

No Worker Left Behind: Protecting Workers and Communities in the Green New Deal

A briefing paper for trade unionists



LABOR NETWORK
FOR SUSTAINABILITY

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INTRODUCTION

The Green New Deal Resolution submitted by Rep. Alexandria Ocasio-Cortez and Senator Ed Markey, while it includes many protections and benefits for workers, does not include language that specifically addresses workers who might be adversely affected by the transition to a climate-safe economy.¹ Such GND proposals were soon criticized as too vague to provide protections that workers and unions could count on. AFL-CIO president Richard Trumka, for example, told the Economic Club of Washington, DC, “We would want a whole lot of changes made so that workers and our jobs are protected in the process.”²

There are now several GND plans proposed by political figures, including Democratic presidential candidates, that spell out how protections for workers might be implemented. There are also a variety of GND proposals from individuals and groups that further spell out such protections.

In this briefing paper we lay out the basic elements that have been proposed to protect the well-being of workers and communities who may be adversely affected by aspects of the GND and the transition to a climate-safe economy. We summarize how each of the plans would go about protecting workers and communities whose jobs may be threatened. In the Appendix we provide partial texts from which these summaries are extracted.

The purpose of this compendium is not to evaluate which candidate or other proponent has the best plan. Rather, the purpose is to present the various strategies and programs from which future shapers of the GND can select and combine to forge the best possible program.

This paper aims to identify policies that could be actionable by GNDs at national and state levels. It focuses on proposals that are or could be readily translated into legislation and executive orders. Therefore, many other ideas and proposals, good as they may be, are not included here.

GND programs will involve significant impact on nearly all American workers, including at-risk workers. These include:

- Millions of new jobs
- Training programs
- Labor rights
- Community economic development

¹ Text - H.Res.109 - 116th Congress (2019-2020): Recognizing the duty of the Federal Government to create a Green New Deal. <https://www.congress.gov/bill/116th-congress/house-resolution/109/text>

² <https://www.climatedepot.com/2019/04/24/afl-cio-union-chief-says-no-to-green-new-deal-the-workers-interest-really-wasnt-completely-figured-into-it/>



- Countering past injustices to create a more equal society
- State and local programs

In this briefing paper, however, we only present GND policies specifically designed to protect workers and communities whose jobs and livelihoods may be adversely affected by deliberate managed decline of fossil fuel burning and other GND policies.

The proposals reviewed are:

- Colorado Just Transition law
- Center for Biological Diversity Presidential Action Plan
- Washington State Initiative 1631
- Senator Bernie Sanders “The Green New Deal – Sanders Details”
- Governor Jay Inslee “Community Climate Justice plan,” adopted by Sen. Elizabeth Warren after Inslee withdrew from the presidential race.
- Vice-President Joe Biden “Plan for a Clean Energy Revolution and Environmental Justice”
- BlueGreen Alliance “Solidarity for Climate Action”
- Sunrise Movement “Candidate Scorecard Framework”
- Peter Knowlton “Jobs for Climate Justice Demands”
- Sens. Bernie Sanders, Jeff Merkley, and Edward Markey “Clean Energy Worker Just Transition Act”
- Political Economy Research Institute, “The Economics of Just Transition”
- Institute for Energy and Environmental Research and Labor Network for Sustainability, “Beyond a Band-Aid”

ELEMENTS OF WORKER PROTECTION IN THE GREEN NEW DEAL

Here’s how GND plans address the protection of workers who might be threatened by the transition to a climate-safe economy.

Planning and initial executive action

The Center for Biological Diversity has proposed a “Presidential Action Plan” for actions that can be taken by a new President without need for Congressional approval in the first 100 days after the inauguration. It proposes an Executive Order creating a just transition task force to create a comprehensive, multi-industry, nation program that guarantees support and protection for affected communities and workers.

The Colorado Just Transition law created a Just Transition Office in the Department of Labor and Employment. It will administer benefits to coal transition workers to enable them to support themselves and their families and to access and complete education and training, resulting in being hired for high-quality jobs. And it will make grants to eligible entities in coal



transition communities that seek to create a more diversified, equitable, and vibrant economic future for those communities.

Initial social safety net

Sen. Bernie Sanders' "Green New Deal" plan provides that its first two years will be spent "laying down a social safety net to ensure that no one is left behind." The safety net will include energy assistance and programs to ensure a "hunger-free transition."

Workplace transition plan

Colorado's recent "Just Transition" law creates a Just Transition Office which requires that an electric utility that proposes to retire a coal-fueled electric generating facility shall submit to the Office a workforce transition plan at least 90 days before the retirement of the facility.

Wage guarantee/insurance

The Colorado Just Transition law will provide a "wage differential benefit" defined as "supplemental income" covering all or part of the difference between an individual's previous employment in a coal mine, coal-fueled electrical power generating plant, or the manufacturing and transportation supply chains of either, and new employment or supplemental income during job retraining.

The narrowly-defeated State of Washington Initiative 1631 established a worker-support program for bargaining unit and nonsupervisory fossil fuel workers who are affected by the transition away from fossil fuels to a clean energy economy. It provided full wage replacement for every worker within five years of retirement; for every worker with at least one year of service for each year of service up to five years of service; and wage insurance for up to five years for workers reemployed who have more than five years of service.

Peter Knowlton's "Jobs Climate Justice Demands" provides that fossil fuel or other employees laid off or terminated will receive a wage supplement and benefits package for up to five years. The cost is divided between the employer and the federal government. The wage supplement will take the form of a federal wage and benefit supplement to states unemployment compensation so that eligible employees receive 100% of their gross pay (including pay for vacations and holidays), at the time of their lay-off or termination, for up to 5 years.

Senator Bernie Sanders "Green New Deal" proposal will "guarantee five years of a worker's current salary."

The Sunrise Movement "Candidate Scorecard Framework" calls for "guaranteeing incomes and benefits at current levels" for workers in greenhouse gas intensive industries whose jobs are lost due to Green New Deal policies.



Education and job training

The Colorado Just Transition law provides benefits to coal transition workers to enable them to support themselves and their families and to access and complete education and training, resulting in being hired for high-quality jobs.

The Washington Initiative 1631 provides: up to two years of retraining costs including tuition and related costs, based on in-state community and technical college costs; peer counseling services during transition; employment placement services, prioritizing employment in the clean energy sector; and relocation expenses.

The Sanders GND proposal states that “if workers would like to receive training for a different career path, they will receive either a four-year college education or vocational job training with living expenses provided.”

The Inslee/Warren proposal provides “income replacement and support for educational and worker training stipends for workers seeking to move into new or related professions,” as well as assistance with dependent care, mortgage and other debt relief, transportation costs, and other areas of economic pressure for workers in transition.

Peter Knowlton’s “Jobs Climate Justice Demands” emphasizes that “education and training should not be just for workers after they are laid off but should be available while they are still working...Workers should be “eligible NOW for training, apprenticeship, and other educational and training opportunities.”

Priority job placement

Senator Sanders’ Green New Deal proposal establishes “priority job placement for any displaced worker.” It also provides employers with tax credits to incentivize hiring transitioning employees. In order to ensure that workers who are displaced by this plan are able to find meaningful employment, it provides the Work Opportunity Tax Credit to employers who hire them.

Pension and benefit support

The Inslee/Warren proposal includes a “GI Bill” for impacted energy workers. It will “shore up retirement benefits” through national pension guarantee system.

The Sanders proposal includes “early retirement support for those who choose it or can no longer work.”

Biden, Sanders, and Inslee/Warren plans include protecting the mineworkers health and retirement funds and the Black Lung Disability Fund.



Peter Knowlton's proposed "Demands" include "No employee shall be deprived of their pension credits or rights to a pension, promised or implied." Employers or pension trusts, with defined benefit pensions or retirement plans shall be required, as if the employee was working, to provide five fully funded additional years of credits or of monies to eligible workers upon their layoff or termination.

Health care

Inslee/Warren and Sanders proposals call for universal and affordable health care for all.

Peter Knowlton's proposes that until universal health care legislation is passed, health insurance will be provided to laid off employees, at no premium, deductible, or co-pay costs, for any medical provider of their choosing "at the same or better benefit levels, conditions, and mechanisms as the insurance plan provided to Congressional representatives."

Community investment

The Colorado "Just Transition" law provides grants to eligible entities in "coal transition communities" that seek to create a "more diversified, equitable, and vibrant economic future" for those communities. "Coal transition community" is defined as a municipality, county, or region that has been affected or will be affected by the loss of fifty or more jobs from a coal mine, coal-fueled electrical power generating plant, or the manufacturing and transportation supply chains of either.

The Sanders Green New Deal proposal provides "targeted regional economic development." Communities especially in need of assistance will be eligible for an additional funding for economic development investments through regional commissions and authorities, for example projects that enhance workforce competitiveness, build and repair infrastructure, and increase community capacity like broadband projects, clean drinking water, organic farming, and energy efficiency. The plan includes \$130 billion in infrastructure investments for counties impacted by climate change with funding for water, broadband, and electric grid infrastructure investments.

Joe Biden proposes to support coal and power plant workers and their communities through an "unprecedented investment building upon the vision put forward in the Obama-Biden Administration's Power+ Plan." He proposes a Task Force on Coal and Power Plant Communities, as the Obama-Biden Administration did for Detroit when the auto industry was in turmoil.

The Inslee/Warren plan will support local government budgets impacted by changes in tax revenue due to community level transitional impacts and provide support for local business lines of credit to support local small business. It will create a "Re-Power Fund" to invest in "re-development corridors" and vibrant economic diversification in communities that were



formerly dependent on fossil fuel infrastructure or extraction. Investments could include small business development – including advanced manufacturing and clean energy, infrastructure improvements, and supporting the local government tax base. It will center new job creation on growing, high wage and high value-added industries that draw on the existing skills of workers and strong local supply chains.

The Inslee/Warren plan will also establish a dedicated “Restoration Fund” to create new skilled union jobs in environmental remediation and construction - cleaning up the sites polluted by fossil fuel companies throughout the country, and especially in low-income and disadvantaged communities. This program will hire local workers, and will supplement, and not replace, existing resources like the federal Abandoned Mine Land Fund. Jobs for reclamation and restoration will be required to pay prevailing wages and to allow workers the opportunity to organize.

Arjun Makhijani proposes a fund designed to protect communities and workers directly affected by an energy transition before the damage occurs. It would replace taxes or fees paid by fossil fuel plants and proactively create good jobs in affected communities. The training would be for the jobs that are being created, not some hypothetical jobs that may or may not materialize.

What will it cost?

Cost estimates differ greatly depending on the extent of the plan. A few examples will give some sense of the possible range.

The Washington Initiative 1631 sets aside a minimum balance of \$50 million to be replenished annually for a worker-support program.

The Sanders Green New Deal proposal will spend “\$1.3 trillion to ensure that workers in the fossil fuel and other carbon intensive industries receive strong benefits, a living wage, training, and job placement.”

Sanders, Merkley, Markey “Clean Energy Worker Just Transition Act” estimates a \$41 billion cost for implementing its worker protections.

“The Economics of Just Transition” proposal from the Political Economy Research Institute proposes a program to protect workers and communities adversely affected by climate policies. Guaranteed jobs for workers laid off due to climate policies will cost the public \$300 million per year. Fully guaranteed pensions for fossil fuel industry workers will cost \$90 million per year. Support for community transition will cost between \$150 and \$200 million per year. The total cost will be about \$600 million per year over a 20-year transition period.



How will we pay for it?

Most of these proposals are not stand-alone programs but part of far more extensive GND plans. Therefore, most financing proposals are for the whole GND, not just the worker protection piece. However, almost any part of broader GND financing plans could be used to pay for protection of workers affected by climate policies.

The Washington State Initiative provides “a minimum balance of fifty million dollars of the clean air and clean energy account must be set aside, replenished annually, and maintained for a worker-support program for bargaining unit and nonsupervisory fossil fuel workers who are affected by the transition away from fossil fuels to a clean energy economy.”

The Sanders Green New Deal plan will be paid for by:

- Making the fossil fuel industry pay for their pollution, through litigation, fees, and taxes, and eliminating federal fossil fuel subsidies.
- Generating revenue from the wholesale of energy produced by the regional Power Marketing Authorities. Revenues will be collected from 2023-2035, and after 2035 electricity will be virtually free, aside from operations and maintenance costs.
- Scaling back military spending on maintaining global oil dependence.
- Collecting new income tax revenue from the 20 million new jobs created by the plan.
- Reduced need for federal and state safety net spending due to the creation of millions of good-paying, unionized jobs.
- Making the wealthy and large corporations pay their fair share.

Peter Knowlton proposes that employers be partly responsible for worker protections.

“For every hour an employee works or is paid as if they were working (i.e.: vacation and holiday pay) covered employers shall pay ___% of wages an hour (or so many cents per hour) into a Fund to assist in the payment of direct benefits to those workers transitioning from a certified employer and 100% of this Fund shall be used for those and other payments.” Alternatively, such payments could be based on a percentage of the company’s gross or net profits. “Employers should begin to pay into a fund NOW for workers and communities eventual shift to other work.”

The Sanders/Merkley/Markey “Clean Energy Worker Just Transition Act” covers its \$41 billion costs for worker protections by closing the tax loophole that allows corporations to ship their headquarters overseas to avoid paying taxes.

The Political Economy Research Institute “Just Transition” plan proposes to



generate funds through “investments to raise efficiency in government-owned buildings, which would save \$1.3 billion a year” or “a carbon cap or tax” which could generate \$200 billion a year, .3 percent of which would pay for its just transition program.

Arjun Makhijani suggests the following possible sources of just transition funds:

- A carbon fee or tax for creating jobs prospectively in communities we know will be affected adversely if we keep fossil fuels in the ground.
- Eliminating fossil fuel subsidies and tax breaks.
- Decommissioning funds.
- Using the Community and Worker Protection Fund to leverage other investments.
- A possible charge on electricity supply after renewables become 50 or 60 percent of the energy system.
- General funds from income taxes.



APPENDIX: EXCERPTS FROM “NO WORKER LEFT BEHIND” PROPOSALS

Colorado HB 19-1314 JUST TRANSITION FROM COAL-BASED ELECTRICAL ENERGY ECONOMY³

[Colorado HB 19-1314 is a pioneering piece of legislation passed in 2019 with the initiative and strong support of organized labor that provides a wide range of supports for workers transitioning out of the coal industry, including supplemental wage benefits to compensate for lost income.]

Excerpts:

Bill Summary:⁴

The act creates the just transition office in the division of employment and training in the department of labor and employment. A just transition advisory committee will develop a draft just transition plan, and the director of the office will submit a final just transition plan to the governor and general assembly, regarding proposed:

- Benefits to be given to coal transition workers to enable them to support themselves and their families and to access and complete education and training, resulting in being hired for high-quality jobs;
- Grants to be awarded to eligible entities in coal transition communities that seek to create a more diversified, equitable, and vibrant economic future for those communities; and
- Sources of funding.

An electric utility that proposes the accelerated retirement of a coal-fueled electric generating facility shall submit to the office and the affected community a workforce transition plan at least 6 months before the retirement of the facility.

\$155,758 is appropriated from the general fund to the department of labor and employment and \$920 from the general fund to the general assembly for the implementation of the act.

Signed Act:⁵

Colorado must ensure that the clean energy economy fulfills a moral commitment to assist the workers and communities that have powered

³ https://leg.colorado.gov/sites/default/files/documents/2019A/bills/2019a_1314_rer.pdf

⁴ <https://leg.colorado.gov/bills/hb19-1314>

⁵ https://leg.colorado.gov/sites/default/files/2019a_1314_signed.pdf



Colorado for generations, as well as the disproportionately impacted communities who have borne the costs of coal power pollution for decades, and to thereby support a just and inclusive transition.

"Coal transition community" means a municipality, county, or region that has been affected in the previous twelve months, or that demonstrates it will be impacted in the next thirty-six months, by the loss of fifty or more jobs in total from a coal mine, coal-fueled electrical power generating plant, or the manufacturing and transportation supply chains of either.

"Coal transition worker" means a Colorado worker laid off from employment on or after the effective date of this section in a coal mine, coal-fueled electrical power generating plant, or the manufacturing and transportation supply chains of either.

"Disproportionately impacted community" means any community of color, low-to-middle income community, or indigenous community that is or has been directly impacted by coal pollution.

"Wage differential benefit" means supplemental income covering all or part of the difference between an individual's previous employment in a coal mine, coal-fueled electrical power generating plant, or the manufacturing and transportation supply chains of either and new employment or supplemental income during job retraining.

There is hereby created within the division a Just Transition Office. It is the purpose of the Office to:

Identify or estimate, to the extent practicable, the timing and location of facility closures and job layoffs in coal-related industries and their impact on affected workers, businesses, and coal transition communities and make recommendations to the Just Transition Advisory Committee, as part of its work outlined in subsection (6) of this section, as to how the office can most effectively respond to these economic dislocations.

In developing the draft just transition plan, the advisory committee shall consider options to:

Align and target local, state, and federal resources and leverage additional resources to invest in communities and workers whose coal-related industries are subject to significant economic transition;

Align and target existing local, state, and federal programming and establish additional programming to support communities and workers whose coal-related industries are subject to significant economic transition;

Establish benefits for coal transition workers, including consideration



of:

benefits similar in type, amount, and duration to federal benefits available pursuant to 20 CFR 617.20 to 617.49.

wage differential benefits for affected workers, including consideration of eligibility and the duration of the benefits.

Educate dislocated workers, in collaboration with employers of dislocated workers and relevant labor unions, regarding how to apply for just transition benefits.

Establish and structure a grant program and other potential programmatic support for coal transition communities and organizations that support coal transition communities, including eligible entities.

In developing the draft just transition plan, the advisory committee shall identify and consider:

- (i) the projected short-term and long-term costs and benefits to the state of each plan component, including worker benefits, grant programs, and other supports;
- (ii) potential sources for sustainable short-term and long-term funding for a just transition plan and its components;
- (iii) the potential fiscal, economic, workforce, and other implications of extending components of the just transition plan to other sectors and industries affected by similar economic disruptions; and
- (iv) which components of the just transition plan can be implemented by the departments under existing authority and which require additional legislation.

There is hereby created in the state treasury the Just Transition Cash Fund.

Within thirty days after the approval to accelerate retirement of a generating unit by the utility's governing body and in no case less than six months before the retirement of an electric coal-fueled generating unit that has a nameplate capacity of at least fifty megawatts, the owner or operating agent of that unit shall submit to the office and to the affected community a workforce transition plan.

To the extent practicable, a workforce transition plan must include estimates of:

- (a) the number of workers employed by the electric utility or a



contractor of the utility at the coal-fueled electric generating facility, which number must include all workers that directly deliver coal to the electric utility;

(b) the total number of workers whose existing jobs, as a result of the retirement of the coal-fueled electric generating facility:

(i) will be retained; and

(ii) will be eliminated;

(c) with respect to the workers whose existing jobs will be eliminated due to the retirement of the coal-fueled electric generating facility, the total number and the number by job classification of workers:

(i) whose employment will end without them being offered other employment;

(ii) who will retire as planned, be offered early retirement, or leave on their own;

(iii) who will be retained by being transferred to other electric generating facilities or offered other employment by the electric utility; and

(iv) who will be retained to continue to work for the electric utility in a new job classification; and

(d) if the electric utility is replacing the coal-fueled electric generating facility being retired with a new electric generating facility, the number of:

(i) workers from the retired coal-fueled electric generating facility who will be employed at the new electric generating facility; and

(ii) jobs at the new electric generating facility that will be outsourced to contractors or subcontractors.

For the 2019-20 state fiscal year, \$155,758 is appropriated to the department of labor and employment for use by the division of employment and training. This appropriation is from the general fund and is based on an assumption that the division will require an additional 1.8 FTE. To implement this act, the division may use this appropriation for the just transition office.



Center for Biological Diversity Presidential Action Plan

[The Center for Biological Diversity has proposed a Presidential Action Plan for actions that can be taken by a new President without need for Congressional approval in the first 100 days after the inauguration.]

Excerpt:

Launch a just transition to protect our communities, workers, and economy. Issue an Executive Order creating an inter-agency just transition task force with a deadline of six months to create a comprehensive, multi-industry, national program that guarantees support and protection for affected communities and workers. The task force must meaningfully consult with unions, workers, Indigenous Peoples, and frontline community organizations, and include the Environmental Protection Agency, Departments of Labor, Energy, Transportation, Housing and Urban Development, Commerce, Interior, Defense, and other relevant agencies.⁶

Washington State Initiative 1631

[Washington State Initiative 1631 was developed to provide a just transition to a climate-safe economy, including full wage replacement workers in industries affected by climate policies. It was largely developed and supported by unions. It was narrowly defeated in a 2018 initiative which fossil fuel companies spent large funds to defeat.]

Excerpts:

Within four years of the effective date of this section, a minimum balance of fifty million dollars of the clean air and clean energy account must be set aside, replenished annually, and maintained for a worker-support program for bargaining unit and nonsupervisory fossil fuel workers who are affected by the transition away from fossil fuels to a clean energy economy. The department of commerce, in consultation with the environmental and economic justice panel, may allocate additional moneys from the fund if necessary to meet the needs of eligible workers in the event of unforeseen or extraordinary amounts of dislocation.

Worker support may include but is not limited to full wage replacement, health benefits, and pension contributions for every worker within five years of retirement; full wage replacement, health benefits, and pension contributions for every worker with at least one year of service for each year

⁶ "Climate Top Ten: The Top Executive Actions For The Next President's First Ten Days In Office A Presidential Action Plan To Address The Climate Emergency, Center for Biological Diversity, https://docs.google.com/document/d/1U7RCGp_YlkXO-QNmsfogJ-Hp6nHbG5iLU1ojeyXoGx8/edit#



of service up to five years of service; wage insurance for up to five years for workers reemployed who have more than five years of service; up to two years of retraining costs including tuition and related costs, based on in-state community and technical college costs; peer counseling services during transition; employment placement services, prioritizing employment in the clean energy sector; relocation expenses; and any other services deemed necessary by the environmental and economic justice panel.

Senator Bernie Sanders “Just Transition Plan”

[Senator Bernie Sanders issued an extensive “Green New Deal” plan as part of his 2019 presidential campaign.]⁷

Excerpts:

This plan will prioritize the fossil fuel workers who have powered our economy for more than a century and who have too often been neglected by corporations and politicians. We will guarantee five years of a worker’s current salary, housing assistance, job training, health care, pension support, and priority job placement for any displaced worker, as well as early retirement support for those who choose it or can no longer work.

The first two years of this plan will be spent very aggressively laying down a social safety net to ensure that no one is left behind. Because this plan is so comprehensive in ensuring we solve the climate crisis, we must prioritize establishing a social safety net in the first years of the implementation of this plan. That will include:

Energy assistance. While we do not expect energy prices to spike because the federal government is going to weatherize homes, electrify heating, and keep electricity prices stable, we still want to ensure that families are protected during the transition. We will expand the Low-Income Home Energy Assistance Program (LIHEAP) by \$25 billion to help low-income families pay their heating and cooling bills. Additionally, the program will be expanded to provide 10 percent of program costs for maintenance of new efficient heating and cooling systems and technical assistance for the installation and use of new furnaces, heat pumps, boilers, and other upgrades for the duration of the 10-year transition.

Ensure a hunger-free transition. Because the cost of energy and food are so intertwined, we will provide \$215.8 billion for free, universal school meals, including breakfast, lunch and snacks. We will expand the Supplemental Nutrition Assistance Program (SNAP) by \$311 billion to increase the benefits from the “thrifty” plan which provides inadequate benefits to the more

⁷ “The Green New Deal – Sanders Details” <https://berniesanders.com/en/issues/green-new-deal/>



generous “low-cost” food plan, include those with incomes up to 200 percent of the federal poverty line, remove punitive work requirements, remove barriers for college students to access SNAP, and ensure people are not denied benefits due to past interaction with the criminal justice system.

Ensure a just transition for energy workers. When we are in the White House, we will create millions of union, family-wage jobs through the Green New Deal in steel and auto manufacturing, construction, energy efficiency retrofitting, coding and server farms, and renewable power plants. We will spend \$1.3 trillion to ensure that workers in the fossil fuel and other carbon intensive industries receive strong benefits, a living wage, training, and job placement. We will protect the right of all workers to form a union without threats or intimidation from management. The benefits include:

Up to five years of a wage guarantee, job placement assistance, relocation assistance, health care, and a pension based on their previous salary.

If workers would like to receive training for a different career path, they will receive either a four-year college education or vocational job training with living expenses provided. They will also be eligible for health care through Medicare for All.

We will fully fund tenant-based Housing Choice Vouchers to ensure housing assistance to provide safe and affordable housing.

If a worker is ready to retire, they may opt for pension support and access to health care through Medicare for All.

Currently, the Black Lung Disability Trust Fund and multi-employer miners pensions are paid for by coal companies. We will protect miners’ pensions and provide \$15 billion for the Black Lung Disability Fund to ensure it remains solvent as we transition away from coal.

Provide employers with tax credits to incentivize hiring transitioning employees. In order to ensure that workers who are displaced by this plan are able to find meaningful employment, we will provide the Work Opportunity Tax Credit to employers who hire them.

Provide targeted regional economic development. Communities especially in need of assistance during our transition to a clean energy economy will be eligible for an additional funding for economic development investments through regional commissions and authorities. Our federal regional commissions make targeted economic development investments in rural America. These commissions have funded projects that enhance workforce competitiveness, build and repair infrastructure, and increase community capacity like broadband projects, clean drinking water, organic farming, and energy efficiency.



An additional \$5.9 billion in funding will be distributed as follows:

- \$2.53 billion for the Appalachian Regional Commission
- \$506.4 million for the Delta Regional Authority
- \$304 million for the Denali Commission
- \$405 million for the Northern Border Regional Commission
- \$94 million for the Southeast Crescent Regional Commission
- \$2.02 billion for Economic Development Assistance Programs

Infrastructure investments for impacted communities. We will provide \$130 billion for counties impacted by climate change with funding for water, broadband, and electric grid infrastructure investments.

- Making the fossil fuel industry pay for their pollution, through litigation, fees, and taxes, and eliminating federal fossil fuel subsidies.
- Generating revenue from the wholesale of energy produced by the regional Power Marketing Authorities. Revenues will be collected from 2023-2035, and after 2035 electricity will be virtually free, aside from operations and maintenance costs.
- Scaling back military spending on maintaining global oil dependence.
- Collecting new income tax revenue from the 20 million new jobs created by the plan.
- Reduced need for federal and state safety net spending due to the creation of millions of good-paying, unionized jobs.
- Making the wealthy and large corporations pay their fair share.

Gov. Jay Inslee plan (adopted by Sen. Elizabeth Warren)

[Governor Jay Inslee issued a series of detailed proposals, totaling hundreds of pages, for a wide range of policies for climate protection and economic development as part of his presidential campaign. When he ended the campaign, Sen. Elizabeth Warren immediately announced that she was adopting the Inslee climate program.]⁸

Excerpts:

“GI Bill” for Energy Workers and Families: Just as America cared for its returning heroes following their defeat of fascism in World War II, so now the U.S. must commit to supporting energy workers who are facing ongoing displacement as the world accelerates its shift off of fossil fuel energy and onto cleaner alternatives. Unfortunately, predatory fossil fuel executives, and politicians seeking campaign contributions, have refused to recognize this necessary transition — or worse, are milking their last millions from industries like coal

⁸ Unless otherwise noted, Inslee information is from <https://jayinslee.com/issues/climate-justice>



before they declare bankruptcy and abandon their workers and pension obligations as they sail off into retirement. In his Evergreen Economy Plan, Governor Inslee has proposed a “GI Bill” for impacted energy workers.

Providing energy workers, their families, and their communities with financial security by shoring up retirement benefits through federal backstops to the troubled national pension guarantee system.

Protecting workers’ health care coverage — including protecting the United Mineworkers Association (UMWA) Health and Retirement Funds that continue to support 87,000 Americans; backstopping the solvency of the Black Lung Liability Trust Fund that holds \$6 billion in debt; and by granting qualifying employees and families continued access to their historic health insurance, or new coverage through federal policies to achieve universal and affordable health care, as outlined in Inslee’s Putting Families First Plan.

Further providing income replacement and support for educational and worker training stipends for workers seeking to move into new or related professions, as well as assistance with dependent care, mortgage and other debt relief, transportation costs, and other areas of economic pressure for workers in transition.

Ensuring eligibility for all employees and contractors of companies directly involved in the extraction and processing of fossil fuels. Working with and running programs through local unions that have the relationships and the training expertise to quickly support workers as they transition to future employment. And, supporting local government budgets impacted by changes in tax revenue due to community level transitional impacts, as well as providing support for local business lines of credit, to support local small business.

Creating a “Re-Power Fund” to invest in “re-development corridors” and vibrant economic diversification in communities that were formerly dependent on fossil fuel infrastructure or extraction. Investments could include small business development – including advanced manufacturing and clean energy, infrastructure improvements, and supporting the local government tax base. And this program will ensure that new job creation is centered on growing, high wage and high value-added industries that draw on the existing skills of workers and strong local supply chains.

Establishing a dedicated “Restoration Fund” to create new skilled union jobs in environmental remediation and construction - cleaning up the sites polluted by fossil fuel companies throughout the country, and especially in low-income and disadvantaged communities. This program will hire local workers, and will supplement, and not replace, existing resources like the Abandoned Mine Fund. Jobs for reclamation and restoration will be required to pay prevailing wages and to allow workers the opportunity to organize.



The opportunities available through the Restoration Fund involved projects will last for years, and would be available to fossil fuel employees in addition to other “G.I. Bill” training programs that allow workers remain fully employed.

Joe Biden Plan for a Clean Energy Revolution and Environmental Justice

[Joe Biden issued “Climate: Joe’s Plan for a Clean Energy Revolution and Environmental Justice” as part of his presidential campaign.]⁹

Excerpts:

Joe Biden will commit our country to fulfilling our obligation to all workers impacted by the energy transition, like coal miners and power plant workers and their communities. Coal miners and power plant workers took on dangerous jobs to power our industrial revolution and the decades of subsequent economic growth. As economic trends continue to shift our country away from coal as an energy source, we have an obligation to help these workers and their communities succeed.

President Biden will:

Secure the benefits coal miners and their families have earned. As marketplace competition continues to shift the country away from coal-fired electricity, we have an obligation to these workers who’ve worked hard and sacrificed for the rest of us. Biden will make sure coal miners and their families receive not only the respect they deserve but also the pensions and health benefits they have been promised. Congress should do the right thing and pass legislation now to protect the retirement benefits owed to miners, their dependents, and their widows. But if Congress doesn’t act before Biden takes office, he will make sure we fulfill this obligation. And, Biden will increase coal companies’ payments into the black lung benefits program, reform the black lung benefits system so it is no longer rigged in favor of coal companies who can hire lawyers and doctors to ensure miners’ benefits are denied, expand efforts to help miners detect black lung cases earlier and access care, and enforce regulations to reduce cases of black lung in the first place.

Invest in coal and power plant communities and other communities impacted by the climate transformation. Each of these communities is necessary. We can’t write them off or act like they don’t matter. Each has assets that can be leveraged to diversify their economies, create good, middle class jobs, and help the country get stronger – assets like a rich culture, natural beauty, a proven workforce, and entrepreneurial spirit. The

⁹ “Climate: Joe’s Plan for a Clean Energy Revolution and Environmental Justice”
<https://joebiden.com/climate/>

federal government should be a partner to help these communities capitalize on these strengths and build vibrant communities where good jobs are available and young people want to stay or return home. To support coal and power plant workers and their communities, President Biden will make an unprecedented investment building upon the vision put forward in the Obama-Biden Administration's Power+ Plan. And, he'll establish a Task Force on Coal and Power Plant Communities, as the Obama-Biden Administration did for Detroit when the auto industry was in turmoil. For example, the Task Force will help these communities access federal investments and leverage private sector investments to help create high-paying union jobs based upon the unique assets of each community, partner with unions and community colleges to create training opportunities for these new jobs, repair infrastructure, keep public employees like firefighters and teachers on the payroll, and keep local hospitals open.

BlueGreen Alliance “Solidarity for Climate Action”

[The BlueGreen Alliance, composed of major unions and environmental groups, issued a statement “Solidarity for Climate Action” proposing action to meet scientific targets for climate protection.]

Excerpt:

Guaranteed pensions and a bridge of wage support, healthcare, and retirement security until an impacted worker either finds new employment or reaches retirement.¹⁰

Sunrise Movement “Candidate Scorecard Framework”

[The Sunrise Movement, a youth climate organization and a key proponent of the Green New Deal, issued a “scorecard” that provides criteria for evaluating the GND proposals of presidential candidates.]¹¹

Excerpt:

A Just Economic Transition: Includes plans to ensure a just economic transition for all communities and workers, especially frontline communities and workers most vulnerable to the climate crisis and the transition to a new economy. This includes guaranteeing incomes and benefits at current levels for workers in greenhouse gas intensive industries whose jobs are lost by Green New Deal policies, allowing for early retirement, and providing job placement and training.

¹⁰ “Solidarity for Climate Action,” BlueGreen Alliance, <http://www.bluegreenalliance.org/wp-content/uploads/2019/07/Solidarity-for-Climate-Action-vFINAL.pdf>

¹¹ Candidate Scorecard Framework
https://drive.google.com/file/d/1RtPyFHMIAYZo1PTG5odmy_-ikJQJxBGb/view

Peter Knowlton “Jobs Climate Justice Demands”

[Peter Knowlton, UE General President, retired, developed a set of “Jobs Climate Justice Demands” based on discussions with a range of trade union leaders.]

Excerpts:

Ideas for legislative language and additional funding sources in order to protect and defend workers, families, and communities affected by the shift of jobs and skills from fossil fuels to renewables:¹²

Definitions:

Eligible workers: Any worker or employee laid off or terminated from a certified employer.

Certified Employer: Any employer who lays off or terminates employees in fossil fuel or related industries (you might even be able to identify them by SIC codes) or employer in other industries whose business lays off employees due to movement of work or funding from fossil fuel to renewable energy jobs.

On the date of passage a fossil fuel employee or an employee whose employment is impacted from the fossil fuel industry shall, when laid off or terminated, receive a wage supplement and benefits package whose cost shall be borne between the employer and the federal government for up to five (5) years from the date the employee is laid off:

A federal wage and benefit supplement to states unemployment compensation so that eligible employees receive 100% of their gross pay (including pay for vacations and holidays), at the time of their lay-off or termination, for up to 5 years.

No employee shall be deprived of their pension credits or rights to a pension, promised or implied. Employers or pension trusts, including the government, with defined benefit pensions or retirement plans shall be required, as if the employee was working, to provide five (5) fully funded additional years of credits or of monies to eligible workers upon their layoff or termination.

Health insurance (until HR 1384 and SB Medicare for All are passed) – The fund shall provide health insurance to laid off employees, at no premium, deductible, or co-pay costs, for any medical provider of their choosing at the

¹² Peter Knowlton, UE General President, retired. Message from Peter Knowlton June 30, 2019, “Jobs Climate Justice Demands.” Permission to use received November 11, 2019.



same or better benefit levels, conditions, and mechanisms as the insurance plan provided to Congressional representatives.

The fund shall pay for other benefits lost by employees due to their lay-off or termination for up to five (5) years, including but not exclusive of, short term and long term disability insurance, sick pay, insurance, and life insurance.

Training and education: Workers shall be eligible NOW for training, apprenticeship, and other educational and training opportunities through each state's programs that work with frontline, marginalized and dislocated workers and their retraining, development, and education needs.(Education and training should not be just for workers after they are laid off but should be available while they are still working.) If such a state's "program" does not exist one shall be funded and created between the state and the federal governments to implement and administer the provisions of the Act.

(A minimal example would be the models of the Works Progress Administration and Conservation Corp of the 1930's and, even more relevant, the Weatherization programs under the Comprehensive Employment Training Act (CETA) which provided union apprenticeship programs and especially providing opportunities for people of color, women, and youth, and the formerly robust training programs of vocational education. There are, also, lots of examples providing solid and compassionate assistance to laid off workers. In the 1980's and 90's the Industrial Service Program (ISP) Worker Assistance Centers in Massachusetts, staffed by the local union leadership in unionized shops in Massachusetts, were the implementation arm of assistance for job searching, job retraining, job interview counseling, education, ESL, and other programs for workers laid off and eligible for Trade Adjustment Assistance (TAA) benefits.)

The status, successes, and failures of the implementation and administration of the programs shall be reviewed on an annual basis and such reports sent to the Secretary of Labor.

Additional funding source: For every hour an employee works or is paid as if they were working (ie: vacation and holiday pay) covered employers shall pay ___% of wages an hour (or so many cents per hour) into a Fund to assist in the payment of direct benefits to those workers transitioning from a certified employer and 100% of this Fund shall be used for those and other payments. (Or, instead of wages it could be a % of the company's gross or net profits.) Employers should begin to pay into a fund NOW for workers and communities eventual shift to other work. Forcing this debate over the responsibility of fossil fuel employers is long past due and necessary.



The Clean Energy Worker Just Transition Act

[In the 2015-16 session of Congress, Sen. Bernie Sanders (I-Vt.), Jeff Merkley (D-Ore.), and Edward Markey (D-Mass.) proposed detailed legislation to protect coal miners, to be followed by extension of its provisions to other workers threatened by economic dislocation.]¹³

Excerpts:

We must not only create new jobs for workers who have lost work, but we must ensure that those new jobs are good jobs, meaning they pay a family-sustaining wage, they provide health care and retirement benefits, they are safe, and the workers who hold them have a powerful voice on the job. Moreover, we must create these jobs in the same communities that are suffering. While workers are transitioning to new employment, they must receive protections to maintain family-level wages, health care, and pensions until they are able to start their new jobs. Further, workers need support in connecting with new jobs and the opportunity to learn new skills through vocational education programs. In addition, communities must have the infrastructure to attract new investment that provides those jobs.

The Clean Energy Worker Just Transition Act achieves these goals, and covers the \$41 billion costs of implementing these protections by closing the tax loophole that allows corporations to ship their headquarters overseas to avoid paying taxes.

Summary of Bill Provisions:

Section 1: Eligibility

Workers are eligible when transitioning between jobs or are underemployed. Workers maintain eligibility until they have a salary, pension, and health care benefits package within 10% of the previous benefits package.

For the first 5 years, coal workers are eligible. Then, if 20% or more jobs are lost in other energy sectors, then eligibility opens for those workers as well.

Section 2: Benefits

For up to three years, workers receive unemployment insurance, health care, and pension based on their previous salary.

Workers may receive job training, health care, and living expenses for up to four years.

¹³ The Clean Energy Worker Just Transition Act, Sens. Bernie Sanders, Jeff Merkley, Edward Markey. <https://www.sanders.senate.gov/download/worker-just-transition-act-summary?inline=file>



If a worker is ready to retire, they may opt for pension support and health care. Employers receive tax credits to incentivize hiring transitioning employees.

Section 3: Targeted Investments in Coal Country

Once 35 or more workers in a county become eligible for the program created by this Act, that county becomes eligible to apply for targeted, need-based development funds through an inter-agency effort spearheaded by the Department of Commerce Economic Development Administration (EDA). Funds will be allocated through:

Appalachian Regional Commission (ARC) to assist economic growth in Appalachian communities. Appalachian communities most affected by coal economy transition will receive \$40 million annually for a range of economic development planning and implementation activities. Department of Commerce, Economic Development Assistance Programs (EDAP) to assist economically distressed communities by fostering an environment conducive to job creation and economic growth. The Act includes \$10 million annually to coordinate federal economic development funds government-wide. The agency will take a leadership role in planning and coordination to communities and federal agencies.

In order to address the continuing legacy of coal abandoned mine lands (AML) on the health, safety, environment and economic development potential of communities, the Act provides \$250 million annually to States and Tribes for the reclamation of abandoned coal mine land sites and associated polluted waters in a manner that promotes sustainable redevelopment in economically distressed coal country communities. OSMRE will seek input from States, Tribes and other stakeholders as it finalizes details of this proposal.

The remainder (\$7 billion over 10 years) goes to eligible counties for water, broadband, and electric grid infrastructure investments.

Section 4: Workplace Protections for ALL Workers

Promotes community outreach and mandate workplaces to inform workers of the existence of clean energy worker protections.

Makes it easier for workers to unionize by requiring only a majority of eligible workers to sign authorizations with the National Labor Relations Board. Mandates companies to negotiate within 10 days of union certification and provides the option of mediation after 90 days and the option of arbitration after 30 days following.



Political Economy Research Institute “The Economics of Just Transition”

[Robert Pollin and Brian Callaci published the report “The Economics of Just Transition: A Framework for Supporting Fossil Fuel-Dependent Workers and Communities in the United States.” The report was published in October 2016 by the Political Economy Research Institute of the University of Massachusetts at Amherst.]¹⁴

Excerpts:

The Just Transition program that we have developed here will require significant levels of government spending in three areas. These include:

Guaranteed Jobs and Support for Laid-off Workers. Our high-end estimate for this, including workers who face job losses either due to steady industry decline or large-scale production site shut downs, is \$300 million per year.

Fully guaranteed pensions. As a high-end figure, the U.S. government will have to spend \$1.8 billion to bring the United Mine Workers Health and Retirement Fund to full funding. This amounts to \$90 million per year over 20 years. The figure can be lower to the extent that the coal companies can be made to contribute toward closing their underfunding gap. By contrast, the oil and gas companies, as well as the five ancillary industries, are still fully capable of closing their underfunding gaps. These gaps should therefore be handled through regulatory interventions.

Community transition. Working from the largely successful Worker and Community Transition program, the high-end level of support would be around \$200 million per year. This would be in addition to the direct clean energy investment projects flowing into all regions of the country. Alternatively, if we use the less successful Defense Reinvestment and Conversion Initiative as a financial model, that would imply spending about \$12,000 per displaced worker, amounting to annual spending of around \$150 million per year. Thus, a reasonable range for these programs is between \$150 - \$200 million per year.

Combining these three policy areas, we approximate the total costs as being about \$600 million per year over a 20-year transition period. This level of federal spending can be readily absorbed within the broader \$200 billion annual U.S. clean energy investment program that we have sketched above,

¹⁴ Robert Pollin and Brian Callaci, “The Economics of Just Transition,” October 13, 2016 Political Economy Research Institute, University of Massachusetts, Amherst. <https://www.peri.umass.edu/publication/item/762-the-economics-of-just-transition-a-framework-for-supporting-fossil-fuel-dependent-workers-and-communities-in-the-united-states>



with direct public spending in this program at around \$50 billion per year. The Just Transition program we are proposing, costing around \$600 million per year, would amount to one percent of the \$50 billion in overall public spending needed to build a clean energy U.S. economy.

As one option, these funds could be generated through the savings the federal government would obtain through investments to raise efficiency standards by 30 percent in most of the buildings they own or lease, as stipulated by the 2007 Energy Independence and Security Act. These building efficiency investments should save the federal government about \$1.3 billion per year, i.e. more than twice as much as would be needed for the Just Transition program. Beyond this, establishing a carbon cap or tax to discourage fossil fuel consumption could realistically generate about \$200 billion per year. The total costs of the Just Transition program would therefore amount to about 0.3 percent of the revenues that could come from a carbon tax or cap. [These savings and revenue figures are derived in Pollin et al. (2014), Appendix 5, esp. Table A5.3.]

Institute for Energy and Environmental Research and Labor Network for Sustainability: “Beyond a Band-Aid”¹⁵

[Arjun Makhijani of the Institute for Energy and Environmental Research wrote the paper “Beyond a Band-Aid: A Discussion Paper on Protecting Workers and Communities in the Great Energy Transition” to provide a proactive plan for addressing the impact of impending energy industry change on workers and communities. It was co-published with the Labor Network for Sustainability.]

Excerpts:

A targeted approach is needed to protect communities and workers directly affected by an energy transition *before the damage occurs*. The creation of a Community and Worker Protection Fund (CWP Fund) would accomplish that purpose.

The CWP Fund would be in two parts. One part would replace taxes or fees paid by fossil fuel plants and perhaps also by nuclear and ethanol plants, since they are shutting down with some regularity. The other part would proactively create good jobs in affected communities.

Consider the state of Maryland, which IEER has studied extensively. The taxes and fees paid by the two-reactor Calvert Cliffs nuclear plant in Maryland

¹⁵ Arjun Makhijani, “Beyond a Band-Aid: A Discussion Paper on Protecting Workers and Communities in the Great Energy Transition,” Institute for Energy and Environmental Research and Labor Network for Sustainability.

<https://www.labor4sustainability.org/articles/beyond-a-band-aid/>



amount to \$23.5 million per year; almost all of the revenues accrue to the local government. Revenues of this magnitude from a carbon tax set aside for 10 to 15 years would enable schools, libraries, police and fire departments, and other public services now financed partly by plant fees to continue after the plant is shut (now scheduled for the mid-2030s). A similar concept would apply to Maryland's fossil fuel power plants and to the two counties where coal mining takes place. Total revenue requirements to replace such taxes and fees are probably on the order of \$50 million to \$60 million per year, statewide. Such a community protection fund represents only a fraction of the funds needed for a just transition, but it is critical to support government services in the affected communities.

In Maryland, about 2,000 utility workers in fossil fuel and nuclear plants would be affected by plant closures in the transition to a renewable grid. There are no petroleum and natural gas production facilities in Maryland. Transmission and distribution utility jobs as well as jobs in the gas industry would increase, though the latter would be hydrogen- and possibly biogas-related rather than natural gas-related. Overall, a transition may require revenues on the order \$200 million per year for 15 or 20 years to create jobs proactively and to protect community services and facilities in the event of closure of fossil fuel plants, and, as per the current schedule, the nuclear plant (in the mid-2030s).

Creating jobs prospectively: The worker part of the CWP Fund would create jobs and training *prospectively*, before or approximately at the pace that fossil fuel jobs decline. The training would be for the jobs that are being created, not some hypothetical jobs that may or may not materialize. If they do, as is happening in Texas, they may not be sufficient in number and compensation may not be comparable. [\[13\]](#) This prospective and concurrent creation of good jobs in fossil fuel-dependent communities is essential to prevent widespread disruption; it could also increase support for keeping fossil fuels in the ground. These are *targeted investments*, made in addition to general investments in renewable energy and efficiency which are necessary but may occur elsewhere in the country.

Revenues: To protect threatened workers and communities in advance requires raising funds in advance. Funds are necessary for investments to create jobs and reserve funds to protect communities. Many streams of revenues can be considered:

- a) A carbon fee or tax for creating jobs prospectively in communities we know will be affected adversely if we keep fossil fuels in the ground.
- b) Eliminating fossil fuel subsidies and tax breaks.
- c) Decommissioning funds.
- d) Using the Community and Worker Protection Fund to leverage other investments.
- e) A possible charge on electricity supply after renewables become 50 or



- 60 percent of the energy system.
- f) General funds from income taxes.

A carbon tax sufficient to influence market behavior for reducing greenhouse gas emissions is estimated to be on the order of tens of dollars per metric ton of CO₂-equivalent, approaching a hundred dollars a metric ton or more. Such high levels of taxes would significantly increase the cost of energy during the transition. Fortunately, a carbon tax to make renewables competitive relative to fossil fuels is not needed; the transition can be accomplished in various ways, including by mandating renewable energy and efficiency targets. This means that a high carbon tax is not needed for the transition. A more modest tax could be used for a just transition and for an affordable energy program to protect low-income households.

For instance, ten dollars per metric ton of energy-related CO₂ emissions would amount to about \$50 billion per year initially. This level of tax would correspond to about a 4 percent increase in the final cost of energy. Another \$2 to \$3 per metric ton would provide monies to be refunded to low-income households to offset the effects of the tax on them. It is possible that a smaller tax could be used to leverage much larger investments. This is routinely done in energy efficiency, where public (ratepayer) funds are used to leverage larger private investments in energy efficient lighting and appliances. Private manufacturing investment leveraged by the decision of a city-owned utility in San Antonio to invest in solar energy, cited above, provides another example.

As investments are made they would generate jobs; therefore, the need for additional revenues would decline over time. So, in contrast to carbon taxes proposed for stimulating a fossil fuel phase out, *the carbon tax for the CWP Fund can be reduced*; it can go to zero, as fossil fuels are phased out. This is because the CWP Fund would be used specifically to create jobs for workers in the communities affected by that phase-out before or concomitantly with the end of fossil fuel production.

The indirect jobs would still be there if the jobs for workers in fossil fuels and related industries are created prospectively or concurrently and if the pay in the new jobs is comparable to the ones phased out.

Ending governmental subsidies and tax breaks to the coal, oil, and gas industries would generate about \$20 billion per year, initially. This is approximately the amount needed to make good on the U.S. share of the \$100 billion per year promised to developing countries as part of the Paris Agreement. Another revenue source, potentially general tax revenues, would be needed over time as fossil fuel use declined. Potentially, the initial funds could be used to leverage investments and speed the transition in developing countries.



Decommissioning funds would be available in many areas (nuclear plants, many coal plants, and some fossil fuel production areas). The amounts over time could be very substantial. The development of a just transition plan should include careful consideration of decommissioning funds and related jobs.

The CWP Fund can be used to leverage other investments, including private and public capital, in a variety of ways. For instance, some of the funds could be used to seed a Green Bank in affected communities. It could provide assistance for converting fossil fuel heating to efficient electric systems on a large scale and leverage that to bring manufacturing to fossil-fuel-dependent communities. Creating targets for exports of renewable electricity could also leverage manufacturing investment in solar- and wind-energy-related manufacturing. The CWP Fund should be large enough to create such leverage.