

The Clean Economy Revolution Will Be Unionized

A Road Map From States on Creating Good, Union Jobs To Build the Clean Energy Economy

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Introduction and summary

This year, the United States has an enormous opportunity to invest in a clean energydriven economic recovery that will support millions of good-paying union jobs, confront environmental injustice, and prevent the worst impacts of climate change. On March 31, President Joe Biden released the American Jobs Plan calling for major job-creating public investments in clean energy industries, clean infrastructure, and innovation. This plan would simultaneously confront the climate challenge; drive investment in high-quality, family-supporting jobs; and build worker power by including high-road labor standards and expanding the right to organize.¹

Importantly, the enormous opportunity now facing the nation—the creation of millions of good union jobs to build a clean energy-driven economic recovery flows in great measure from lessons learned through successful state leadership. The Center for American Progress and League of Conservation Voters have argued that state, tribal, and local governments are laying a road map for jobs, justice, and climate solutions.² These include actions taken to promote job quality in new and fast-growing clean energy industries; efforts to expand existing industries that support union jobs critical to the clean economy, such as in transportation, water infrastructure, and manufacturing; and efforts to advance labor standards and the right to organize, ensure government spending does not undercut workers' ability to bargain collectively, and promote local hiring and equitable access to good jobs. This report provides an illustrative overview of state and local progress and how it can inform federal action in 2021.

Now is the time for Congress to build a clean economy that truly works for working people. Labor and climate advocates have spent years building together toward this moment. In 2019, the BlueGreen Alliance—a coalition of 13 labor unions and environmental organizations—released its Solidarity for Climate Action platform, which demands that "working people are front and center as we create a new economy." That same year, CAP released its "100 Percent Clean Future" report, which pointed to the opportunity to create good union jobs to build a clean economy. 4 The combination of advocacy for climate action and good jobs has a

long history, from the creation nearly two decades ago of the Apollo Alliance—a coalition of environmental groups, labor unions, and businesses working together to transform the economy—to the work of the Peoples' Climate March that began in 2014 for "climate, jobs and justice," to national movements organizing for transformative change today.⁵

In May, 21 labor, progressive, environmental, and environmental justice organizations sent a letter to Congress urging it to pass legislation "that invests at least \$4 trillion throughout the economy over this presidential term, bound by highroad labor, equity and climate standards." Such legislation, the letter argues, will "rebuild the economy, reverse growing inequality, confront systemic racism, reduce pollution, guarantee labor rights, and make necessary down payments in tackling the climate crisis." And last month, Reps. Pramila Jayapal (D-WA), Stephanie Murphy (D-FL), Susan Wild (D-PA), and more than 200 members of Congress wrote, "Congress must ensure that middle class family-sustaining jobs will be created by including strong labor standards on all forms of federal infrastructure investment moving forward."

However, tension has long existed between labor and environmental constituencies over whether or not actions to stop climate change and build a clean economy can also support workers and retain and create good union jobs. Translating advocacy into concrete policies has proven to be particularly challenging, but never before has there been a greater federal policy opportunity to tackle these challenges together. And thanks to state and local advocates and lawmakers, there is now a road map that federal lawmakers can follow. While no state or city government has taken every necessary step to achieve good jobs, climate action, and environmental justice, many of them have made important progress—and from this progress, federal lawmakers and lawmakers in other states can derive policy lessons and political momentum. This report offers a recap of some informative state and local actions designed to support good jobs, ensure high-road labor standards, and confront the climate crisis.

The climate agenda is an investment agenda

Climate action offers the greatest investment opportunity in decades to fundamentally rebuild the fabric of the American economy. Done right, this economic transformation can create millions of good-paying jobs. Around the world, the commitments made through the Paris Agreement alone provide a \$23 trillion investment opportunity in climate solutions, according to an analysis conducted by the International Finance Corporation.¹⁰ Automakers in North America, Europe, and China are investing hundreds of billions of dollars in a race to dominate electric vehicles industries in the coming years.¹¹ And growing and transforming traditional manufacturing industries to reduce emissions and build more advanced technologies offers an investment opportunity as large as \$11 trillion to \$21 trillion globally, according to McKinsey and Company. 12 A recent study published by the Sierra Club, in partnership with the Political Economy Research Institute at the University of Massachusetts-Amherst, estimated that upgrading U.S. infrastructure, expanding renewable energy, and increasing energy efficiency could create 9.3 million jobs over the next 10 years.¹³ Clearly, the potential for job and economic growth is tremendous. Fully realizing these gains will require robust federal government policy and public investment, as well as strong standards to ensure the creation of good jobs with benefits that ripple throughout local economies. The climate solutions agenda is fundamentally a jobs agenda, and it is up to federal lawmakers to seize it.

Unions are critical to supporting good jobs and inclusive prosperity

Building the clean energy economy must go hand in hand with creating high-quality American jobs. Unions and worker power are integral to realizing this outcome. Union workers earn higher wages and are more likely to receive necessary benefits such as health insurance, retirement plans, and paid leave than their nonunionized counterparts. ¹⁴ Unionization raises total compensation—both wages and benefits—of union workers by an average of about 28 percent, according to the Economic Policy Institute. ¹⁵ Communities with high union density also tend to have higher rates of economic mobility, and unions have been shown to decrease the racial wealth gap and help narrow pay gaps for women and Black and Latinx workers. ¹⁶ Indeed, the union wage premium is *higher* for Black, Hispanic, and Asian workers than it is for white workers. ¹⁷

Moreover, union membership can also strengthen democracy, at a time when working families in the United States need equitable and just representation in the nation's highest political offices. Beyond their role as an active counterbalance to corporate power, unions represent one of the few interest groups whose positions line up with the interests of the middle class. Research shows that lawmakers representing strong union districts are more responsive to working-class constituents, and unions have been shown to increase voter turnout among both members and nonmembers.

Years of de-unionization have harmed the middle class

Despite the evident health and livelihood benefits of unionization, the past five decades have seen declining union membership rates. Just 10.8 percent of Americans belonged to a union in 2020,²² down from nearly 30 percent in 1970.²³ Jobs in the private sector, which are particularly pertinent in discussion of a clean economy transition, are only about 6 percent unionized.²⁴ Declining unionization is strongly correlated with a downward trend in the share of national income garnered by the middle class.²⁵ In fact, researchers estimate that the decline in unionization explains one-fifth to as much of one-third of the increase in wage inequality between 1973 and 2007.²⁶ Once overlooked or avoided in some policy circles, the empirical evidence showing the benefits of unionization for economic and wage growth are now overwhelming and undeniable.

Sound government spending upholds high standards for workers

CAP, the BlueGreen Alliance, and the League of Conservation Voters have called for federal action to ensure that investments in the clean energy economy promote high-quality, good jobs.²⁷ In addition, state and local policies should take steps to uphold industrywide standards and prevent union wages from being undercut, preference employers who have a track record of upholding high standards and complying with the law, and promote unionization opportunities by pledging to maintain neutrality in union representation elections.²⁸

A bold national agenda aimed simultaneously at addressing the climate crisis and recovering from the pandemic-induced economic downturn by getting Americans back to work in good jobs provides the opportunity to tie together public investments and basic labor standards, including:²⁹

- · Paying decent wages and providing quality benefits
- Preventing discrimination and complying with equal pay protections
- Expanding access to apprenticeship and other labor-management training programs
- Using targeted or local hire programs
- Respecting workers' right to join a union and helping prevent labor disruptions on large projects
- Complying with existing workplace laws
- Adhering to "Buy America" rules that create jobs in the United States

These standards can be achieved with specific policies that broadly cover government spending programs, such as prevailing wage laws and anti-discrimination protections. In addition, project-specific project labor agreements and community workforce agreements can be used to raise standards, boost efficiency, and prevent costly delays on large projects.

Examples of state and local progress

Many states and local governments are taking steps to center workers, the creation of high-quality union jobs, and strong labor standards in their climate and clean energy policy agendas. While all states and cities can go further, the programs described below provide initial ideas for how federal lawmakers can follow suit.

State and local governments have long demonstrated their ability to improve labor conditions by codifying into law standards that surpass federal labor standards. Aggressive federal and subnational climate goals present an even greater opportunity for governments to further support good union jobs. Already, state and local climate policies have helped create high-quality union jobs and make the economy more equitable for people of color, women, and other disadvantaged groups. Climate policies that require the purchase of goods and services or that promote clean energy projects through public investments and financing can also promote strong labor standards.

This section provides an overview of some of the state and local policies that can best inform a path forward for lawmakers, particularly at the federal level, but also in other states and cities. Some of these interventions can be used to uphold strong wage floors that do not undercut the market and prevent disruption on large clean energy projects. Others promote the creation of good jobs in fast-growing clean energy industries; invest in key sectors that already support good union jobs; support workers' rights and confront de-unionization; and promote local hiring and equitable access. This section borrows especially from the BlueGreen Alliance state policy toolkit, published in July 2020, which provides examples of state actions that promote good, union jobs in growing clean energy industries.³⁰

- Project labor agreements (PLAs) are collective bargaining agreements covering all of the craft workers, union and nonunion, on a construction project. PLAs are often supported by building trades unions, employers, and the government as a means of ensuring that large projects uphold high standards for workers, high-road firms are not undercut by contractors that pay below-market wages, and costly delays and disruptions due to labor shortages or disruptions are prevented.
- Community benefits agreements (CBAs) and community workforce agreements (CWAs) are similar in nature to PLAs but are broader and often include community organizations as signatories. CBAs and CWAs connect building trades unions with the local community through targeted hire provisions and pre-apprenticeship programs that create career pathways to high-wage jobs for workers in low-income and under-resourced communities.
- **Prevailing wages** establish a wage floor for each occupation that all contractors on a government-funded project must pay at or above, typically set to reflect the market wage for a given type of work in a given area. The Davis-Bacon Act and the McNamara-O'Hara Service Contract Act require that workers on federally funded construction and service work are paid prevailing wages and receive benefits that do not undercut local market wages. Numerous cities and states have enacted their own prevailing wage laws to ensure that government-

- supported construction and service work create middle-class jobs and do not undercut collectively bargained wage rates in areas where unions are strong.31 These laws also set a minimum standard for benefits contributions, such as health and retirement, that must be given to workers on a project.
- Organizing rights provisions include anything that helps rebalance the power dynamic between workers trying to organize a union and their employer or helps prevent disruptions due to labor disputes, such as neutrality clauses and card check agreements.
- Local hire agreements mandate or incentivize the hiring of workers on a project from within the state or community where the project takes place. Without this provision, developers often bring in work crews from out of state to do the work and then leave.
- Targeted hire mandates or incentivizes the hiring of workers on a project from certain communities, which may include women, individuals of color, veterans, the formerly incarcerated, economically disadvantaged communities, communities heavily affected by climate change or climate change policies, and many others.

Promoting good, union jobs in fast-growing clean energy industries

At the end of 2020, more than 3 million American workers were employed in clean energy jobs, such as in energy efficiency, solar, wind, and electric vehicles.³² Clean energy accounted for more than 40 percent of America's overall energy workforce. 33 Renewable energy jobs make up a fast-growing segment of these jobs, but only a small portion have historically been unionized, and unionization rates are higher in some industries and regions than others.³⁴

Some states and localities have stepped up to the plate and demonstrated how climate action is made stronger by unionization and pro-worker policies. In several states, prompted by coalitions that include both labor unions and environmental groups, elected leaders are successfully promoting unionized, renewable energy jobs in fast-growing industries. Clean energy investments, tax incentives, and performance standards are powerful tools for deploying solar, wind, and other forms of zero-carbon energy at the state level. These policy tools can also be effective means of ensuring companies respect workers' right to unionize and promoting high-paying jobs. Governments can require that companies providing goods and services purchased or subsidized by the government, receiving other types of financial assistance, or working on projects subject to the government's regulatory standards or permitting decisions adhere to wage, benefit, and other job quality standards that will provide good jobs and deliver quality goods and services to tax-payers. These actions provide a framework for how federal lawmakers and policy-makers in other states can think about the same.

For example, Washington state tied labor standards to tax incentives for renewable energy development through the Clean Energy Transformation Act (CETA) signed by Gov. Jay Inslee (D) in 2019. The bill contains a clean electricity standard (CES)—which drives utilities to invest in clean energy projects to achieve 80 percent clean electricity generation by 2030, en route to 100 percent carbon-free energy—and conditions related business tax incentives on high-road labor standards and practices, such as apprenticeship utilization, prevailing wage, local hire, and the use of PLAs and CWAs, to promote good jobs. 35 To date, Washington's CETA has resulted in new major renewables projects advancing under PLAs, such as the Rattlesnake Flats wind farm developed by Clearway Energy.³⁶ The CETA legislation represents successful coalition-building between local labor and climate advocates. In the years prior to its passage, climate advocates and union locals, such as the International Brotherhood of Electrical Workers (IBEW) and its certified electrical workers division, engaged together around the opportunity for policy action that would catalyze major investments in clean energy projects, including how those policies could more intentionally support union jobs.³⁷

In 2021, New York—which also has a bold CES aimed at decarbonizing the power sector—enacted a law requiring developers of renewable energy projects that are 5 megawatts (MW) and larger to pay prevailing wage or enter into PLAs for construction work in order to receive state renewable energy credits (RECs) under its standard.³⁸ This new law requires renewable energy system owners of projects 5 MW and larger that receive state RECs to enter into labor peace agreements for

operations and maintenance work.³⁹ It also broke important ground in connecting U.S. industries to clean energy and preventing the continued offshoring of manufacturing and industrial jobs by requiring all public entities procuring clean energy to use domestically produced steel and iron in their projects.⁴⁰ Similarly, since 2013, New Jersey has required developers of solar projects 1 MW and greater that receive state RECs to pay prevailing wages to construction workers.⁴¹_

This year, the Oregon Legislature passed legislation requiring 80 percent clean electricity by 2030 and 100 percent clean electricity by 2040, as well as requiring large clean energy projects to pay prevailing wages, ensure benefits for their workers, and encourage midsize projects to use PLAs and apprenticeship programs with high graduation rates.⁴² The bill also commits to ensuring that 15 percent of clean energy project work hours are performed by people of color, women, veterans, or people with disabilities.⁴³ Also this year, Connecticut Gov. Ned Lamont (D) signed legislation requiring prevailing wages and CBAs for in-state renewable energy projects.44

In Maine, there is also growing support for clean energy and ambitious climate policies among labor unions in the state. 45 Maine's Green New Deal—which passed with the backing of the Maine AFL-CIO in June 2019⁴⁶—creates strategies necessary to the creation of clean energy jobs and a robust clean energy economy in the state and requires opportunities for training and retraining workers and the development of registered apprenticeship programs.⁴⁷

The Virginia Clean Economy Act, sponsored by state Sen. Jennifer McClellan (D) and Del. Richard "Rip" Sullivan, Jr.(D) and passed in 2020, includes provisions directing public utilities in the state to develop up to 5,200 MW of offshore wind. The law requires utilities building those resources to submit plans detailing their options for hiring local workers as well as opportunities to prioritize the hiring and apprenticeship of local workers, veterans, and historically economically disadvantaged communities. 48 The legislation is already demonstrating results: The Virginia State Building and Construction Trades Council, IBEW and the Laborers' International Union of North America (LIUNA) Mid-Atlantic Region joined regional energy utility Dominion Energy in negotiating a PLA for the Coastal Virginia Offshore Wind commercial project. 49

Maryland's Clean Energy Jobs Act of 2019 amended the state's labor and employment law to establish a Clean Energy Workforce Account that provides grants supporting workforce development programs. ⁵⁰ To receive funding, programs must first initiate a PLA. The law requires any approved project to use a CBA and pay workers the prevailing wage rate.

Action in state public utility commissions (PUCs) can also be a helpful tool to ensure that clean energy investments drive labor standards, local hire, and partnerships with unions. For example, the Colorado PUC Reauthorization Act established PLA criteria by which the commission reviews utility decisions to acquire new energy resources. It also directed the PUC to consider "best value" employment metrics, which include the payment of "industry-standard wages" for the project. Si Similarly, in Minnesota, renewable energy projects subject to PUC oversight have been required since 2018 to disclose the number of local jobs they were creating. This has led to greater opportunities for partnerships with local unions to ensure high-quality local jobs, rather than relying on imported contractors paid with low wages. This has, in turn, built greater support for bold clean energy policies—LIUNA, for example, has supported proposed bills in the Minnesota Legislature targeting 100 percent clean electricity. Si

Offshore wind provides another massive opportunity at the cross-section of good jobs in clean energy. Climate Jobs New York, a coalition of labor unions, has worked with the state to include strong labor standards as part of a commitment to robust offshore wind energy development; the coalition has since expanded its successful model to other states through the Climate Jobs National Resource Center. In addition, in 2019, Connecticut enacted a bill to ensure that 30 percent of the state's total load is sourced from new offshore wind energy. The law directed state agencies to begin the process of soliciting bids from offshore wind developers that are required to engage in a good faith negotiation of a PLA. In process, where the process of soliciting bids from offshore wind developers that are required to engage in a good faith negotiation of a PLA.

Recently, Danish renewable energy group Ørsted and North America's Building Trade Unions (NABTU) engaged in a landmark partnership in 2020, based on a model used by the Rhode Island Building and Construction Trades Council for the United States' first offshore wind project. The deal ensures the construction of 15 active commercial offshore wind leases along the East Coast that will support \$25 billion in annual economic output and about 83,000 jobs over the next decade and will use unionized workers. In implementing this regional series of projects, NABTU will provide workforce training, registered apprenticeships, and family-supporting construction careers. ⁵⁶ Already, the Biden administration has taken

action that builds from this state leadership and accelerates offshore wind development in the Northeast. ⁵⁷ Last month, the administration approved a major \$2.8 billion offshore wind energy project, Vineyard Wind 1, off the coast of Massachusetts. ⁵⁸

Electric vehicle charging infrastructure is yet another zone of enormous opportunity. Decarbonizing America's transportation sector and supporting electric vehicle fleets with sufficient infrastructure is key for environmental health and public safety. Moreover, rebuilding transportation systems can be a powerful driver of economic recovery and job growth in forward-looking states and localities if they employ high standards for materials, projects, and operations in the rapid buildout and deployment of EV infrastructure and charging networks. So Increasingly, high-road industry groups and worker representatives are focused on ensuring that the existing workforce is ready to take on the transition to clean transportation. The Electric Vehicle Infrastructure Training Program (EVITP)—which started in California and Nevada and was developed through a partnership among unions such as IBEW, auto manufacturers, utilities, and educational institutions—provides electricians with instruction and hands-on training to install both residential and public charging stations. EVITP has trained approximately 3,000 electricians to install and maintain EV charging stations.

Greater investments in sectors that already support good union jobs

In recent years, many states and local governments have taken action to invest in clean infrastructure and advanced manufacturing—sectors that in many jurisdictions already support high-quality union jobs. State and local governments are already responsible for the majority of infrastructure spending in the United States. Many have supported workforce development and high-quality jobs through infrastructure investments in sectors such as energy efficiency retrofits, transit, clean water, and manufacturing. In addition, numerous cities and states have enacted construction sector prevailing wage laws to ensure that workers earn market wages and benefits and high-road companies can compete for jobs funded through government spending.

The clean economic transition will require much more than clean energy generation technologies; it necessitates massive reinvestment in a sustainable built environment, which includes transformative reinvestments in many traditional infrastructure sectors. In addition, it provides an opportunity to support and revitalize domestic manufacturing, as well as more sustainably producing the goods that are

used every day in a modern economy, with cleaner manufacturing. A recent report from the UC Berkeley Labor Center argues, "the vast majority of the jobs that will be involved in work to lower greenhouse gas emissions across the economy are in traditional occupations where specific 'low carbon' knowledge and skills are only one component of a broader occupational skill set."⁶³ These sectors provide incredible opportunities to retain and create millions of good union jobs, especially as federal lawmakers look to unleash the unparalleled power of federal investment and financing to rebuild America's infrastructure. Below are informative examples of state and local leadership on energy-efficient buildings, transit, clean water infrastructure, and manufacturing. These are only illustrative examples and do not capture the full breadth of opportunities inherent to the clean economy.

Investments in energy-efficient buildings

Energy efficiency investments in commercial and residential buildings have been widely successful at supporting growth in good, unionized jobs. Energy efficiency jobs, the largest employment sector in clean energy industries in the United States, have a 10 percent unionization rate—60 percent higher than the national average for private sector workers. ⁶⁴ Many leading states and local governments have been promoting expansion of energy efficiency jobs through commercial building energy efficiency investments and programs.

The city of Los Angeles' commercial energy efficiency retrofitting programs have created high-quality jobs. Compared with other types of infrastructure investments, energy efficiency programs in Los Angeles consistently produce the largest number of jobs per public dollar invested, pay higher wages and benefits for those jobs, and provide the most consistent support for development on the job-skill ladder for the widest range of trades. Energy efficiency investments in California largely employ workers in traditional building and construction trades rather than relying solely on specialized energy efficiency occupations. In 2011, IBEW Local Union 11 and the Los Angeles chapter of the National Electrical Contractors Partnership opened their NetZero Plus Electrical Training Institute to unite energy efficiency practices and workers. The institute was, at the time, the country's largest net-zero commercial retrofit building.

New York City has taken strides to craft some of the country's most progressive energy efficiency policies, requiring 80 percent emissions reductions from large buildings by 2050, instituting sweeping changes to the city's building codes, and implementing efficiency standards, with fines for noncompliance.⁶⁸ The work of retrofitting and decarbonizing the largest source of carbon pollution in the city

will be achieved in large partnership with local labor unions and state funding for training programs. For example, the New York State Energy Research and Development Authority (NYSERDA) Energy Efficiency and Clean Technology Training Fund supports the city's largest municipal labor union, District Council 37, on technical energy efficiency jobs training initiatives.⁶⁹

Also in New York City, Service Employees International Union (SEIU) Local 32BJ launched a "Green Supers" program that provides training for its unionized building superintendents on steps that will improve building energy and water usage, indoor air quality, waste control, and the overall performance of the building envelope. 70 This program not only improves energy efficiency, cuts electric bills, and reduces pollution, but also provides valuable professional training for union members that will benefit their careers. SEIU has been working to expand this program into jurisdictions nationwide, with support from local governments.

Washington state also offers significant incentives for energy efficiency investments and, in 2019, passed the first state law implementing an energy efficiency performance standard for large existing commercial buildings.71 The Clean Buildings for Washington Act, or H.B. 1257, aims to reduce the energy intensity of Washington's commercial building stock for buildings larger than 50,000 square feet with compliance requirements phased in by 2028. The state has led by example by requiring energy-efficient public buildings and fleets, benchmarking energy use, and encouraging the use of energy savings performance contracts. Contracts and procurement under H.B. 1257 incentivize workforce development, protection, and benefits as certified by the state's Department of Labor and Industries under Washington's aforementioned CETA law.⁷²

Investments in transit

Over the past decade, U.S. cities, state governments, and regional bodies have committed nearly \$50 billion to expanding transit networks.⁷³ This expansion not only supports the development of clean transportation but also provides a major opportunity to create and sustain good jobs in construction, maintenance and operations, and manufacturing in communities across the country.⁷⁴ According to the American Public Transit Association (APTA), public transportation is a \$74 billion industry that directly employs 435,000 workers, in jobs that tend to be union jobs. 75 Moreover, every \$1 invested in public transit delivers \$5 in economic benefits. 76 The BlueGreen Alliance also found that, as of 2015, 750 companies in 39 states manufacture components for transit and passenger rail.⁷⁷ These provide a variety of economic opportunities for state and local governments that federal investment can accelerate.

In 2015, voters in Phoenix approved Transportation 2050—a major investment in citywide transit expansion that includes tripling the number of miles of light rail service and new stations, building more than 1,000 miles of new bike lanes and 135 miles of sidewalks, constructing 75 miles of new rapid transit bus routes, and more. 78 This initiative was supported by the Arizona Building and Construction Trade Council.⁷⁹ In 2020, voters in Austin, Texas, approved Project Connect—a major \$7.1 billion transit expansion that includes 27 new miles of light rail service via two new lines, a downtown transit tunnel, commuter rail, expanded bus service, and a new fleet of e-bikes. It also includes anti-displacement investment to protect affordable housing and support transit-oriented development. 80 In the November 2018 elections, U.S. voters approved nearly \$10 billion in transit funding measures nationwide.81

Ongoing transit development projects continue to be a source of high-road jobs and transportation decarbonization. For example, in 2016, voters in the western region of Washington state approved a \$54 billion Sound Transit 3 (ST3) measure—among the nation's largest—for a major expansion of light rail infrastructure throughout the Central Puget Sound region, the development of which continues under a PLA and has since been joined with a commitment to 100 percent electrification. 82 ST3 will add 62 miles of light rail at 37 new stations, two bus rapid transit (BRT) lanes, and expansions and extensions of existing commuter rail and bus service. It was a top priority of the Washington State Labor Council and the Building and Construction Trades Council when it passed.⁸³

However, at the same time, local and state stories on public transit are not all rosy—particularly amid financing plans that rely on regressive local consumption taxes when Americans have been hit by two unprecedented economic calamities in less than two decades. In November 2020, voters in Gwinnett County, Georgia—a suburban country in the Atlanta metro area—rejected an otherwise popular 82 projects transit measure that involved a 1 percent sales tax increase, 84 despite a new charge given by state lawmakers to the Metropolitan Atlanta Rapid Transit Authority to begin to address one of the nation's worst-congested traffic regions through more transit options. 85 The ballot measure lost by just more than 1,000 votes out of nearly 400,000.86 Nationally, there is also the issue of ridership loss—even prior to COVID-19, transit networks had been shedding riders, pointing to the need for greater accessibility and the development of more transit-smart housing projects.⁸⁷ In light of the economic challenges that decimated communities during the COVID-19 pandemic, it is important to consider how federal investments could help alleviate voters' antipathy towards sales- and property taxbased transit financing plans, whose rejection can force local governments to scrap popular and critically needed expansions.

Much greater federal financial support will be essential and can build upon and accelerate state and local transit development. APTA estimates that 45 percent of Americans have no access to public transportation, and the American Society of Civil Engineers estimates that the backlog of needed transit investments will grow to \$270 billion by 2030.88 The American Rescue Plan passed by Congress and signed by President Biden in March 2021 provided a critical \$30 billion lifeline for state and local transit systems. However, much more investment will be needed to sustain and expand transit, as well as intercity rail transportation.

The American Jobs Plan proposes major transit investments—an opportunity for good jobs in the construction industry and maintenance of more sustainable transportation infrastructure for the 21st century. 89 And just weeks ago, a coalition of advocates wrote to Congress urging it to provide robust investment in public transportation. The letter asked for \$99 billion to address the nationwide transit maintenance backlog, \$20 billion in operating support to expand service, and efforts to ensure that transit receives at least 50 percent of federal transportation investments, rather than the measly 20 percent it has received in the recent past. 90 The letter also urges a \$50 billion investment in clean, zero-emission buses. 91

Investments in clean water

Water infrastructure investment needs are varied and can include stormwater management, waste treatment, and drinking water upgrades for healthy communities; repairs and replacements of locks, dams, and levees that prevent flood and storm surge; and water storage and conservation projects that shore up critical water supplies and protect habitats. Clean water infrastructure for communities is an especially critical need, in light of the Flint, Michigan, water crisis and aging or failing water infrastructure around the country. 92 Water infrastructure investment is also a source of good union jobs, according to the UC Berkeley Labor Center.93 The investments required to improve the U.S. drinking water system alone, from its current poor D+ grade from the American Society of Civil Engineers to a much-improved B grade could create an estimated 144,000 domestic jobs in replacement and upgrades of pipelines, treatment plants, storage tanks, and the installation of green infrastructure projects.94

One example of a state that has recently led on clean water infrastructure is Michigan. In 2020, Gov. Gretchen Whitmer (D) announced the Michigan Clean Water Plan, which would invest \$500 million in upgrading the state's water infrastructure, from wastewater infrastructure to lead service line replacement to remediation of Per- and polyfluoroalkyl substances. 95 This plan received significant

attention, especially in light of the Flint water crisis. The Michigan Clean Water Plan pledged \$207 million for investment in drinking water systems and \$293 million toward wastewater protections and will support more than 7,500 jobs, according to the U.S. Environmental Protection Agency (EPA).⁹⁶

In Miami Beach, Florida, city officials passed the Integrated Water Management plan in 2018 to build blue-green stormwater infrastructure that supports water quality improvement, groundwater recharge and replenishment, and flood mitigation.⁹⁷ The program uses an integrated approach to project implementation to maximize community benefit, including local jobs and training support.98

While states and municipalities are making progress, this is another area where greater federal investment will be critical. In early 2021, four Midwest governors—Gretchen Whitmer, Tony Evers (D-WI), J.B. Pritzker (D-IL), and Tim Walz (D-MN)—wrote to President Biden urging him to prioritize water infrastructure investment as part of his infrastructure and economic recovery agenda. 99 Biden's American Jobs Plan responded with \$111 billion in proposed water infrastructure investment, including \$45 billion for lead service line replacement. 100

Investments in manufacturing

Through investments in low-carbon manufacturing—including local "Buy Clean, Buy Fair" policies and related efforts—federal lawmakers can build on states' efforts and support more American jobs to build clean and competitive manufacturing industries for the 21st century. Already, Buy America laws and the Buy American Act require that federal purchasing and investments in infrastructure source U.S.-made iron and steel and use domestic production and assembly of other manufactured goods. Buy Clean policies, however, focus on the carbon content of manufactured goods—preferencing procurement decisions for firms that meet lower carbon pollution metrics. Additionally, Buy Fair policies can similarly leverage the power of government procurement to ensure fair treatment of workers. Both of these initiatives also inherently support American manufacturing, which frequently involves lower greenhouse gas pollution and better labor conditions. 101 These sorts of policies can also be used to drive a virtuous race to the top in high-road labor and environmental standards, pushing manufacturing enterprises to continue innovating while supporting U.S. jobs. The Biden administration and Congress have the opportunity to support clean and competitive U.S. advanced manufacturing, and in doing so, they can build on a movement that has begun in the states.

In 2017, California became the first state to pass a Buy Clean law, urged on by BlueGreen Alliance, the United Steelworkers, and the Sierra Club. 102 This legislation requires state agencies to consider as part of the procurement processes the carbon pollution embedded in industrial products—such as steel and glass—using a portion of the state's \$10 billion annual public infrastructure investment to incentivize low-carbon manufacturing. Since then, similar legislation has been introduced in Minnesota, Oregon, and Colorado. 103 Washington appropriated money this year to build a state tracking system for both Buy Clean and Buy Fair components. The state has also funded several pilot projects through the capital budget. 104 New York state has passed legislation for offshore wind energy developments that include requirements for investments to satisfy Buy Clean supply chain principles. 105 These points of state progress provide a template for federal action, particularly alongside a legislative agenda for greater public investment in infrastructure.

Elsewhere in manufacturing opportunities that support good jobs and decarbonization is the race to ensure American leadership in the fast-growing 21st century global market for electric vehicles. Success will require bold federal policy action, such as the Clean Cars for America proposal put forward by Sens. Chuck Schumer (D-NY) and Debbie Stabenow (D-MI)¹⁰⁶ and the Clean Energy for America Act led by Sen. Ron Wyden (D-OR), which provides an expanded tax credit for electric vehicles made in America by workers with high-quality jobs. 107 Likewise, states have demonstrated leadership in this area. In 2020, Michigan launched a new state Office of Future Mobility and Electrification to generate new investment and protect the state's competitiveness in electric vehicles and other future mobility technologies. 108 California, Michigan, Nevada and Tennessee have all used tax incentives and grant payments to attract electric vehicle manufacturing facilities to their states, although these states vary in their labor policy and correlated conditions.¹⁰⁹ States have used demand-side policies to pull more electric vehicles into the market as well. Fourteen states, including Minnesota and Virginia, have adopted clean car standards first promulgated by California, requiring increasing sales of zero-emission vehicles and low-emission vehicles. 110 Moreover, this industry extends well beyond single-occupancy vehicles, with the enormous opportunity for electric bus manufacturing.

Already, the electric bus manufacturing sector has laid the groundwork for highquality, union jobs to support the transition to clean transportation. In one example, Proterra electric bus manufacturers in Los Angeles County joined the national United Steelworkers (USW) union in 2019. In this move, USW and Proterra signaled alignment in clean jobs, "ensuring that the materials and components in the transportation supply chain are made in America and that the workers who make them earn fair wages and good benefits." In 2020, Jobs to Move America and Proterra entered into a historic CBA in Los Angeles County to make significant investments in local worker training and hiring for zero-emission bus manufacturing. Under this agreement, Proterra is legally required to hire 50 percent of new hires from communities facing significant barriers to employment. 112

California's proposed Climate Jobs and Equity Act, or A.B. 794, would cement workforce standards into law for the procurement of electric vehicles and the manufacture of electric buses and heavy-duty vehicles. For bus and heavy-duty vehicle manufacturing, 60 percent of the total incentive credit is available for the satisfaction of baseline standards, including compliance with state labor laws, disclosure, and Buy America provisions. Manufacturers can receive the additional 40 percent of the incentive if they satisfy additional labor standards, including hiring of disadvantaged workers, participation in apprenticeship or training programs, prevailing wage, and dispute resolution options.¹¹³

Another example of an opportunity for American jobs in clean manufacturing is in the movement to phase-out hydrofluorocarbons (HFCs)—a powerful climate pollutant that has been used in air conditioning and as refrigerants. The international community moved to phase down HFCs with the Kigali Amendment to the Montreal Protocol, 114 and American manufacturers have begun moving away from HFCs, investing more than \$1 billion in their replacement for most uses. 115 However, the Trump administration refused to support Kigali, despite benefits to the climate and domestic manufacturing competitiveness, again forcing states to lead in the absence of federal leadership. 116 Sixteen U.S. Climate Alliance states are working to pass legislation or adopt regulations to phase down HFCs. 117

In 2019, California, Vermont, and Washington passed legislation to adopt HFC limits based on EPA rules promulgated during the Obama administration. Colorado, Connecticut, Delaware, Maryland, New Jersey, New York, and most recently Virginia have taken similar regulatory action. Transitioning toward HFC alternatives could create as many as 33,000 new regional manufacturing jobs and add approximately \$12.5 billion per year to the U.S. economy, according to testimony from the U.S. Climate Alliance. Federal lawmakers have already taken action to build on state leadership, with passage of the Energy Act in late 2020 to phase down HFCs. However, the Senate still needs to pass the Kigali Amendment, which will help ensure that American manufacturers can compete in the global marketplace.

Supporting workers' rights and confronting de-unionization

Unions and union jobs have long been a potent force for social, moral, and economic fairness. At its most elemental, the right to unionize means having a voice in one's employment and having a stronger voice by partnering with co-workers to speak as one. As the coronavirus pandemic began to sweep through America, workers across the nation recognized that this voice is about much more than wages and benefits. For many front-line workers in the pandemic, access to a union has been a matter of life and death. 120 Unsurprisingly, public support for unions is at a multidecade high.¹²¹ Yet, decades of relentless attacks on the right to unionize have left too many workers unable to collectively bargain with their employers. 122 Now, as state and federal policymakers consider significant investments in building the clean energy economy, it is important that those policies support workers' rights and confront de-unionization. 123

Federal labor law has countless loopholes that undermine workers' ability to come together in strong unions. While federal laws limit some state actions to promote bargaining rights, states have implemented several reforms that can serve as a model for the federal government and help prevent labor disruptions, ensuring that workers continue to have access to unions and the right to collective bargaining.

Governments have significant authority to attach standards to prevent labor disruptions on large investments that create private sector jobs. A number of states and local governments require private contractors on public works projects to enter labor peace agreements and/or PLAs to limit labor disputes and workforce shortages and to safeguard appropriate wage and benefits standards. 124 The District of Columbia, for example, conditions certain contracts on the employers' willingness to enter into labor peace agreements. 125

In addition, some states have adopted protections to ensure that recipients of clean energy sector funds respect their workers, based on evaluations of their histories of compliance with wage and hour, health and safety, and labor laws. In Washington and Minnesota, for instance, contractors are eligible for state contracts and renewable energy incentives only if they have clean histories of compliance with labor laws. 126 California has adopted a responsible contractor standard for all energy efficiency investments to apply workforce standards and protect the quality of workmanship. 127

Of course, public sector jobs should also come with bargaining rights. While the National Labor Relations Act excludes public sector workers, many cities and states have taken action to extend bargaining rights to state and local government employees. Today, more than half of all union members in the United States work in the public sector.¹²⁸ Over the past decade, various anti-union laws enacted at the state level and the 2018 Janus v. AFSCME decision—in which the Supreme Court held that public sector unions must allow "freeriding" by nonmembers, which happens when nonmembers benefit from union gains without paying for them—have chipped away at the right of workers to band together. 129 But progressive elected officials in many other states are enacting reforms to ensure that these workers can unionize. 130 In order to protect public sector workers' right to fairly negotiate and raise workplace standards, federal policymakers should expand public sector bargaining rights to all government workers and ensure that their unions have the ability to access and communicate with workers and collect dues in convenient ways. 131

Finally, in regions and industries where union membership is particularly low, policymakers have used sectoral approaches, such as workers' boards, to increase worker power. Workers' boards are tripartite bodies that bring together workers, employers, and the public to establish minimum wage rates, benefits, and other workplace standards, including paid leave policies and benefit contribution rates. 132 Engaging labor representatives in board activities helps ensure that resulting standards are responsive to workers' needs while also potentially building union visibility and strength. Governments have commonly used these workers' boards in the service sector, with examples including fast-food workers in New York and domestic workers in Seattle. However, more state and local policymakers could also use this approach to establish standards in clean energy sectors with low unionization rates.

Local hire and equitable access

As described in this report, unions and collective bargaining are some of the most effective tools for reducing racial inequalities in pay and household wealth. By taking policy action now to ensure that jobs in the clean energy economy pay good wages and benefits and uphold workers' right to unionize, policymakers can simultaneously take action to combat the economic impacts of systemic racism. But fully realizing the benefits of middle-class jobs also requires a concerted effort to ensure that these jobs are accessible to all and benefit local communities and communities affected by racism, legacy pollution, and deindustrialization. Much more needs to be done, but states and municipalities have taken the lead in crafting policies to protect access to life-changing career pathways for these communities.

State leadership in this space has most often used two policy mechanisms: local hire policies and targeted hire policies. True to their name, local hire policies are often crafted to ensure that the communities that host new energy or manufacturing facilities benefit from those jobs. For example, Virginia's recently passed Clean Economy Act will spur the development of more than 5,000 MW of new offshore wind generation, and the utilities developing those projects will be required to develop a plan to use local workers. The bill also contains a targeted hire mechanism, requiring the utilities developing new offshore wind facilities to prioritize the hiring of "historically economically disadvantaged communities." Similarly, Colorado's carbon reduction goals also require the Public Utilities Commission to ensure that new energy development uses local labor as opposed to "importation of out-of-state workers." 134

Other states have arguably gone even further in taking steps to ensure that marginalized communities benefit from clean energy and manufacturing projects. California's 2015 Clean Energy and Pollution Reduction Act set out a number of critical commitments, containing policies to ensure that energy efficiency investments in the state use only responsible contractors that pay livable wages and provide safe workplaces. (Notably, however, "livable wages" were not defined in the law, leading to real implementation challenges.) In developing this policy, the state tracked the participation of disadvantaged workers in all energy efficiency programs across the state, casting a wide net to include low-income workers, workers on public assistance, single parents, the formerly incarcerated, non-English speakers, and workers who have grown up in the foster care system.

Maryland's Clean Energy Jobs Act is designed to increase the representation of women and people of color in the ownership of clean energy businesses, as opposed to looking at the workforce alone. The bill requires utilities building new offshore wind projects to use CBAs that promote opportunities for local businesses and businesses owned by women and people of color, as well as prioritize training and hiring of local residents, women, veterans and people of color. Washington state combined these two approaches in its Clean Energy Transformation Act, which contains policy mechanisms to diversify the clean energy workforces as well as the ownership of businesses operating in the clean energy and manufacturing field. 137

State and local progress begets federal action

Policies aimed to ensure high-quality, union jobs in the clean economy are not only gaining traction within states; they are also advancing at the federal level where there is a growing focus on increasing union density across the country and linking federal investments to high-road labor standards that support good jobs.

These principles and policies are reflected in the plans put forward by President Biden during his first 100 days, including the groundbreaking American Jobs Plan centering climate and infrastructure investments alongside growing union density, protecting workers' rights, and supporting high-quality jobs.¹³⁸ The president's vision for \$2 trillion to \$3 trillion in federal investment would be the biggest jobs package since World War II. 139 The plan also includes the Protecting the Right to Organize (PRO) Act, which will strengthen federal laws to protect workers' right to join together in unions and negotiate for decent wages and benefits. It also helps ensure that federal investment creates good jobs and prevents labor disruption by requiring federally funded projects to prioritize CWAs and PLAs and invest in pre-apprenticeship programs to provide access to high-quality training and job opportunities. President Biden's plan has a strong focus on ensuring that the jobs created in the clean energy economy are good, high-paying jobs with worker protections.

The American Jobs Plan proposes a wide range of critical investments in U.S. clean energy, infrastructure, and advanced manufacturing sectors.¹⁴⁰ It includes \$400 billion in clean energy deployment, tied to labor standards; \$85 billion to "modernize existing transit and help agencies expand their systems to meet rider demand"; more than \$100 billion for lead pipe replacement and other clean water infrastructure; and another \$174 billion for electric vehicle manufacturing and charging infrastructure. Plus, the plan includes more than \$200 billion to "build, preserve, and retrofit more than two million homes and commercial buildings to address the affordable housing crisis" and nearly \$50 billion in clean economy workforce development. 141 It also proposes investments to continue to support and accelerate state and local clean energy progress, much like the Clean Energy Challenge Grants proposed by CAP's From the State House to the White House initiative. 142

Many forward-looking policies have been progressing in Congress as well. The PRO Act—the most significant upgrade to U.S. labor law in the last 80 years—passed the House in March 2021 by a vote of 225-206. Led in the House by Education and Labor Committee Chairman Bobby Scott (D-VA) and in the Senate by Health, Education, Labor, and Pensions Committee Chair Patty Murray (D-WA), this bill aims to close loopholes in federal labor laws, penalize employers that violate workers' rights, and enhance workers' rights to engage in boycotts, strikes, and solidarity actions. In addition, the introduced Public Service Freedom to Negotiate Act would ensure that all public sector workers are able to exercise their right to come together in unions.

Congress has also taken steps to advance legislation incentivizing high-quality job creation in the clean energy sectors, specifically. Sen. Wyden's Clean Energy for America Act, proposed in April 2021, which creates a new technology-neutral clean energy tax incentive tied together with labor standards to ensure good jobs in deployment of clean energy, transport and energy efficiency infrastructure. 145 Wyden's bill, which was lauded upon release by unions including NABTU and LIUNA, provides these incentives contingent upon compliance with federal labor standards including prevailing wage and apprenticeship requirements and neutrality agreements. 146 Also during the 116th Congress, Sen. Jeff Merkley (D-OR) introduced the Good Jobs for the 21st Century Act to establish a new expanded tax credit for clean energy projects for companies that meet high-road labor standards.147 CAP and the Rhodium Group have found that long-term extension of clean energy tax credits could result in the creation of more than 600,000 American jobs. 148 Evergreen Action and Data for Progress cite similar numbers in their report, calling for long-term extension of clean energy tax incentives tied to labor standards and accompanied by an 80 percent clean electricity standard by 2030 and 100 percent by 2035. 149 President Biden's American Jobs Plan called for extending federal renewable energy tax incentives for 10 years and tying them to labor standards, as well as implementation of an energy efficiency and clean electricity standard. The bill proposes a \$400 billion federal investment in clean electricity, with strong support for tying these investments to labor standards to ensure good jobs. 150

Importantly, a recent working paper from researchers at Princeton University found that these kinds of policies—which would both ensure that workers are paid a fair wage and drive greater use of domestically sourced parts and materials in the renewable energy sector—will not delay clean energy deployment or significantly increase its cost. ¹⁵¹ The research also found that the impact of increased domestic

manufacturing for clean energy would be similarly minimal, with a 10 percentage point increase in domestic content sourcing associated with only a 1 percent increase in the average capital costs of installed solar PV projects. 152

While increasing wages and the amount of domestic content in the solar and wind energy industries will have a very minimal impact on project costs, workers in those industries could see significant benefits. The same Princeton study found that paying workers across domestic wind and solar supply chains 20 percent more could generate an additional \$5 billion in aggregate annual wages in the 2020s, which equates to increasing each worker's average wages by \$12,000 to \$13,000 per year. And by producing more of these components domestically, the United States can support an additional 45,000 jobs in the 2020s. 153 These policies can ensure that even small potential increases are insignificant amid robust incentives to re-shore and expand domestic clean energy deployment.

Furthermore, the Moving Forward Act passed by the House of Representatives last year included requirements for prevailing wage, Buy America standards, and provisions to prevent interference with labor organizing. Key points for lawmakers to reprise from that bill to ensure good jobs in the clean economy include preventing recipients of broadband funding from interfering with labor organizing by requiring neutrality, first contract bargaining, and binding arbitration; requiring prevailing wages; and prohibiting subcontracting to circumvent CBAs. The bill also included provisions to identify and develop pathways for students and individuals to secure pre-apprenticeships in surface transportation projects. 154

In summer 2020, the House and the Senate Special Committees on the Climate Crisis released comprehensive recommendations for tackling climate change and reaching net-zero emissions by 2050. 155 Both reports placed workers' rights and increasing union density front and center in combating the climate crisis and building a clean energy economy. These reports also recognize and emphasize the opportunity facing Congress to ensure that the clean energy economy works for working people. In addition to an explicit reference to the PRO Act, the House report emphasized the connection between federal funding and labor standards. Throughout the report, recommendations for federal spending are conditioned on meeting Buy America standards, Davis-Bacon prevailing wage requirements, and negotiation of CBAs and PLAs. In addition, the report recommends reauthorizing the National Apprenticeship Act and expanding partnerships between industry, labor unions, community and technical colleges, and employers in the clean energy economy. 156 Similarly, in its 2020 report, the Senate Select Committee on

the Climate Crisis recommendations center federal action in protecting workers and growing workers' rights. The report contains provisions to improve retraining and education for displaced workers and underrepresented communities and calls on Congress to include pro-worker provisions in climate and energy policies. Specifically, it recommended that federal investments should contain provisions for workers' right to organize and prevailing wage standards.

Conclusion

Federal lawmakers in 2021 have an opportunity to take bold, decisive action that can create and retain millions of good-paying union jobs throughout the country and improve working conditions for Americans, while simultaneously making a crucial down payment in confronting the climate crisis. As Congress and the administration look to realize such an agenda, they would do well to continue learning from the state and local progress that has already been seen at the intersection of good jobs, economic and environmental justice, and climate solutions. Federal lawmakers do not need to build a plan from scratch. They are standing on the shoulders of state and local advocates and lawmakers.

This report lays out several areas where state and local progress can inform federal action to support high-quality jobs building the clean economy. To be clear, there are a number of additional policy areas that will be critical for good American jobs and achieving climate progress. These include funding for workforce development; reforming trade policy to avoid a race to the bottom in wages and environmental protections in global commerce; investing in the care economy, or supporting critical care health care, home care, and child care industries that are vital to a just and equitable economy; and supporting the just transition policies aimed at protecting workers and communities economically linked to fossil fuel industries that are now undergoing marked economic transition. However, this report focuses on important lessons from some of the most crucial policy arenas.

Fundamentally, the United States is faced with the greatest opportunity in generations to build a just, inclusive, and sustainable clean economy with millions of good-paying union jobs and chart a path forward in terms of climate solutions. Seizing this opportunity requires learning from the state and local governments that have laid a road map for federal action. President Biden and Congress have demonstrated their commitment to this critical moment through the policies that they have put forward in the first half of 2021. Now it is time to finish the job.

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The Center for American Progress is an independent, nonpartisan policy institute that is dedicated to improving the lives of all Americans, through bold, progressive ideas, as well as strong leadership and concerted action. Our aim is not just to change the conversation, but to change the country.

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As progressives, we believe America should be a land of boundless opportunity, where people can climb the ladder of economic mobility. We believe we owe it to future generations to protect the planet and promote peace and shared global prosperity.

And we believe an effective government can earn the trust of the American people, champion the common good over narrow self-interest, and harness the strength of our diversity.

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We develop new policy ideas, challenge the media to cover the issues that truly matter, and shape the national debate. With policy teams in major issue areas, American Progress can think creatively at the cross-section of traditional boundaries to develop ideas for policymakers that lead to real change. By employing an extensive communications and outreach effort that we adapt to a rapidly changing media landscape, we move our ideas aggressively in the national policy debate.

