Building Green Pathways out of Poverty

A Report From

Policy Matters Ohio

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Policy Matters Ohio, the publisher of this study, is a nonprofit, nonpartisan policy institute dedicated to researching an economy that works for Ohio. Policy Matters seeks to broaden debate about economic policy by doing research on issues that matter to working people and their families. With better information, we can achieve more just and efficient economic policy. Areas of inquiry for Policy Matters include work, wages, education, housing, energy, tax and budget policy, and economic development.

Executive Summary

Our economy, communities, workforce, and environment are at a crossroads. Practices and policies supporting conventional energy produced an economy with vast amounts of waste and low-road development that left workers behind, communities impoverished, residents dependent on fossil fuels imported from out of state, and our environment polluted. The clean energy movement, on the other hand, is driven in part by a partnership between labor, environmental, community, business and government leaders, as well as concerned citizens, working together toward policies and programs that promote "high-road" economic-development strategies to foster growth that creates quality jobs, protects the environment, and promotes career pathways.

The Apollo Alliance Green Pathways Model offers an excellent approach. Its elements include: 1) Enacting policies and programs to drive investment toward a more energy efficient, sustainable Ohio; 2) Aligning these economic development strategies with training programs and promoting on-the-job training when using public funds for clean energy projects; and 3) Preparing low-skilled workers for these opportunities, particularly women and minority workers, by helping to reduce existing barriers.

Ohio has made progress on all three prongs of the Apollo Pathways Model, enacting a number of foundational polices and programs: adopting renewable energy and energy efficiency standards for electric utilities; creating the Green Pathways Advisory Council where employers, labor and community leaders, and agency officials can align clean energy development with training; and growing the network of apprenticeship prep programs.

Most jobs created from a sustainability strategy are what we traditionally think of as blue-collar work, the kind of jobs that have long been the ticket to the middle class for the nearly 70% of Americans without a four-year degree. A strategy to make our transportation sector more sustainable, for instance, would include serious investments in public transit, passenger rail, freight rail, and next generation automobiles. This will create jobs for rail track layers, bus drivers, train operators, dispatchers, and manufacturing workers while reducing the roughly $15.5 billion leaving our state's economy each year to purchase motor gasoline.

Unfortunately, in the recent past, we have underinvested in the blue-collar skills needed. As a result, the average age of workers in the skilled trades is nearing retirement, without trained workers to replace them. The average skilled electrician, for instance, is 47 years old. Fortunately, Ohio has a system of apprenticeship programs, an age-old training system that combines classroom training with paid work, via apprenticeships, requiring trainees to work closely with highly-skilled craftspeople. Publicly-funded green projects are ideal for creating on-the-job training opportunities for apprentices, but increasing these opportunities requires reforming the contracting process for awarding public funds.

Current projects go to the lowest-cost bidder, which tends to reward low pay, low skill and low quality. "Best-value" contracting instead ensures the greatest return on investment, by allowing the state to select projects based on several factors including qualifications, cost, quality, training opportunities, workforce diversity, and environmental benefits. A growing number of state and local governments are using best value contracting to expand apprenticeships: by creating pools of responsible contractors; giving preference to employers who provide better wages and benefits; or encouraging local hiring of low-income, under-represented, and entry-level workers.

Apprenticeship prep programs are also growing. These programs address barriers like lack of access to transportation or child care, gaps in education or skills to succeed in higher education, or need for income support during training. Constructing Futures, an initiative from Governor Strickland started in September of 2009 using $4 million in federal stimulus funds, is an Ohio network of such apprenticeship prep programs. It lays the foundation for building a green training pipeline in Ohio, while addressing a long history of racial and gender divides in both work and wages, and helping to reduce poverty. Three of the five programs receiving funds from this effort are described in the report. These include:

- The Construction Trades Network in Columbus, which offers an eight-month apprenticeship prep training program for the construction trades, is focused on African American and female workers from less educated neighborhoods.
- A Northwestern Ohio apprenticeship prep partnership for rural, urban, and suburban communities, targeting minorities, now has a waiting list. Registered apprenticeship sponsors include heat and frost insulators, bricklayers/tile setters, cement masons, glaziers, painters, roofers, and plasterers.
- The Greater Cincinnati Regional Construction Trades Partnership works with clients with limited skills and education, poor work history, and other barriers to employment, including criminal records. With funds from Constructing Futures, the partnership has expanded, added green skills, and added a focus on women.

These policies and programs should be built upon to ensure continued gains for communities, our workforce and our environment. Significant energy-savings potential remains in the industrial, transportation, residential, commercial, and electric-utility sectors. As we continue to drive investment toward clean energy, we should use state-funded sustainability projects, whether awarded through the Ohio Department of Transportation or the Ohio Department of Development Energy Division, to support skills development and on-the-job training. One way to do so would be to require that contractors engage in community benefit agreements on large-scale projects. We also need to find a sustainable source of funding for Ohio's Constructing Futures Initiative, grow it to more areas across Ohio, and leverage existing resources to better support the program. This report provides concrete ways to do so.

Building Green Pathways out of Poverty

Our economy, our communities, our workforce, and our environment are at a crossroads. Past practices and policies of the conventional energy economy produced an economy with vast amounts of waste and low-road economic development that left our workers behind, our communities impoverished, our residents dependent on fossil fuels imported from out of state, and our environment polluted. Since the last recession in 2001, from which Ohio never fully recovered, more than 377,000 manufacturing jobs and nearly 63,000 construction jobs have disappeared. Five of Ohio's cities are among the nation's top ten list for having the biggest increases in poverty over the prior year. At the same time, Ohioans spent more than $54 billion on energy in 2008, roughly $4,700 per person, putting additional pressure on already strained budgets. Ohio ranks sixth in the nation for total energy use, in large part due to our energy-intensive manufacturing sector. We rank a shameful second in the nation for the level of pollution emitted by our electric power industry.

The clean energy revolution is driven in part by a partnership between labor, environmental, community, business and government leaders, as well as concerned citizens, working together to demand policies and programs that promote "high-road" economic-development strategies, strategies that foster economic growth in a way that creates high-quality jobs, protects the environment, and promotes career pathways. Ohio has already taken significant steps to transition to the new energy economy but more can and should be done. While there are up-front costs to achieving environmental and economic sustainability, we will continue to reap the benefits for decades to come from the investments we choose to make—benefits that will far outweigh any costs in the long run. As we implement existing and future policies and programs to make Ohio's economy energy efficient and increase the amount of energy coming from renewable energy sources, however, we need to ensure our workers are equipped with the necessary skills to succeed in the new energy economy, and that we are building on-ramps to the middle class for low-income and low-skilled workers. The Apollo Alliance Green Pathways Model offers an excellent approach to achieve this goal. Its elements include:

1. *To create a more energy efficient, sustainable Ohio and assist Ohio energy consumers* we must enact policies and programs to drive investment in the clean energy economy. As a priority, we must invest in our infrastructure and in the energy inefficient homes of lower-income Ohio families, invest to upgrade our manufacturing sector, and build the 21st century transportation system Ohio workers need.

2. *To build a training pipeline of highly-skilled workers in environmentally-friendly fields* we must align economic and workforce development strategies and promote on-the-job training opportunities. When public funds are used to make Ohio's businesses, manufacturers, homes, schools, transportation sector, and government entities more sustainable, we have an opportunity to promote high-

road work practices among employers and on-the-job training opportunities. Instead of awarding public dollars for projects based solely on lowest-cost bidder formulas, we should also consider additional economic value project proposals provide to the community – such as the value derived from using responsible contractors with diverse workforces that hire locally, provide decent wages and benefits, operate from a job site accessible by public transit, engage in environmentally sustainable practices, or offer job training for apprentices and pre-apprentices.

3. *To forge green pathways out of poverty towards family-sustaining wages***,** we should prepare low-income, low-skilled workers in Ohio, particularly women and minority workers who may have been left behind in the conventional energy economy, by helping to reduce existing barriers to jobs paying family-supporting wages. To accomplish this, we should support apprenticeship prep programs, like Ohio's Constructing Futures initiative, and set aside one-half of one percent of green project funds for skills development, partnership building, and supportive services**,** as a growing number of states are beginning to do.[1] These funds should be used to connect trainees with paid work experience, provide income stipends for those in training so they can support themselves and their families, and ensure access to child care, transportation, and other supportive services.

[1] Altstadt, Working Poor Families Project, *Building Opportunity: How States Can Leverage Capital and Infrastructure Investments to Put Working Families on the Path to Good Jobs* (2010).

1. Creating a more energy efficient, sustainable Ohio

In order to reduce our dependence on polluting fuels and achieve a more sustainable economy, we must understand how Ohioans use energy, and where our emissions come from. State and local economic development investment strategies must consider the way we use energy currently. Ohio ranks fifth in the nation for total energy consumption, in large part due to our energy-intensive industry.[2] Figure 1 shows that our industrial sector accounts for 33 percent of the energy we use in Ohio, our transportation sector consumes 25%, and our residential and commercial sectors, combined, constitute about 42% of the energy we use.

Figure 1. **Ohio's Energy Use** (2008)
Source: Energy Information Administration

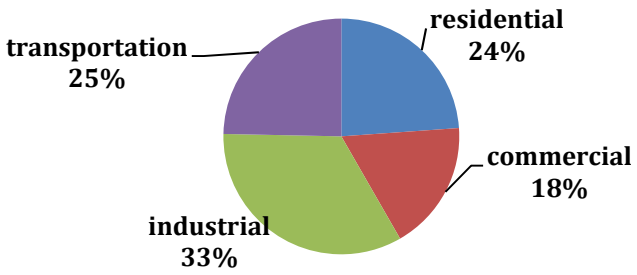
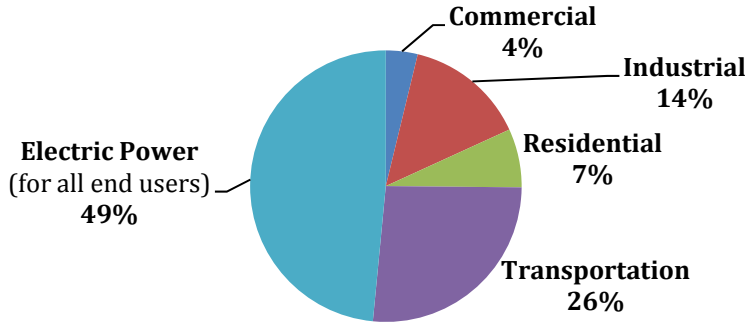


Figure 2 shows that electricity generation is a major source of carbon emissions, representing almost half of total emissions. In fact, Ohio's electric power industry ranks second only to Texas in 2008 for the amount of greenhouse gases it emits.

Figure 2**: 2007 Ohio Emissions (CO_2)**
Source: Environment Ohio (based on EIA data)



[2] Energy Information Administration, 2008, Ohio is tied with the state of New York for total energy use.

Ohio has already implemented aggressive policies to jumpstart our clean energy economy. Governor Strickland, with bi-partisan support from the state legislature, put in place aggressive renewable energy and energy efficiency standards that require electric utility companies to get 12.5% of our electricity from renewable energy sources, and become 22% more energy efficient, by 2025. Ohio also received significant funds from the federal American Recovery and Reinvestment Act and invested them strategically (see Appendix 1 for more detail). However, both figures show we need to do more, in terms of policy, to ensure efficient industry, transportation, housing, commercial building and electrical power generation and to create green jobs. More specifically:

1. A sustainability strategy for Ohio's industrial sector will reduce the nearly $6 billion our manufacturing sector spends on energy while creating jobs in energy assessments, energy management, and construction of a new system of cleaner, more distributed energy generation centers.[3]
2. A strategy to make our transportation sector more sustainable, including serious investments in public transit and passenger rail, freight rail, and next generation automobiles, will reduce the roughly $15.5 billion leaving our state's economy each year to purchase motor gasoline. At the same time it will create jobs for rail track layers, bus drivers and train operators, dispatchers, and manufacturing workers producing next-generation automobiles and transit vehicles.[4]
3. A strategy to weatherize our residential and small commercial structures can ensure long-term job opportunities. Our older housing and building stock, combined with our cold winters, means home and commercial building weatherization can yield big returns here in energy use reductions. Retrofitting homes and businesses to be more energy efficient and to incorporate renewable energy, and building new buildings up to green standards, can create thousands of jobs for energy auditors, electricians, heating, ventilation, and air conditioning technicians, insulation installers, and others. Clean energy standards should also be adopted for natural gas utilities, and we should weatherize residential and small commercial properties across the state.
4. Our outdated electrical grid needs an overhaul since more energy is lost during generation and transmission of electricity than actually reaches the end user. To bring our grid into the 21st century we must upgrade transmission lines, and build new combined heat and power plants that recover massive amounts of heat traditionally wasted in the conventional approach to producing electricity. This will create work for electricians, laborers, and other construction workers. Existing efficiency standards for electric utilities should be extended to gas utilities as well, encouraging cost-sharing and more effective efficiency programming.

[3] Census survey of Manufacturers.
[4] Energy Information Administration, Consumption, Price, and Expenditure Estimates by Sector, 2008.

Because sustainable-energy technology is largely a manufactured science, if Ohio and the nation demand more renewable energy and energy efficiency products, someone has to supply them.[5] Because of our industrial infrastructure and skilled workforce, and our historical strength in producing insulation for weatherizing homes, part manufacturing for durable goods, glass-making and related industries, Ohio is well-positioned to manufacture many of these products.

2. Building Ohio's Green Training Pipeline

We need to ensure we are creating a pipeline of workers equipped with the skills needed to transition us towards the new energy economy, and that we are building career ladders to move low-income, low-skilled workers up the training rungs towards jobs with family-sustaining wages. To do that, we must first analyze the job creation impact of our transition strategy. When we look at how Ohioans use energy and where emissions come from, and begin to outline a strategy to reduce dependence on fossil fuels, we can see the job creation potential. Among the jobs that can emerge are those retrofitting our homes, businesses, and industry with innovative energy products and services; building a more sustainable transportation sector like laying the rail for the 3-C corridor project that will connect riders from Cincinnati to Columbus and Cleveland; and producing the products and services required in the new energy economy. Such a strategy crosses multiple sectors and state departments, requiring coordination between energy development and workforce development. We can better ensure efficient allocation of training resources by aligning economic and workforce development efforts and supporting skills development on publicly-funded green projects.

Ohio has taken a number of important steps in this direction. The Ohio Skills Bank, a partnership led by the Board of Regents in collaboration with the Ohio Department of Development, the Ohio Department of Job and Family Services, Workforce Investment Boards, and career one-stop partners, is dedicated to aligning curriculum and training with skills needed through collaboration, data analysis, and communication between training institutions, economic development experts, and employers. The Ohio Board of Regents also assembled a Green Pathways Advisory Panel that consists of leaders from business, labor, economic and workforce development agencies, utility companies, education and training institutions, and environmental and anti-poverty groups. This encourages cross-agency and multi-stakeholder communication.[6] See Appendix 2 for more detail on these initiatives.

Clean Energy Jobs are in the Skilled Trades and Require Quality Training

Upon preliminary analysis of the clean energy industry, we see that the majority of clean energy jobs are largely what we traditionally think of as blue-collar work—work for electricians, carpenters, insulators, and plumbers—the kind of jobs that have long

[5] Sue Helper, Economic Policy Institute Briefing Paper, *Renewing U.S. Manufacturing: Promoting a High-Road Strategy* (2008) at http://www.sharedprosperity.org/bp212/bp212.pdf.
[6] Ohio Green Pathways Advisory Panel Strategic Plan.

been the ticket to the middle class for the nearly 70% of Americans without a four-year degree. Many of the skills involved in the new energy economy are not new skills at all. However, some sustainability work does involve the "greening up" or upgrading existing skills and incorporating sustainability skills into existing training curriculums. Appendix 3 details the kind of blue-collar work that might be needed.

In the recent past, our economy has failed to recognize the continued need for skilled workers in the trades, and we have underinvested in the training pipeline. As a result, the average age of workers in the skilled trades is nearing retirement, without trained workers to replace them. The average age of an electrician, for instance, is 47 years old.[7] More than a quarter of the members of the International Brotherhood of Electrical Workers are within twelve years of retirement. Of the skilled trades, the construction sector offers the largest and most immediate set of job opportunities. In the long run, as previously noted, demand for clean energy products and services will boost employment in the manufacturing sector.

Fortunately, one of Ohio's best-kept secrets is our system of apprenticeship programs, often affectionately referred to, by those familiar with the system, as "the other four-year degree."[8] This age-old training system combines classroom training in foundational skills with paid work experience, via apprenticeships, requiring trainees to work closely on the job with highly-skilled craftspeople. Publicly-funded green projects provide an ideal opportunity to create on-the-job training opportunities for apprentices. And if we target low-income workers for apprenticeship training, particularly workers that were often left behind in the conventional energy economy, we can also create green pathways out of poverty. To encourage employers to hire apprentices for high-quality on-the-job training opportunities, the contracting process for awarding public funds needs to be reformed.

Best-Value Contracting: The Road to a Sustainable Economy and Workforce

For the past several decades, publicly-funded projects have largely gone to the lowest-cost bidder. However, the low-cost bidding system effectively rewards or subsidizes contractors engaging in low-quality building practices, low-skilled workmanship, and paying low wages and benefits. We indirectly pay for the work of these "low-road" contractors. Low-quality work results in higher energy bills and more rapidly degrading infrastructure while low wages contribute to rising poverty rates, fewer roads to the middle class and increased use of public work support systems to supplement low wages. Conversely, research shows that high-road contractors—responsible contractors that comply with workplace laws and provide quality training,

[7] International Brotherhood of Electrical Workers, Pension Demographics.

[8] *See* Piet Van Lier et. al, Policy Matters Ohio and the Apollo Alliance, *Mapping Green Career Pathways,* a report documenting a number of Ohio's apprenticeship centers, at http://www.policymattersohio.org/GreenCareers2010.htm.

wages, and benefits—are more productive and skilled, and provide quality work that results in savings to taxpayers in the long run.[9]

Ohio should take the high road when spending public funds. In fact, the clean energy economy requires it. Green standards are only achievable with high-quality construction practices and skilled workmanship. To ensure publicly-funded green projects are performed to these high standards, we should award projects to contractors that provide the best value to the community rather than to the lowest cost bidders—that means awarding contracts to responsible contractors employing sustainable practices, offering training, and doing high quality work with a well-paid, diverse, and skilled local workforce.

A "best-value" contracting process seeks to ensure the greatest return on taxpayer investment, while still controlling for costs, by allowing the state to select projects based on several factors including qualifications of contractors, overall project cost, project impact to public, and quality of work. This is in contrast to the current procurement process that awards contracts based solely on the lowest bid.[10] Best-value contracting practices to consider include creating a pool of prequalified responsible contractors that must meet certain standards (such as compliance with workplace, tax, and labor laws, achievement of equal opportunity goals, use of apprentices, and payment of prevailing wages);[11] giving preference for employers paying a family-sustaining wage and providing health benefits, and encouraging local hiring of low-income, under-represented, and entry-level workers;[12] or, creating targeted hire provisions requiring contractors to hire local residents, low-income individuals, minorities, or women, for a certain percentage of work hours, apprentice hours, new hires, or project funds.[13] See Appendix 4 for more information on how a number of state and local governments are moving in this direction.[14]

In Ohio, the Ohio School Facilities Commission has adopted model responsible bidder workforce standards.[15] Not only does the Ohio School Facilities Commission use the U.S. Green Building Council's LEED® for Schools rating system to build high

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[9] Sonn & Gebreselassie, NELP, *The Road to Responsible Contracting: Lessons from States and Cities for Ensuring that Federal Contracting Delivers Good Jobs and Quality Services*, at http://nelp.3cdn.net/985daceb6c3e450a10_pzm6brsaa.pdf (2009).

[10] Ohio Department of Transportation, *ODOT's Design-Build Construction Plan: Capitalizing on Time, Quality, Innovation, and Cost-Savings Benefits for Ohio*

[11] Sonn & Gebreselassie, NELP, *The Road to Responsible Contracting: Lessons from States and Cities for Ensuring that Federal Contracting Delivers Good Jobs and Quality Services*, at http://nelp.3cdn.net/985daceb6c3e450a10_pzm6brsaa.pdf (2009).

[12] Altstadt, Working Poor Families Project, *Building Opportunity: How States Can Leverage Capital and Infrastructure Investments to Put Working Families on the Path to Good Jobs* (2010).

[13] *See Note above,* Altstadt, Working Poor Families Project, *Building Opportunity* (2010).

[14] Sonn & Gebreselassie, NELP, *The Road to Responsible Contracting: Lessons from States and Cities for Ensuring that Federal Contracting Delivers Good Jobs and Quality Services*, at http://nelp.3cdn.net/985daceb6c3e450a10_pzm6brsaa.pdf (2009), and Altstadt, Working Poor Families Project, *Building Opportunity: How States Can Leverage Capital and Infrastructure Investments to Put Working Families on the Path to Good Jobs.*

[15] http://www.osfc.state.oh.us/Construction/ResponsibleBidderCriteria/tabid/146/Default.aspx

performing, energy efficient buildings, the commission also provides local areas the option of adopting responsible bidder criteria for the construction contracts to build them. These criteria include: quality review provisions for very low bids; requirements that contractors, subcontractors, project supervisors and personnel be appropriately licensed, experienced, trained, or in certified training programs; and prevailing wage, health care and retirement standards for compensation, among other provisions. See Appendix 5 for more detail on the Ohio School Facilities Commission model.

4. Building Green Pathways out of Poverty

Providing opportunities for high-road contractors through best value contracting will open the door for apprentices to gain quality work experience. To help ensure low-income, low-skilled workers are prepared to take advantage of apprenticeship opportunities, many communities are fostering the growth of apprenticeship prep, or pre-apprenticeship, programs.[16] Green apprenticeship prep (GAP) programs address income and employment barriers that often prevent workers from participating in higher education, training programs, and gaining meaningful employment.[17] Ohio's Constructing Futures initiative, a growing network of green apprenticeship prep programs across Ohio, created with Workforce Investment funds from the American Recovery and Reinvestment Act, puts the green apprenticeship prep model into practice (see Appendix 6 for more detail on the state program and local initiatives in Columbus, Cincinnati, and Northwest Ohio). This initiative could play a critical role in building the green training pipeline and ensuring access for low-income, low-skilled workers, women, and people of color.

Apprenticeship prep programs, like the Constructing Futures initiative, are designed to address seemingly simple things that can turn into insurmountable barriers for people with minimal resources, such as a lack of reliable transportation or child care, a deficiency in computer skills or failure to attain a high school diploma or GED equivalent, or a need for stipends during training. To counter common employment barriers, apprenticeship prep programs help students attain interpersonal skills, professionalism, initiative, basic math and literacy competency. The programs also help trainees obtain GEDs and work experience.

Low wages can make it difficult for low-wage workers to meet basic family budgets even if they are not enrolled in training programs. Research suggests the primary reason adults drop out of school is because they "need to work to make money."[18]

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[16] *See* The Aspen Institute, *Construction Pre-Apprenticeship Programs: Results from a National Survey* (July 2009) at http://www.aspenwsi.org/Publications/09-007.pdf, and Profiles of 13 pre-construction apprenticeship programs at http://www.aspenwsi.org/WSIprofiles-program.asp.

[17] Northwestern Ohio Construction Education Center proposal for the Constructing Futures Grant Project proposal.

[18] *See* Community Research Partners, *Help-Wanted: A lead state workforce official* (citing Public Agenda, *With Their Whole Lives Ahead of Them: Myths and Realities About Why So Many Students Fail to Finish College* (2009).

Table 1 provides a basic family budget for a single parent with two children living in the Akron area, and demonstrates that a family of this size needs about $1,500 per month just to cover rent, utilities, food, clothing and basic supplies, even before transportation, child care, or health care are factored in (work supports that require nearly an additional $2,000 per month). However, a person working full time at the minimum wage, earns only about $1,265 per month, $235 less than needed for even the most basic necessities. This worker struggles just to make ends meet, making it difficult to enroll in a potentially costly and time-consuming training program.

Table 1. A minimum-wage worker makes less than what it takes to meet basic needs, and can't afford to enter training without assistance.

Earnings For Full-Time Worker at Minimum Wage			
Earnings		Full Time Earnings (40 hours per week)	
		Monthly	Annual
	2010 Minimum Wage: $7.30	$1,265	$15,184
Cost of Living in Akron Ohio For a Single Parent with Two Children			
		Monthly	Annual
Basic Necessities	Housing	$743	$8,916
	Food	$465	$5,580
	Clothing, School Supplies, Personal Care Products	$290	$3,480
	Total	**$1,498**	**$17,976**
Work Supports	Transportation	$339	$4,068
	Child Care	$1,276	$15,312
	Health Care	$274	$3,288
	Total	**$1,889**	**$18,600**
Basic Necessities + Work Supports		**$3,387**	**$36,576**
Earnings Compared to Cost of Living			
Hardship Gap		**Earnings Minus Basic Necessities**	
	Minimum Wage Worker	$(233)	$(2,792)
		Earnings Minus (Basic Necessities + Work Supports)	
	Minimum Wage Worker	$(2,122)	$(21,392)

Source: Basic Family Budget data from http://www.epi.org/content/budget_calculator/.

Table 1 shows to complete training, trainees may need income and work supports to alleviate the costs of living, such as:

- **Cash Income**. A single parent with two children in Akron needs $1,500 per month in income to cover rent, utilities, and basic household items. Public stipends may be necessary to enable program completion.
- **Transportation**. This individual either needs access to reliable public transit, help coordinating transportation to job sites, or $340 to cover the cost to own, operate, and maintain a car in the Akron area (in order to get to work, training, child care, medical care appointments or to pick up groceries).

- **Safe, enriching and reliable child care**. Child care is a juggling act for parents trying to get to work or school. Quality child care, that is both safe and enriching, is expensive. The average cost to cover two children in a certified day-care center is nearly $1,300 per month. So, this parent either needs subsidized child care, or an additional $1,300 to cover the cost of care on the private market.
- **Health Care**. A single parent with two kids needs access to health care, or one health episode can badly derail her financial stability. For employed individuals that have access to health benefits from their employers, the average monthly cost to cover employee premium share, and out-of-pocket cost is about $274. However, low-wage workers are less likely to have health care benefits attached to their jobs.

The Apollo Model Green Pathways out of Poverty Training Program.[19]

The Apollo green apprenticeship prep (GAP) program model, based on the Oakland Apollo Green Jobs Corp, is serving as a model for many communities across the nation. This model attempts to simultaneously address income and employment barriers encountered by many low-skilled workers. Ohio's Constructing Futures initiative, described below, adheres to many of its principles (see Appendix 6 for more details). The model combines classroom training and work experience to bridge the gap between existing skill level and the level needed to succeed in a registered apprenticeship program. It also provides help with income, child care and transportation. The Apollo GAP model has five stages:

1. Recruitment and Assessment
2. Initial training
3. Vocational training
4. Internships (Paid work experience)
5. Graduation and Career Transition

1. Recruitment and Assessment. Working with community organizations and other entities, the GAP program concept involves actively recruiting low-income, low-skilled adults, particularly women and minorities. Staff conducts individual assessments of job history, education level, math, reading, and technical skills. Some trainees, particularly displaced workers or others with more solid job history, place out of some of the initial training. Entry-level trainees also receive education to prepare them and assess their ability to handle physical and other demands associated with these positions – for example, they are warned about weather conditions in construction, exposure to heights and wind in some positions, and other conditions that some workers may be unable to tolerate. Before trainees begin the program, trained counselors assess participant's needs for income support, child-care assistance, driver's license reinstatement, transportation, and addiction issues. On an as-needed basis, these services are provided.

[19] Based on the Oakland Green Jobs Corp / Pinderhughes model.

2. Initial Training. For those who are assessed as requiring initial training (which will include most of those with fewer than five years of job experience), the initial 3-month training includes the components listed below. The curriculum is developed with continuous and significant feedback from community colleges, employers, and apprenticeship programs to ensure that skills acquired will position students to transition into higher education, apprenticeships or good jobs.

- Basic literacy and numeracy
- Life skills and job readiness
- Computer skills
- Team building and working in teams
- Environmental sustainability and environmental justice
- Financial management (how to manage personal finances, avoiding exploitative lending, establishing credit and savings)
- OSHA Safety training certification
- Career Pathways 101 (apprenticeship programs, higher education, and other steps towards work paying family-sustaining wages)

III. Vocational Training. Trainees enroll in three four-week rotations learning vocational hard skills related to green collar work. During this period, trainees receive paid stipends (for example, $9/hour for 20 hours a week).

IV. Internships. Trainees are placed in paid internships with employers (usually three months). Work participation is monitored and certified, so that at the end of the internship, trainees can demonstrate to employers and apprenticeship directors that they showed up to work, on time, and reliably.

V. Graduation and Career Transition. Upon completion, environmental, employer, community, and labor partners participate in high-profile graduation ceremonies, with certification of completion, to affirm the trainees and gain attention for the program and the next set of recruits. Both during the internship phase, and after, the GAP program assists graduates in moving into higher education programs at community colleges, technical schools, apprenticeship programs, or career-track positions with decent wages. For at least one year after graduation, the GAP program continues to provide case management and job retention services. Success of the GAP program is assessed not just with initial job placement, but retention and ascension up a career ladder over the long term.

Constructing Futures is an Ohio network of Green Apprenticeship Prep programs

The Ohio Constructing Futures Initiative lays the foundation for building a green training pipeline in Ohio, while addressing a long history of racial and gender divides in both work and wages, and helping to reduce poverty. In September of 2009, using $4 million in American Recovery and Reinvestment Act dollars from the Workforce Investment Act state discretionary grant, the Ohio Department of Job and Family Services (ODJFS) made funding available for development and operation of

apprenticeship prep programs to prepare unemployed adults, particularly women and minorities, for construction careers in growth industries (especially the clean energy sector). Success for these programs was defined as "enrollment and retention of trainees in Registered Apprenticeship programs or placement in permanent jobs with family-sustaining wages of $30,000 or more per year plus benefits; and secondarily as enrollment in further training geared to career goals identified by trainees while participating in the program." See Appendix 6 for details on the Constructing Futures programs started in Central Ohio, Cincinnati, and Northwest Ohio. All grantees are now underway with their respective programs, with some having already graduated their first round of students in high-profile ceremonies. The Ohio State Apprenticeship Council also issued policy guidance for pre-apprenticeship programming seeking state recognition to ensure programs receiving public funds are meeting basic quality standards.[20]

Each Constructing Futures proposal was required to identify a Registered Apprenticeship sponsor as the entity responsible for administration and reporting. Other required partners included entities from the public workforce system, technical or academic programs in the University System, Adult Basic Literacy and Education (ABLE) program sponsors; and non-profit community-based organizations specializing in career development and supportive services for the intended trainee population. Grantees were required to provide the following services: recruitment of participants from the targeted populations; pre-assessment to determine job readiness, occupational preference, income, and family concerns; individual service plans based on skill testing and needs assessments; career guidance; occupational training in the classroom or lab; additional training for those participants who need it, including work experience or exposure and remedial instruction, if needed; providing credentials to students for skills acquired and life-long learning strategies; and stipends as needed to cover equipment, tools, and economic needs.

The three partnerships described in Appendix 6 to this report, including pre-apprenticeships efforts in Columbus, Cincinnati, and Northwest Ohio, have formed the Constructing Futures Statewide Advisory Council, and are working together to improve participant outcomes by identifying best practices, filling knowledge gaps concerning program design, ensuring pre-apprenticeship training credentials are portable, stackable and industry-recognized in Ohio, and identifying additional resources across state and local agencies that can be used to supplement the Constructing Futures grants.[21] Pre-apprenticeship training program coordinators in Youngstown-Warren, Dayton, and Cleveland have also joined the discussion. In effect, the Constructing Futures Advisory Council is building a system of pre-apprenticeship programs that will put Ohio at the forefront of best practices for the rest of the nation to follow. The work done so far is monumental, and the state, program partners, and participants have reason to be

[20] http://jfs.ohio.gov/apprenticeship/pre_app_policy_10_02.pdf

[21] For more information on what it means to be "stackable," see Community Research Partners, *Ohio Stackable Certificates: Model for Success* at http://www.communityresearchpartners.org/uploads/publications/Ohio_Stackable_Certificates_Models_for_Success.pdf (2008).

proud. However, we must continue to build on the great work that has been done. Appendix 7 details additional existing resources that should be investigated to support the various components of the Constructing Futures initiative.

Some of these programs are also working with the Ohio Benefit Bank, another Strickland initiative, which is an internet-based, counselor-assisted service that connects low- and moderate-income families to tax credits and support services such as child care assistance, health care benefits, and help with utility bills.

6. Building on the Ohio Example and Putting the Pieces Together

To summarize, Ohio already enacted a number of foundational polices and programs to transition our state into the clean energy economy, build the green training pipeline, and create pathways out of poverty. However, these policies and programs should be built upon to ensure continued progress.

- We adopted renewable energy and energy efficiency standards our electric utilities must comply with, secured funding for the 3-C rail corridor, and made other strategic investments with American Recovery and Reinvestment dollars from the federal stimulus package. These will jump-start Ohio's clean energy economy and create long-term demand for clean energy products and services that will ramp up over the next 15 years.
- To align clean energy economic development efforts with workforce training goals, the Ohio Skills bank has begun research to identify the workforce needs of employers engaging in green markets, and the Ohio Board of Regents created the Green Pathways Advisory Council**,** bringing together responsible and sustainable local employers, labor and community leaders, and agency officials to ensure Ohio's training entities are providing the skills needed.
- To build our schools to green standards using high-road contracting principles, the Ohio School Facilities Commission uses the U.S. Green Building Council's LEED rating system and adopted responsible bidder criteria that local areas may use when awarding contracts.
- Governor Strickland's Constructing Futures initiative—a growing network of apprenticeship prep programs created from ARRA funds and designed to build bridges for low-income, low-skilled workers into labor apprenticeship programs, higher education, and ultimately higher-wage jobs—represents a foundation from which to build pathways towards family-sustaining wages. The Ohio State Apprenticeship Council issued policy guidance to promote basic quality standards in pre-apprenticeship programming.
- The Ohio Benefit Bank is an internet-based, counselor-assisted service that connects low- and moderate-income families to tax credits and support services such as child care assistance, health care benefits, and help with utility bills.

In order to put all the pieces together, Ohio should do a pilot project implementing high-road contracting principles, providing on-the-job training opportunities for apprentices, and targeting Constructing Futures participants for some of those training opportunities. As part of the American Recovery and Reinvestment

Act, the Ohio Department of Transportation's secured a $400 million project to connect Cincinnati, Columbus, and Cleveland via passenger rail. This project represents a prime opportunity to train workers in this emerging transportation field and to create pathways out of poverty. This project will create many good jobs for rail-layers, electricians, welders, metal fabricators, engine assemblers, production helpers, transportation supervisors and dispatchers.[22]

We should award the 3-C corridor project to contractors providing the overall best value to the community. There is a growing precedent for this approach in transportation projects. The Transportation Equity Network worked with a number of partners to secure the largest community benefits agreement in history, on what is now being referred to as the Missouri Model and quickly becoming a national model for transportation projects. On a $550 million highway project, the Missouri Department of Transportation devoted 30% of the workforce hours to low-income apprentices, and ½ of 1% of the total project budget ($2.5 million) to job training. The project was finished ahead of schedule, $11 million under budget, and provided many low-income people access to good jobs and job training in order to build their careers and communities. Kansas City, Missouri, Wisconsin, Michigan, and Minnesota are now adopting versions of the model, and the US Department of Transportation is funding a pilot project to implement the Missouri Model on six major transportation projects in five U.S. cities including a multi-billion light rail commuter line project in Denver, CO, a multi-billion bridge project in Louisville, Kentucky, a $500 million bus-way project in Hartford, Connecticut; a new freeway construction project in Phoenix, Arizona, and $670 million bridge replacement project in Brooklyn/Queens, NY.

Ohio should consider adopting the Missouri Model for the $400 million stimulus-funded passenger rail project, and award 30 percent of work-hours to apprentices and pre-apprentices, and set aside ½ of 1% of project dollars, $2 million, for job training.

Recommendations

1. **Continue to enact policies and programs driving investments in the clean energy economy and creating good jobs in sustainability.** While there are upfront costs to reducing dependence on polluting fossil fuels, we will continue to reap the benefits for decades to come—purchasing fewer fossil fuels from out of state, increasing energy savings, achieving a more sustainable environment and economy, and creating good jobs in the process—benefits that will far outweigh any costs in the long run. Significant energy savings potential remains in the industrial, transportation, residential and commercial sectors, as well as efficiency gains to be had within our electric utilities themselves.

2. **Better align the state's economic development activities in the clean energy economy with workforce training and support skills development**. As discussed extensively above, we should use best value contracting principles when awarding

[22] *See* Pollins & Wicks-Lim, Political Economy Research Institute (PERI), UMass, *Job Opportunities in the Green Economy* (2008).

public dollars for sustainability projects, through any public entity, to encourage job-training opportunities for apprentices and pre-apprentices. One mechanism to accomplish this goal would be to require the use of community benefits agreements on publicly-funded projects. A current bill in the Ohio House of Representatives, HB7, would require green standards be applied to all public fund expenditures. This is a good start, but to promote green career pathways, the bill could be amended to include wage, quality, and training standards as well.

3. **Find a sustainable source of funding for Ohio's Constructing Futures Initiative, grow it to more areas across Ohio, and leverage existing resources to better support the program**. Consider continued use of WIA discretionary dollars to build on and continue the Constructing Futures initiative, and to expand it to more regions in Ohio. Currently, the program is funded with WIA discretionary dollars provided through the American Recovery and Reinvestment Act. Permanent WIA discretionary funding is needed to maintain the program beyond its current expiration date. We can also *s*et aside ½ of 1% of all infrastructure project dollars for skills development, as many other states have done.[23]

- Use these funds to subsidize wages for Constructing Futures participants for paid internships on infrastructure projects and employment opportunities in weatherization; to build partnerships among green employers, community and labor training programs, community action agencies, workforce investment boards, benefit providers, and others; to provide income stipends while participants are in classroom training; and, to fill gaps in supportive services for transportation and child care.
- We should also investigate the potential use of existing workforce development resources to better support the various components of the Constructing Futures apprenticeship prep programs and help build strong links between these programs and the next step in a career pathways (apprenticeship, community colleges, or employment in a good-paying job). *See* Appendix 6 for details about existing programs that are being used or explored by some or all of the Constructing Futures partners, or could be.

Conclusion

In Ohio, we have already taken significant steps on the high road towards the new energy economy. More can and should be done to build an economy that works better for our communities, workforce, citizens, and environment. As we implement policies and programs to move Ohio into the 21st century, we must continue building the green training pipeline to ensure our workers are equipped with the necessary skills to succeed, and that we are building on ramps to the middle class for low-income and low-skilled workers via green pathways out of poverty towards family-sustaining wages.

[23] See Altstadt, *Building Opportunities*.

Appendix 1. Ohio's Clean Energy Strategy (to date)

Governor Strickland made investing in the clean energy economy a priority in his strategic plan for the Ohio Department of Development (ODOD). The Governor's commitment to clean energy development was put into law, with bi-partisan support, when Ohio passed aggressive standards requiring Ohio's investor-owned utility companies to increase the amount of renewable energy in their energy portfolio, and reduce the amount of fossil fuel energy used in Ohio. This law effectively ensures demand for clean energy products and services for a long time to come. The Ohio Dept. of Development also undertook a statewide effort to map the clean energy supply chain and reach out to existing manufacturers to advise them of opportunities and passed a state-level job stimulus package to help those companies retool their product lines and the supply chain. Investment funds from the American Recovery and Reinvestment Act (ARRA) provided additional resources to help Ohio transition:

*ARRA State Energy Program***:** The State Energy Plan encourages use of solar, wind, fuel cells, distributed energy generation, combined heat and power generators, anaerobic digesters, and biomass, and to provide access to capital for clean energy production and product line retooling via grants and revolving loan funds to companies, communities, campuses, hospitals, and other institutions. ARRA funds were also directed toward Ohio manufacturers to reduce industrial energy use and energy waste in the commercial and residential sectors, making "efficiency work" by conducting energy audits, upgrading heating and ventilation units, employing geothermal technology, installing insulation, installing efficient lighting, sealing leaks, and upgrading Ohio's building codes.

*ARRA Energy Efficiency and Conservation Block Grant***.** In 2007, Governor Strickland issued an executive order to state officials to reduce energy costs and "lead by example" by improving energy efficiency of government. ARRA funds support this initiative by making funds available to state and local governments and higher education institutions, to lower their energy bills, reduce emissions, create demand for clean energy products and services, create jobs.

*ARRA Transportation Funding***.** Ohio's application for federal ARRA transportation funds included a number of "multi-modal" projects, creating investments in alternative and greener modes of transportation, such as through our rail, ports, and mass transit. The Department of Transportation also positioned Ohio for continued federal funding in cleaner and more efficient modes of transportation such as freight and high-speed rail projects, securing $400 million in federal funds to build a transit rail corridor from Cleveland through Columbus to Cincinnati.

*The Ohio Home Weatherization Assistance Program (HWAP)***.** ARRA significantly expanded a long-standing program providing free weatherization services to Ohio households, increasing eligibility to households up to 200% or less of the federal poverty level, making enough funds available to weatherize an estimated 32,000 homes, and permanently reduce their energy bills. The program has created approximately 1,000 jobs paying prevailing wages. The Corporation for Ohio Appalachian Development also received a million dollar grant from the Department of Energy for its Northern Ohio Training Center to train Ohioans for work in weatherization.

Community Services Block Grant (CSBG) ARRA. The Ohio Department of Development, working closely with Ohio's Community Action Agency network, has provided low income residents with training and employment opportunities, including youth employment in landscaping and conservation, energy education and outreach, construction, recycling administration, utility scale wind turbine maintenance training, solar installer training, and more.

Appendix 2. Ohio's Effort to Align Economic and Workforce Development Goals

Ohio Skills Bank. The Ohio Skills Bank is a partnership—among the Board of Regents, the Ohio Department of Development, the Ohio Department of Job and Family Services, Workforce Investment Boards, and career one-stop partners— with the goal of ensuring Ohio's workforce meets the need of important industries of the 21st century economy and becomes a critical asset to employers and economic development. To do so, the Skills Bank aligns curriculum and training with skill demand via collaboration, data analysis, and communication between training institutions, economic development experts, and employers. The Skills Bank continues to undertake the difficult task of identifying clean energy sector jobs and the skills needed to do that work.

Green Pathways Advisory Council: *Connecting the Dots between Economic and Workforce Development.* The Ohio Board of Regents assembled a Green Pathways Advisory Panel that consists of leaders from business, labor, economic and workforce development agencies, utility companies, education and training, environmental and anti-poverty groups to encourage cross-agency and multi-stakeholder communication.[24] By coordinating Ohio's energy strategy, we can help ensure efficient allocation of training resources. We can also position Ohio to secure additional training funds from the U.S. Department of Labor, which strongly encourages the use of green project funds to create on-the-job training opportunities, and to direct training efforts through a comprehensive strategy that promotes green career pathways out of poverty.

The Ohio Green Pathways Advisory Panel is charged with the following goals[25]:

1. Develop a comprehensive understanding of green workforce demand
2. Build and expand relationships with green industry leaders
3. Identify strategies to create and expand new green opportunities in Ohio
4. Improve communications and dissemination of information about green jobs.

By encouraging communication among these diverse stakeholders, the panel will help ensure that we are building a green training pipeline of workers, leveraging our resources effectively and meeting the needs of our emerging green businesses. Separate efforts and different expertise to increase efficiency exist at the Ohio Department of Development and the Ohio Department of Transportation; in utilities, businesses and unions; and among community, workforce development and education leaders. The Green Pathways Advisory Panel brings these diverse groups together.

[24] *See* http://www.uso.edu/opportunities/sustainability/green-pathways/advisory-panel.php
[25] Ohio Green Pathways Advisory Panel Strategic Plan.

Appendix 3.

JOBS THAT WILL BUILD THE GREEN U.S. ECONOMY AND FIGHT GLOBAL WARMING

Strategies for Green Economy Investments	Representative Jobs
Building Retrofitting	Electricians, Heating/Air Conditioning Installers, Carpenters, Construction Equipment Operators, Roofers, Insulation Workers, Carpenter Helpers, Industrial Truck Drivers, Construction Managers, Building Inspectors
Mass Transit	Civil Engineers, Rail Track Layers, Electricians, Welders, Metal Fabricators, Engine Assemblers, Production Helpers, Bus Drivers, First-Line Transportation Supervisors, Dispatchers
Energy-Efficient Automobiles	Computer Software Engineers, Electrical Engineers, Engineering Technicians, Welders, Transportation Equipment Painters, Metal Fabricators, Computer-Controlled Machine Operators, Engine Assemblers, Production Helpers, Operations Managers
Wind Power	Environmental Engineers, Iron and Steel Workers, Millwrights, Sheet Metal Workers, Machinists, Electrical Equipment Assemblers, Construction Equipment Operators, Industrial Truck Drivers, Industrial Production Managers, First-Line Production Supervisors
Solar Power	Electrical Engineers, Electricians, Industrial Machinery Mechanics, Welders, Metal Fabricators, Electrical Equipment Assemblers, Construction Equipment Operators, Installation Helpers, Laborers, Construction Managers
Cellulosic Biofuels	Chemical Engineers, Chemists, Chemical Equipment Operators, Chemical Technicians, Mixing and Blending Machine Operators, Agricultural Workers, Industrial Truck Drivers, Farm Product Purchasers, Agricultural and Forestry Supervisors, Agricultural Inspectors

*Table Reprinted from Pollins & Wicks-Lim, Political Economy Research Institute (PERI), UMass, *Job Opportunities in the Green Economy* (2008).

Appendix 4: Best Practices in Best-Value Contracting (across states)

Creating a pool of prequalified responsible contractors. California, Connecticut, Massachusetts, the Ohio Schools Facilities Commission and Ohio Department of Transportation, the cities of Oregon, Ohio and Los Angeles, have all adopted some form of pre-qualification review for contractors wanting to work on publicly-funded projects. These systems require contractors to either achieve a threshold level of points in order to be eligible to bid for public contracts, or certify they comply with labor, workplace, environmental and employment standards. In the example of the pre-qualification point system, points are awarded to contractors for items such as compliance with workplace, tax, and labor laws, achievement of equal opportunity goals, use of apprentices, and payment of prevailing wages.[26]

Giving preference for employers paying a living wage and providing health benefits. 140 cities and the state of Maryland require contractors to pay living wages (what a full-time worker would need to support her family), including the Ohio cities of Cleveland, Lakewood, Cincinnati, Dayton and Toledo.[27] An assessment of the policy in Maryland found that more people bid for public contracts following adoption of the living wage. Half of the contractors surveyed said that before the living wage, contractors paying low wages would automatically be able to underbid them.[28] El Paso, Houston, Orlando, and San Francisco award points in the contracting process for contractors who provide health benefits, pay into a fund to offset the cost on the health care system for uninsured workers, or compensate workers 20% more to purchase health insurance.

Encouraging local hiring preferences for low-income, under-represented, and entry-level workers. California, Illinois, New York, Washington, Wisconsin, and Wyoming require a certain percentage of work hours on publicly-funded projects to be completed by apprentices from registered apprenticeship programs, typically from 15 to 20% of total work hours, or provide voluntary incentives for doing so (Wyoming "exchanges" 10% of work hours by apprentices for a one percent decrease in bid price).[29]

Creating Targeted Hire Provisions. While targeted hire provisions are most often used by local governments, the states of Connecticut, Illinois, and Missouri require or encourage contractors to hire local residents, low-income individuals, minorities, or women, for a certain percentage of work hours, apprentice hours, new hires, or project funds.[30]

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[26] Sonn & Gebreselassie, NELP, *The Road to Responsible Contracting: Lessons from States and Cities for Ensuring that Federal Contracting Delivers Good Jobs and Quality Services*, at http://nelp.3cdn.net/985daceb6c3e450a10_pzm6brsaa.pdf (2009).

[27] *See Note Above,* Sonn & Gebreselassie, NELP, *The Road to Responsible* (2009). *See also* Policy Matters Ohio, *Living Wage Study For Cuyahoga County* (2007).

[28] *See Note Above,* Sonn & Gebreselassie, NELP, *The Road to Responsible* (2009).

[29] Altstadt, Working Poor Families Project, *Building Opportunity: How States Can Leverage Capital and Infrastructure Investments to Put Working Families on the Path to Good Jobs* (2010).

[30] *See Note above,* Altstadt, Working Poor Families Project, *Building Opportunity* (2010).

Appendix 5: The Ohio School Facilities Commission

Model Responsible Bidder Workforce Standards.[31]

The Ohio School Facilities Commission use the U.S. Green Building Council's LEED® for Schools rating system to build high performing, energy efficient buildings, and also provides local areas the option of adopting the following responsible bidder criteria for the construction contracts to build them:

1. On projects of $100,000.00 or more, the Board of Education **may review the bid** to verify that the bidder included all required work. A bidder with a very low bid, if more than twenty percent below the next lowest bid, must also list three projects successfully completed within the previous five years.

2. For relevant contracts, the bidder must be **licensed** or **certified** (heating, ventilating, and air conditioning, refrigeration, electrical, plumbing, or hydronics), and cannot subcontract more than 25% of the labor (excluding materials) for its awarded contract, unless the named subcontractors are also licensed accordingly.

3. Project supervisors must have three or more years experience in the specific trade and/or maintain the appropriate state license, if any. **Personnel must be trained in a state or federally approved apprenticeship program or Career Technical program, or enrolled** in a state or federally approved apprenticeship program or Career Technical Program, or have at least three years experience in their particular trade.

4. The Bidder **cannot have been debarred** or penalized from any public contract, have violated the Fair Labor Standards Act, or had a professional licensed revoked, in the last five years, or have prevailing wages violations more than three times in the last ten years, and must be in compliance with Ohio's Drug-Free Workplace requirements, and maintain a substance abuse policy.

5. The Bidder must **be in compliance with unemployment and workers compensation laws** for at least the two years, cannot have an Experience Modification Rating of greater than 1.5 (a penalty rated employer) with respect to the Bureau of Workers Compensation risk assessment rating, and must not have final judgments against it that have not been satisfied for 50% of the bid amount of the project.

6. The Bidder and its subcontractors must **pay the prevailing wage rate, provide a minimum health care medical plan and contribute to an employee pension or retirement program** for employees working on this project, and must comply with the requirements of a project labor agreement adopted for use on the project.

[31] http://www.osfc.state.oh.us/Construction/ResponsibleBidderCriteria/tabid/146/Default.aspx

Appendix 6. Ohio's Constructing Futures Initiative

Central Ohio: The Construction Trades Network

The Construction Trades Network offers an eight-month apprenticeship prep training program for the construction trades, housed at the International Brotherhood of Electrical Workers Electrical Trades Center in Columbus, and "designed to enhance the technical skills of the participants and to help them gain the life, employability, and career advancement skills needed to become self sufficient." [32] Participants will alternate periods between classroom learning and on-the-job training (one week in classroom, next week on the job). Those who complete this rigorous program will be considered "Construction Wiremen" and eligible for work in the trades, and will be able to demonstrate they went to work every day and on time, and that they take instruction well. Remedial training for the first of three cohorts began in early July. They will also earn 17 credits of coursework towards a degree from Columbus State community college.

The primary target area for program participants includes the federally designated enterprise zone in Franklin County, where the population is overwhelmingly African-American (68%), half the population is women (52%), over 1/3 of the residents do not have a high school diploma or GED, and nearly 25% of employed residents earn $25,000 or less per year. Participants have to be dislocated workers, unemployed, TANF eligible, or have incomes below 200% of the federal poverty level.

The Construction Trade Network partnership includes industry, education, community-based organizations, and the workforce system.[33] Over 185 employers are subscribed to the apprenticeship programs participating in this network, which include training programs for electricians, carpenters, heat and frost insulators, and sheet metal workers. The community-based organizations involved were purposely selected to help the project target women, minorities, and otherwise disadvantaged populations. The program's stated goal is to become a direct pipeline for the best and brightest candidates to enter skilled trades apprenticeship programs, and ultimately achieve of journeyman status. In creating the curriculum for the program and pulling together appropriate partners, the group analyzed green increased demand or green enhanced skills requirements.

Expected # of Initial Program Participants: 125
Expected # of Students Receiving Supportive Services: 90%
Expected Placement of Top Students in Registered Apprenticeship: 35%
As of June, 2010: Started 1st class of 32 enrollees (95% minorities, 3 women).

The 8 month program includes:

[32] Construction Trade Network proposal in response to the RFP for the Constructing Futures initiative.
[33] Partners include The Electrical Trades Center, Lead Entity (International Brotherhood of Electrical Workers); Sheet Metal Workers Local 24 Training Trust; Carpenters Local 200 JATC, and Insulators Local 50 JATC; COWIC/Job Leaders; Godman Guild Association and the Center for New Directions; Columbus State Community College and Ohio University, Franklin and Delaware County Workforce Investment Boards.

1. **Recruiting, Screening, Pre-testing** (2 weeks). Recruitment will target women, minorities, and other disadvantaged populations.
2. **Credit and Non-credit Classroom Programming** (including 17 transferable credit hours at Columbus State), beginning with *Basic Skills Remediation* (4 weeks), such as Life/Employability Skills, and basic math, reading, and writing designed to prepare participants for the rigors of apprenticeship exams. Remedial training is followed by *Basic Skills Development* (8 weeks), including technical core skills, employment skills, and more math/English, and *Basic Skills Enhancement* (4 weeks), which includes workplace preparation, basic skills for the construction Industry, OSHA safety training, and college math.
3. **12-week trade-specific paid internship** (at $11/hour).
4. **Supplemental Services**. The vast majority of participants (90%) will receive supplemental services such as access to transportation, child care, dependent care, emergency housing, work clothing or uniforms, licensing or testing fees, medical and healthcare supportive services, needs related payments, stipends, and case management.[34]
5. **Apprenticeship program placement for top students** (35% of program participants)**,** as well as Columbus State Community College credit towards an associate's degree, which can then also be transferred to Ohio University, where participants can strive for a Bachelor's degree at a reduced tuition rate.

[34] Workforce Investment Act funds can be used for tools / equipment / other occupational expenses, childcare, transportation, short-term housing assistance, medical examinations, and other needs, to permit participation on a case-by-case basis. Needs related payments are supportive services in the form of monetary assistance necessary to enable individuals to participate in an eligible WIA training activity, and are based on a family's financial need and enrollment in training. The Federal Pell Grant Program provides need-based grants to low-income students to promote access to postsecondary education. Students may use their grants for the CTN project training.

Northwestern Ohio[35]

In an effort to connect construction-related unions and employers with unemployed adults, veterans, women and minority populations, a coalition of labor groups and construction professionals have partnered with career centers, a local community action agency serving four northwestern Ohio counties, and the Workforce Investment Board of Lucas County, to implement an apprenticeship prep training program that will serve rural, urban, and suburban communities in the area.[36] The registered apprenticeship sponsors include heat and frost insulators (lead entity), bricklayers/tile setters, cement masons, glaziers, painters, roofers, and plasterers. The partnership designed education and training services to help participants enroll in registered apprenticeship programs, or find meaningful employment. The program includes both vocational and basic skills components, individualized employment and education plans for each participant based on thorough assessments, and supportive services such as case management, follow-up services, drivers license recovery, world of work training, transportation, and childcare.

Expected # of Program Participants: 100 (with 80 ultimately ending up in training)
Expected # of Participants Receiving Supportive Services: 80
Expected # of Participants Expected to Complete Training: 80
Expected Placement in Registered Apprenticeship or Employment: 50%
As of June 2010: Graduated 1st class with high profile and emotional ceremony, second class started July 6 with 24 enrollees (90% minority, 23% women), program now has a waiting list.

1. **Outreach and Recruitment:** Referrals will come from educational institutions, ABLE/GED programs, youth/adult organizations, social service agencies, faith-based organizations, union halls, local Workforce Investment Act One Stop partners, County Departments of Job & Family Services, veteran associations, and minority associations such as Voices Unidas and the NAACP. Special efforts will be made to make information accessible to laid-off workers at union halls, social service agencies and residents in target areas.
2. **Individual and Family Assessments, Case Management, and Supportive Services.** Supportive Services include barrier and needs assessments, skill and vocational assessments, career pathway employment and education plan, remedial education, transportation, childcare, mentoring, driver's license recover, housing, emergency services, case management, and follow-up.
3. **Classroom Component will address the basic technical skills necessary to succeed**

[35] Northwestern Ohio Construction Education Center proposal for the Constructing Futures Grant Project proposal.
[36] Partners include Northwestern Ohio Construction Education Center, the Alliance of Construction Professionals of Northwest Ohio; Four County Career Center, Penta Adult Career Center, WSOS Community Action Commission Inc., serving economic development region 2. Registered Apprenticeship Sponsors include Insulators Local #45 (Lead Sponsor), Bricklayers/Tile Setters Local #3, Cement Masons Local #886, Glaziers Local, Painters Local #7, Roofers Local #134, and Plasterers Local #886.

in the various apprenticeship entrance exams—bricklayers, cement masons, glaziers, insulators, painters, plasterers, and roofers)—which are themselves designed to address the basic knowledge and skills needed for a successful career in construction. a) core competencies including workplace skills, technical skills; business processes; problem solving and critical thinking; leadership and teamwork skills; and b) more specialized occupational knowledge and skills.[37]

4. **Work experience component includes** hands-on training, job shadowing, and field trips with labor organizations so that individuals can get hands-on experience. Emphasis will be placed on In-Demand Energy Efficiency or Renewable Energy construction occupations. If transportation is a barrier, staff will supply transportation vouchers through the local transit providers or gas cards.
5. ***Reimburse Employers for On-the-Job Training***. Reimbursement for employers who hire participants, for half the participant's wages, to offset cost of training new hires.
6. **Pre-Apprenticeship Skill Certificates** for a 10 Hr. OSHA Certification/Safety, Environmental Justice 101, Labor 101, Leadership Development, Sexual Harassment Prevention, Financial Literacy, Life Skills, Job Readiness, School Readiness, Work Ethic, and Math for the Trades.

[37] Essentially, the classroom component will include basic skills development in reading comprehension, active listening, writing, speaking, math, and science; process skills development in critical, active learning, learning strategies, skills in monitoring performance of self, other individuals, or organizations to make improvements or take corrective action; also, occupation skills development includes classroom instruction in self-esteem, motivation, safety, communication, time management, citizenship, decision-making, and team building as well as presentations on apprenticeship training programs for each participating union.

Greater Cincinnati Regional Construction Trades Partnership

The Greater Cincinnati Regional Construction Trades Partnership works to link the marginalized workforce in Hamilton and Butler Counties and surrounding areas.[38] The typical client has low basic skills and education levels, poor work history, some type of criminal conviction, barriers to child care and transportation, mental health issues, learning disabilities, and/or generational poverty issues. The Constructing Futures initiative enabled the partnership to expand and enhance existing pre-apprenticeship programs to build on best practices from other programs; build on basic foundational skills that feed into many construction trades by incorporating some "green" technical training into the curriculum; allowed an opportunity to improve the certifications provided upon completion for existing programs; and, develop articulation agreements to obtain college credits. The Constructing Futures grant also allowed the partnership to develop a unique program with special focus on recruiting women, allocating funding for 60 women to participate in an apprenticeship prep program, as well as do targeted outreach, with recruiting, training, mentoring, supportive services, and technical assistance strategies tailored for women.

Expected # of Participants: 230 (with at least 60 women)
Expected # *of participants entering Registered Apprenticeship Programs*: 60%
Participants as of June 2010: 58 (90% minority, nearly 20% women)
Most programs are providing stipends and access to supportive services.

The partnership stated the following goals[39]: Integrate skill standards, assessment, career counseling, and curricula into service strategies; align with areas of anticipated economic and job growth in Ohio, especially in occupations and industries that build a green economy; help non-working low-income adults and dislocated workers, especially minority members and women, to enroll and succeed in Registered Apprenticeship training. The partnership is also working to connect the pre-apprenticeship training program participants to work experience by developing relationships with the region's

[38] Partners include Laborer's Local 265 JATC (lead), Southwest Ohio Regional Workforce Investment Board, Workforce One Regional Workforce Investment Board of SW Ohio, Easter Seals Work Resource Center, Cincinnati State and Technical College, Butler Tech, ABLE providers Mercy Neighborhood Ministries and YWCA of Greater Cincinnati, Urban League of Greater Cincinnati, Cincinnati-Hamilton Community Action Agency, ONOW, Cincinnati Arts and Technical Center, Straight 2 the Heart, Greater Cincinnati Apprenticeship Council, Greater Cincinnati Workforce Network, SELF, Ohio Construction Coalition/GLOLMC, Great Oaks Career Technical Center, NAWIC Greater Cincinnati Chapter, SuperJobs Center, Messer Construction, Stonehenge Building Group (MBE), Solica Construction (MBE), Megen Construction (MBE), Hard Hatted Women, Independent Electrical Contractors. Bricklayers JATC, Local No. 18, Southwest Ohio Carpenters JATC, Cement Masons JATC, Local 32, Roofers JATC, Local 42, Electricians JATC, Local 212, Heat & Frost Insulators and Asbestos Workers JATC, Local 8, Laborers JATC, Local No. 265, Mechanical Equipment Service JATC, Local No. 392, Millwrights JATC, Local No. 1066, Operating Engineers, Local 18, Painters JATC, Local 12, Pipe Fitters JATC Local No. 392, Plasterers JATC, Local No. 18, Plumbers JATC Local No. 392, Reinforced Concrete Iron Workers JATC, Local No. 18, Sheet Metal Workers JATC, Local No. 24, Sprinkler Fitters JATC, Local No. 669, Structural Iron Workers JATC, Local No. 44, Tile, Marble, Terrazzo JATC, Local No. 18, Boilermakers JATC, Local 105

[39] Greater Cincinnati Regional Construction Trades Partnership

minority business enterprise community. To date, demand for sustainability skills in the Cincinnati region has not seen significant growth, so several programs have not yet fully integrated sustainability into their existing curriculum.

Various partners will deliver the following components to participants:

1. **Outreach, Recruitment**, **and Intake** screening, pre-assessment, determination of WIA Core Services eligibility, use of assessment tool strategies, and individual career planning. The partnership developed a targeted strategy to recruit women.
2. **Technical Instructional Component** includes soft skills like job readiness, workplace culture, mock interviewing, field trips to registered apprenticeship programs, communication/conflict resolution, self-esteem, sexual harassment prevention and similar topics. Microsoft and other computer basic skills will be considered as well. An industry skills component will include tool identification, industry math/science and reading/literacy as well as industry-specific training such as blueprint reading, and safety training. Remedial training, will be provided as needed, including GED preparation and basic adult literacy. Courses in financial literacy and leadership development will also be offered, as well as Skilled-Defined Career Development in order to prepare the participant to transition into the next level of employment and education.
3. **Work Experience and/or field observation** includes 4- 8 weeks of hands-on learning including Photovoltaic Installation and Energy Efficiency.
4. **Customized Supportive Service Plans, the Benefit Bank, and Comprehensive Child Care Assistance Program. I**ndividualized support service plans will be developed for each program participant. Supportive Services can include stipends for eligible program participants during the length of the pre-apprenticeship training program (most participants), as well as transportation assistance, driver's license recovery help, help accessing public work supports, and the development of a comprehensive child care assistance solution. Program partners are trained in the use of Ohio Benefits Bank software, a program that can identify participants eligibility for tax credits and public work supports such as health care, utility bill assistance, food support, and child care subsidies, among others.
5. **Certifications.** Specific industry-recognized certifications will be provided, such as 10-hour OSHA Safety certifications. Other certifications are also being considered such as weatherization and energy audit certifications, as well as articulation agreements for college credits.
6. **Links to large-scale, publicly funded, multi-year construction projects in the Greater Cincinnati region**.[40] The partnership will also help participants secure employment on local large-scale infrastructure and development projects, and help contractors meet their specific hiring goals by linking Constructing Futures program graduates to the projects.

[40] Such projects include, but are not limited to, the Greater Cincinnati Banks Project, I-75 Corridor Expansion Project, the Queen City Square Development Project, the Metropolitan Sewer District of Greater Cincinnati Project and the Cincinnati Public Schools Expansion and Rehabilitation Project.

Appendix 7. Existing Workforce Development Resources that should be investigated as a source of support for the Constructing Futures initiative to create green pathways out poverty.

Marketing, Recruitment, and Assessment	
Local Workforce Investment Act dollars for core and intensive services, can be used for outreach, such as recruitment of target populations, initial assessment of skill levels, aptitudes, abilities, and supportive service needs, and eligibility for WIA and other non-WIA related services (like Temporary Assistance for Needy Families), and to educate potential participants on pre-apprenticeship programs and the availability of supportive services.	
Partners to Engage include Community Action Agencies serving many low-income people, and are a key resource for identifying and recruiting low-income populations for training purposes. Minority and women's groups, like the NAACP, the Urban League, and Hard Hatted Women, and a number of other community groups can be very helpful in the process. Ohio's Benefit Bank could be also be a key partner in marketing, recruitment, and assessment of income needs and determining eligibility.	
Connect participants with income stipends and other existing support services	
Stipends to allow program participants to pay bills and put food on the table while in training could potentially come from a number of sources and should be investigated	
Temporary Assistance for Needy Families (TANF) Emergency Funds	These funds are flexible and can be used for income stipends to cover basic expenses (through cash assistance), as well as subsidized employment (through wage subsidies or employer training), or community service jobs. Illinois, Mississippi, Pennsylvania, and Kentucky are employing these funds in similar creative fashions. Existing funds are set to expire in September, but discussions about extending the federal program are taking place in Congress now.
WIA needs-based payments	The needs-based payments are generally for the amount needed to help someone attend training, as established by a workforce boards and is generally akin to the state's unemployment benefit or the federal poverty line. Currently, few areas across the nation and none in Ohio offer needs-based payments for low-income persons in training, with local WIB representatives citing to the difficulty of navigating the process, as well as its costliness. However, the state of Ohio recently provided technical assistance to local WIBs, in the recognition that this is a worthwhile use of WIA funds.
Ohio College Opportunity Grant (OCOG)	This state's need-based financial aid program could potentially be used for Constructing Futures programs that provide college credit.
WIA funds for supportive services	Can be used for transportation, child care, dependent care, housing, books and supplies, and needs-related payments, if not receiving those services from somewhere else.
Temporary Assistance for Needy Families **(TANF)** short-term benefits dollars	Can be used for emergency housing and utility assistance, payments for education or work costs including tuition, transportation, and child care.
Federal Transportation Funds to enhance opportunities for women and minorities.	The Ohio Department of Transportation applied for and received funds to use for pre-apprenticeship and remedial training, on-the-job training, as well as counseling, transportation, and physical exams. However, these funds appear to be limited to use in training for employment in highway construction.
Supplemental Nutrition Assistance Program **(SNAP)**	SNAP employment and training program dollars can be provided for recipients of food assistance, and can be used for training, child care, transportation, equipment, supplies, books, vision and dental expenses, as well as housing assistance. However, states must provide a match of 50% of the funds with non-federal funds, which Athens County does. Other states, not including Ohio, have programs to allow community training programs to use their own funds to draw down these SNAP funds, since the match can come from foundations and non-profits, employer contributions, and state and local public monies.

Public Transit	We should recognize that public transportation is the more affordable, accessible, and environmentally-friendly transportation alternative. Thus, we should start working towards ensuring that our job centers, training programs, as well as our child care and health care centers are all accessible by public transportation, to reduce the need for low-income Ohioans to depend on driving cars which are expensive to own and operate.
Potential program Partners, The Ohio Benefits Bank	The Ohio Benefits Bank links low-income people to public work supports that can help connect program participants to existing work support programs, should be employed. The Benefit Bank Mobile could visit training program sites, and link participants to existing public benefits for which they may be eligible.
Classroom training in foundational skills	
WIA intensive services	Can be used for "soft skills" training, and GED preparation. WIA training service dollars can be used for occupational skills training, job readiness, and adult education and literacy activities.
WIA waivers	Can be employed to fund grants to training institutions for general classroom training
Individual training accounts under WIA	Can be used in conjunction with a cohesive pre-apprenticeship program strategy to support pre-apprenticeship programming. In this alternative scenario from employing WIA waivers, a local training partnership can negotiate the system for the Constructing Futures participant by getting the training program pre-approved for WIA funding
Local Green Pathways Advisory Councils	***Advisory panels should be formed regionally to inform training curriculums***. It is critical that the curriculum be developed with feedback from employers, community and technical schools, and apprenticeship instructors to ensure an appropriate foundation in the skills necessary to start climbing the green career ladders. Therefore, a workforce intermediary to connect these disparate programs is also critical. Stakeholders that one might reach out to for the council for inclusion would be Community and Technical Schools, COAD weatherization training provider, ABLE providers, responsible green employers, Labor Apprenticeship program providers and labor leaders, economic and community development agencies, HUD, state or local low-income weatherization provider, community action agencies.
Paid Work Experience	
WIA wage on-the-job training subsidies for employers, and workplace training	WIA can be used to subsidize wages for responsible employers who hire Constructing Futures participants, in order to cover additional training costs. Programs with both classroom and work experience components also qualify for funding under WIA workplace training.
Ohio Internship/Coop funds	A $250 million fund created as part of the Ohio Job Stimulus package, which could be used to provide paid work experiences for program participants. However, the program went unfunded in the last biennial budget.
Federal Transportation On-the-Job Training	Ohio could require transportation contractors to allot a certain percentage of project work hours to apprentices, and pre-apprentices, but then reimburse them for a percentage of wages paid to those participants.
Temporary Assistance for Needy Families.	These funds are flexible and can be used for income stipends, on-the-job training via subsidizing some or all of participant's wages for employers, community service jobs – 28 states have used TANF emergency contingent funds for subsidized employment. Illinois, Mississippi, and Pennsylvania are employing these funds in similar creative fashions.
Low-income weatherization program funds.	Weatherization programs should be considered as a smart place to support on-the-job training opportunities for Constructing Futures participants with subsidized employment dollars.

Best Value Contracting when using public funds.	As discussed in this report, we should use best value contracting principles when awarding green project dollars to ensure contractors are providing job training opportunities for apprentices and pre-apprentices. Such projects would include those awarded through the Ohio Department of Transportation, such as the 3c Corridor project, the Ohio Department of Development energy division projects, Housing and Urban Development, Ohio Dept. of Natural Resources, and the Ohio School Facilities Commission. A current bill in the Ohio House of Representatives, HB7, would require green standards be applied to all public fund expenditures. This is a good start, but the bill should be amended to include wage, quality, and training standards as well.
Sources for this table See National Women's Center, TANF Emergency Fund Is Creating Jobs, Helping Families in Crisis—and Expiring at http://www.nwlc.org/pdf/TANFEmergencyFund.pdf See http://www.workworld.org/wwwebhelp/temporary_assistance_for_needy_families_tanf_.htm Community Research Partners, Help Wanted (2010). http://www.workworld.org/wwwebhelp/temporary_assistance_for_needy_families_tanf_.htm	

Policy Matters Ohio is a non-profit, non-partisan research institute dedicated to researching an economy that works for all in Ohio. Policy Matters seeks to broaden debate about economic policy by providing research on issues that matter to Ohio's working people and their families. Areas of inquiry for Policy Matters include work, wages, and benefits; education; economic development; energy policy; and tax policy. Generous funding comes from the Ford, Joyce, Gund, Cleveland, Public Welfare, Annie E. Casey, Sisters of Charity and W.K. Kellogg Foundations, the Economic Policy Institute, and Greater Cleveland Community Shares. To those who want a more fair and prosperous economy... Policy Matters.

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