



Presidential Transition



Aligning Environmental, Tax and Workforce Development Policies to Create a New Green-Collar Workforce

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Introduction

President Obama has outlined an aggressive national agenda to reduce carbon emissions, increase the production of renewable sources of energy, improve energy efficiency in public buildings and private homes, and expand “green-collar” employment opportunities for individuals and families in poor, disadvantaged and disconnected individuals and communities. Achieving this bold vision is an immensely complex undertaking requiring the coordination of a wide-range of policies across federal agencies ranging from environmental protection laws and regulations to tax policy to workforce development program and social services supports.

The purpose of this paper is to provide an initial analysis of the key questions facing policy makers in Congress and the Administration as those charged with implementation seek to align diverse agencies and policies with the “green-collar” workforce vision. Among the questions that must be asked and answered as the federal government embarks on this critical initiative are:

- How will federal environmental, tax, and spending policies intensify development of renewable energy (RE) sources and encourage the adoption of energy efficiency (EE) technology by industry and households?
- How will federal and state governments quickly develop comprehensive labor market analysis tools that can capture the current state of demand for “green-collar” workforce?
- How will changes in environmental and tax policies, such as the adoption of “cap and trade” carbon dioxide reduction and public subsidies for renewable energy and energy conservation, affect future workforce demand?
- How will federal and state workforce development authorities quickly expand capacity for “green job” training programs and assure alignment with current and future “green collar” demand sectors?
- How can Green Jobs Act job training resources be coupled to other investments, such as re-employment grants and Community-Based Job Training Grants, to up-skill or retrain those who have recently lost jobs in traditional manufacturing industries to foster transitions to the new green-collar workforce?
- How will these same agencies fulfill the promise of the Green Jobs Act to focus training and social services resources on poor, disadvantaged and disconnected populations in ways that will create access to high-wage careers with good benefits?

ICF International’s cross-disciplinary team of policy experts working in energy, environment, labor market analysis, workforce development and social services have joined forces to produce a roadmap for successful implementation and coordination of a “green collar” workforce development program. We believe these are the key factors that must be addressed as the Obama Administration begins to translate its broad vision into the specifics of policies and programs:

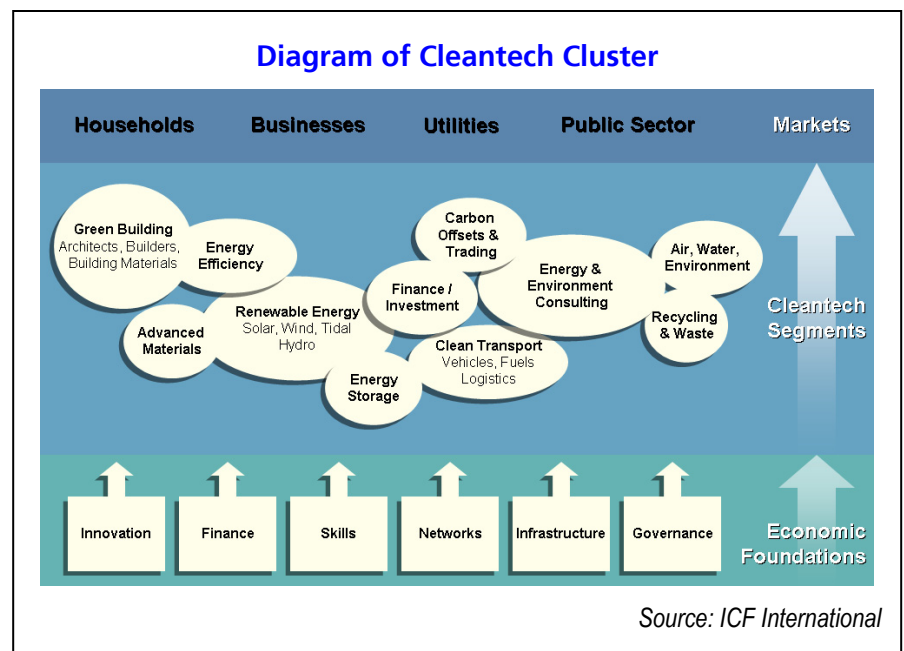
- New policies relating to carbon emissions as well as significant new tax and direct spending programs to support RE/EE development will combine to form critical aspects of the “demand-side” of the “green-collar” workforce equation. These policies and initiatives are beyond the scope and responsibility of the main agencies responsible for labor market analysis (the Bureau of Labor Statistics – BLS) and workforce development (the Employment and Training Administration – ETA). Cross-agency coordination will be the sine qua non of a successful “green-collar” workforce development effort.



- The timing of workforce development efforts, decisions about training content, and partnerships with private-sector employers are likely to be critical elements in creating the workforce necessary to support the low-carbon energy future envisioned in the Administration’s policies. Yet there is also a danger of creating a mismatch between “green-collar” trainees and the actual needs of industry, one that is heightened by the speed with which the initiative is being carried out. Initial training efforts should focus on where stimulus spending and incentives are likely to create a surge in workforce demand and help workers with allied skills, in trades such as construction, electrical, and heating, ventilation and air conditioning (HVAC), to gain access to jobs created through federal spending and tax policies. As the full effect of broader policy and tax changes make themselves felt in energy markets over the coming decade, BLS and ETA will have more of the data they need to build-out training programs that respond to new patterns of industry and household demand.
- Given the focus of the Green Jobs Act on low-income, disadvantaged and disconnected populations, there will be need for extensive consultation and coordination between ETA and its human services counterparts in other agencies, especially those housed at the Administration for Children and Families (ACF). Officials at ACF in the Temporary Assistance for Needy Families (TANF) Program and the state and tribal TANF agencies they oversee have extensive understanding of the needs of low-income populations as well as direct access to TANF recipients. Other ACF programs, such as Head Start, child welfare, and the large number of discretionary grant programs targeted at low-income populations offer similar insight and access. Finally, due to earlier work, ACF and ETA have already done significant work around the question of what works in coordinating program efforts to assist low-income families achieve self-sufficiency. The strategies and practices the agencies have identified have immediate application to the Green Job Act framework with its emphasis on coordination of supportive services.

Today’s Green Economy

Any discussion about green job policy should begin with the definition of ‘green jobs’ and a basic understanding of the number that exist in America; however analyzing the green economy is somewhat more complicated than conducting labor market assessments for traditional industry sectors. Several dozen reports have been published over the past few years attempting to nail down the definition of a green job and estimate the size of the green economy. Because of limitations in data categorization however, there is no official classification for green industries or green occupations, and thus no reliable count of green employment. Certain sectors and sub-sectors of the economy have been dubbed ‘green’ – particularly those related to environmental services,





alternative fuel transportation, green building, renewable energy development and energy efficiency. The definition of 'green' can be broadened, however, to include traditional industries that employ environmentally sustainable practices (e.g. organic goods retailers or 'green' manufacturers) or those that support the green sector (e.g. 'green' financing/consulting). As the green economy evolves, it will be critical to modify traditional industry and occupation classification structures as well as use more granular enterprise-level data sources to allow for the evaluation of policy impact on the growth of the green economy.

At this early stage, what is most critical to creating adequate workforce development policy is the ability to identify sectors of the economy that will likely be supported by a green policy agenda. These industries and occupations, as mentioned, cover a broad range of sectors, the most important of which are in the RE and EE sectors.

U.S. Renewable Energy and Energy Efficiency Industries, 2007¹

Industry	Revenues (in billions)	Industry Jobs (in thousands)	Total Jobs (in thousands)
Renewable Energy	\$42.58	218	504
Energy Efficiency	\$1,002.92	3,745	8,586
Total	\$1,045.50	3,963	9,090

These sectors span wind, solar, biofuels as well as green building and energy efficient retrofits. Common jobs in this segment include auditing energy use, manufacturing and installing energy efficient materials and devices such as lighting and heating systems, insulation, windows and appliances, manufacturing parts for solar and wind energy generation, assembling, installing and maintaining solar panel systems, constructing, operating and maintaining wind farms and activities related to producing alternative fuel and vehicles. In 2007 RE & EE industries constituted more than 9 million jobs and \$1,045 trillion in U.S. revenue.² Projections indicate that these sectors will grow rapidly over the next decades and in 2030 RE&EE industries will provide 37 million US jobs.³ What is important to consider is that these jobs rely on occupations that already exist in our economy. Electricians, HVAC installers, carpenters, construction equipment operators, roofers, insulation and construction workers and building inspectors, iron and steel workers, millwrights, sheet metal workers, welders, metal fabricators, electrical equipment assemblers, and electrical and chemical engineers represent the current green occupations. More often than not, traditional skills associated with these occupations are relevant to the green sector; in other instances more specific training, and sometimes very advanced education, is needed for participation in green industry sectors.

¹ Defining, Estimating, and Forecasting the Renewable Energy and Energy Efficiency Industries in the U.S. and in Colorado, the American Solar Energy Society, December 2008.

http://www.ases.org/images/stories/ASES/pdfs/CO_Jobs_Final_Report_December2008.pdf

² Xu, Isabelle and Shana Johnson. Economic Development and the Green Economy. APA Newsletter, March 2009.

³ Chappel, Karen. Defining Green Economy. A Primer on Green Economic Development. University of California Center for Community Innovation, November 2008.



Changes to Energy Efficiency and Environmental Policy – Enacted and Pending

One of the unifying themes of the American Recovery and Reinvestment Act is its emphasis on reducing carbon emissions and reliance on imported energy. Congress has created or expanded at least nine programs totaling \$25.5 billion in which renewable energy, energy efficiency, upgrades to the electrical grid, weatherization, public building retrofit, and green workforce development play an important role. In addition to these direct expenditures, the bill provides \$20 billion in tax incentives to support development of solar, wind and other renewable energy sources and encourage conservation.

The book-end to these direct expenditures is a series of legislative and regulatory changes that will help support the demand for conservation and renewable energy development.

- Carbon Legislation and/or Regulation. Several bills to limit carbon emissions have been introduced in Congress, with broad policy endorsement from the Administration. EPA is also examining whether to regulate carbon emissions using its existing authorities. Under most scenarios, the imposition of a carbon constraint is expected to increase the price of traditionally-generated electricity, which will in turn increase the relative value of renewably-generated electricity and energy efficiency.
- Renewable/Alternative Energy Standard. Twenty-eight states have established renewable portfolio standards, and another 5 have renewable energy goals. Congress is now considering the establishing of a nationwide renewable energy standard (or alternative energy standard, depending on whether it includes energy efficiency and/or nuclear power), which would provide further stimulus for development of clean energy resources.

Key Workforce Development Policy Issues

The stimulus expenditures, tax policy expansions, and environmental regulatory changes are all being implemented at a unique point in the nation's economic history. The deep recession being experienced across the U.S. economy is a major factor shaping how the U.S. Department of Labor approaches the design and implementation of the green job training programs and should have a dramatic impact in the sequencing and roll-out of new training initiatives.

In a sharply recessionary context, it may be useful to divide our thinking on green jobs workforce development initiatives into short- and medium- and long-term economic perspectives. In the short-term, the provisions of the stimulus legislation should provide a significant number of new jobs, particularly in fields related to energy efficiency and renewable energy. The billions of new dollars flowing into Energy Efficiency and Conservation Block Grants, the Weatherization Assistance Program, the High Performance Green Buildings Program, Assisted Housing Energy Efficiency and Green Retrofits Program, and the Public Housing Capital Fund, each with a strong, if not exclusive focus, on improving energy efficiency in public and private structures, will translate into a need for trained construction workers, many of whom have lost jobs in due to the decline in the housing and commercial construction markets. For many of these workers, minimal training will likely be required to transition from traditional construction to green construction. For others, the transition from single family construction to retrofitting of public buildings and public housing may require up-skilling or specialized training. Finally, as ETA designs and implements training initiatives, special attention should be paid to coordinating other investments, like the \$250 million in Wagner-Peyser Re-Employment Grants, with green job training programs so that those who



can begin working immediately or with minimal assistance are quickly connected the firms that will be engaged in implementing the direct energy efficiency expenditures and revived renewable energy programs.

The medium- and long-term strategy for green job workforce development will be shaped mainly by factors relating to the expansion of the renewable energy sector driven by tax incentives and the shrinking excess labor pool associated with a recovering economy. In both instances, we are likely to see a revival of the workforce development challenges that were present prior to the recession, chiefly the gap between the skills of the American workforce and the needs of American industry. For the past decade, federal and state workforce development entities have been focusing their efforts on aligning training programs to meet the needs of high-growth, high-wage industries. In virtually every growth sector, from advanced manufacturing to information technology to hospitality to health care to energy, one of the chief constraints faced by U.S. industries has been a shortage of well educated and trained employees capable of keeping pace with rapidly changing technologies.

The energy efficiency and renewable energy sectors, as they develop through the incentives provided by direct federal spending and tax policy, tighter environmental regulation and growing consumer demand, will be faced with the same constraints other U.S. industries have faced over the past several decades: the acquisition of adequately prepared workers. In other words, the challenges of green workforce development are the challenges of workforce development writ large. For the medium- and long-term, then, green job workforce development activities (especially those targeted at the poor) should be anchored in similar principles that guide other workforce development. Among these are strengthening basic literacy and numeracy skills, encouraging high school completion, expanding the capacity of community college training programs, supporting “lifelong learning” initiatives to keep incumbent workers skills current and fostering access to other skills certification programs and graduate and post-graduate education. Green jobs may occasionally involve rocket science but the success of green jobs training could turn on investing in the basics of workforce preparation.

The scale and scope of green collar workforce development does have one unique attribute which significantly raises the risks and opportunities involved in green job training programs: the emphasis in the Green Jobs Act on preparing a variety of low-income and at-risk populations for careers in green sectors. Many of the most prominent advocates for the development of the green economy have spoken and written eloquently about how poor, disadvantaged and disconnected populations have a special stake in creating a cleaner more energy efficient world. To paraphrase Van Jones, a leading green economy advocate, having been “locked out” of opportunities in traditional industries, federally funded training initiatives offer the chance to “lock in” access to good jobs and greater prosperity for poor and at-risk populations.

Fulfilling the social justice vision embodied in the Green Jobs Act will require a thoughtful and inclusive approach to workforce development that takes into account the significant gaps that exist between the mainstream of American social and economic life, including the burgeoning green sector, and the socio-economic conditions experienced by Americans living in poor communities. As noted above, the best way to prepare for work in a green sector may be to prepare for work generally. Programs like the Pathways Out of Poverty Demonstration place heavy emphasis on involving at-risk youth, ex-offenders, low-income individuals and other needy populations. For these groups, attainment of basic academic credentials and soft skills will be as much prerequisites for green jobs as they are for other employment opportunities. Green job programs should also be integrated with efforts to prevent and reduce drop-outs and other initiatives to bring at-risk youth who have dropped out into multiple education pathway programs. Remedial education for adults can help lay the foundation for successful participation in green job training programs and should be integrated into the overall green job structure.



Apart from the educational programming, strictly defined, the Green Jobs Act clearly envisions the need to provide comprehensive and coordinated supportive services to needy populations that receive training. Among the activities authorized by the Green Jobs Act is coordination between training programs funded through the Act with programs that provide “basic skills, literacy, GED, English as a second language, and job readiness” as well as “supportive services”. The Act also directs that priority should be given to proposals that show a background in working with the targeted low-income populations and a plan for integrating supportive services with job training programs. If these provisions were implemented in a thorough and comprehensive manner, green jobs programs would succeed not only in training individuals that are badly in need of skills to access the market place, but also provide a model for the rest of the social services system in how to align and de-silo anti-poverty programming to improve outcomes for disadvantaged individuals, families and communities across the country. The federal government could help model this collaboration by assuring that, to the maximum extent possible, federal agencies active in green jobs development (principally the Departments of Labor, Energy, and Health and Human Services) work closely together to harmonize their own policies and encourage coordination at the state and local level for green job training programs and participants.

Recommendations

- 1) Labor market data and analysis is essential to ensure that the significant federal investment in green job training programs is fully successful. ETA and BLS should work closely with organizations that can provide accurate and timely information on the status of the current green jobs workforce; they can assist the federal government in making sure the first stage of green job grant opportunities are targeted toward existing workforce needs in the broader economy.
- 2) Econometric modeling of the impact of direct spending, tax incentives, and environmental policy changes will also be critical to quantify their job-creation impact. Where possible, ETA, BLS and other federal agencies should use such modeling to drive decisions about how to prioritize future rounds of green job training and specific categories of employment that can be reasonably assumed to require additional workers in the five and 10-year time frames in which the full impact of regulatory changes will be felt.
- 3) Green Jobs activities touch a wide variety of federal agencies, policies and programs. At a minimum, the full program will involve the U.S. Departments of Labor, Energy, Housing and Urban Development, Health and Human Services, Defense, Treasury, the U.S. Environmental Protection Agency and various divisions of the Executive Office of the President helping to coordinate environmental, energy, housing, tax, and workforce development policies. We recommend the President establish a Green Jobs Interagency Coordinating Council to oversee policy coordination and sharing of information between the affected agencies. The Council would have a rotating chair among the Cabinet secretaries of the relevant agencies to assure shared responsibility for implementation of the program as well as giving each of the Cabinet agencies the opportunity to assure that particular matters of concern in their jurisdiction receive adequate attention.
- 4) Integration of supportive services for green job training participants is one of the most significant challenges within the overall program. Fortunately, the structure of the Green Jobs Act appears to anticipate this challenge by mandating the development of broad-based, comprehensive non-profit partnerships to implement training programs. These partnerships require the inclusion of business, industry and organized labor and strongly encourage the inclusion of educational institutions, community-based organizations,



Workforce Investment Act authorities and others in designing and implementing training and supportive services programs. ETA and its other federal partners should work to make these partnerships as inclusive as possible and should seek the input of the President's Offices of Social Entrepreneurship and Faith-Based and Neighborhood Partnerships as they begin designing grant competitions. Further, ETA should continue and expand the work already begun to bring greater integration of the Temporary Assistance for Needy Families (TANF) and WIA programs and make full use of technological tools (such as the On-Line Work Readiness Assessment program designed by ACF) to assist grantees whose work focuses on preparing needy populations for green job training.

- 5) ETA should seek to leverage the federal investment in summer youth employment as a launching pad for youth considering jobs in green sectors. With almost \$1.2 billion to be spent over the next two years on youth employment, this is an ideal time to build linkages between summer youth employment programs and emerging green sectors. This represents an early opportunity to expose young people to the excitement and rewards of being part of the "green wave" and inspire them to stay in school to gain the education they need to be a part of the movement in the future.
- 6) Among the most critical needs for a program of this size is the development and implementation of communities of practice and resource centers that can facilitate easy sharing of information and promising practices between grantees. It is important that the federal government provide an opportunity for cities, employers, organizations and all who are moving the "green collar economy" forward to share information, discuss promising practices and learn from each other via a virtual community of practice. A national resource center for Green Jobs—focusing on providing both energy and environmental expertise, as well as depth in understanding the workforce training needs for disadvantaged and low skill workers is needed.
- 7) Early evaluation will be critical to assessing the effectiveness of green job training in meeting the needs of the green economy, its relevance to industry, and its success in drawing poor, disadvantaged, and disconnected populations into workforce development programming. Non-quantitative analysis will be useful in the early going to document promising practices in each of these areas and to help adjust future rounds of grant competitions. From an accountability standpoint, it will also be necessary to begin preparing for random assignment evaluation of green jobs training programs. A careful preliminary assessment should be done of the program objectives to determine the most useful measures for assessing impact prior to the designs of these studies.

About the Authors

This paper benefited from the input of staff across ICF who conduct work on energy policy and programming, workforce development, human services, and community development, specifically Robert Kwartin, Christina Techico, Elizabeth Johnston, Katie Joyce, and Brent Orrell. Each of these authors brought in their unique perspectives of working on a range of issues that either impact Green Jobs policies or would be affected by them. The views expressed in this paper and any errors are those of the authors and not necessarily those of ICF International.



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