

THE WORKING POOR FAMILIES PROJECT

POLICY BRIEF ■ SPRING 2010

A PATHWAY TO CLEAN JOBS AND PROSPERITY: STATE POLICIES FOR HELPING LOW-INCOME WORKING FAMILIES BUILD CLEAN ENERGY CAREERS

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THE WORKING POOR FAMILIES PROJECT

Strengthening State Policies for
America's Working Poor

Millions of American breadwinners work hard to support their families. But, despite their determination and effort, many are mired in low-wage jobs that provide inadequate benefits and offer few opportunities for advancement. In fact, more than one out of four American working families now earn wages so low that they have difficulty surviving financially.²

Launched in 2002 and currently supported by the Annie E. Casey, Ford, Joyce, and Mott foundations, the Working Poor Families Project is a national initiative that works to improve these economic conditions. The project partners with state nonprofit organizations and supports their policy efforts to better prepare America's working families for a more secure economic future.

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INTRODUCTION

The “clean energy” economy has the potential to bring renewed prosperity to working families and create high quality, middle-skill jobs within the construction and manufacturing industries. However, unless strong action is taken, clean energy jobs will remain largely out of the reach of low-skilled, low-income adults in dire need of work and better wages. Targeted, robust government policies can increase opportunities for skills development, raise wages and benefits, and ensure employer commitment to hiring workers who are under represented in the trades.

WORKING POOR FAMILIES PROJECT (WFPF) seeks to strengthen state policies that can help low-income working families achieve economic security and become productive participants in the economy. WFPF supports efforts of state nonprofit organizations to address obstacles that keep low-skilled, low-income adults from working in occupations that offer family sustaining wages and benefits, career advancement potential, and strong job growth. Investments in clean energy have the potential to create high quality jobs, but, unless states take specific steps, low-income adults will be left behind.

A few states, including several with WFPF project partners, are in the forefront of advancing public policies that expand access to clean energy jobs. This policy brief describes these efforts and presents specific recommendations for tailoring skills development programs and investments to low-skilled, low-income adults, increasing employer commitment for hiring low-income and disadvantaged workers, and improving the quality of clean energy jobs.

DEFINING CLEAN ENERGY AND JOB OPPORTUNITIES

In recent years, a “green job” has come to include any occupation that is, even tangentially, involved in curbing climate change and other forms of environmental degradation. Such an expansive definition incorporates a chef cooking with organic or sustainably grown agricultural products, a furniture maker building from environmentally certified and recycled woods, a hazardous waste worker cleaning up brownfields, and a customer service representative for a hybrid car manufacturer.

This policy brief is focused on a narrower group of occupations directly involved in expanding energy efficiency and renewable energy production and use, the so called “clean energy” sector. Clean energy jobs are found mostly in traditional occupations within construction and manufacturing industries, augmented by new skills.³ Manufacturing, installing, and maintaining wind turbines, for example, creates jobs for machinists, welders, and maintenance and repair workers, among many oth-

ers. Increasing the efficiency of buildings through retrofitting takes the efforts of electricians, heating/air conditioning installers, carpenters, and insulation workers, among others. Even new “clean energy” occupations, such as a solar panel installer, rely on the traditional skill set of a roofer, electrician, and plumber in addition to some specific new technical knowledge and skill.

The U.S. Department of Labor (DOL) has created a working list of existing and emerging occupations that are tied to the clean energy economy through renewable energy generation, energy efficiency, construction, and manufacturing, among a broader set of industry sectors.⁴ DOL identifies which occupations are undergoing significant changes in skill requirements and tasks, and which occupations are in greater demand but otherwise unchanged by green projects and technologies. DOL is currently defining occupational codes for green jobs (see Table 1 for a sampling of occupations). Many of these occupations are nontraditional for women and minorities, who disproportionately fill the ranks of low-income working families.⁵

TABLE 1: CLEAN ENERGY JOBS

	Increased Demand	Enhanced Skills	Emerging Occupation
Renewable Energy Development and use of energy sources (e.g. solar, wind, geothermal, and biomass), as well non-renewable sources undergoing significant green technological changes (e.g., oil, coal, gas, and nuclear).	Power distributor	Power plant operator (geothermal, hydro, utility)	Biomass plant technician Solar photovoltaic installer Wind turbine service tech
Energy Efficiency Activities related to increasing energy efficiency and making energy demand response more effective.	Boilermaker* Insulation worker*	HVAC mechanic/installer	Energy auditor* Weatherization installer/tech
Green Construction Construction of new green buildings, retrofitting residential and commercial buildings, and installing other green construction technology.	Carpenter Electrician Welder*	Roofer (cool roofing) Plumber (green) Pipe fitter (green)	
Manufacturing Industrial manufacturing of green technology as well as energy efficient manufacturing processes.	CNC operator Millwright	Machinist (wind turbine) Technician (solar, PV)	Mfg production technician* Logistics analyst*

Source: U.S. Department of Labor

*Denotes occupation linked to multiple sectors

JOB GROWTH POTENTIAL

Although still in its infancy, the clean energy economy has demonstrated an ability to grow jobs at a faster clip than the overall economy. Experts predict massive growth in clean energy jobs if the U.S. continues to invest in energy efficiency projects and renewable energy production and adopts tougher measures to curb greenhouse gases.

The Pew Charitable Trusts tallied up how many clean energy jobs were created state-by-state between 1998 and 2007.⁶ The study found that clean energy jobs grew by 9.1 percent over the time period, while the total U.S. labor market increased by only 3.7 percent. By 2007, more than 68,200 businesses across all 50 states and the District of Columbia accounted for about 770,000 clean energy jobs.

Pew broadly defined clean jobs to incorporate occupations unrelated to manufacturing and construction (the focus in this policy brief).⁷ Two-thirds of jobs were created through conservation and pollution mitigation efforts, for example at recycling centers. However, Pew found that jobs tied to clean energy use, energy efficiency, and production of environmentally-friendly goods, are growing faster and now offer the most potential.⁸ Economists have forecast that half of future clean energy jobs will be in construction occupations.⁹

The Center for American Progress and the Political Economy Research Institute are among clean energy advocates who believe significant job growth is possible with the right investments and policies. They estimate that the United States can create 1.7 million jobs over a decade if the public and private sectors contribute a combined \$150 billion each year in new spending on clean energy production.¹⁰ Worldwide the clean energy sector is expected to undergo major growth over the next decade.¹¹

To date, states have taken a lead role in addressing climate change. Twenty-nine states and the District of Columbia have adopted renewable portfolio standards, which require electricity providers to supply a minimum amount of power from renewable energy sources.¹² Twenty-two states have established energy efficiency standards for energy

generation, transmission, and use.¹³ Twenty-three states are actively participating in three major regional initiatives seeking to increase renewable energy generation and reduce carbon pollution from power plants.¹⁴ Forty-six states offer some form of tax incentive to encourage corporations and residents to use renewable energy or adopt energy efficiency systems and equipment.¹⁵ Thirty-three states have established policies to boost public and private construction in compliance with Leadership in Energy and Environmental Design (LEED) green building standards.¹⁶ The District of Columbia has taken a step further by mandating that all public and large private development and renovation projects be LEED certified.¹⁷

These state efforts are helping to spur demand for clean energy jobs; however, unless they tie their climate change policies to career and skill development strategies, low-income working families will have limited employment opportunities.

BARRIERS TO CLEAN ENERGY JOBS

Many clean energy jobs are expected to fall within the broad category of “middle-skill” jobs that provide a middle-class wage for workers with education and skills that exceed a high school diploma but are less than a bachelor’s degree.¹⁸ These career-track positions typically are out of the reach of low-skilled, low-wage adults facing barriers to skills development programs and limited personal and professional networks to employment opportunities. Entering the clean energy sector through entry-level, semi-skilled jobs can carry the same drawbacks of other industries if wages and benefits are poor.

SKILLS GAP

In the past decade, postsecondary education institutions, labor unions, community-based organizations, and other skills development providers have ramped up training and certification offerings to prepare workers for the clean energy jobs. Community and technical colleges have developed some programs from scratch and have supplemented other existing pro-

grams with clean energy related curriculum (after all, many clean energy jobs come from existing occupations, so skills requirements are largely the same). Registered apprenticeship providers are developing a variety of curriculum components based on clean energy technologies, processes, and materials.¹⁹

Most of the skills development programs leading to a certification are designed to serve advanced professionals such as architects, designers, and engineers who have either postgraduate training or a two- or four-year degree combined with many years of experience.²⁰ This is particularly the case in the renewable sector. These credentials are out of the reach of low-income working families, who face a host of financial, academic, and work readiness barriers that limit their success in college and in on-the-job training programs.²¹ More than half of low-income working families are headed by an adult who has a high school education or less,²² raising their prospect of deficiencies in both math and literacy.

Mainstream education and workforce development systems have not done enough to ensure low-skilled, working adults can access skills development programs. When programs are set up to serve low-skilled and disadvantaged populations, they are often funded with one-time money and operated as boutique programs outside the existing education and workforce development structures. These programs typically do not do a good enough job engaging clean energy businesses in crafting curriculum, providing on-the-job training opportunities, and hiring program graduates. This raises serious concerns about their sustainability and long-term impact on employment of low-income working families.

Access alone is not sufficient. The quality of clean energy credentials also has been questioned. In a recent study of hundreds of clean energy credentials, the Center on Wisconsin Strategy found few credentials that assess competencies in a standardized way, are meaningful to employers, are embedded in career and educational pathways, or are portable.²³

HIRING GAP

Historically, workers from low-income and disadvantaged communities have been shut out from jobs in clean energy related industries, especially construction. Among low-income families, women and minorities must surmount some of the toughest obstacles. They faced years of discriminatory hiring practices, leaving few with personal and professional ties to businesses and workers who could act as mentors and share job notices.²⁴ The few who do find work on construction projects tend to be employed in low-skilled, low-paid occupations.²⁵

Construction firms that win government contracts now are required to make a good faith effort to employ women and minorities, yet contractors largely have failed to recruit, hire, and provide career advancement opportunities for women and minorities. Relatively few women and minorities have entered and successfully completed registered apprenticeships.²⁶ This has a domino effect. The lack of women and minorities completing apprenticeships and working in the trades means other women and minorities have no one to encourage and mentor them to enter the construction field.

The same scenario is likely to play out in construction and manufacturing jobs tied to the clean energy sector, unless a concerted effort is made to recruit and hire previously excluded worker populations. Although the current recession has left experienced tradesmen temporarily out of work,²⁷ the construction and manufacturing sectors are facing a looming skills shortage caused by the mass retirement of Baby Boomers and projected long-term growth in jobs.²⁸ In particular, an anticipated shortage of qualified energy auditors and wind turbine technicians, as well as machinists and welders with requisite skills, could stunt the growth of the clean energy sector.²⁹ Therefore, investing in the skills and careers of low-income adults is not only good for families but also could head off an anticipated shortage of workers in renewable energy and energy efficiency fields.

WAGE GAP

Although there is evidence the clean energy sector is growing particularly in middle-skill, middle-income jobs,³⁰ currently there is a wide range of high-, middle-, and low-skill jobs at varying levels of pay.³¹ There is evidence to indicate that not all businesses in clean energy fields pay their workers as well as they could or should.

According to research by Good Jobs First, many wind and solar manufacturing facilities pay wages that are below the national average for workers employed in the manufacturing of durable goods. In some locations, average pay rates fall short of income levels needed to support a single adult with one child.³²

In the construction sector, weatherization projects have traditionally paid workers just as poorly as the broader residential construction field. These are types of construction jobs most likely to be filled by low-income, low-skilled adults. In an examination of Massachusetts' energy efficiency sector, the Apollo Alliance found that weatherization contractors typically hire workers on a part-time, seasonal basis, offering them extremely low wages while failing to provide health insurance, pensions, or other benefits.³³ Relatively little is invested in developing workers' skills or in creating equitable pathways for worker recruitment and advancement. As a result, workers and their families are forced to rely on public safety net programs.

Progress has been made through the American Recovery and Reinvestment Act (ARRA). Construction firms awarded ARRA-funded weatherization contracts are now required to adhere to federal prevailing wage requirements. However, weatherization wage rates are much lower than for the skilled trades. According to the Apollo Alliance, wage rates are still so low – from \$11.26 to \$17.59 per hour depending on location – that even those weatherization workers earning the prevailing wage qualify for the Weatherization Assistance Program's low-income eligibility level (earning less than 60% of State Median Income).³⁴

Even so, ARRA-funded weatherization projects could be only a temporary bump in earnings unless the federal government or states extend prevailing wage requirements after stimulus money runs out.

States also have the ability to improve the wages and benefits of clean energy jobs that are supported in some way by taxpayer dollars. Several states have attached job quality standards to economic development incentives and other subsidies, which have been offered to many clean energy manufacturing businesses.³⁵ However, in the race to create clean energy jobs, some states have decided to waive or weaken job quality standards for manufacturers that are offered economic development incentives.³⁶

STATE POLICY OPTIONS FOR BUILDING CLEAN ENERGY CARRERS

Most efforts to train and employ low-skilled workers in clean energy jobs have been developed at the local level, by education institutions, unions, businesses, community-based organizations, and cities. In addition, most reports examining the clean energy economy focus on these local projects and federal funding opportunities, offering little or no mention of state policies that are supporting a skilled clean energy workforce.

In fact, several states are taking a leadership role in reducing barriers that low-income, low-skilled adults face in enhancing their education and skills and obtaining career-path jobs, family sustaining wages, and benefits within the clean energy sector. By and large, states are seeking to adapt existing workforce development policies and promising practices to clean energy, rather than inventing new strategies to address the sector's needs.

As described in section A below, these states have sought to implement programmatic and policy actions that incorporate the clean energy sector into existing successful skills development and employment strategies, such as industry sector partnerships, bridge programs, and apprenticeship prep programs. In addition, states have connected

clean energy skills development programs to existing education and workforce systems in an effort to build capacity and available resources. States also have leveraged innovative funding sources as another step to ensure sustainability of skills development programs. Finally, as described in section B below, states also have taken measures to improve the quality of jobs and the commitment of employers to hire low-income adults and other disadvantaged individuals. It is time for other states to follow suit.

Recent funding through the U.S. Department of Labor (DOL) could seed system change and long lasting investments in the skills and careers of low-income working families if states spend these resources wisely. In January 2010, DOL announced that 34 states were awarded a total of \$190 million to support clean energy sector strategies and create an integrated system of education, training and supportive services that promotes skill attainment and career pathway development for low-income, low-skilled adults and other targeted populations.³⁷

In addition, DOL awarded \$150 million to 38 local and national entities to support programs that help disadvantaged populations raise their economic self-sufficiency through employment in energy efficiency and renewable energy industries. Through the “pathways out of poverty” funding, targeted populations will receive recruitment and referral services; basic skills, work-readiness and occupational skills training; supportive services to help overcome barriers to employment; and other services at times and locations that are easily accessible.³⁸

As a starting point to programmatic and policy changes, several states have sought to build foundational knowledge of the employment and skills development opportunities in the clean energy sector. Michigan, Oregon, New York, New Jersey, Washington, and Minnesota, among other states, have commissioned labor market studies to quantify clean energy jobs, estimate future growth, and assess skill requirements and wage and benefit levels for jobs created. New Jersey has used its labor market research findings about green job skill requirements to develop a green jobs curriculum,

which is now being introduced in several of the state’s postsecondary institutions.³⁹ Ohio is among the states that have developed a statewide inventory of clean energy-related education and skills development programs at public colleges and universities, in order to market program offerings more effectively to students and employers.⁴⁰ Several states, including California, Minnesota, and New Mexico, have convened state-level councils or task forces to engage clean energy stakeholders and craft employment and skills development initiatives.

A) INCREASE ACCESS TO SKILLS DEVELOPMENT OPPORTUNITIES

Develop sector initiatives with skills development strategies

Sector initiatives offer an effective framework for aggregating the skill needs of businesses and targeting workforce development resources to prepare workers, including low-skilled adults, for high-demand, high-wage occupations. Washington and Michigan are among the states that have incorporated the clean energy sector into existing statewide industry sector partnership initiatives.

- ♦ **Washington** passed legislation in 2008 calling on the state workforce investment board to form green sector partnerships under the state’s Industry Skills Panels initiative.⁴¹ The panels, which must consist of business representatives, labor unions, state and local veterans agencies, employer associations, educational institutions, and local workforce development councils, are charged with conducting labor market and industry analyses, planning strategies to meet recruitment and skills development needs, and leveraging and aligning public and private resources to fund solutions. New ISPs have been created to focus on energy, manufacturing, green construction, and apprenticeship connections.⁴² As part of this initiative, the Center of Excellence for Energy Technology at Centralia College conducted a comprehensive analysis of skill

standards for wind technicians to address a shortage of skilled workers in power generation fields.⁴³ Funded by the Pacific Mountain Workforce Development Council's Workforce Innovation in Regional Economic Development (WIRED) Initiative, the project mapped and validated skill standards following a process mandated by the State Board for Community and Technical Colleges, including extensive research, focus groups, surveys, expert analysis, and industry-wide review. Because of this, and because of the commitment and full participation of industry, labor, and education partners, the project resulted in a widely accepted, industry-driven set of voluntary standards to which colleges and unions agree to train.

- ♦ **Michigan** added green as one of the targeted sectors in the state's Regional Skills Alliances (RSAs) initiative. The sector was included in time for a new round of funding for RSAs announced through a December 2009 request for proposals.⁴⁴ To receive funding, green alliances need to focus on renewable energy production and distribution, energy efficiency, or natural resources management. Besides funding green sector strategies, Michigan has integrated the state energy agency into the renamed Department of Energy, Labor, and Economic Growth (DELEG) to better connect workforce and economic development with the needs of the emerging clean energy sector.

Based on the work of clean energy sector initiatives, both states have crafted skills development strategies for low-skilled adults and other targeted populations.

- ♦ **Washington** passed legislation in 2009 establishing the Evergreen Jobs Training Account, a competitive grant program for funding curriculum development, transitional jobs, workforce education, and program innovations that link basic and remedial education to occupation-specific skills development opportunities, and

student outreach efforts in coordination with local workforce investment boards.⁴⁵ Washington plans to finance the training account through gifts, grants, or endowments from public or private sources. Initially, the state has focused on securing federal funds through ARRA, including the sector and pathways grants mentioned earlier.

- ♦ **Michigan** has launched the Energy Conservation Apprenticeship Readiness (ECAR) program to equip women, minorities, and low-income individuals with the skills and certification needed to enter and succeed in energy efficiency-related construction apprenticeships.⁴⁶ The ECAR program was developed through a Green Sector Skills Alliance comprised of several unions and other stakeholders. Assessment, training, placement assistance, and follow-up and retention services are coordinated through Michigan's one-stop career centers. The state leveraged \$1.4 million in ARRA-funded WIA and Wagner-Peyser resources to develop and operate the apprenticeship prep program.

Expand capacity of education and workforce systems to deliver skills development

Recognizing the pitfalls of boutique programs, several states have taken strides to incorporate entry-level skills development offerings into postsecondary and workforce systems. This has ensured low-income adults a clearer path to advanced education and skills, while taking advantage of existing capacity and resources. Still, most innovations are happening at the local and program levels. In a recent study, The Workforce Strategy Center highlights a few community and technical colleges around the nation that have developed career pathway programs in clean energy fields for low-skilled adults.⁴⁷

Maryland and Kentucky have involved community colleges in the delivery of ARRA-funded weatherization skills development programs, spurring on long-lasting system changes and

improved coordination. Massachusetts has leveraged Workforce Investment Act funds and services to support a state-funded green jobs initiative.

- ◆ In **Maryland**, the weatherization dollars have led to closer collaboration among community colleges accustomed to competing with one another.⁴⁸ The state awarded the colleges \$3 million in ARRA funding, which they used to buy and modify curriculum for weatherization and energy efficiency; putting aside competition, the colleges are now sharing curriculum and class space to deliver noncredit weatherization training. As a result of the weatherization initiative, more colleges are participating in a construction and energy technologies education consortium to address the training and workforce recruitment needs of Maryland's construction and energy businesses (previously, only the state's largest community colleges were members of the consortium).
- ◆ **Kentucky** is also using ARRA funds to develop curriculum at the state's community and technical college that will prepare students to pass energy auditor certification exams. Advocates are working to ensure the community college system designs an education pipeline from entry-level weatherization installer to Business Performance Institute-certified energy auditor, building on its experience crafting health care career pathways. Kentucky has invested in skills development as part of a broader initiative through the state's finance cabinet to grow the energy efficiency sector.⁴⁹ The cabinet is leveraging federal, state, and utility incentives and funds to pay for home retrofitting projects for moderate-income residents. Students who pass the BPI exam will be added to a pool of certified energy auditors who are eligible to bid on the energy efficiency projects.
- ◆ **Massachusetts** has awarded \$1 million in state money to community colleges,

workforce investment boards, and community-based organizations to provide low-income individuals with skills development and employment services in preparation for jobs in solar panel installation, home weatherization, and energy auditing, among other fields.⁵⁰ The initiative, Pathways out of Poverty, is active in five of the commonwealth's "gateway communities," which are former mill towns with growing immigrant populations. Grantees are expected to partner with local clean-energy employers to craft skills development programs and place participants in jobs. One of the grantees, a local Workforce Investment Board (WIB) has matched its grant with WIA money to increase services. At other sites, community colleges are working with their local WIB to provide wraparound services, such as soft skills training and case management.⁵¹

Increase the affordability of clean energy skills development programs

Some states have taken steps to reduce the cost of clean energy skills development programs for low-income individuals. Michigan is tapping existing funding sources to cover tuition costs. Connecticut is considering a proposal to forgive student loans.

- ◆ **Michigan** uses financial aid resources through the No Worker Left Behind initiative to provide eligible workers, including low-income adults, with tuition assistance in preparation for high-demand clean energy jobs that have been identified through the green sector initiative.⁵²
- ◆ In **Connecticut**, the General Assembly is debating a legislative proposal that would forgive federal and state student loans for college students who go on to work in the state in high-demand sectors, including clean energy.⁵³ The state would forgive as much as \$2,500 of federal and state education loans annually for up to four years, or 5 percent of loans, whichever is less. To qualify, students must earn an

associate's or bachelor's degree and work in Connecticut for at least two years.

Leverage innovative funding to support skills development programs

With state budgets for education, workforce development, and human services running thin, and ARRA funds drying up, some states have sought innovative ways to fund clean energy skills development programs. Options include bonds and revenue generated from fossil fuel taxes or caps on carbon emissions.

- ♦ **Iowa** is using bonds to expand skills development opportunities in clean energy. The state adapted a longstanding policy for building a skilled agricultural workforce, called the New Jobs Training Program, to grow the biofuels industry.⁵⁴ The program authorizes Iowa's 15 community colleges to issue bonds to pay for training in preparation for jobs that biofuels businesses promise to create. Employers pay off the bonds by allocating 1.5 or 3 percent of their increased payroll tax revenues resulting from new jobs. In recent years, Iowa Central Community College sold tax-exempt bonds to support the training of new employees at five start-up biofuel plants. The program has a revenue-neutral impact on the state budget because the colleges are retiring bonds at a rate equal to the issuance of new bonds.

Several other states have sought to enhance skills development opportunities for clean energy jobs but have run into funding challenges.

- ♦ **Illinois** committed \$425 million in its 2009 capital budget to weatherize homes in low-income, urban neighborhoods and to pay for skills development programs to prepare residents to do the work.⁵⁵ The funding would be used to improve occupational and basic skills and to offer other workforce development services, including mentoring, job development, support services,

transportation assistance, and wage subsidies. However, the state has yet to generate enough bond money to fund the program.

- ♦ **New Mexico** had plans to offer \$20 million in bonds to municipalities and tribal areas to invest in clean energy skills development programs, but like Illinois the bond money has yet to materialize.⁵⁶

Revenues generated from “dirty” sources of energy could be another source of funding for clean energy skills development programs.

- ♦ **Massachusetts** is allocating nearly \$1.9 million from revenue generated by the region's cap-and-trade initiative to fund energy efficiency skills development programs.⁵⁷ The programs prepare incumbent weatherization workers to pass the BPI exam and become certified energy auditors—a rung up from the state's Pathways out of Poverty initiative mentioned earlier.
- ♦ Human services advocates in **Utah** have contended that closing tax loopholes on oil and natural gas mining would raise tens or even hundreds of millions of dollars annually, which the state could use to fill budget gaps in human service programs.⁵⁸ States that mine for fossil fuels could apply this policy prescription to invest in clean energy and skills development programs.

B) EXPAND ACCESS TO FAMILY SUPPORTING JOBS

Guarantee jobs and assure family sustaining wages on publicly funded clean energy projects

A few states have established policies to raise the quality and access of clean energy jobs on publicly funded projects. Maryland, Oregon, and Washington have sought to strengthen employers' commitment for hiring low-income and disadvantaged individuals. In addition, Oregon and Washington require the payment of family sustaining wages and benefits.

- ◆ **Maryland** leverages Transitional Assistance for Needy Families (TANF) funds to provide employers with incentives to hire low-income, low-skilled adults for jobs on ARRA-funded weatherization projects. The welfare funds subsidize wages for TANF-eligible adults while they undertake on-the-job training.⁵⁹
- ◆ **Oregon** has set local hiring requirements and job quality standards to a new loan program that seeks to increase energy efficiency and use of renewable energy sources across the state.⁶⁰ In legislation passed in 2009, the state authorized local governments to provide loans for renewable energy and energy efficiency improvements to residential, commercial, and industrial properties. The loan program provides homeowners and business owners with money upfront to retrofit properties, install solar panels, or undertake other, high-cost clean energy projects; they then repay loans in installments on their monthly utility bills (Kentucky is piloting a similar “on-bill financing” scheme in the eastern section of the state). Oregon has attached workforce requirements to the innovative loan program. Contractors must hire at least 80 percent of workers from their local area, pay at least 180 percent of the state minimum wage, and meet other job quality standards. The state gives preference to contractors that provide health insurance benefits.
- ◆ **Washington** has set a goal of creating 15,000 clean energy jobs by 2020, with a priority that 30 percent of the jobs be filled by targeted populations, including low-income and disadvantaged individuals, veterans, and National Guard members.⁶¹ To create jobs, Washington is implementing an ambitious plan for retrofitting buildings throughout the state,⁶² along with other investments and policies designed to grow the clean energy economy.⁶³ The state has attached hiring requirements to the retrofitting initiative to ensure targeted populations are hired to do the work, and the state established prevailing wage

requirements to improve job quality. Washington is tapping the Evergreen Jobs Training Account initiative to prepare targeted populations for available jobs.

POLICY RECOMMENDATIONS

States have several policy and programmatic options for expanding access to clean energy jobs for low-income, low-skilled adults. States have adopted some of these options already, while others have yet to be applied.

1. Determine clean energy job opportunities, skill requirements, and training strategies. It is important to develop foundational knowledge of the employment and skills development opportunities in the clean energy sector. States can do so by (1) commissioning labor market studies to quantify clean energy jobs, estimate future growth, and assess skill requirements and wage and benefit levels for jobs created; (2) developing a statewide inventory of clean energy related education and skills development programs at public colleges and universities, in order to market program offerings more effectively to students and employers; and (3) convening state-level councils or task forces to engage clean energy stakeholders and craft employment and skills development initiatives.

2. Develop sector strategies in preparation for high-demand jobs. Industry sector partnerships initiatives can be used to aggregate the training and workforce needs of multiple employers in key sectors and to target skills development resources to meet those needs. States ought to consider developing or expanding sector initiatives to include clean energy industries likely to create local jobs. States without an existing industry sector initiative should leverage funding opportunities through DOL’s State Energy Sector Partnership and Training Grants program to develop a statewide clean energy sector initiative (and adapt the framework to other targeted industries in the future). States can leverage other existing resources, including Workforce Investment Act funds, to support the development and delivery of sector strategies.

3. Develop skills standards for clean energy jobs.

Sector strategies provide a useful, proven framework for convening industry, labor, education, and workforce development partners to develop consistent skill standards. In doing so, the state can ensure workers gain access to credentials that measure competencies in a standardized way, are meaningful to employers, are embedded in career and educational pathways, or are portable. States should take steps to ensure access to credentials for low-skilled adults (see recommendations 4, 5, 6, and 7).

4. Strengthen education pipeline to clean energy careers.

It is critical for states to craft strategies that help low-skilled adults enter and succeed in postsecondary programs that serve clean energy fields. These efforts should ensure short-term, entry-level skills development programs (e.g. weatherization installation) fully prepare adults to enter more advanced education and training (e.g. energy auditing and traditional building trades). States can strengthen transitions and success by mapping career pathways in the clean energy sector, as advocates have attempted to do in three Midwestern states.⁶⁴ In addition, states should support the development of bridge programs that are linked directly to community and technical college.⁶⁵ Leading the way is Washington state, which has awarded funding to several community and technical colleges to support I-BEST programs related to the clean energy sector.⁶⁶

5. Increase access to apprenticeships and skilled trades.

States should seek to build the capacity of apprenticeship prep programs to prepare low-skilled adults for clean energy related apprenticeships and skilled trades jobs. States should consider awarding funds to prep programs and requiring registered apprenticeships to partner with funded programs.⁶⁷ Michigan has involved union apprenticeship providers in the development of a clean energy apprenticeship prep program. Other forms of on-the-job training, including paid internships, also should be leveraged to increase employment access.

6. Incorporate supportive services in skills development and employment programs.

Access to

child care, substance abuse counseling, and case management and job placement services are critical for low-income working families to successfully complete skills development programs and obtain employment. Workers also might need support remediating criminal records and addressing driver's license issues.

7. Leverage the capacity and resources of education and workforce systems.

Clean energy skills development programs should be integrated into community college and workforce development systems, in order to take full advantage of existing resources and capacities and to avoid the pitfalls of standalone boutique programs. States can achieve this by directing federal and state clean energy skills development resources (e.g. weatherization) to community and technical colleges, as Maryland, Massachusetts, and Kentucky have done. States also should ensure funded programs prepare students to enter more advanced education. In addition, states should require education providers to partner with workforce development and human services agencies to take advantage of WIA and TANF employment and referral services and training resources. These programs have expanded the capacity of skills development initiatives in Massachusetts and Maryland.

8. Provide financial assistance to low-income adults.

It is critical that clean energy skills development programs are eligible for state funded financial aid. States should consider developing new sources of aid targeted to high-demand occupations, including those tied to the clean energy sector, as Michigan has done. This also could take the form of loan forgiveness, under consideration in Connecticut.

9. Tap innovative funding to support skills development.

States ought to consider a broad array of potential funding sources, beyond traditional education and workforce resources. This includes capital budget bonds, revenues generated from regional cap-and-trade initiatives, and taxes on fossil fuel mining and drilling. This has proved successful in Iowa and Massachusetts. In addition, states should consider setting aside a portion of funding for clean energy projects to pay for

education and skills development, as has been done on publicly funded construction projects.⁶⁸

10. Encourage targeted hiring on publicly funded projects. States should adopt policies that raise employer commitment to hire low-income adults, entry-level workers, and other targeted populations for jobs on state funded clean energy projects or in clean energy businesses that have received state economic development subsidies. This could take the form of apprenticeship utilization requirements or hiring goals for low-income or local residents, both of which have been done on publicly funded construction projects (Washington and Oregon have adopted preferential hiring policies for clean energy projects). In addition, states should consider providing wage subsidies to employers that hire and provide on-the-job training opportunities for low-income and disadvantaged workers, as Maryland has done.

11. Require family sustaining wages and benefits on publicly funded projects and for businesses that receive economic development incentives.

Prevailing wage laws and job quality standards should be applied and vigorously enforced on clean energy projects. States ought to ensure similar enforcement of wage requirements on all economic development programs. In addition, states should consider adopting responsible contracting standards to reward bidders that offer health insurance and paid sick days (this also can be used to ensure hiring and skills development opportunities).

12. Monitor progress of efforts to employ low-income working families in the clean energy sector.

States should incorporate robust data tracking and reporting requirements in skills development and employment initiatives to monitor the progress in raising employment levels of low-income working families in the clean energy sector. Doing so provides a mechanism to hold program providers accountable and to uncover and correct problems that are inhibiting successful outcomes.

WORKING POOR FAMILIES PROJECT RECOMMENDATIONS

- 1) Determine clean energy job opportunities, skill requirements, and training strategies.
- 2) Develop sector strategies in preparation for high-demand jobs.
- 3) Develop skills standards for clean energy jobs.
- 4) Strengthen education pipeline to clean energy careers.
- 5) Increase access to apprenticeships and skilled trades.
- 6) Incorporate supportive services in skills development and employment programs.
- 7) Leverage the capacity and resources of education and workforce systems.
- 8) Provide financial assistance to low-income adults.
- 9) Tap innovative funding to support skills development.
- 10) Encourage targeted hiring on publicly funded projects.
- 11) Require family sustaining wages and benefits on publicly funded projects and for businesses that receive economic development incentives.
- 12) Monitor progress of efforts to employ low-income working families in the clean energy sector.

CONCLUSION

The clean energy sector holds the promise of good jobs and a path to self sufficiency for low-income working families. Yet, unless states take bold actions to reduce barriers to these jobs, working families may be left behind. Several states have enacted programmatic and policy innovations to expand access to skills development opportunities through community colleges and the workforce development system. States have incorporated the clean energy sector into existing best-practice initiatives, such as industry sector partnerships and bridge programs, and have leveraged funding through WIA, TANF, bonds, and other sources to pay for programs and human services. With state budgets for education, workforce development, and human resources running thin, and ARRA funds drying up, it is imperative that states find innovative, sustainable ways to fund clean energy skills development programs.

A few states have taken steps to set hiring and wage requirements on clean energy projects, recognizing that investing in the skills of low-income, low-skilled adults does not alone guarantee them employment or good wages. Coupling skills development policies with targeted hiring and job quality standards ensures low-skilled, low-income adults who build their skills have access to clean energy jobs that can support their families. It is time for other states to follow suit.

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ENDNOTES

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