



# OpportunityMaine

## **A New Energy Initiative for Maine**

by  
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Opportunity Maine promotes economic security and sustainable development through innovative investments that expand educational opportunity and upgrade the skills of our workforce. We utilize an effective blend of policy development and advocacy, communications, coalition building and community and youth organizing in achieving our mission.

Our greatest achievement is what has come to be known as the Opportunity Maine Program – a bold workforce and economic development initiative that reimburses educational debt for Maine workers and rewards businesses that invest in their workers. To further our goal of creating good jobs by investing in the skills and education of our workforce, we are now working to help Maine jumpstart its New Energy Economy.

Our New Energy Initiative for Maine focuses specifically on workforce investment in the energy efficiency and renewable energy sectors. We are expanding our coalition of youth, business, labor, anti-poverty and education advocates to build public support for a core set of workforce and new energy investments. These policy changes can cut energy bills, create jobs, raise incomes and conserve our natural resources.

We will launch the initiative with the release of a report on green economic and workforce development in Maine, which will further detail Maine's current needs and limitations, promising programs and institutions, and models from other parts of the country that Maine could emulate to resolve its energy crisis. It will focus chiefly on energy efficiency, small-scale renewable technologies (such as residential solar-thermal) and other green building techniques, and wind power generation and component manufacture.

### **A New Energy Initiative for Maine**

America's energy crisis is hitting Maine especially hard. Our State has the oldest housing stock in the country, 80% of our homes are heated with fuel oil, and the average heating bill has more than quadrupled over the last several years. At the same time, the economy is weakening, we have the lowest incomes in New England and, nationally, we have the oldest workforce and the highest percentage of 18 – 24 year olds who are neither working nor pursuing education. Vulnerable citizens are facing a desperate situation and all Mainers are questioning how we got into this situation. We must take immediate action, but quick fixes cannot obscure the need for long term planning.

Maine should approach this challenge as an economic development opportunity, not merely as a crisis to manage. We can tie energy security to economic development through a New Energy investment strategy that directly creates thousands of good-paying, non-exportable jobs (and indirectly creates many thousands more), cuts energy and heating bills by as much as one-third and moves us toward energy independence.

The New Energy sector encompasses the technologies and services that will move us away from our over-reliance on fossil fuels, as well as the development of the green-skilled workforce and entrepreneurial talent that will make this promise a reality. It includes research, development and commercialization of wind, solar, tidal, biomass and other energy sources, as well as existing and emerging means of increasing energy efficiency.

Among the elements of a successful energy independence strategy, energy efficiency is the lowest-hanging fruit. It is the fastest, cheapest energy source we can tap, and is both locally produced and sustainable. Investments in efficiency are more cost-effective, produce more jobs and spread job creation more evenly throughout the State than other energy investments. Energy efficiency is the gift that keeps on giving.

Unfortunately, widespread energy efficiency investments will not happen automatically. Even if we remove the many barriers for individuals, businesses and others who want to make such investments, Maine lacks the workforce to get the job done. A successful energy efficiency strategy will have to simultaneously foster large-scale investments in energy efficiency and develop our workforce to meet the increased demand. Otherwise, efficiency funds will remain idle or will pay for substandard work that fails to benefit Maine's residents, businesses, economy and carbon footprint.

Maine faces similar challenges and opportunities in renewable energy. We have enormous potential to develop wind and other renewable energy sources, generating power that will cost less than fossil-fuel generated power, will create jobs and will lessen our impact on climate change. Maine has most of the necessary conditions to develop manufacturing jobs in renewable energy as well, particularly for wind turbine components. However, the financial and regulatory barriers to such development are substantial, and Maine lacks the workforce to capitalize on these opportunities.

With the right mix of public policies and strategic public and private investment, we can use the demand for affordable energy and heating to increase the supply of good jobs. New Energy can be Maine's ticket in the new economy.

Additionally, with a properly deployed workforce development and energy investment strategy, we can create pathways from poverty to good jobs for many low-income, low-skill, underemployed and laid-off workers, in fields ranging from building and construction trades to information technology to engineering, research and design.

### **Jobs in the New Energy Economy**

Many of the jobs of the New Energy economy will be similar to or the same as those of the fossil fuel economy. For every new energy auditor, solar thermal installer or wind technician, Maine will need dozens more electrical or HVAC technicians, insulation installers, steelworkers, carpenters, plumbers and IT specialists, but with upgraded certifications in a variety of green skills. We must move aggressively to increase our supply of green-skilled workers to address our immediate heating crisis and to meet the needs of a broader, emerging New Energy sector.

Just as green jobs resemble existing jobs, the successful approaches that states have taken to workforce and economic development apply to green jobs as well. Across the nation, states are focusing on sector development – creating industry partnerships between employers, unions, educational institutions, community groups, state agencies and other stakeholders to determine industry and workforce needs and to ensure that the workforce has the skills that employers demand. The best initiatives maximize the extent to which low-income and disadvantaged workers participate in training by developing strong, comprehensive career ladders and pathways out of poverty. They also rely on the best data and subject themselves to rigorous evaluation. New Energy development simply adds to this successful formula a mix of new policies and investments to create the demand for the services of businesses in New Energy industry partnerships.

Nationwide and in Maine, middle-skill jobs provide much of the potential for greater prosperity in the coming decades, and most New Energy sector jobs are middle-skill jobs. These jobs require some amount of post high-school education short of a four year degree. Maine already cannot meet existing demand for workers in middle-skill jobs – Community College President John Fitzsimmons has identified over 4,200 that are currently going unfilled or being filled with out-of-state recruits. Research by The Workforce Alliance has shown that this trend will only worsen, with the growth of middle-skill jobs in Maine outpacing high-skill jobs. A comprehensive workforce development program will allow Maine to close that gap, create thousands more middle-skill jobs in the New Energy sector and meet the workforce needs of Maine's businesses.

## **Benefits for Maine's Workers and Economy**

Maine's workforce has the lowest incomes and the lowest education level of any state in New England. This means that there are many *individual workers* consigned to low-income jobs, but it also means that *all workers* see their economic opportunities diminished when entrepreneurs and businesses looking to expand or locate operations bypass Maine due to the low concentration of degree holders in our workforce.

Currently, Maine's median wage is \$13.72 per hour, or \$28,620 per year. By focusing our resources on developing the New Energy sector in Maine, we will be developing a sector where the starting wages for all occupations is at or well above Maine's current median wage, and where median wages are anywhere from 30% – 250% greater than our current statewide median wage.

This is an economic sector that is growing at double digit rates and will continue to do so, regardless of other national or global economic woes. However, growth will be concentrated in the states (and nations) that catalyze the workforce and economic development investments needed to make this sector boom. Pursuing this strategy in Maine will strengthen our economic and energy security and promote broadly shared, sustainable prosperity.

Any economic development strategy that does not focus on keeping the supply of skilled workers ahead of demand will have poor results and is unlikely to deliver the greatest benefits to the broadest number of people. To ensure equitable outcomes, Maine must build a more effective, coherent and comprehensive workforce development system that will strengthen career ladders out of poverty and into good jobs. The growing New Energy sector is an ideal place to begin the shift towards this model.

## **A Sample of Traditional Jobs in the New Energy Economy**

- **Building Retrofitting** – Electricians, Heating/Air Conditioning Installers, Construction Equipment Operators, Roofers, Insulation Workers, Construction Managers, Building Inspectors, Carpenters, Industrial/Commercial Truck Drivers
- **Wind Power** – Environmental Engineers, Iron and Steel Workers, Millwrights, Sheet Metal Workers, Machinists, Electrical Equipment Assemblers and Technicians, Construction Equipment Operators, Industrial Production Managers, First-Line Production Supervisors, Industrial Truck Drivers

Additionally, many new jobs will be created, including Energy Auditors, Weatherization Technicians, Home Performance Evaluators and Solar Thermal Installers in the building retrofitting sector, and Wind Turbine Technicians and Engineers in the wind power sector.

Little research to date has attempted to predict future growth in any particular occupations in the New Energy sector, or in the sector as a whole. In the specific area of energy efficiency, the most conservative estimates suggest that every \$1 million of public investment will directly create 8-11 jobs, with many more created indirectly. In general, levels of job growth will depend upon:

- the level of investment that is brought to bear
- the level of coordination between the public and private sector in that investment strategy
- the public and political will to reform relevant regulatory, educational, taxation and other systems

## **Elements of a New Energy Initiative**

A well-designed New Energy Initiative would create a comprehensive, green-skilled career ladder lifting thousands of Mainers into good jobs in the New Energy sector, and would catalyze the demand for that workforce with substantial investments in weatherizing, retrofitting and rehabbing Maine's homes and businesses, and in expanding our wind power production and component manufacturing. However, we must begin now to develop a workforce that has the core theoretical and practical competencies of green building and new energy development.

This needs to start at the vocational level. Vocational education in Maine is centered in the Career and Technical Education Centers, which:

- Are where the broadest group of future workers in this sector will come from
- Have too many graduates who are not pursuing post-secondary education
- Exist in 26 locations, are well-dispersed throughout the State, maintain close links to the surrounding communities and school districts, and frequently have a good “workforce pipeline” in place
- Are cost-effective and relatively nimble institutions
- Have a long track record with developing night, weekend and other nontraditional educational opportunities that will help low-income and laid-off workers

The CTEs will train a large portion of the people who will work in this sector, if we transform Building Trades and other related construction and electrical education programs into Green Builder and New Energy Programs. Embedding in the CTE curriculum the core green skills and competencies of this workforce is the most cost-effective way to ensure the availability of green-skilled workers in each part of the State.

CTEs should therefore expand their programs to include a broad range of nationally recognized, green-skilled certifications, credentials, pre-apprenticeships and apprenticeships, developed in concert with industry and other stakeholders. This will result in a much higher-value education program and in attainment of college credits toward an associate or bachelor’s degree, and will make it easier for employers and consumers to identify qualified workers.

Obviously, post-secondary education programs must be modified to ensure integration with the revised CTE programs. More broadly, a comprehensive green-skilled career ladder will build the curriculum across educational institutions and programs, including the CTEs, union and workplace apprenticeships, and Community Colleges, Universities and private colleges.

The New Energy Initiative will also:

- Implement a communications, coalition building and advocacy campaign dedicated to educating, organizing and mobilizing Mainers.
- Demonstrate how community and industry partnerships can create good jobs and cut energy bills, through a pilot project that includes Habitat for Humanity, the Bath Regional Vocational Center, the Labor Department, several business people, unions and other stakeholders
- Implement a campaign to expand this pilot project statewide, through model legislation that will make an ambitious ten-year investment to:
  - Create thousands of good jobs, raise incomes and reduce poverty with education and training programs and career ladders that will strengthen our green-skilled workforce
  - Move Maine from one of the least efficient states in the country to one of the most by weatherizing, retrofitting and reducing energy demand for all ME homes and businesses that need it
  - Secure our energy future by expanding wind power development and component manufacturing
  - Better align public and private workforce, economic development and R&D investments to spur good job creation, energy independence and environmental conservation