREEN NEW DEAL

Data for Progress analyzed data from several national surveys and found that voters, particularly Democratic voters, are ready for a Green New Deal and will mobilize for candidates that support Green New Deal policies.

Key Findings:

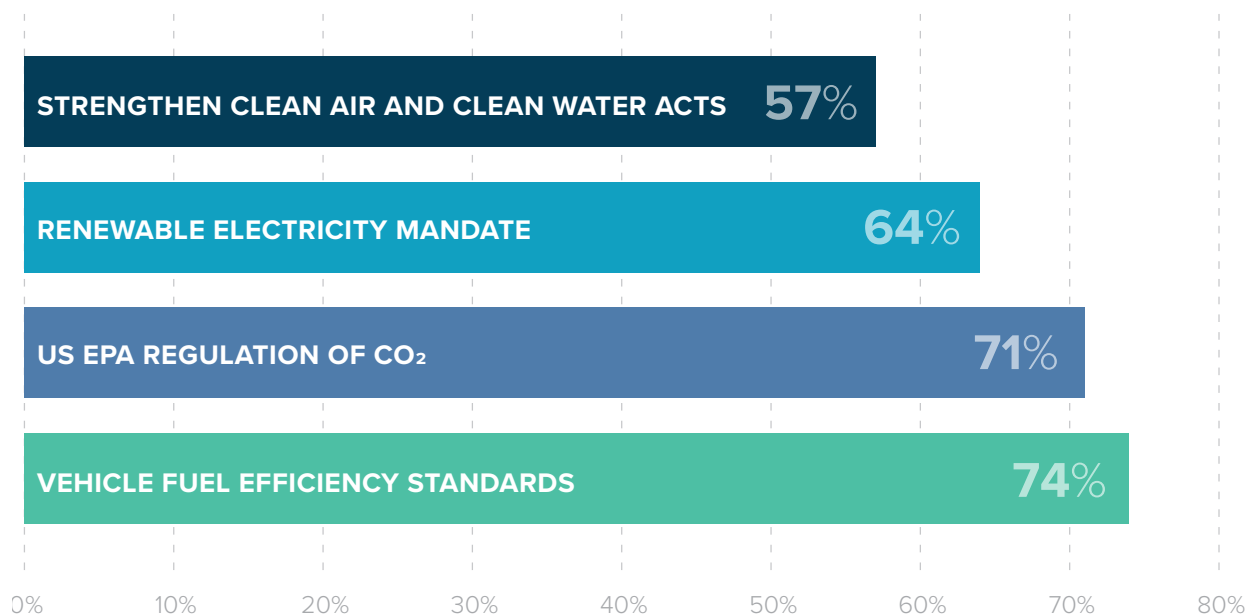
- ▶ Americans **know that climate change is real** and that humans are the cause
- ▶ Americans support Green New Deal policies, including a **green job guarantee**
- ▶ A green job guarantee **performs well across geographies**
- ▶ Voters are **more likely to vote for candidates** running on a green job guarantee and renewable energy, particularly Democrats

THE CASE FOR A GREEN NEW DEAL

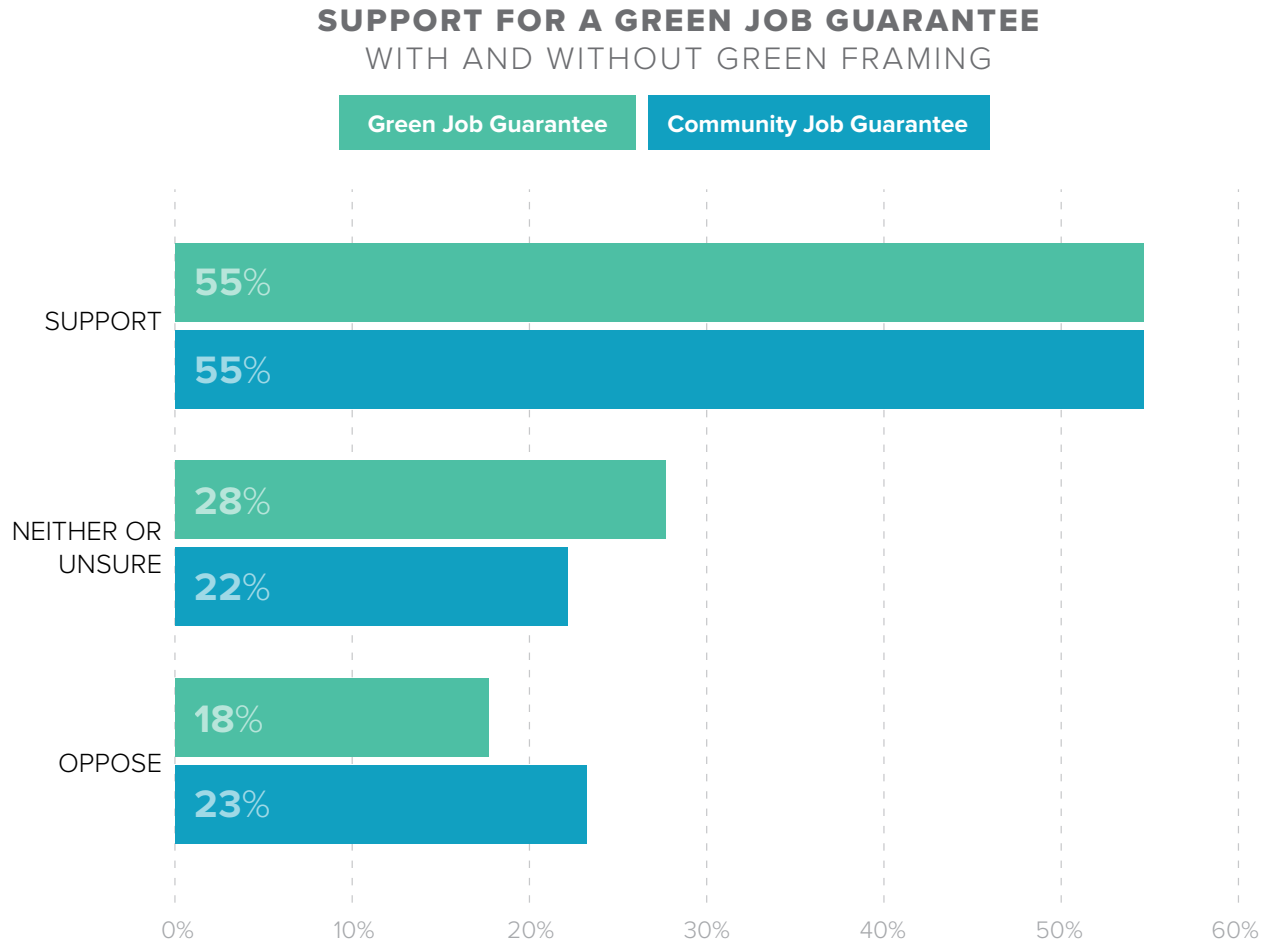
Data for Progress analyzed the 2016 Cooperative Congressional Election Study survey results, which asked about political attitudes and policy support before and after the 2016 elections.³⁹ We examined support for four key environmental policies nationally: strengthening enforcement of the Clean Air Act and Clean Water Act, raising fuel efficiency standards, setting a renewable electricity mandate, and allowing the U.S. Environmental Protection Agency (EPA) to regulate CO₂.

All of these policies have greater than 55 percent support in the median state, as the chart below shows, with fuel efficiency standards garnering 74 percent in the median state. These findings are consistent with other national public opinion polling about global warming policies conducted annually by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication.⁴⁰ They found national support for these policies at greater than 65 percent.

GREEN POLICY SUPPORT IN THE MEDIAN STATE | 2016



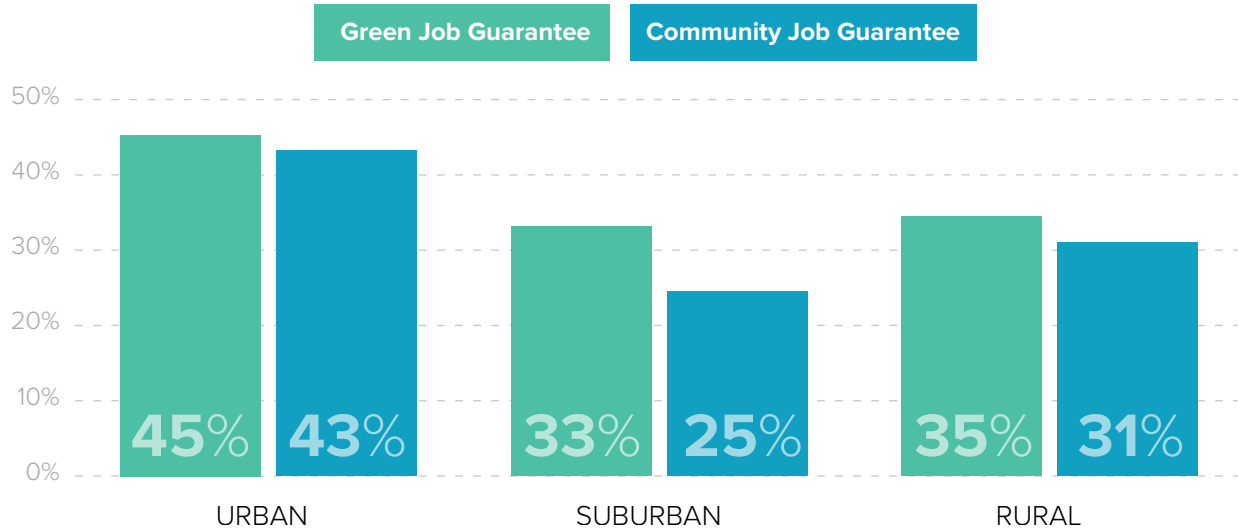
Fifty-five percent of Americans also support community job creation, especially when it has a green job framing. Data for Progress, along with Sunrise Movement, commissioned a survey on major progressive policies with YouGov Blue fielded in July 2018.⁴¹ The survey found that a majority of respondents support both community job creation for any person who cannot find a job, and a green jobs programs scaling up renewable energy, weatherizing homes and office buildings, developing mass transit projects, and maintaining green community spaces.



Interestingly, the green jobs framing elicited less opposition—23 percent opposed the non-green framing, while 18 percent opposed the green framing. We can infer that respondents were less likely to oppose community job creation if the proposal was more specific about the types of jobs created. It would be important to survey this further with other specific examples of community jobs and public works—such as education, public health, and sanitation.

Across geographies, a Green Job Guarantee garnered consistently high support. Notably, it performed better than community jobs among suburban and urban voters.

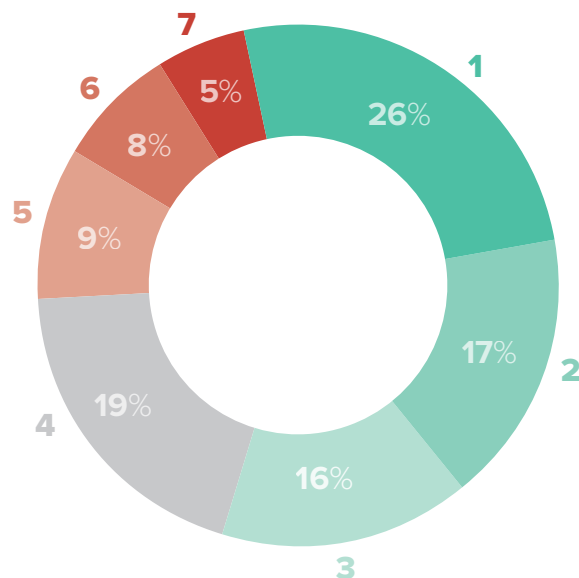
NET SUPPORT FOR JOB GUARANTEE BY GEOGRAPHY



Americans also do not see a trade-off between environmental protection and jobs. This is according to a Data for Progress analysis of the American National Election Studies 2016 election study.⁴² Respondents to the survey rated their opinions on a scale of **1** to **7**, where **1** means they think the federal government needs to regulate business to protect the environment, and that efforts to protect the environment will also create jobs, and **7** means they think that the federal government should not regulate business to protect the environment, and that this regulation will not do much to help the environment and will cost us jobs.

The chart below shows that **58 percent of Americans felt that protecting the environment would create jobs**—while only 22 percent felt the opposite and 20 percent expressed an opinion in the middle.

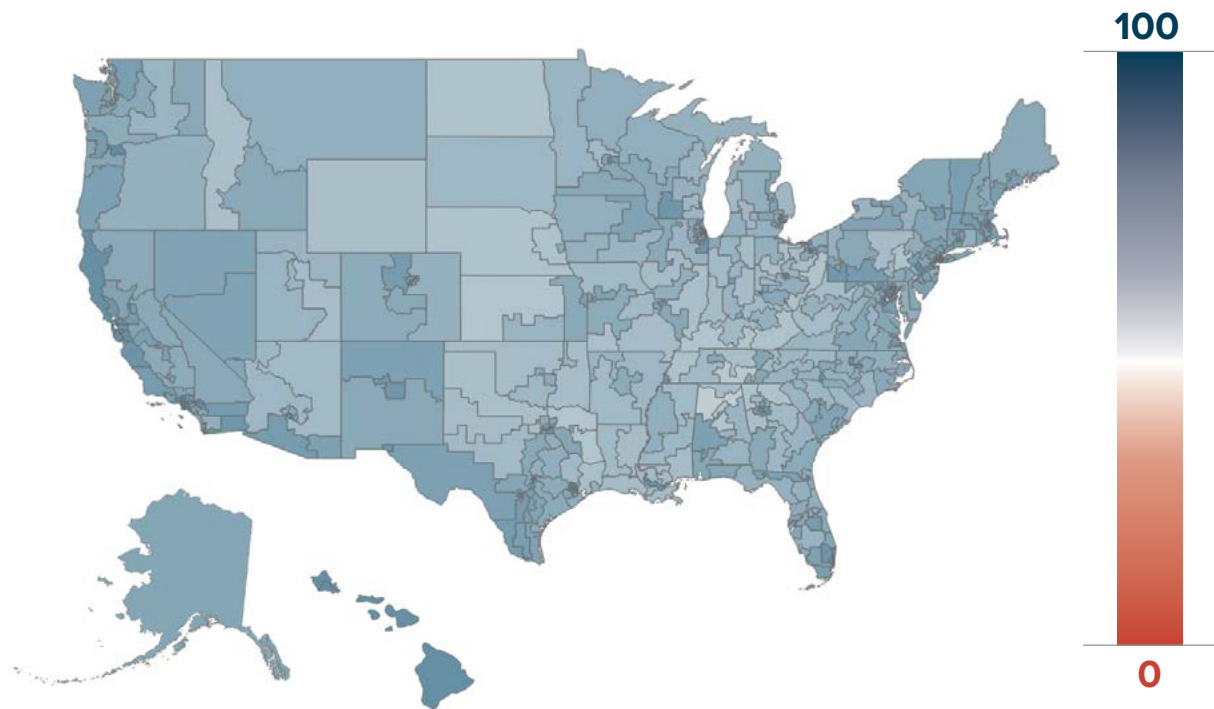
MOST AMERICANS THINK THAT PROTECTING THE ENVIRONMENT WILL CREATE JOBS BASED ON A SCALE OF 1=CREATE JOBS AND 7=COST JOBS



HUMANS ARE THE CAUSE OF CLIMATE CHANGE AND AMERICANS KNOW IT

Americans support environmental and job-creating policies because they accept the environmental reality. There is no reason to be ambivalent about whether climate change exists or if human activity has a role in creating and exacerbating it. **A large majority of American adults think global warming is happening—70 percent—and in no state or congressional district is there not a majority of adults who think climate change is happening.**⁴³

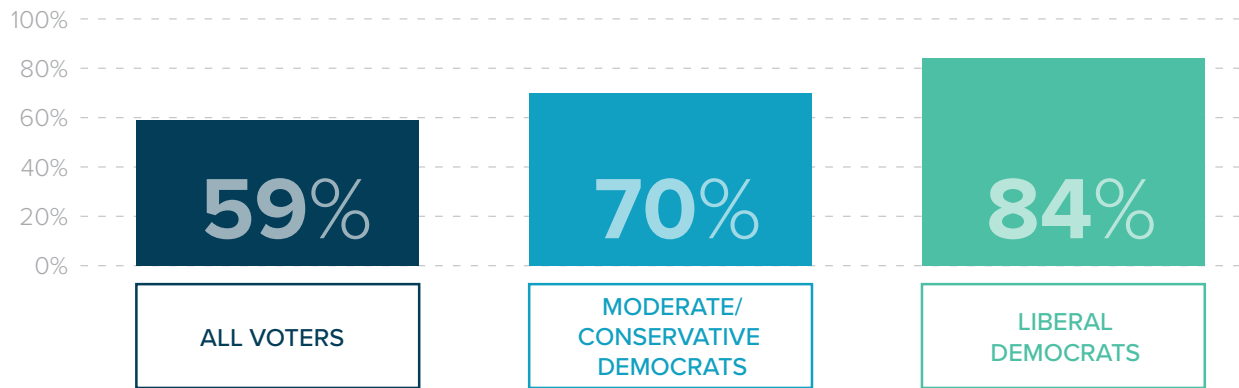
SHARE OF AMERICAN ADULTS WHO THINK CLIMATE CHANGE IS HAPPENING BY CONGRESSIONAL DISTRICT



Source: Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication, 2018

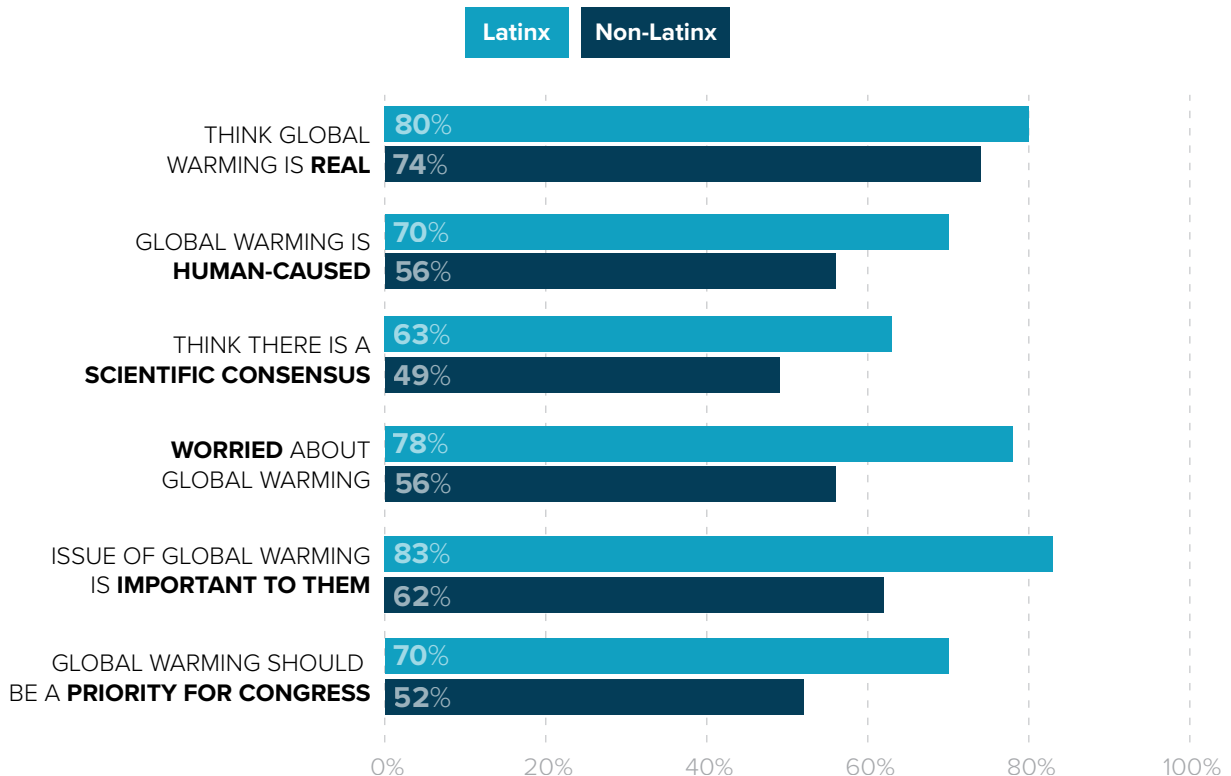
Similarly, a majority of registered voters think global warming is caused mostly by human activities—59 percent.⁴⁴ As the chart below shows, voters who identify as Liberal or Moderate/Conservative Democrats expressed a greater understanding of the link between human activity and climate change.

REGISTERED VOTERS WHO THINK GLOBAL WARMING IS CAUSED BY HUMAN ACTIVITIES | 2017



In particular, Latinx voters are especially concerned about global warming compared to non-Latinx voters—78 percent to 56 percent—and think it should be a priority of Congress—70 percent compared to 52 percent.⁴⁵ Across the board, Latinx voters appear to take the issue and the response to global warming more seriously.

THE LATINX COMMUNITY TAKES GLOBAL WARMING MORE SERIOUSLY

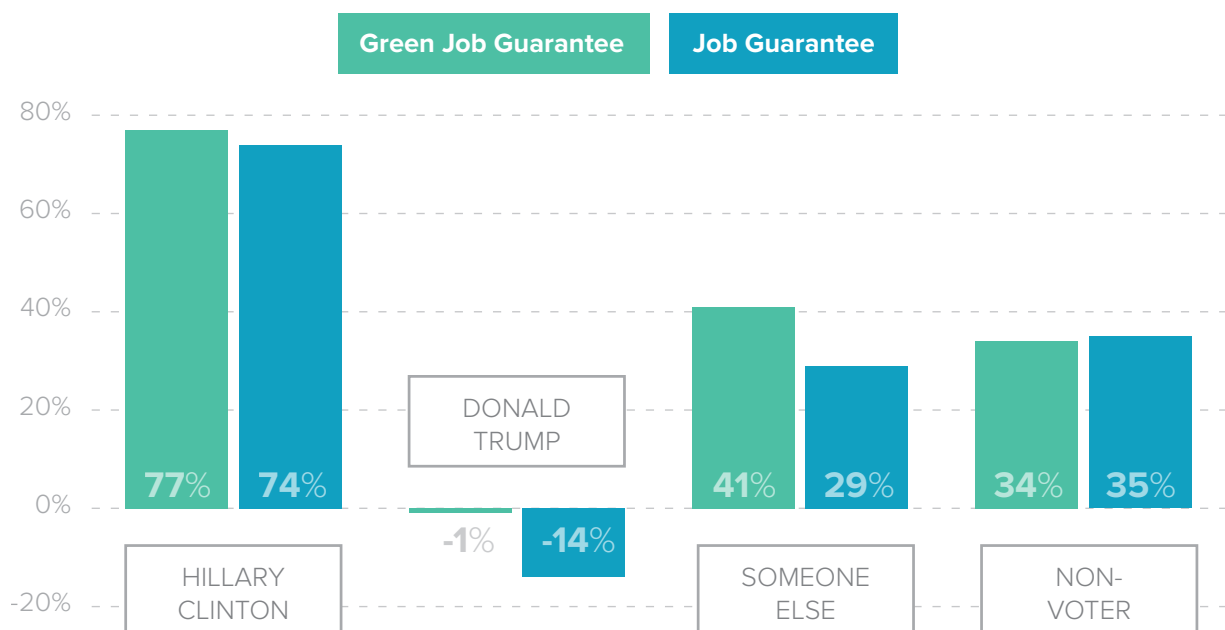


A GREEN NEW DEAL CAN DRAW VOTERS FOR 2018

Several key issues will dominate the agenda in the 2018, including immigration, healthcare, income and racial inequality, gun policy, and corruption. **But for Liberal Democratic voters, climate change and environmental protection are two of the top four important issues when deciding for whom to vote in the 2018 Congressional election.** This is according to a ranking of 28 voter issues in a survey administered by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication.⁴⁶

Our recent survey of a Green Job Guarantee found high net support among voters who chose Hillary Clinton in the 2016 Presidential Election—77 percent—as well as voters who chose someone else or did not vote—41 percent and 34 percent, respectively. The green framing elicited far less opposition from Donald Trump voters. Thirty-five percent of Trump voters supported a Green Job Guarantee and 36 percent opposed, while 30 percent supported the Community Job Guarantee compared with 45 percent opposed. This indicates a Green Job Guarantee can help progressives draw support from typically unsupportive voters.

NET SUPPORT FOR GREEN JOBS BY 2016 PRESIDENTIAL SUPPORT

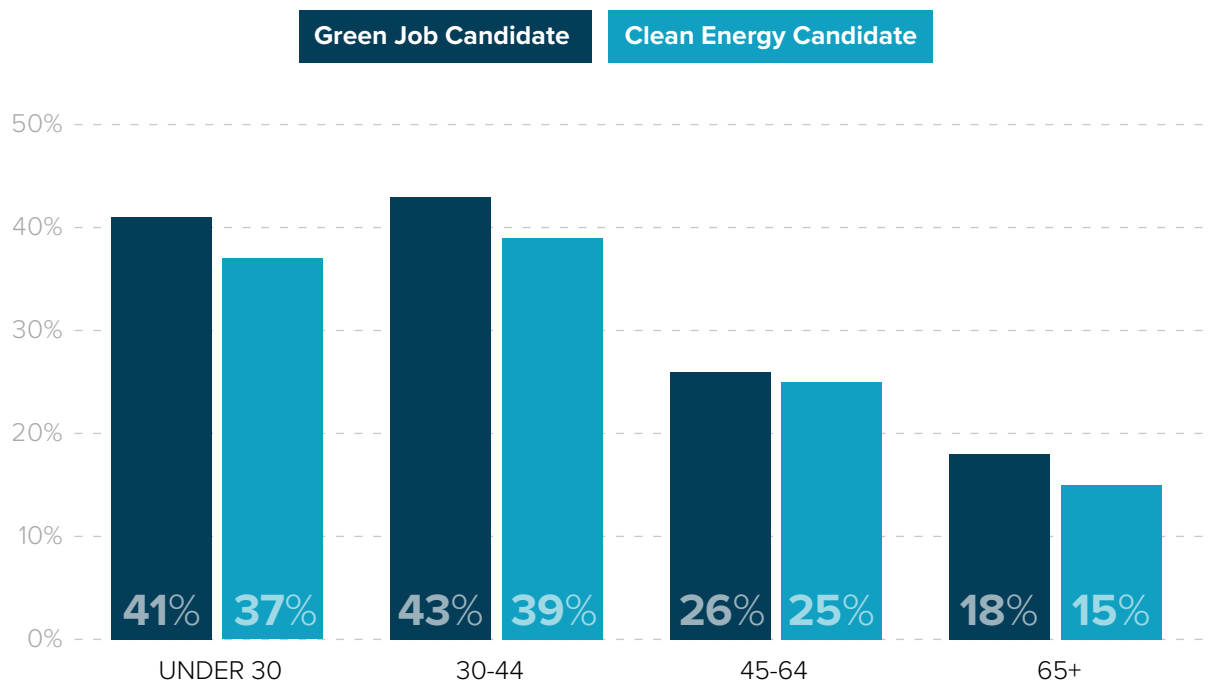


The biggest question that remains is whether a Green New Deal can bring voters to the polls and cast a ballot for progressive candidates. Our analysis of recent national polling suggests that voters are enthusiastic and more likely to vote for a candidate who supports green policies.⁴⁷

Fifty-one percent of voting eligible adults said they would be *more likely* to support a candidate running on a Green Job Guarantee—with only 20 percent opposed. Forty-eight percent of voting eligible adults said they would be more likely to support a candidate who was running on 100% Renewable Energy by 2030. This is more ambitious than the target proposed in this report.

Young people are far more likely to support a candidate running on 100% Renewable Energy and Green Jobs. More than half of individuals under 30 said they would be *more supportive* of a candidate running on 100% Renewable Energy or Green Jobs with only 15 percent saying 100% Renewable Energy would make them *less likely* and 10 percent saying the same about Green Jobs. Net support for a candidate is also high for voters aged 30 to 44 years and still positive for older voters.

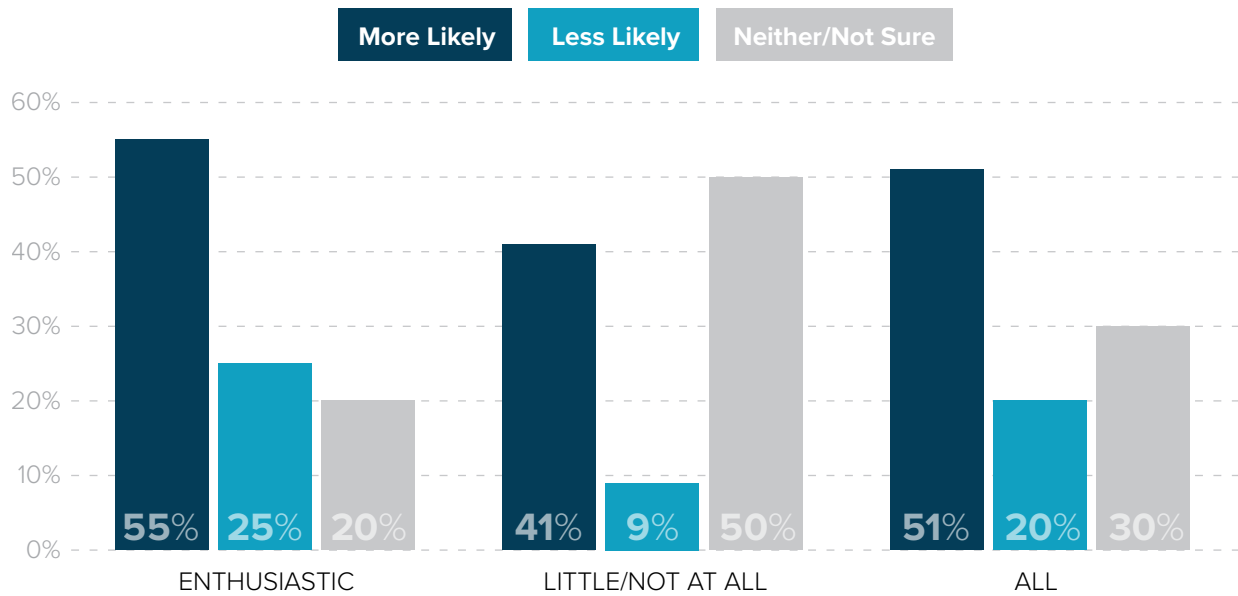
NET SUPPORT FOR A CANDIDATE RUNNING ON GREEN POLICIES BY AGE



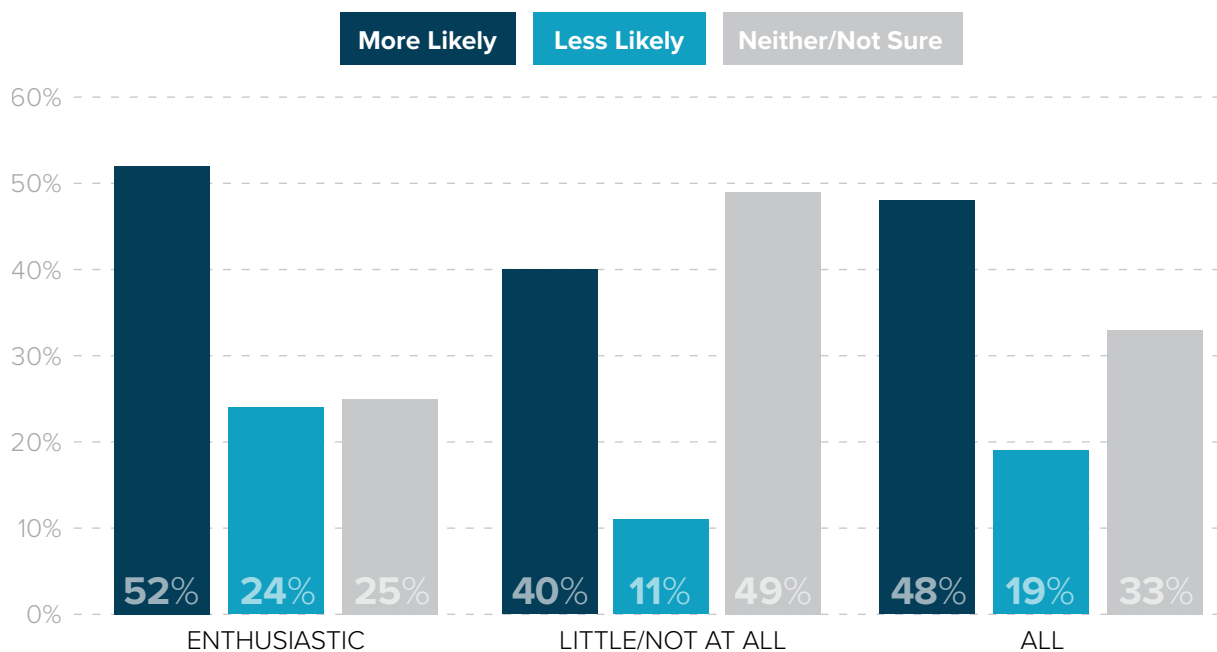
There is another positive sign coming out of the electorate. Of eligible voters, those who expressed enthusiasm for the 2018 Congressional elections also said they would be *more likely* to support a candidate running on green policies. **Fifty-five percent of enthusiastic voters are more likely to vote for a Green Job Candidate and 52 percent for a 100% Renewable Energy Candidate.**

This sentiment is even stronger among Democrats and Independent voters, who expressed enthusiasm for the 2018 Congressional elections at a rate of 72 percent and 67 percent, respectively.

ENTHUSIASTIC **VOTERS** ARE MORE LIKELY TO SUPPORT GREEN JOB GUARANTEE CANDIDATES



ENTHUSIASTIC **VOTERS** ARE MORE LIKELY TO SUPPORT RENEWABLE ENERGY CANDIDATES



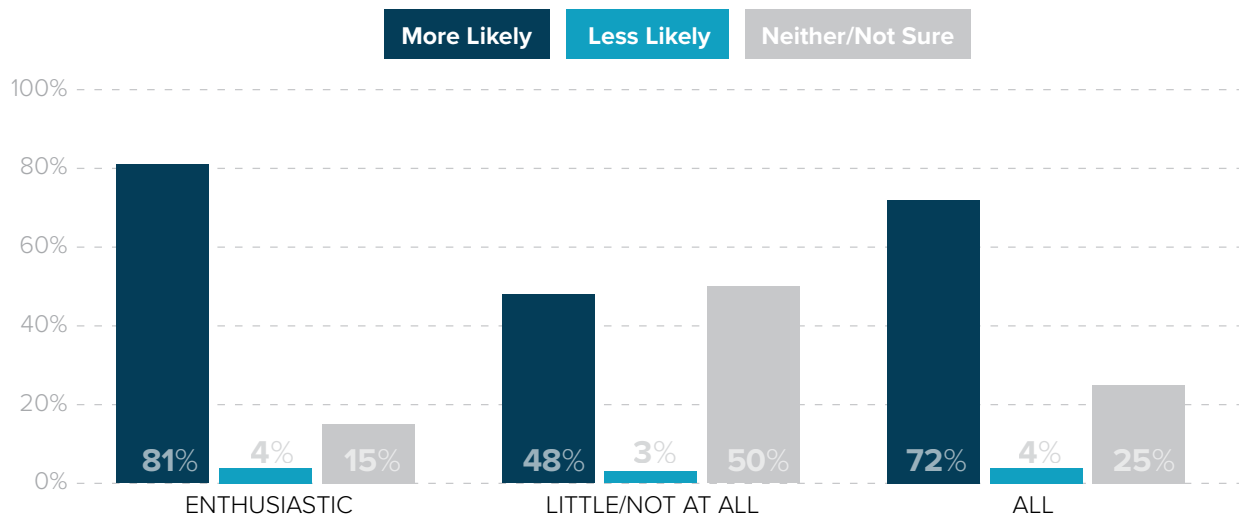
Among enthusiastic Democratic voters, **81 percent** said they would be *more likely* to support a candidate running on Green Jobs, and the same figure for 100% Renewable Energy.

Among enthusiastic Independent voters, **52 percent** said they would be *more likely* to support a candidate running on Green Jobs, and **46 percent** are more likely to support a candidate running on 100% Renewable Energy.

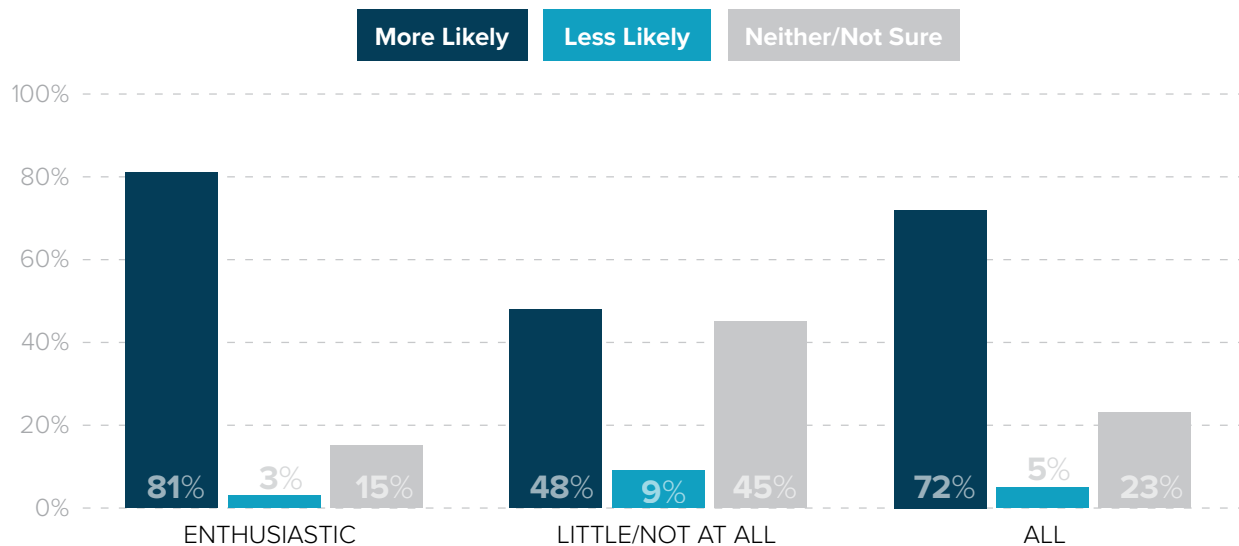
These numbers should serve as a signal to Democrats in 2018.

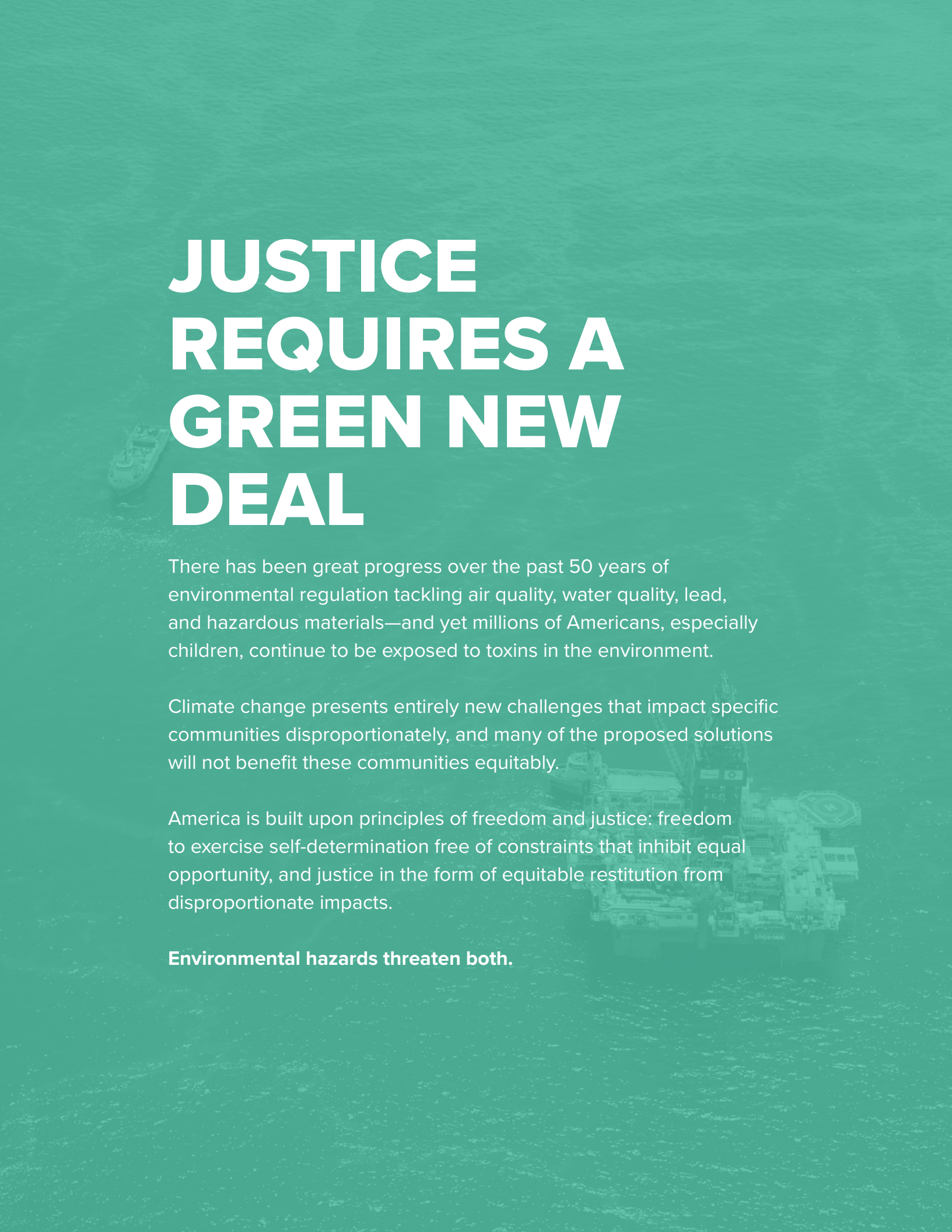
The Democratic electorate has expressed overwhelming support for Green New Deal policies. There are also signs that progressive environmental policies are nationally popular and can draw support from enthusiastic voters from across different regions and age groups, as well from Independents.

ENTHUSIASTIC DEMOCRATS ARE MORE LIKELY TO VOTE FOR A GREEN JOB CANDIDATE



ENTHUSIASTIC DEMOCRATS ARE MORE LIKELY TO VOTE FOR A RENEWABLE ENERGY CANDIDATE



An aerial photograph of a large offshore oil rig in the ocean, viewed from a high angle. The rig is a complex structure with multiple levels and cranes, situated in the middle of the sea. The water is a deep blue-green color. The rig is the central focus of the image, with its structure extending across the middle ground. The background shows the vast expanse of the ocean under a clear sky.

JUSTICE REQUIRES A GREEN NEW DEAL

There has been great progress over the past 50 years of environmental regulation tackling air quality, water quality, lead, and hazardous materials—and yet millions of Americans, especially children, continue to be exposed to toxins in the environment.

Climate change presents entirely new challenges that impact specific communities disproportionately, and many of the proposed solutions will not benefit these communities equitably.

America is built upon principles of freedom and justice: freedom to exercise self-determination free of constraints that inhibit equal opportunity, and justice in the form of equitable restitution from disproportionate impacts.

Environmental hazards threaten both.

A GREEN NEW DEAL IS THE 21ST CENTURY ENVIRONMENTAL LEGISLATION THAT WILL FINISH THE JOB OF THE PREVIOUS CENTURY, BUT THIS TIME BUILT UPON PRINCIPLES OF JUSTICE:

- ▶ That public policy is based on **mutual respect for all people, free from all forms of discrimination or bias**, particularly low-income, indigenous peoples, and minority groups.
- ▶ That Americans demand an **ethical, responsible, and sustainable use of lands, waters, and renewable resources** with future generations in mind.
- ▶ That all Americans have **the right to participate in the decision-making** of environmental action, including planning, implementation, enforcement, and evaluation.
- ▶ That all American have **the right to safe and healthy home and work environments** without being forced to choose between unhealthy livelihoods and unemployment.
- ▶ That all Americans have **the right to share in the joy of America's natural resources** through equal access to open and green spaces and public parks.
- ▶ That **victims of environmental injustice or displaced workers** have a right to reparations for damages, unemployment benefits, and quality health care.

Disproportionate Impacts

THE EFFECTS OF CLIMATE CHANGE ARE NOT FELT EQUALLY

Increasing heat will bring tens of thousands more premature heat-related deaths each year, with that number rising each decade. Beyond health, heat waves and other extreme weather cost the economy billions of dollars through damage to roads and railways, agriculture losses, energy demand, and lost worker productivity.⁴⁸

Certain populations are disproportionately vulnerable and affected, including “those with low income, communities of color, immigrant groups, Indigenous peoples, children and pregnant women, older adults, vulnerable occupational groups, persons with disabilities, and persons with preexisting or chronic medical conditions.”⁴⁹ This may worsen from the newly described phenomenon of **climate gentrification—the inability of poorer residents to move out of harm’s way.**⁵⁰

NO LEVEL OF LEAD EXPOSURE IS SAFE, ESPECIALLY FOR CHILDREN

Today, there are at least 4 million children living in households exposed to high levels of lead and half a million children with high blood lead levels.⁵¹ Non-Hispanic Black children are disproportionately affected by lead exposure, and low-income children ages 1-5 have 34 percent higher levels of lead than non-low-income children.⁵²

1 IN 13 AMERICANS HAVE ASTHMA

The number living with asthma has been steadily increasing in recent years.⁵³ **Black Americans are nearly twice as likely to suffer from asthma, and three times as likely to endure hospitalization.**⁵⁴ Air pollution in the form of smog or particulate matter can trigger asthma symptoms. Longer and hotter summers aggravate asthma symptoms and increase hospitalizations.

ACCESS TO RECREATION IS NOT EQUITABLE

Access to open space, recreation, and parks is not equitably distributed across racial or socioeconomic groups. **Minority neighborhoods are significantly less likely—as much as eight times—than white neighborhoods to have access to natural open spaces and recreation.**⁵⁵

Ensuring Equitable Benefits

A Green New Deal built upon a foundation of justice can work to resolve inequity, specifically through a set of **Environmental Justice Standards** and **Job Quality Standards**.

ENVIRONMENTAL JUSTICE STANDARDS

- ▶ Ensure investments to address clean air, clean water, and toxins place special emphasis on historically underserved, minority, low-income, and particularly vulnerable communities.
- ▶ Ensure investments in clean energy, energy efficiency, and affordability, as well as climate fund dividends, place special emphasis on low-income and vulnerable communities.
- ▶ Strengthen existing federal and state Environmental Justice initiatives and increase funding of Environmental Justice grant programs.
- ▶ Broaden data collection and communication of the disproportionate exposure between different communities.
- ▶ Direct greater resources to environmental enforcement in the most overburdened communities.
- ▶ Strengthen community involvement in environmental decision-making and enforcement, with special consideration of federally recognized tribes' and indigenous peoples' issues.

JOB QUALITY STANDARDS

- ▶ Livable wage requirements that include health insurance, full-time hours, and minimum length of employment.
- ▶ Special consideration and recruitment requirements of workers from low-income, minority, under-employed communities, as well as those displaced by the energy transition.
- ▶ Protections and requirements for unionization and collective bargaining.
- ▶ Performance requirements on job creation and job training metrics with clawback mechanisms when performance falls short.
- ▶ Disclosure requirements on the costs of job programs and benefits to specific communities.
- ▶ New job additionality requirements to avoid relocating or displacing existing jobs.

CAN WE AFFORD IT?

WE CAN'T AFFORD NOT TO!

Extreme events are more frequent and more expensive than ever.

2017 was a year of bad records in terms of frequency and cost of extreme weather events—including Hurricanes Harvey, Irma, and Maria; the Western and California wildfires, the Dakota Drought, and central river floods and tornadoes,

16

the all-time record number of billion-dollar weather and climate disasters in 2017, compared to a historical average of 6 per year.⁵⁶

\$300
BILLION

the all-time record cost of direct damages from all billion-dollar weather and climate disasters in 2017, including \$270.3 billion from hurricanes and \$18.4 billion from wildfires. For comparison, Hurricane Katrina (2005) and Superstorm Sandy (2012) cost \$161 billion and \$71 billion (adjusted), respectively. These estimates also do not capture the cost on the broader economy.

2018 is already looking to set records on extreme heat, red tide algal blooms, hurricanes, and wildfires, as the California Mendocino Complex Fire is now the largest in state history after the Thomas Fire set that record in 2017.

IGNORING CLIMATE CHANGE WILL COST US MORE IN THE FUTURE

A 2017 study by the EPA found that it would cost up to \$280 billion by the end of the century to adapt just the nation's roads and railways to the damaging effects of climate change.⁵⁷ This estimate grows exponentially when considering all other public and private infrastructure. Refusing to act now will only transfer the costs to vulnerable populations, state budgets, and businesses. We can either invest now to mitigate the worst of climate change, or let future generations pay a lot more later.

INVESTMENTS IN INFRASTRUCTURE WILL BOOST THE ECONOMY

The argument that we cannot afford a Green New Deal is also a false one. We have made massive investments in public infrastructure and specific industries in the past that transformed the economy—rural electrification, the federal highway system, hydrologic dam systems, space exploration, and nuclear energy.

Economy analyses have shown that in the near term, increases in infrastructure spending would significantly boost economic activity and employment and have the potential to increase public and private sector productivity growth in the long term. For example, the Economic Policy Institute found that **investing in building efficiency and national smart grid for carbon mitigation would boost GDP by \$147 billion annually and create 1.1 million jobs in the first year.**⁵⁸ Even bigger investments show potential for larger pay-offs.

In addition, there is new analysis that **a carbon tax will not hamper the economy**, particularly as revenues are reinvested smartly in communities.⁵⁹

A BETTER USE OF AMERICAN TAX DOLLARS

We continually spend money on things that are historically or increasingly unpopular, which should have been diverted to investment in American workers and sustainability—including **\$4.6 billion per year for fossil fuel subsidies,**⁶⁰ **\$1.5 trillion for the 2017 Trump Tax cuts,**⁶¹ and **\$1.6 trillion between 2001 and 2014 for the Iraq and Afghan wars.**⁶²

Instead of spending millions on wars in other countries or tax breaks that do not trickle down to everyday Americans, there is evidence that investments in American communities make life better, the environment cleaner, communities more resilient, and economies more stable.

CONCLUSION

Change is never easy, and it often does not happen until it's too hard to stay the same.

America cannot continue this unsustainable course. The time is over for debating the reality of climate change, the threats to the environment or public health, and the lack of justice. The time is also over where we could accomplish our goals through incremental change.

It's time to return to long-term thinking and planning and stop wasting time until we respond at the scale and urgency necessary to solve these problems. Aiming for anything less is insufficient.

The good news is there's evidence that a progressive agenda will create jobs and grow the 21st century economy while working to solve our greatest environmental and justice problems.

There is also evidence that this is what voters want, particularly in the Democratic Party.

We understand the problems, we understand the solutions, and we understand the benefits.

We just need to do it.

**IT'S TIME
FOR A
GREEN
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