Making the Transition:
Helping Workers and Communities Retool for the Clean Energy Economy

Introduction

We stand at a critical moment in American history. We face a choice: do we continue with business as usual, ignoring the climate implications of current energy, environmental, and economic policy? Or do we move forward with a new set of priorities aimed at promoting climate stability, energy security, and economic prosperity?

Though this is sometimes seen as a choice about environmental policy, it is fundamentally one about the future of the American economy. The path we take will have huge and long-ranging implications. We know that doing nothing – that is, ignoring global warming and continuing on our current energy-intensive path -- will exact incredible social and economic expense. According to the *Stern Review on the Economics of Climate Change*, doing nothing to curb carbon emissions will result in a 5-20 percent loss in global GDP, an economic downturn equivalent to the "Great Depression and the two World Wars" combined.[1]

By contrast, doing something – putting a price on carbon, and investing significant dollars into industrial efficiency, advanced energy technologies, and renewable and efficient energy alternatives – will generate important economic benefits: the Apollo Alliance estimates that a $500 billion federal investment in clean energy over the next ten years will create 5 million jobs,[2] and the United Nations Environment Program reports that investments in renewable energy and energy efficiency will generate jobs and economic growth worldwide.[3]

According to the 2008 US Conference of Mayors Report *Current and Potential Green Jobs in the US Economy*, in 2006 there were 750,000 green jobs in the US. By 2038, the study projects 4.2 million new green jobs in renewable power generation, building retrofitting, renewable transportation fuels, and related fields.[4] A recent study from the Pew Center for Global Climate Change finds that while a cap and trade program will drive innovation in low-carbon technologies, it will also lead to lower consumption of carbon-intensive products, creating winners and losers within and among industries.[5] Similarly, in their 2002 study entitled *Clean Energy and Jobs*, the Economic Policy Institute found that, while a market mechanism that

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[1] Stern, N. *The Economics of Climate Change: The Stern Review* (Cambridge and New York: Cambridge University Press, 2006).
[2] Apollo Alliance. *The New Apollo Program* (2008).
[3] Renner, M.; Sweeney, S.; and Kubit, J.. *Green Jobs: Toward Decent Work in a Sustainable, Low-Carbon World* (UNEP, ILO, ITUC, IOE, September 2008).
[4] US Conference of Mayors. *US Metro Economies: Current and Potential Green Jobs in the US Economies* (Global Insight, 2008)
[5] Aldy, J. and Pizer, W. *The Competitiveness Impacts of Climate Change Mitigation Policies* (Pew Center, May 2009).

increases the price of carbon would add over 1.4 million direct jobs by 2020, certain carbon-intensive industries would likely experience job losses.[6]

The transition to a carbon-constrained future can be eased significantly through targeted investments: in industrial efficiency and advanced energy measures, and in new energy technologies that need to be scaled up and made cost-competitive. That is why the Apollo Alliance and many other organizations recommend that whenever a price is put on carbon, a majority of the proceeds be invested back into renewable energy and energy efficiency projects, and into developing and deploying low carbon coal technologies such as carbon capture and storage. Such investments will reduce greenhouse gas emissions and create significant new green job opportunities.[7] At the same time, we must invest in workforce development programs that will prepare America's labor force to build the new energy future. But even with these investments, the transition will come with some costs – costs to carbon-intensive industries; the communities dependent on these industries; and the low- and moderate-income consumers least able to pay higher energy costs for any period after carbon pricing goes into effect, however short this period actually is.

In developing an aggressive carbon-reduction plan, which will provide a tremendous overall benefit for future generations, we must ensure that the transition to a clean energy economy does not place an undue burden on this relatively small group of individuals, their families, communities and regions. Any system which places a price on carbon must include a sustainable, comprehensive program that serves as a catalyst for bringing these workers and communities into the clean energy economy. This program must be targeted toward those who have the least capacity to adapt, and must provide direct income and economic development resources to the hardest-hit communities. Such an investment is critical to rebuilding crumbling local economies and creating new opportunities for workers.

The idea of transition assistance is not new. American history is rife with examples of workers and communities affected by major shifts in the economy being provided direct federal assistance and facilitated access to new opportunities – the GI Bill, for instance, provided financial support, education and job training to ease soldiers' transition back into the civilian economy. We are at a similar critical moment now, where we must move an entire country from dependence on traditional fossil fuels and imported oil into a new era of energy independence, where we harvest our electricity and fuel from the wind, sun, and earth. It is an era full of opportunity, but we need to make sure it is also an era of broadly shared prosperity that does not leave our most vulnerable citizens behind.

This report offers a number of recommendations which together form a comprehensive worker and community transition program as part of federal climate legislation. To provide context, we analyze past and current transition programs, identify their strengths and weaknesses, and use these data to develop a proposal for a model climate transition policy. Our recommendations focus on workers in carbon-intensive industries such as coal and fossil fuels, communities dependent on or affected by those industries, and low- and moderate-income consumers unable to cope with a temporary rise in energy prices as America moves into the new energy future.

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[6] Barrett, J. and Hoerner, J. *Clean Energy and Jobs* (Economic Policy Institute 2002)

[7] BBC Research & Consulting: *"Employment and Other Economic Benefits from Advanced Coal generation With Carbon Capture and Storage Technologies"* (February 2009)

Historical Overview

The United States has a long history of investing in programs that ensure a relatively equal transition for workers and communities affected by major economic shifts. These programs are primarily aimed at providing training and employment services to help transition dislocated workers into new jobs with comparable wages and benefits. In some cases, they also revitalize local communities through investments in training infrastructure and economic development.

The U.S. federal government has developed worker transition programs in response to a number of different conditions, from mechanization and shifts in production, to environmental regulations, to increased foreign trade. The first, longest-standing, and perhaps most popular transition program is the GI Bill. Originated under the Roosevelt Administration in 1944, the GI Bill, now the Montgomery GI Bill, provides 36 months (approximately 4 academic years) of educational and training support for military personnel who finish three years of service and enter into civil society.

The U.S. has also implemented several other comprehensive transition programs. The following programs are representative, and serve as relevant examples of both program design and execution. In this section we briefly summarize several key programs; the next section will focus on the relative strengths and weaknesses of each model and will serve as a guide for an improved worker and community transition program as part of new federal climate legislation.

Trade Adjustment Assistance (TAA)

Since its passage as part of the Trade Expansion Act of 1962, the Trade Adjustment Assistance (TAA) program has provided transition assistance services to over 25 million workers negatively impacted by US trade policies.[8] The overall goal of TAA is to assist workers in finding jobs with relatively equal pay and benefits, defined at 80% of previous wage levels or higher, by providing key services including income, retraining and relocation support.

Over the program's history, the major components, including eligibility requirements, training, job search assistance and levels of income support, have fluctuated considerably. During the original stage of TAA, eligible workers could only receive income and relocation support - there was no training or job assistance component. The level of income support fluctuated with each administration, as did the amount of time that support was provided. In the 1970s, the program provided weekly allowances of 70% of previous income, or 100% if enrolled in training. During the 1980s, the main focus of TAA shifted to job search and job placement assistance, and income support was reduced to less than half of previous income - the levels provided by unemployment insurance. In 1988, Congress further amended the program to require that all workers be enrolled in training programs in order to receive income support.

A number of improvements were made to TAA in 2002, including reforms that doubled training funds, expanded eligibility to additional worker groups, created a health coverage tax credit, and established wage insurance benefit for older workers.[9] As part of the 2009 Recovery and Reinvestment Act, Congress expanded eligibility for TAA to include service and public sector workers, and created a community assistance grant program. The TAA program currently

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[8] Rosen, Howard. *Designing a National Strategy for Responding to Economic Dislocation* (June 2008)
[9] US Department of Labor. *Trade Adjustment Assistance Reform Act of 2002* (October 23, 2006). http://www.doleta.gov/tradeact/2002act_index.cfm

provides worker transition assistance as well as financial assistance for impacted communities to promote economic diversification and development.

Job Training Partnership Act Title III

In response to a major shift in production resulting from increased mechanization, the 1962 Manpower Development and Training Act (MDTA) was established to provide employment and training services to workers impacted by automation. Over time, the focus shifted away from dislocated workers, until MDTA was replaced by the Comprehensive Employment and Training Act (CETA) in the 1970s, and by the Job Training Partnership Act Title III (JPTA) in the 1980s. The JTPA was designed to assist workers who were impacted by shifts in the domestic economy and therefore unlikely to find new employment in the same industry. The new program design represented a shift away from income and training toward job placement and job search, and included significant cuts in support for retraining programs.

In 1988, the Economic Dislocation and Worker Adjustment Assistance Program (EDWAA) amended JPTA, increasing funding, creating a rapid response unit, extending unemployment insurance benefits, and promoting collaboration between various partners including labor unions, the government and the private sector.[10] As part of 1990 amendments to the Clean Air Act (CAA), Congress created the Clean Air Employment Transition Assistance program as part of JPTA to cover workers laid off as a consequence of CAA compliance. Benefits included a job search and relocation allowance of up to $800, and need-related payments to help workers complete retraining or education programs.

Regional Rail Reorganization Act of 1973, Sub Chapter 17 (45 U.S.C.22)- Protection of Employees

The Regional Rail Reorganization Act (RRRA), passed in 1973, came in response to widespread financial failure of Northeast and Midwest Railroads. The Act initiated the process of bailing out private railroads, mainly by reorganizing and nationalizing them under Conrail, the Consolidated Rail Corporation. As part of RRRA, a federal worker assistance program was created to aid the thousands of workers dislocated by the reduction in rail service. The employee protection program (Subchapter V) of the 1973 Act provided income assistance to displaced workers, at 100 percent of lost wages up to $2,500 per month.[11] The program expired after six years, and in 1981 was reinstated under the Northeast Rail Service Act. The employee protection program under this Act allowed for a termination allowance up to a maximum of $25,000, and included clauses for preferential hiring and dispute resolution handled by the Railroad Retirement Board.

Redwood Employee Protection Plan & Northwest Economic Adjustment Initiative

The Redwood Employee Protection Plan (REPP) and the Northwest Economic Adjustment Initiative (NWEAI) are both federal worker assistance programs targeted at particular regions of the Pacific Northwest where timber harvest was significantly reduced by federal environmental regulation. The REPP was part of 1978 legislation to expand Redwood National Park (RNP), and its inclusion enabled the AFL-CIO, other labor organizations, and local governments to ally

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[10] Barrett, Jim. *Worker Transition and Global Climate Change*. (PEW Center on Global Climate Change, December 2001).
[11] US Government Accountability Office. *Unemployment Assistance, Trade Act Worker Adjustment Assistance, Title V Provisions of the Rail Act, and the Redwood Employee Protection Program* (GAO, 1980).

with environmental groups and support the expansion of the park. [12] The REPP provided weekly benefits equivalent to 100% of previous earnings with no benefit maximum, or a lump sum payment that could not exceed 72 weeks of pay. As a bridge to retirement, affected employees could receive benefits for an additional five years if they reached age 60 on or before September 30, 1984. The REPP also provided continuation of health, welfare, and pension payments during the protected period. The REPP included funding for re-training of affected employees, as well as job search and relocation allowance (80% of allowable cost with $500 maximum).

The NWEAI was part of the Northwest Forest Plan of 1993, a comprehensive plan to address the socio-economic impacts from reduced timber harvests due to protection of spotted owl habitat. In addition to individual worker assistance, the Plan included a larger economic development component to assist businesses and communities. One element, the Jobs-In-The-Woods (JITW) program, supported ecological restoration projects to help remediate forests and provide displaced workers with new job opportunities. Ecological restoration projects included "watershed maintenance, ecosystem restoration and research, environmental monitoring, and forest stewardship to improve the condition of the region's ecosystems, create jobs in timber-dependent areas, improve water quality, and increase salmon stocks to avoid salmon listings and improve commercial fishing."[13]

Workforce Investment Act of 1998

The Workforce Investment Act (WIA) was established in 1998 to consolidate the administration and delivery of various job training and employment services, including JTPA, parts of TAA, and other worker transition programs. The Act established "one-stop" career centers throughout the country, where all dislocated workers can access income and benefit replacement, career counseling and job placement, and a variety of other services. One-stop centers also provide some training, including GED classes, literacy, and occupational skills. Participants in WIA Adult and Dislocated Worker programs can choose to receive vouchers to enroll in any participating training program, providing individuals with the ability to choose the program that best fits their needs. The American Recovery and Reinvestment Act of 2009 significantly increased support for WIA programs and one-stop career centers, with particular emphasis on those services targeted toward dislocated workers.

Designing a New Model for Workers and Communities

History proves our nation's commitment to helping workers affected by major economic shifts. It is clear that, without some form of assistance, displaced workers have difficulty finding new employment with equivalent wages and benefits. A 2001 study on job loss due to increases in imports found that almost 40% of all displaced workers in the US do not find employment within the first two years after the initial job loss. Another 40% of workers find jobs at lower wage rates with fewer benefits, and only 20% of displaced workers find equivalent or slightly better jobs.[14] A 2007 GAO report on TAA indicates that most workers who found new employment earned about 80 percent of their previous wages.[15] Additionally, mass layoffs in specific sectors or

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[12] John Jacobs. *A Rage for Justice: The Passion and Politics of Phillip Burton.* Berkeley: University of California Press, 1995.
[13] DeForest, Christopher E. *Watershed Restoration, Jobs-in-the-Woods, and Community Assistance: Redwood National Park and the Northwest Forest Plan.* (USDA Forest Service, May 1999.)
[14] Kletzer, Lori. *Job Loss from Imports* (Institute for International Economics, September 2001)
[15] US Government Accountability Office. *Trade Adjustment Assistance: Program Provides an Array of Benefits and Services to Trade-Affected Workers* (GAO, 2007).

regions cause a negative ripple effect because loss of employment leads to a decline in consumer spending and tax revenue, diminishing the socio-economic health of the whole region.

Drawing from the experiences of previous transition programs, we can design a new model that effectively provides opportunities in the new economy for workers and communities. Before proposing a new program, we analyze the successes and failures of previous and existing efforts, identifying key areas for improvement. This analysis is grouped into five broad categories: (1) participation rates; (2) income and benefit levels; (3) education and training; (4) community and economic development; and (5) monitoring and evaluation. Within each area are lessons learned that help generate recommendations for a better and more comprehensive program design, which will be discussed in the following section.

(1) Participation Rates

One the greatest criticisms of worker transition programs has been extremely low rates of participation. For TAA, the largest and longest running program, about 10 percent of eligible workers actually participate in the program.[16] Participation rates in other worker transition programs have been equally abysmal. A study of JTPA from 1995-1996, for example, reported a participation rate of 13 percent.[17] While there are myriad reasons why these rates are so low, strict eligibility standards and delays in benefits reaching workers are two factors that have historically led to poor levels of participation.

One of the most obvious problems occurred during the first during the first stage of TAA, when workers had to demonstrate that their work was directly impacted by a specific trade action. This proved to be extremely difficult, demonstrated by the fact that TAA did not provide services for a single worker during the first seven years of the program. President Nixon later eased the eligibility standards, and as a result 25 times more workers were served between 1976 and 1980 than between 1962 and 1975.[18] Despite improvements, eligibility continued to be a problem for many workers. A 1992 GAO investigation on eligibility demonstrated that almost two thirds of all petitions filed during 1990-1991 were misclassified, and a comparable number of petitions that should have been accepted were denied.[19] These rigid eligibility standards and misclassifications make clear that past programs have not reached intended recipients.

While eligibility standards for TAA have recently been expanded to include workers who manufacture component parts and in some cases even digital products, many workers still do not qualify because of technicalities and rigid definitions of industries impacted by trade. In 2006, one third of all petitions were not certified, denying benefits to a large number of workers who failed to qualify because their firms do not manufacture ‘articles’ as defined by the act. Many of these ineligible workers were employed in computer programming and airport related services.[20] Under the RRRA, by contrast, affected employers were identified in advance, making

[16] Rosen, 2008.
[17] Barrett, 2001.
[18] Ibid.
[19] US Government Accountability Office. *Dislocated Workers: Trade Adjustment Assistance Program Flawed*, Report GAO/T-HRD-94-4 (GAO, 1993).
[20] US Government Accountability Office. *Trade Adjustment Assistance: Program Provides an Array of Benefits and Services to Trade Affected Workers*, Report GAO-07-994T (GAO, 2007).

workers immediately eligible for benefits.[21] As a result, within the first three years of the program, benefits were provided to a total of 36,500 workers laid off by eight different employers.[22]

The timeliness of access to program benefits and services also impacts participation rates. Research has found that reaching workers before or at the time of layoff increases the chance of reemployment.[23] Where this fails to occur, workers are less able to access program benefits. In the case of the REPP, for example, participation in re-training programs was very low - "from 1978 to 1984, in no year were there more than 13 Redwood National Park positions (temporary, term, or permanent) filled by affected workers."[24] An evaluation of the REPP linked the low participation rates with delayed implementation of the re-training program. In effect, the re-training programs were not available to workers until more than a year after their dislocation.

In an attempt to address this issue in the design of TAA, the time frame for processing applications was amended during the 2002 reforms from 60 days to 40 days, allowing workers to access training, education and other services in a more efficient manner. As a result, in 2007 the GAO found that petitions filed between 2004 and 2006 had an average processing time of 32 days.[25] In addition, rapid response programs were developed to provide services for unemployed workers, sometimes even before layoffs occurred. Rapid response teams provide on-site information to workers and help coordinate the various services including income support, education and training opportunities, job search and career assistance, health benefits, and workshops on resumes and interviewing.

In developing a new transition program, it is very important that eligibility be clearly established, and that benefits and services are provided for the intended audience from the onset. The application process must be clear and simple, with a fair procedure for refuting claims that are denied. Training and other services should be set up prior to the workers' dislocation so that they have information on available options far in advance of their lay off and are able to begin re-training immediately. Additionally, rapid response teams should be deployed to set up one-stop centers, where early and coordinated intervention can lead to better access for workers.

(2) Income and Benefits Levels

While income replacement has been a core feature of most worker transition programs, income and benefit levels have varied throughout their history. Early programs like the RRRA, the REPP and pre-1981 TAA provided generous benefits, ranging from 70-100 percent income replacement for a period of 18 months. By contrast, the Reagan Administration reduced income and benefit levels to between 30 and 40 percent of lost wages, administered as a one-year extension of unemployment insurance. In some cases, workers have been given the option of receiving a lump sum severance allowance in lieu of weekly benefits payments - the RRRA allowed a lump sum allowance of $20,000 for employees with three or more years of service,

[21] US Government Accountability Office. *Unemployment Assistance, Trade Act Worker Adjustment Assistance, Title V Provisions of the Rail Act, and the Redwood Employee Protection Program* (GAO, 1980).
[22] Ibid.
[23] U.S. Congress, Office of Technology Assessment, *Plant Closings: Advance Notice and Rapid Response Special Report,* OTA-ITE321 (Sept. 1986)
[24] DeForest, Christopher E. *Watershed Restoration, Jobs-in-the-Woods, and Community Assistance: Redwood National Park and the Northwest Forest Plan* (USDA Forest Service, May 1999.)
[25] Ibid.

and the REPP allowed a lump sum equivalent to 72 weeks of income for employees with more than five years of service.

Transitional income support is directly related to displaced workers' ability to access training, as workers must be able to maintain living standards while completing training programs. At one stage during TAA, training programs were provided for up to two years, while income benefits were only available up to 18 months. Participants enrolled in training programs generally dropped out when their financial assistance ended.[26] Completing training, however, has a significant impact on workers' ability to return to previous wage levels. A comprehensive analysis of transition assistance programs produced by the Pew Center on Global Climate Change found that an additional year of schooling can yield about an eight percent increase in earnings.[27] The analysis suggests that, to return workers to 100 percent of their previous income, at least two years of assistance covering all training and related expenses should be provided.

Inadequate funding has further limited the ability of programs to provide income replacement benefits. Both JTPA and TAA post-1981 technically allowed for the extension of unemployment benefits, but they also lacked the funds necessary to provide these services. In 1996, JPTA provided a total of $1.2 billion in services for 284,000 displaced workers, an amount slightly less than $4000 per person.[28] Even though funding was up dramatically from a decade earlier, it was still not sufficient to provide support for all participants. The funding regulations for JPTA mandated that no more than 30 percent of all funds could be used for income payments and other 'supportive services,' therefore structurally prohibiting income replacement for many workers. As a result of the lack of funding, the number of participants in these programs who received benefits was extremely low. In 1985, less than 25% of participants enrolled in JPTA received income or other supportive services and less than 50% received training.

For older workers, participating in training or finding a new job may not be a viable option. Older workers are likely to see steeper decreases in earnings at new employment, and they are less likely to enroll in education and training programs. Previous programs have made efforts to provide some sort of bridge to retirement for eligible workers, though at varying levels. Under the RRRA, eligible workers of any age with more than five years of service were entitled to receive benefits until they reached age 65. The REPP provided full benefits for an additional 5 years if the participant reached age 60 before a particular date. The TAA extends benefits for a mere 26 additional weeks for workers over the age of 60. An alternative program was created under TAA for workers over age 50, but the benefits were only available to low-paid workers for a short period of time (two years) and provided a minimum income supplement.

An improved model must include sufficient levels of income replacement to allow workers to maintain their standard of living during a designated period of transition. Benefits such as health insurance and pension contributions should also be maintained during this time. Income and benefit replacement should match the length of time that training assistance is provided, to ensure that workers can complete their training program and move on to better opportunities. Older workers must be specifically

[26] US Government Accountability Office. Trade Adjustment Assistance: Improvements Necessary, but Programs Cannot Solve Communities' Long-Term Problems Report GAO-01-988T (GAO, 2001)
[27] LaLonde, Robert. 1995. The Promise of Public Sector-Sponsored Training Programs. *Journal of Economic Perspectives.* Vol. 9, No. 2, pp. 149-168
[28] Barrett (2001).

protected, and provided an adequate bridge to retirement that preserves their pension and health benefits and provides equivalent income for an extended period of time. Finally, the worker assistance program must be sufficiently funded to fulfill its intended purpose and provide full benefits to all eligible workers.

(3) Education and Training

Support for worker retraining is another core component of most transition programs. Provided in the form of vouchers or other types of tuition assistance, workers receive support to pursue full- or part-time retraining at community colleges, technical schools, or four-year universities. Under the current GI Bill, for example, the maximum benefit is 36 months tuition and fees (in an amount not exceeding the most expensive public in-state option), monthly housing allowance (amount depends on location), and $1000 stipend for books.[29] Participants in the TAA program receive both tuition assistance and income support for up to 104 weeks of full-time training, with an additional 26 weeks for those pursuing remedial education.

One good example of a worker retraining proposal is the one developed under the McCain Universal Tobacco Settlement Act of 1997.[30] Recognizing that stricter regulation of the tobacco industry would have a negative impact on tobacco farmers, the bill included a transition program geared toward farmers and their families. In addition to other income support and benefits, the Act proposed providing up to $2,900 in grants per year for up to four years. This level of assistance was intended to provide tobacco farming families with access to opportunities for higher education.

The relationship between training and wages is clear. While participants enrolled in transition assistance programs initially experience a sharp decline in wages, studies show that, in the long term, displaced workers who receive retraining fare better than their non-trained counterparts. A 1993 assessment of workers enrolled in JPTA, which focuses on retraining, saw an average decline in wages of 45% during the first year after job loss. This study also showed, however, that although annual earnings were significantly lower in the first year following termination, they recovered during the second year of training and went on to surpass the income levels of non-participants. In the year following program completion, JPTA participants earned 33 percent higher wages than non-participants.[31] Another study of workers enrolled in JPTA programs during the early 1990s showed that 32 months after termination, the average wage for those in a training-related field had recovered to 100 percent of the layoff wage. Though less than 50% of workers enrolled in JPTA ended up in fields related to their training, this fact underscores the importance of simultaneously enrolling in training and matching training to regionally available jobs.[32]

It is important that training funds be available for use at a variety of types of programs, in a variety of sectors and occupations. The Trade Adjustment Assistance program, for example, maintained flexibility in how education benefits could be used, so that participants could choose a program that fit their individual needs and interests. Of the roughly one third of all TAA

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[29] Veterans Affairs Administration letter on Post 9-11 GI Bill: http://www.gibill.va.gov/documents/CH33_veteran_outreach_letter.pdf

[30] S. 1415, The Universal Tobacco Settlement Act: http://www.lawpublish.com/tobacco/s1415b.html

[31] US Department of Labor. *The St. Louis Metropolitan Re-Employment Project: An Impact Evaluation, Research and Evaluation* Report Series 93-B (DOL, 1993).

[32] US Department of Labor. *Semi-Annual Report to Congress: The Job Partnership Training Act*. Report No. 02-95-232-03-340 (DOL, 1995).

participants in 2006 that participated in training programs, 75% chose occupational training as compared with other types of education and training. The top three occupational training programs selected by dislocated workers were nursing, medical assisting, and truck driving. The remaining participants were enrolled in remedial education and on-the-job training at 23% and 2% respectively.[33]

An effective worker transition program must include adequate support for worker retraining that includes both tuition assistance and income support for the full training period. Assistance must be sufficient to ensure that workers can complete the full course of training. Tuition vouchers must be eligible for use at a wide range of programs that match workers' needs and interests, from remedial education to community college or apprenticeships to four-year universities. And tuition assistance should be coordinated with economic development efforts, to help direct dislocated workers into growth industries where they can find equivalent work.

(4) Community and Economic Development

The success of worker assistance programs ultimately depends on the strength of the surrounding local economy. Support for retraining and job placement is only effective where there are sufficient new local work opportunities. Areas dependent on mining and heavy industry are already experiencing economic decline, with job losses occurring at a faster rate than in other parts of the country.[34] Neighborhoods located near carbon-intensive industries suffer higher rates of poverty and unemployment, as well as significant health disparities.[35] As climate legislation is implemented, communities dependent on, or affected by, carbon-intensive industries will need a comprehensive approach that not only protects workers, but also creates new economic opportunities, whether in low-carbon improvements to existing facilities, or in new emerging energy industries.

Past experience proves the importance of a comprehensive strategy. In the REPP, income support and re-training programs were not successful because the community in which workers lived had few new job opportunities. The REPP offered preferential hiring, however the lack of sufficient job growth in affected communities made the preferential hiring program irrelevant. Drawing on the experience of the REPP, the NWFP created the Jobs-in-the-Woods Program to specifically address the need for job growth for displaced loggers. The intent was that the NWFP would create as many new jobs in ecological restoration work as existed in the timber industry prior to passage of the NWFP. The NWFP also mandated that dislocated workers would have hiring preference for the ecological restoration work.

Although the NWFP attempted to bridge individual worker assistance with community assistance to provide displaced workers with jobs, the Jobs-in-the-Woods program still struggled to meet these goals. In reality, few jobs were actually created, for several reasons. First, federal funding for these ecosystem restoration projects was limited and dependent upon Congress for annual approval. Tensions arose over how to choose which projects to pursue first - those with the greatest environmental benefit, or those that provided the greatest number

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[33] US Government Accountability Office (2007).

[34] Wial, H. and Friedoff, A. *Bearing the Brunt: Manufacturing Job Loss in the Great Lakes Region 1995-2005* (Brookings, July 2006); Drabenstott, M. and Moore, S. *Rural America in Deep Downturn* (RUPRI, 2009). http://www.rupri.org/Forms/RUPRI%20Rural%20America%20in%20Deep%20Downturn.pdf

[35] Ash, M. et al. *Justice in the Ai: Tracking Toxic Pollution from America's Industries and Companies to Our States, Cities, and Neighborhoods (*Creative Commons, April 2009).

of jobs. And because the program lacked explicit job growth mandates, local Forest Service officials would often choose capital-intensive restoration work over labor-intensive work. In some cases displaced workers, who were mainly ex-loggers, did not have the appropriate skill set for restoration work. Moreover, nothing in the worker assistance program made explicit that the restoration jobs would pay family wages, and as a result these jobs often paid much less than displaced workers' former jobs.

Combining investments in worker assistance with support for local and regional economic development is essential to making an effective transition. There are many previous and existing examples of federal assistance to communities negatively affected by economic shifts. The US Community Adjustment and Investment Program provided economic development assistance for communities affected by the North American Free Trade Agreement (NAFTA).[36] Counties along the US border were automatically eligible, and other communities with high unemployment rates impacted by NAFTA could also apply. The program provided direct loans and loan guarantees to businesses to create jobs, as well as direct grants and technical assistance to communities. Similarly, TAA also contains a variety of forms of assistance to communities affected by globalization, including technical assistance, support for training programs, and grants to revitalize industries and sectors and create employment opportunities for dislocated workers.[37]

Other countries also offer constructive examples. An Australian proposal for transitioning coal-dependent communities affected by climate legislation includes a multi-faceted economic development program to build up local industries and create green jobs.[38] Elements of the program include loans, subsidies, and technical support for new industries and employers; compensation and equipment buy-outs for contractors; investment in renewable energy and energy efficiency; wage and health benefit guarantees; and training matched to local needs. The key focus of this program is on shifting coal-dependent communities to become hubs of clean energy generation and component part manufacturing.

One solution to creating immediate opportunities for dislocated workers and developing local economies is to prioritize environmental remediation. In spite of their contribution to local economies, carbon-intensive industries leave behind significant environmental damage in the form of contaminated land and waterways, mine-scarred lands, and toxic waste. There are currently 300 coal waste impoundments, 1650 identified Superfund sites, and over 8,600 abandoned mine sites in both rural and urban areas in the United States.[39] Neighborhoods and communities located near these sites suffer greater health risks due to air and water pollution, higher rates of poverty and unemployment, and are largely populated by people of color.[40] Through increased federal and state investments in Superfund, Abandoned Mine Lands, and brownfield redevelopment programs, this damage can be repaired, creating jobs and improving the quality of life and home values for local residents. Some remediated land can be returned to productive use, serving as sites for economic or renewable energy development and creating long-term employment multipliers.

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[36] Greenwald, J. et al. *Community Adjustment to Climate Change Policy* (Pew Center for Global Climate Change, December 2001).
[37] American Recovery and Reinvestment Act of 2009
[38] Bill, A. et al. *A Just Transition to a Renewable Energy Economy in the Hunter Region, Australia* (Center for Full Employment and Equity, June 2008).
[39] Environmental Protection Agency; Department of Interior Office of Surface Mining
[40] Bullard, R. et al. *Toxics Wastes and Race at Twenty* (United Church of Christ Justice and Witness Ministries, March 2007).

An improved and comprehensive transition program must include assistance for community development, flexible enough to benefit a wide range of local economies. To begin, efforts must be made to preserve existing jobs and industries by installing energy-efficient and emissions-reducing technologies, and retooling to generate clean energy and products. Additionally, clear efforts must be made to identify and invest in a diversified set of growth industries, with emphasis on creating quality jobs at equivalent wage and skill levels. Economic development investments must reinforce sustainability goals by focusing on those projects and industries which will further the growth of the clean energy economy. This includes investments in energy efficiency, renewable energy, and environmental remediation, as well as extensive support for education and training programs.

(5) Effective Monitoring and Evaluation of Programs

Worker and community assistance programs need to be effectively monitored and evaluated, to best meet the changing needs of a community and ensure that the program is having desired impacts. Past programs have been weak on tracking and accountability, and evaluations of their effectiveness have been limited to a few studies with a relatively narrow scope of analysis.

The experiences of the REPP and NWEAI illustrate two important points related to effective monitoring and evaluation of programs. First, these programs demonstrate that it is difficult to measure whether the transition program is having the desired impact because there are always other factors affecting the economic health of an area. For example, just as Del Norte County in Northern California began receiving community assistance for the expansion of Redwood National Park, the state decided to build a state prison in the area, which provided 1,800 direct and indirect jobs in the county. Though the net job gain for the county was positive during the time it received assistance, the broader context made it difficult to measure whether the community assistance program was having an effect.

Second, it is critical to provide ongoing monitoring and evaluation in order to determine if the assistance is useful to its intended beneficiaries. As part of the community assistance component of the Redwood National Park expansion, the U.S. Economic Development Administration gave community agencies in the affected region about $13 million for high-risk business loans and infrastructure development. It is estimated that this assistance created 600 jobs in the community, but without a detailed, long-term evaluation this evidence remains anecdotal.

Similarly, dislocated workers' use of benefits, retraining programs, and other assistance components should be systematically tracked in order to determine whether these elements are effective. Under the REPP, we know that $104 million of worker assistance was spent on 3,500 individuals as of 1988 and that less than 13% of these individuals participated in retraining programs. However, records were not kept to track whether individuals found employment after receiving the retraining or benefits so it is unclear whether these individuals truly benefited from the program.

An effectively designed worker transition program should establish benchmarks and continually monitor and evaluate program impacts. Strengths and weaknesses should be identified, and adjustments should be made immediately to make the program more effective. The structure of the program should be flexible enough to respond to feedback and make rapid process improvements. A more accountable and transparent tracking

system such as this will ensure a better transition for displaced workers, and a more efficient and effective investment of federal funds.

The Next Phase of Adjustment Assistance

Though still an imperfect model, the Trade Adjustment Assistance program provides a base on which to build a stronger and better worker and community transition program as part of federal climate legislation. The TAA program is currently being redesigned and expanded as part of the American Recovery and Reinvestment Act of 2009 (ARRA). The Recovery Act provides an additional $718 million for job training as part of TAA, as well as an additional $1.25 billion for WIA dislocated worker training. The Act also expands the TAA community economic development assistance program. The new TAA program offers an extension in the duration of income support, an increase in health coverage, job placement and job search allowances, and provides for more flexibility for workers. It also extends benefits to service sector and public sector workers, as well as workers in other sectors, who lost their jobs as a result of increased imports or offshoring of jobs. Table 1 illustrates the current benefits of TAA.

The types of services needed for a new worker and community transition program mirror those already provided under TAA - income and benefits, education and training, reemployment services, health care coverage, bridge to retirement, and community economic development assistance. In addition, TAA was designed for a specific group of workers impacted by global trade, which is similar to the workers in energy intensive sectors likely to be impacted by climate change legislation. Because of these factors, TAA can be useful for providing a starting point and for a general structure from which to design and implement a new green transition program. However, while TAA can provide a basic framework, it is important to design a new program that moves beyond the traditional limitations of past models.

Table 1. Description of TAA Benefits before and after May 19, 2009

Service	**Old TAA Program (prior to May 19, 2009)**	**New TAA program, as amended by the American Recovery and Investment Act**
Income Support also known as Trade Readjustment Allowances (TRA)	Income support is provided for up to 104 weeks for those currently enrolled in full time training programs. Income support of up to 130 weeks if worker is enrolled in remedial training.	Income support is provided for up to 130 weeks for those currently enrolled in full time training programs. Income support of up to 156 weeks if worker is enrolled in remedial training.
Training	Training aimed at returning dislocated worker to employment at a similar wage. Training duration is a maximum of 104 weeks. Those who require remedial education are eligible for an additional 26 weeks of training. Training	Training can be on full time or part time basis, but full time training is required for income payments.

	may only be approved on a full time basis.	
Health Coverage Tax Credit	Beginning May 2009, can receive tax credits for 80% of monthly health insurance premiums (this is up from 65%).	Workers can receive tax credits for 80% of monthly health insurance premiums (this is up from 65%).
Reemployment Services	Assists worker in finding new jobs and identify appropriate training programs. Assistance includes: counseling, resume writing, interview skills, job search programs, etc.	Assists worker in finding new jobs and identify appropriate training programs. Assistance includes: counseling, resume writing, interview skills, job search programs, etc.
Rapid Response Assistance	Following a layoff announcement, the Rapid Response staff provides dislocated workers with information about applying for assistance and about available services.	Following a layoff announcement, the Rapid Response staff provides dislocated workers with information about applying for assistance and about available services.
Job Search Allowances	Reimbursement of 90% of the total cost of travel and subsistence for job search or up to $1250	Reimbursement of 100% of the total cost of travel and subsistence for job search or up to $1500
Relocation Allowances	Cover 90% of the necessary moving expenses for workers who need to move to find employment. Paid in a lump sum equal to three times the wages or up to $1250.	Cover 100% of the necessary moving expenses for workers who need to move to find employment. Paid in a lump sum equal to three times the wages or up to $1500.

US Department of Labor, 2009[41]

Policy Recommendations: Transition to the Clean Energy Economy

It is essential that federal climate legislation include a comprehensive set of strategies that catalyze the move toward a clean energy economy for workers and communities dependent on, or affected by, carbon-intensive industries. Such a program would not only help workers access new opportunities, it would also help rebuild crumbling local economies in rural and urban areas that have long been damaged by extractive industries, and create high-skill, high-wage jobs in places where they are desperately needed.

This set of strategies should also serve to protect low- and middle-income consumers from the effects of higher energy prices. As the carbon pricing system takes effect, it will become increasingly expensive to consume energy. Until the market adjusts, and costs of energy from renewable sources goes down, low- and middle-income consumers will shoulder a disproportionate burden. Direct assistance graduated by income level and combined with support for installing energy efficiency improvements is essential to helping the broader population make the transition.

The following recommendations address four key areas of investment within a national transition program: individual worker assistance, community economic development assistance, land remediation, and assistance to low-income families coping with higher energy prices. We recommend that Congress create a specific fund to support these investments using a percentage of auction revenues generated through the carbon market. The program should be designed so that administering agencies have sufficient resources for facilitating access to the full range of benefits, setting up rapid response teams and providing technical support, and completing effective monitoring and evaluation.

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41 US Department of Labor. *Questions and Answers to Upcoming Changes to the TAA Program* (April 2, 2009) http://www.doleta.gov/tradeact/ US Department of Labor. *Trade Adjustment Assistance and Alternative Trade Adjustment Assistance Services and Benefits* (March 27, 2004). http://www.doleta.gov/tradeact/benefits.cfm#2

Individual Assistance for Workers

Overall, investments in clean energy are expected to create or retain millions of jobs in a wide range of industries and occupations. Though the estimated overall employment impact of placing a cap on carbon is expected to be small, certain carbon-intensive industries are likely to be hard-hit by the shift towards clean energy.[42] The Economic Policy Institute estimates that the greatest potential job losses due to federal climate regulations will likely be in the electric utility sector, particularly among workers at coal-burning power plants,[43] though these losses may be mitigated somewhat through new investments in low-carbon coal technologies such as carbon capture and storage. Losses may also occur in the fossil fuels and transportation sector, and in heavy industries such as paper, glass, steel, aluminum, chemicals, and cement manufacturing.[44] Depending on the structure of the cap and trade policy and accompanying investments, the coal mining sector may be particularly hard hit, affecting regions of the country like Appalachia that have been dependent on the coal industry for generations.[45]

Workers who have devoted their lives to these industries, and those in sectors which are dependent on these industries, must be protected during the shift away from carbon-intensive modes of production and towards a clean energy economy. These workers must be provided an adequate transition to new, equivalent work opportunities that includes income and benefit support, as well as support for retraining that allows them to access quality employment. In the case of older workers, retraining and finding a new job may not be a viable option; these workers may need assistance targeted at providing a "bridge" to retirement.

Specifically, federal climate legislation should include a worker assistance program with the following components:

- Up to three years of full wage or salary replacement, health benefit, and retirement contribution replacement for all workers.
- Additional protections for workers 50 years or older, including extended income replacement and benefits as a bridge to retirement. Older workers would have the option to forego training and receive additional income and benefits replacement in lieu of tuition assistance.
- "Rapid response" employment and case management services, including skills assessment, development of an individual employment plan, access to information on available training and how to apply for financial aid, and supportive services such as child care, transportation, and housing assistance.
- Up to four years of full-time training or educational benefits for workers seeking retraining, including full tuition assistance and additional living stipends for those who remain in a training or educational program.
- A travel allowance for job search, as well as assistance in covering relocation costs for workers who choose to relocate.

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[42] Keohane, M. and Goldmark, P. *What Will it Cost to Protect Ourselves from Global Warming?* (Environmental Defense Fund, 2008). http://www.edf.org/documents/7815_climate_economy.pdf
[43] Barrett, J. and Hoerner, J. *Clean Energy and Jobs* (Economic Policy Institute 2002).
[44] Buffa, A. et al. *California's Global Warming Solutions act of 2006: A Background Paper for Unions* (UC Berkeley Labor Center, August 2008); Aldy, J. and Pizer, W. *The Competitiveness Impacts of Climate Change Mitigation Policies* (Pew Center, May 2009).
[45] Environmental Protection Agency. *Coal Production for Electricity Generation & Retirements of Existing Capacity* (Analysis of S. 2191, 2008).

To facilitate early intervention and access to benefits, those industries that will be most affected by new federal climate regulations should be identified from the outset and initial plans should be made to serve eligible workers. Program design should be flexible enough to meet the needs of each individual worker, and ensure that a range of benefit options can be easily accessed. Adequate numbers of trained case managers should be provided to help each worker understand the options available, develop an individualized transition plan, and provide ongoing support. Additionally, standards should be included that prohibit participants in this program from displacing other workers and protect participants from being forced to relocate.

Finally, it is critical that labor unions representing affected workers be actively involved in the transition, both in designing the local administration of assistance programs and linking members to benefits.

Economic Development Assistance to Communities

For communities dependent on, or impacted by, carbon-intensive industries, a shift toward clean energy could have a substantial impact on the local economy. In many cases, these industries are concentrated in rural areas with high poverty levels, where well-paid job opportunities are limited and administrative and training infrastructure is inadequate for managing large-scale programs. Without targeted investment in local and regional economic development, county and municipal governments, training programs, and service providers will become overwhelmed in the short term, and workers will have limited long-term options for adapting to the new economy.

In addition to providing direct benefits to workers, a comprehensive economic development program should be established to help revitalize communities dependent on, or impacted by, carbon-intensive industries. This program should reinforce efforts to rebuild America's manufacturing sector, increase the use of renewable energy resources, and improve industrial and residential energy efficiency. Such a program would help rebuild local and regional economies and prevent forced relocation, creating comparable work opportunities for dislocated workers. It would also help struggling rural and urban communities move toward a more sustainable, good jobs economy.

Economic development strategies within identified communities and regions should build on the successes and lessons learned of previous efforts.[46] Planning should be regional in scope, and take a participatory approach that involves business leaders, labor unions, educators, community-based organizations, and local residents. Together, these stakeholders should identify assets and opportunities, and work in collaboration to chart a new path towards a stronger and more diversified local economic future.

The economic development assistance to communities program should specifically include:

- Targeting of federal investments in renewable energy, energy efficiency, and clean energy manufacturing toward communities dependent on carbon-intensive industries.
- Short- and long-term technical assistance, including advance strategic planning and coordination of available federal and state resources.

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[46] Previous local and regional economic development programs include the WIRED Initiative, Enterprise and Empowerment Zones, the Base Closure and Realignment Commission, and the Appalachian Regional Commission, among others.

- Local and regional data collection and analysis, including asset and labor market mapping, sector and industry analysis, and skill audits.
- Grants and loans to support the development of emerging industries and key clusters, including policies and programs to encourage the development of businesses related to renewable energy and energy efficiency.
- Strategies to retain, expand, and improve existing local industries, including loans and grants for retooling or expanding, and increasing energy efficiency; Grants and low-interest loans specifically targeted toward contractors and small businesses to retool to meet the needs of new and emerging local industries.
- Grants and loans to local community colleges, union apprenticeship programs, and other community-based organizations to develop and expand worker training/retraining initiatives, targeted toward key sectors and occupations that provide good, career-ladder jobs in local emerging industries.
- Expanded support for Community Development Financial Institutions and other entities that promote small business development and entrepreneurship, and provide education and training, technical assistance and marketing support, access to capital, and establishment of peer networks.
- Expanded support for community-based social safety net programs.

As part of a comprehensive community economic development strategy, local governments should tap into other available funding streams to develop large-scale programs that perform energy efficiency improvements and installation of small-scale renewable energy systems on all homes, as well as public and commercial buildings. In addition to saving families money on their energy bills, this would create career-track jobs in the construction sector for dislocated workers. Local workforce development initiatives should be tied to these programs, with particular preference for dislocated workers eligible for retraining.

Economic development initiatives should also maintain a focus on creating quality jobs by attaching labor standards to all grants, loans, and tax subsidies. Wage and benefit standards, local hiring, and apprentice hiring requirements for all recipients of grants and subsidies will ensure that communities gain maximum benefits from investments in the local and regional economy. All awards should be publicly reported to ensure maximum transparency, and include clawbacks for those who fail to fulfill job quality and other obligations. This will help to hold businesses accountable for assistance they receive while promoting long-term economic stability and growth.

Environmental Remediation

Investing carbon revenues in remediation projects not only generates important environmental benefits, it also has the potential to create job opportunities for dislocated workers. Carbon-intensive industries have left behind large swaths of damaged and contaminated land, and there is a backlog of eligible projects among existing federal remediation programs. Contaminated sites are located in both rural and urban areas, and tend to coincide with areas of deep economic distress, with high rates of poverty and unemployment.[47]

[47] Wood, L. *Trends in National and Regional Economic Distress, 1960-2000* (Appalachian Regional Commission, April 2005). http://www.arc.gov/images/aboutarc/grants/pdf/trends_final_05.pdf; Bullard, R. et al. *Toxic Wastes and Race at Twenty: 1987-2007* (United Church of Christ Justice and Witness Ministries, March 2007). http://www.ejnet.org/ej/twart.pdf

Efforts to remediate this land would not only improve the environment, but potentially return it to productive use as sites for sustainable forestry, clean energy manufacturing or renewable energy generation. In the short term, jobs in environmental remediation could serve as a bridge for workers that are within a few years of retirement, or for low-income residents and those with barriers to employment. Over the long term, productive re-use of remediated land could create new opportunities for the next generation of workers.

Specifically, the environmental remediation program should include:

- Expansion of Environmental Protection Agency programs to remediate abandoned non-coal mine and industrial lands, such as Superfund, Mine Scarred Lands Initiative, and other brownfield remediation and land revitalization programs. Funds should specifically be directed toward efforts that promote innovative and sustainable techniques that revitalize damaged lands and return them to natural or productive use.
- Increased support for the Department of Interior Office of Surface Mining Abandoned Mine Lands program, and expansion of the program to include reclamation of illegally-mined sites for which there was no bond and for which no solvent party can be found. Funds should be flexible enough to ensure efficient cleanup, and targeted toward those states and regions with the largest number of identified abandoned mines.
- Increased support for the Drinking Water State Revolving Fund and the Clean Water State Revolving Fund, specifically directed towards communities affected by coal mining and carbon-intensive industries to improve drinking water quality and treatment of waste water.
- Support for Environmental Protection Agency efforts to inventory existing landfills and impoundments of coal ash, flue gas desulfurization waste, and boiler slag at coal-powered electricity generation sites and coal-fired boiler industrial sites, assessing health and environmental risks, and developing regulations and requirements for proper reuse and disposal of coal combustion waste products.[48] .
- Development of a program to support appropriate reuse and safe disposal of coal combustion waste products, including research and development of new technologies, worker training in applying these technologies, investment in proper disposal as part of environmental remediation programs, and support for demonstration projects to promote waste product recycling.
- Expanded support for reforestation initiatives, such as the Appalachian Region Reforestation Initiative, which plants and manages forests on reclaimed mine lands, and the Forest Service's Forest Land Enhancement Program, which provides resources for development of sustainable forest management and certification plans for privately owned land. Support should specifically be made available for value-added processing of forest and agricultural projects that build the ecological and economic wealth of the forests and create jobs for foresters, forest techs, loggers, and wood processers who use sustainable practices.
- Increased support for monitoring and enforcement of environmental regulations and remediation requirements related to mining and heavy industry.

All investments in environmental remediation must include standards to ensure that jobs created are good jobs. All workers must be provided a living wage, equivalent with that established by the National Coal Wage Agreement, the local average manufacturing wage, or other such

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[48] Guidelines can be found in: Committee on Mine Placement of Coal Combustion Wastes. *Managing Coal Combustion Residues in Mines* (National Academy of Sciences, 2006).

benchmark. Full health and pension benefits must also be provided to all workers.[49] Investments must include local hiring requirements, with preference for dislocated workers. And complementary investments must be made in local training programs that provide both entry-level and advanced skills, including worker health and safety training. Specific training should also be provided to involve dislocated workers, particularly older workers, in monitoring and enforcement activities.

Though jobs in environmental remediation will not totally replace current jobs in mining and energy-intensive manufacturing, these policies, combined with additional protections for older workers and community economic development as described above, can help affected areas and workers move toward a more sustainable and secure economic future.

Direct Assistance to Consumers

Though most policy proposals treat consumer assistance as a different issue than transition, we believe that it forms an integral part of a comprehensive package that will ensure an equitable shift to a clean energy economy. Placing a price on carbon will necessarily increase the cost of consuming energy, generating a price signal that is intended to reduce energy use and therefore carbon emissions. Though essential for mitigating climate change, this increase will have a disproportionate impact on low- and middle-income consumers.[50] The impact will be regressive – low-income families will see energy bills consume a larger portion of household income. A Center for Budget and Policy Priorities analysis finds that even a modest 15 percent reduction in greenhouse-gas emissions would cost the poorest fifth of Americans an average of $750 a year – almost 6% of household income.[51]

Any carbon pricing plan must simultaneously provide direct and immediate protection from higher energy prices, and assistance in decreasing the amount of energy consumed. Assistance must be easily accessible, and aim to reach the maximum number of eligible households. And assistance must be regional in nature, with benefit levels that adjust to differing seasonal and climate-related energy needs. Benefits should also be responsive to fluctuations in energy prices, and regularly adjusted to match the impact on household purchasing power.

The Center on Budget and Policy Priorities (CBPP) has developed a comprehensive proposal to provide direct assistance to consumers. Their recommendations include:

- Direct assistance to lowest-income consumers through existing Electronic Benefit Transfer (EBT) systems that currently deliver food stamps and other benefits. This is the most efficient method of getting climate change assistance out to the lowest-income consumers, many of whom do not file taxes. These rebates would go to the bottom fifth of income earners, and would equal the loss in purchasing power that the average

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[49] According to the Bureau of Labor Statistics, the average wage rate for production workers on manufacturing payrolls in durable goods industries in late 2008 was $18.88 an hour.

[50] Keohane, N. and Goldmark, P. *What Will it Cost to Protect Ourselves from Global Warming?* (EDF, 2008). http://www.edf.org/documents/7815_climate_economy.pdf; Greenstein, J. et al. Vandenbergh, M. and Ackerly, B. *How Low-Income Consumers Fare in the senate Climate Change Bill* (CBPP, June 2008). *Climate Change: The Equity Problem* (Virginia Environmental Law Journal 26:53, 2008). Barrett, J. and Hoerner, J. *Clean Energy and Jobs* (Economic Policy Institute 2002).

[51] Greenstein, J. et al. Vandenbergh, M. and Ackerly, B. *How Low-Income Consumers Fare in the senate Climate Change Bill* (CBPP, June 2008).

household in the bottom quintile would experience due to the effects of higher energy-related prices that result from an emissions cap.

- A climate rebate for working families who file taxes and receive the Earned Income Tax Credit. Eligibility standards should be increased to cover ALL households with incomes at or below 200% above the federal poverty line, in order to benefit a wider range of low-income individuals and families. Those households in the next-to-lowest 20 percent of the population would receive these rebates, which would phase down at the same income levels as the EITC.
- A new, refundable tax credit that would go to anyone filing a tax return, and would target middle-income families not eligible for the EITC. The rebates would be scaled to family size, such that larger families would receive a greater rebate.

Direct assistance to consumers must be consistent with energy efficiency and conservation goals. Any benefit scheme must include across-the-board incentives that reward households for energy conservation. Benefits targeted toward low-income households must also be coordinated with widespread implementation of energy efficiency retrofit programs, to ensure that these homes have access to energy-saving improvements and technologies. For middle-income households, energy tax credits should be coordinated with rebates and incentives available for purchasing and installing energy efficiency and renewable energy systems, such that homeowners can actively reduce their energy use.

Conclusion

The shift towards clean energy represents a major economic and policy shift of an astounding scale. By passing comprehensive federal climate and energy legislation, our nation is making a commitment to a new model of economic growth that protects our planet and creates quality green jobs. We must provide adequate protections and opportunities to access jobs in the new economy as a catalyst for those who have been dependent on the carbon economy. We must also maximize this opportunity to reinvest in communities that have sacrificed their health and environmental quality to provide carbon-intensive energy and products, to make them an active part of a sustainable, clean energy future.

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Making the Transition:
Helping Workers and Communities Retool for the Clean Energy Economy

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