

Wisconsin Family Impact Seminars

Workforce Development Policy

NEW DIRECTIONS FOR STATES



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Workforce Development Policy: New Directions for States

First Edition

Wisconsin Family Impact Seminars

*A collaborative of the Center for Excellence in Family Studies
in the UW-Madison School of Human Ecology and UW-Extension*

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Purpose and Presenters

In 1993, Wisconsin became one of the first states to conduct Family Impact Seminars modeled after the seminar series for federal policymakers. The Wisconsin Family Impact Seminars provide objective, high-quality research on family issues to promote greater use of research in policy decisions and to encourage policymakers to examine the family impact of policies and programs. Family Impact Seminars highlight the consequences that an issue, policy, or program may have for families. Because of the success of the Wisconsin Family Impact Seminars, the Policy Institute for Family Impact Seminars, established at the University of Wisconsin-Madison/Extension, is now helping 28 states conduct their own Seminars.

The Family Impact Seminars are a series of presentations, discussion sessions, briefing reports, and newsletters that provide high-quality, solution-oriented research on family issues for state legislators and their aides, Governor's office staff, legislative service agency staff, and state agency representatives. The Seminars provide objective, nonpartisan research and do not lobby for particular policies. Seminar participants discuss policy options and identify common ground where it exists.

“Workforce Development Policy: New Directions for States” is the 28th Wisconsin Family Impact Seminar. For information on other Wisconsin Family Impact Seminars topics or on Seminars in other states, please visit our web site at <http://www.familyimpactseminars.org>.

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Briefing Reports

Each Family Impact Seminar is accompanied by an in-depth briefing report that summarizes the latest research on the topic and identifies policy options state policymakers may want to consider. Since 1993, 28 seminars have been conducted on topics such as corrections, growing the state economy, Medicaid, prisoner reentry, and school funding. For a list of the seminar topics and dates, please visit the Wisconsin Family Impact Seminar web site at <http://www.familyimpactseminars.org> (enter a portal and click on State Seminars). Each seminar has a page on which you can view the list of speakers, download a briefing report, and listen to the audio of the seminar presentations.

If you would like to purchase a bound copy of any report, please contact the UW Cooperative Extension Publications office at (877) 947-7827 or <http://learningstore.uwex.edu>. Legislators can request a free copy directly from the Wisconsin Family Impact Seminars at (608) 263-2353.

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FIS 1	Building Policies That Put Families First: A Wisconsin Perspective.....	March 1993

Table of Contents

Executive Summary	ix
Acknowledgements	xi
Wisconsin’s Workforce Development System	
<i>Adapted from a report by the Public Policy Forum</i>	1
How Much Money is Wisconsin Spending on Workforce Development Programs?	1
How Much Need is there for Employment and Training Services?	2
Is Wisconsin’s Workforce Development System Funded Largely by Federal or State Dollars?	2
What Workforce Development Programs Exist in Wisconsin?	3
Are Enough Funds Being Allocated to Meet Wisconsin’s Training Demands? ...	7
Workforce Training: What Works? Who Benefits?	
<i>by Harry Holzer</i>	9
What Role Should the Public Sector Play in Job Training and Education? ...	9
Meeting Labor Market Demand	9
Providing Access to Training	10
What is the Current State of Federal Funding for Employment and Training? ...	10
Federal Workforce Training is Underfunded	11
Federal Workforce Training is Overstretched	11
Federal Workforce Training is Fragmented	11
What Are Some Promising Programs and Whom Do They Benefit?	12
Programs for Disadvantaged Adults	12
Programs for Disadvantaged Youth	14
Programs for Ex-Offenders	15
What Are Some Good Strategies for a New Workforce System?	15
Policy Design	16
Policy Implementation	16
Policy Funding	17
Conclusion	17
Workforce Development Glossary <i>Compiled by Jessica Karls-Ruplinger</i>	20
Jobs in a Clean Energy Economy: Science, Engineering, and Policy Perspectives	
<i>by Daniel Kammen</i>	23
What is a Clean Energy Economy?	24
Why are the Family Impact Seminars Interested in a Clean Energy Economy? ...	24
What Clean Energy Sources Can Reduce the Use of Fossil Fuels?	24
Energy Efficiency	25
Solar and Wind	25
Biofuels	25
The Smart Grid	25
Summary	25

Can Clean Energy Grow the Economy and Create Jobs?	26
What Steps Have States Taken to Move Toward a Clean Energy Economy?	28
California	28
California, Connecticut, Florida, Illinois, Massachusetts, Minnesota, New Jersey, New York, and Wisconsin	28
Massachusetts	29
Michigan	29
Minnesota	29
Ohio	29
What Steps Can States Take to Build an Independent and Secure Energy Future? . .	29
Standards	30
Tax Credits and Taxes	31
Incentives and Subsidies	31
Enabling Markets	31
Collaboration Among Industry, Academia, and Government	31
Cooperation Between States or Regions	32
Measurement of Success	32
Summary	32
Clean Energy Economy Glossary <i>Compiled by Gregory Nemet, Karen Bogenschneider, & Stephanie Eddy</i>	34
Sector Strategies: Revisioning State Workforce Policies	
<i>by Larry Good & Lindsey Woolsey</i>	37
Why Do States Need to Revision Workforce Strategy?	37
What are Key Components of Sector Strategies?	38
What are Potential Benefits of Sector Strategies?	38
Benefits for Workers	38
Benefits for Employers	39
Benefits for Communities	39
What are Some Promising Examples of State-Driven Sector Initiatives?	39
What are Some Policy Considerations?	40
Funding It	40
Identifying Industry Needs and Skills Gaps	40
Defining Appropriate Regions Within the State	41
Aligning Agency Policies and Resources to Support Sector Strategies	41
Building Capacity	41
Assigning the Right People to Do the Work	41
Marketing	41
Measuring Success	41
Planning for Sustainability	41
Conclusion	41
Selected Resources on Workforce Development and a Clean Energy Economy	43

Executive Summary

In the U.S., the recession is over, but employment continues to fall, according to the National Bureau of Economic Research. Between December 2007 and August 2009, Wisconsin lost 138,900 jobs, which is almost equal to the number of working-aged adults in Madison. According to the Wisconsin Department of Revenue, the state's unemployment rate has already doubled from a year ago, and further drops in state employment are likely before a rebound occurs. In the next year or two, 21% of leading Wisconsin CEOs plan to expand in the state, with 52% planning to expand in another state or country, according to an economic survey by Wisconsin Manufacturers and Commerce. What workforce strategies can attract and retain employers in Wisconsin? What job opportunities are emerging in the clean energy industry? How can Wisconsin ensure the economic future of its workforce and its families?

According to the first chapter, adapted from a recent report by the Public Policy Forum, \$339 million was spent for employment and training of Wisconsin's workforce in FY 2008. The dollars flow through 6 federal agencies, 8 state administrative departments, and 36 different programs. Despite recent reductions, W-2 remains the state's largest workforce development program. Wisconsin relies on the federal government for 83% of its employment and training dollars; Wisconsin provides only 17% of the funding, which appears to be a lower percentage than many other states. From 2006 to 2016, Wisconsin is expected to face a shortage of skilled workers, with two-thirds of the 96,460 job openings requiring some form of training. Wisconsin spends an estimated \$34 million annually for job-specific training, well short of the projected cost of \$120 million.

In the second chapter, Harry Holzer, Professor of Public Policy at Georgetown University, discusses whether the public sector has a role in workforce training and what the research evidence says about its effectiveness. Although some employment and training programs are promising, the results vary by program intensity and demographic group. In general, for adults, modest training and work experience programs generate modest impacts. A small number of more intensive efforts, like the National Supported Work program, have been effective, especially for hard-to-serve women. Training programs that lead to secondary or postsecondary credentials, along with work experience in key economic sectors, are consistently effective for disadvantaged workers. Typically, impacts on earnings are more positive for adult women than men. For parents, supports such as stipends and child care may make it possible to enter and remain in training programs. For youth, Career Academies, job training programs in high schools, have been shown to raise earnings by 11%, and the impacts persist over many years. For ex-offenders, evaluations of one new approach—transitional jobs—suggest a sizeable drop in recidivism for those entering guaranteed employment soon after release.

In the third chapter, Professor Daniel Kammen of UC-Berkeley, discusses why policymakers are investing in the clean energy industry: it creates jobs at home, it contributes to our nation's energy independence, and it preserves the environment.

He was coordinating lead author of the Intergovernmental Panel on Climate Change awarded the 2007 Nobel Peace Prize. Based on evidence from his lab, the renewable energy sector generates more jobs per unit of energy than the fossil fuel sector. For example, the wind industry generates more jobs per megawatt hour than the coal, gas, and nuclear power industries. Currently, energy efficiency is the most promising clean energy policy direction because it saves the most money and also the most carbon emissions. More than many industries, the clean energy sector demands long time frames and sizeable capital investments. Companies are more apt to make the robust, long-term investments that are needed when governments set consistent and predictable energy and environmental policies. From a family perspective, policymakers need to consider our responsibility for any environmental problems that today's actions are causing for our children, grandchildren, and future generations.

In the final chapter, Larry Good, Chairman of the Corporation for a Skilled Workforce in Ann Arbor, Michigan, describes how an increasing number of states are addressing workforce challenges by establishing sector strategies—policies that support regional, industry-specific programs implemented by an employer-driven partnership of relevant stakeholders. Sector strategies can increase state competitiveness, align resources and strategies, and provide multiple career pathways for all types of workers. In a large study of one sector initiative, the percentage of participants who worked rose from 74% to 94%, and their median earnings increased from about \$8,600 to over \$14,000 in the first year and to over \$17,700 in the second year. Based on earnings, almost half of the study participants moved out of poverty. Employers also benefited from a 41% decrease in turnover and a 23% reduction in customer complaints.

The Family Impact Seminars are interested in workforce development for many of the same reasons that policymakers are. In the midst of a global economic transformation, families are a powerful engine of a vital economy because of the many private contributions they make to the public good of developing productive workers. Every nation's competitiveness will depend more than ever on its human capital, particularly the education and social skills of its labor force. Human capital is shaped, to a large extent, by socialization that occurs early in family life and in high-quality preschool programs. In this way, families support workforce development. What's more, workforce development supports families. The capacity of families to economically support their own members depends upon their ability to acquire the education and skills needed to get good jobs. Good jobs can support families' economic well being and also their quality of life. For example, when clean energy jobs are created, families live in a cleaner environment today and their children, grandchildren, and future generations will live in a cleaner environment tomorrow.

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Wisconsin's Workforce Development System

Adapted with permission from a September 2008 publication developed by the Public Policy Forum with funding from the Wisconsin Department of Workforce Development and the Joyce Foundation

In FY 2008, \$339 million was spent for employment and training of Wisconsin's workforce. The dollars flow through 6 federal agencies, 8 state administrative departments, and 36 different programs. Despite recent reductions, W-2 remains the state's largest workforce development program. Wisconsin relies on the federal government for 83% of its employment and training dollars; Wisconsin provides only 17% of the funding, which appears to be a lower percentage than many other states. From 2006 to 2016, Wisconsin is expected to face a shortage of skilled workers, with two-thirds of the 96,460 job openings requiring some form of training. Wisconsin spends an estimated \$34 million annually for job-specific training, well short of the projected cost of \$120 million.

This report of Wisconsin's workforce development system aims to graphically display state and federal funding devoted to employment and training programs in Wisconsin. A broad range of programs are reviewed, including on-the-job training along with job search and placement intended to overcome transportation and language barriers. This resource map was developed to provide policymakers with a clear picture of "what is" as they make decisions about "what ought to be."

How Much Money is Wisconsin Spending on Workforce Development Programs?

In fiscal year 2008, \$339 million was spent to address the employment and training needs of Wisconsin's workforce. In sum, these dollars flow through 6 federal agencies, 8 state administrative departments, and 36 different programs. However, the vast majority of funding is concentrated in two agencies—the Department of Workforce Development and the Department of Children and Families.

Table 1. Workforce development funding by state administrative department

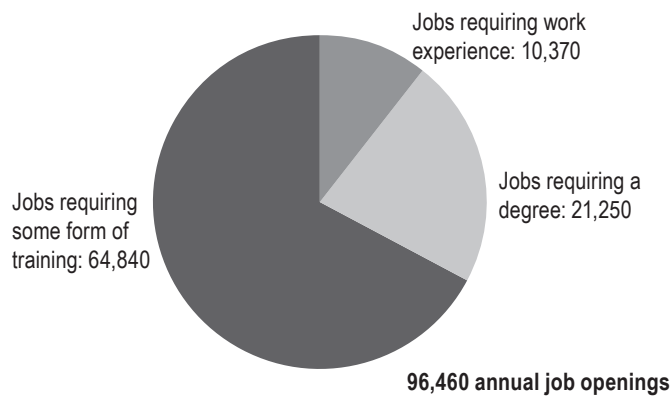
	Number of programs	Total funding for Fiscal Year 2008	% of total funding
Department of Workforce Development	12	\$143,273,663	42%
Department of Children and Families	2	\$96,716,100	29%
Wisconsin Technical College System	5	\$34,475,693	10%
Department of Health Services	6	\$29,057,786	9%
Department of Corrections	2	\$20,845,200	6%
Department of Public Instruction	1	\$9,803,101	3%
Department of Commerce	5	\$3,974,784	1%
Department of Veterans Affairs	3	\$1,117,500	0.3%
Total	36	\$339,263,827	

How Much Need is There for Employment and Training Services?

As baby boomers retire, the number of participants in the state's labor force is expected to decline. According to the Wisconsin Department of Administration, the projected working population in the state (ages 18-64) will peak in 2015 at 3.7 million, and then decline to 3.63 million by 2030. This shrinking labor supply is a concern because a strong economy depends on a steady supply of workers.

From 2006 to 2016, Wisconsin is expected to face a shortage of skilled workers. In large part, these workers will need specific skills, not formal degrees. Of the 96,460 projected job openings each year, two-thirds (67%) will require some form of training.

Figure 1. Projected annual number of job openings in Wisconsin between 2006 and 2016, by typical education or training path.

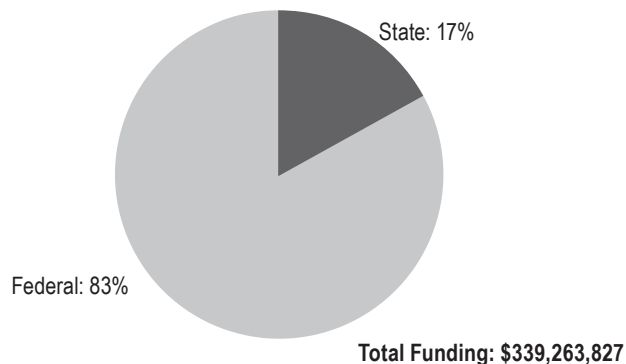


Source: "Wisconsin Occupational Projections, 2006-2016," Wisconsin Department of Workforce Development Office of Economic Advisors.

Is Wisconsin's Workforce Development System Funded Largely by Federal or State Dollars?

Wisconsin relies on the federal government for 83% of its funding. Typically federal funds have more restrictions and are targeted toward specific populations.

Figure 2. Origins of workforce development funding in Wisconsin.



In inflation-adjusted dollars, federal funding for the state’s eight largest federally-funded workforce development programs has dropped 39% from 1985 to 2008. Most of the decline is due to a 73% drop in funding for the Workforce Investment Act (WIA) and its predecessor, the Job Training Partnership Act (JTPA). The 23-year slide in federal funding of workforce development also stems from a 51% reduction in Wagner-Peyser Job Service funding and a 22% drop in Carl Perkins Vocational and Technical Education funding levels.

Wisconsin provides about 17% of all employment and training dollars, which appears to be a lower percentage than many other states. This comparison is limited, however, because these data are not available from all 50 states.

Table 2. Origins of workforce development funding, ranked by share of state support

	Federal	State
New York, FY03	55%	45%
Massachusetts, FY06	62%	38%
Minnesota, FY02	67%	33%
Tennessee, FY03	68%	32%
Illinois, FY02	69%	31%
Texas, FY02	71%	29%
Ohio, FY07	76%	24%
Wisconsin, FY08	83%	17%

*FY stands for “Fiscal Year” and in this table indicates the year of the source data

What Workforce Development Programs Exist in Wisconsin?

Wisconsin’s workforce development programs are summarized in Table 3. The state’s largest workforce development program is W-2, which provides 27% of all funding on the resource map (see Table 3). W-2 provides cash payments along with employment and training benefits to income-qualified working parents.

W-2 is the state’s largest workforce development program accounting for 27% of all funding on the resource map. W-2 remains a viable source of workforce training despite a 58% reduction in funds between 2005 and 2008. Funding reductions can be explained by declining caseloads and a shift of resources toward child care subsidies.

Table 3. A Resource Map Summarizing Workforce Development Programs in Wisconsin

State Agency	Department of Workforce Development											
	Workforce Investment Act (WIA)	Wagner-Peyser Labor Exchange (Job Service)	Veterans Employment and Training Programs	Trade Adjustment Assistance (TAA) and NAFTA-TAA	Workforce Information Grants	Work Opportunity Tax Credit	Children First Program	Vocational Rehabilitation Act	Youth Apprenticeship	WI Employment Transportation Assistance Program ⁵	Boys and Girls Clubs	Refugee Employment and Training
Funding												
Federal ¹	\$37,086,620	\$13,108,238	\$2,954,000	\$9,680,883	\$605,539	\$255,840	\$0	\$55,705,100	\$0	\$3,238,049	\$350,000	\$1,594,194
State ²	\$0	\$0	\$0	\$0	\$0	\$0	\$1,140,000	\$15,156,500	\$1,512,600	\$886,100	\$0	\$0
Total	\$37,086,620	\$13,108,238	\$2,954,000	\$9,680,883	\$605,539	\$255,840	\$1,140,000	\$70,861,600	\$1,512,600	\$4,124,149	\$350,000	\$1,594,194
Service providers	Workforce Development Boards, Job Centers	Job Centers	Job Centers	Job Centers	Department of Workforce Development	Employers	W-2 agencies	Contractors	High schools, Tech schools, Chambers, CESAs	Community-based organizations, local transit system	Boys and Girls Clubs	Community-based organizations
Services												
Job training	X			X			X	X	X			X
Job search	X	X	X	X			X	X				
Job placement	X	X	X				X	X				
Work supports	X			X				X		X		
Work readiness	X							X			X	
Basic education	X											X
Other services	Career planning	Online job search tool (JobNet)	Case management		Workforce information (WORKnet)	Federal income tax credit for employers	Case management	Case management		Job retention		
Target customer	Adults; dislocated workers; youth	Job seekers and employers	Veterans	Individuals displaced by industry changes due to foreign imports	Universal	Employers that hire individuals of certain target groups	Non-custodial parents (NCPs) behind on child support payments	Individuals with disabilities	High school students	Low-income workers	Youth, ages 6-18, eligible to receive TANF	Refugees
Number of participants³	16,615 WIA participants in 2006 ⁴	106,467 registered to receive program services	11,500 veterans receiving services	1,933 program exiters in 2006	270,293 visits to WORKnet website in 2006	1,248 employers	4,000 NCPs served annually	30,000 individuals served with 3,167 successful rehabilitations	3,900 students trained in the 2005-07 biennium	Services provided by 17 transportation agencies	Services provided at 32 club sites	900 refugees gained employment in the 2005-07 biennium

Table 3. A Resource Map Summarizing Workforce Development Programs in Wisconsin (continued)

State Agency	Department of Children and Families		Department of Health Services					Department of Commerce					
	WI Works (W-2)	T.E.A.C.H. and R.E.W.A.R.D	WI Pathways to Independence	Brighter Futures Initiative	Community Services Block Grant	FoodShare Employment and Training (FSET)	AmeriCorps	WI Senior Employment Program ^s	WI Fresh Start	Minority Business Employees' Skills Training	Rural Business Employees' Skills Training	Business Employees' Skills Training	Customized Labor Training
Funding													
Federal	\$93,241,100	\$3,475,000	\$7,575,600	\$1,697,000	\$7,911,700	\$1,044,462	\$6,420,154	\$2,212,702	\$687,000	\$0	\$0	\$0	\$0
State	\$0	\$0	\$296,800	\$1,749,500	\$0	\$149,868	\$0	\$0	\$330,000	\$606,500	\$50,000	\$2,047,084	
Total	\$93,241,100	\$3,475,000	\$7,872,400	\$3,446,500	\$7,911,700	\$1,194,330	\$6,420,154	\$2,212,702	\$1,017,000	\$606,500	\$50,000	\$2,047,084	
Service providers	W-2 agency contractors	WI Early Childhood Association	Potentially any entity delivering employment services to individuals w/ disabilities	County government, tribal and non-profit contractors	WI Community Action Agencies	County government, tribal and W-2 agency contractors	Community-based organizations	Community-based organizations	Community-based organizations	Employers	Employers	Employers	Employers
Services													
Job training	X		X			X	X	X	X	X	X	X	X
Job search	X		X			X		X					
Job placement	X		X					X					
Work supports	X	X	X		X								
Work readiness	X		X	X	X	X	X	X	X				
Basic education	X		X			X		X	X				
Other services		Job retention, career advancement	Strategic planning effort to remove barriers to employment for those with disabilities										
Target customer	Cash assistance recipients	Employed child care workers	Individuals with disabilities	At-risk youth in 10 counties	Low-income individuals including the unemployed, homeless, migrants, and elderly	Food Stamp recipients	Young adults, 18-24 years of age	Low-income, unemployed individuals 55 years and older	At-risk young adults, 16-24 years of age	Minority incumbent workers	Rural incumbent workers	Incumbent workers	Incumbent workers
Number of participants	19,289 W-2 participants	2,148 stipends awarded	136,621 WI residents currently receiving SSI benefits are targeted by this program	BFI collaborative projects serve 100,000 annually	404,297 program participants in 2005	4,242 enrolled as of April 2008	1,093 Ameri-Corps members for the 2007-08 program year	309 funded positions in 2006	200 participants	3 employers awarded grants between SFY02 and SFY05	27 employers awarded grants between SFY02 and SFY05	48 employers awarded grants between SFY02 and SFY05	142 employers awarded grants between SFY02 and SFY05

Table 3. A Resource Map Summarizing Workforce Development Programs in Wisconsin (continued)

State Agency Program Name	Department of Corrections		Department of Veterans Affairs		Department of Public Instruction	Wisconsin Technical College System				General Purpose Revenue Grants ^a	
	Community Corrections Employment Program	Badger State Industries ^b	Retraining Grant	Veterans Assistance Program		Troops-to-Teachers	Carl Perkins Vocational and Technical Education	Carl Perkins Tech Prep	Adult Education and Family Literacy		Workforce Advancement Training Grants
Funding											
Federal	\$0	\$0	\$0	\$0	\$9,803,101	\$12,300,457	\$2,106,802	\$7,887,634	\$0	\$0	\$0
State	\$691,800	\$20,153,400	\$210,000	\$798,900	\$0	\$0	\$0	\$0	\$2,000,000	\$10,180,800	
Total	\$691,800	\$20,153,400	\$210,000	\$798,900	\$9,803,101	\$12,300,457	\$2,106,802	\$7,887,634	\$2,000,000	\$10,180,800	
Service providers	Community-based organizations	Correctional institutions	State employees	Veterans Assistance Centers	School districts	WI technical colleges	WI technical colleges	WI technical colleges, community-based organizations	WI technical colleges	WI technical colleges	WI technical colleges
Services											
Job training	X	X	X	X	X	X	X		X	X	X
Job search											X
Job placement	X										X
Work supports	X										X
Work readiness				X							X
Basic education								X			X
Other services											Case management
Target customer	Ex-inmates released on parole	Inmates	Unemployed or underemployed veterans enrolled in a training program	Homeless veterans and those at risk of becoming homeless	Secondary students, 7th to 12th grade	Technical college students	High school students	Adults without a high-school diploma, inmates	Incumbent workers		See footnote #8
Number of participants	175 open program slots	471 inmate employees during SFY2006	87 grant recipients in the 2005-07 biennium	4,803 assisted in the 2005-07 biennium	38,120 11th and 12th grade participants	20,480 participants	19,296 participants	27,895 participants	Helped 90 employers train 12,000 workers in the 2005-07 biennium	19,558 participants	

Alternative funding resources are not included in the map because they are awarded directly to local and regional entities on a competitive basis. These dollars come from local governments and foundations, employers, and competitive state and federal grants. Table 4 lists a few such funding sources in southeastern Wisconsin.

Table 4. Direct awards for workforce development in southeastern Wisconsin*

Program	Funding	Funding source	Date	Grantee
WIRED initiative	\$5,160,000	Federal	2008-09	Regional Workforce Alliance
Futures First	\$4,800,000	Federal	2007-09	Milwaukee Public Schools
Community-Based Job Training – Advanced Mfg.	\$1,999,999	Federal	2007-09	Milwaukee Area Technical College
Prison re-entry program	\$1,866,765	Federal	2005-09	World of Hope Ministries
Prison-to-work program	\$1,588,520	Foundation, State	2006-09	The New Hope Project
Earn & Learn Summer Youth Internship Program	\$900,000	City, Federal, State, Foundation	2008	Milwaukee Area Workforce Investment Board
Community Economic Development (CED) Program	\$677,000	Federal	2007-2012	Northwest Side Community Development Corporation
United Way Job Training Initiative	\$631,000	Private	2007	Selected job-training agencies
Transition funding	\$600,000	Foundation	2008	Milwaukee Area Workforce Investment
Tax Increment Financing for North End	\$500,000	City of Milwaukee	2008	To be determined
YouthBuild	\$404,131	Federal	2007-2010	City of Milwaukee Housing Authority
Ex-offender pilot program	\$400,000	Federal, State	2008	Selected job-training agencies
ROSS (Resident Opportunities and Self-Sufficiency)	\$350,000	Federal	2008	City of Milwaukee Housing Authority
Community Development Block Grant	\$325,000	City of Milwaukee, Federal	2008	Selected job-training agencies

*This is not a comprehensive list of awards and most of the listed programs receive additional funds from other partners.

Are Enough Funds Being Allocated to Meet Wisconsin's Training Demands?

Currently, foundation and employer support of workforce development in Wisconsin is a multi-million dollar enterprise. Despite this investment, a recent survey found that only 13% of foundations fund specific job training programs.⁹

In regard to employer funding, another survey found that 44% of Wisconsin CEOs reported spending less than 3% of their payroll on employee training.¹⁰

A recent study of workforce development spending in southeastern Wisconsin found only 10% of state and federal dollars were flexible enough to be used to support job-specific training needs.¹¹ Applying this ratio to the entire state reveals an estimated \$34 million is available annually for job-specific training. This figure falls well short of the \$120 million needed to train workers for the state's 64,840 projected job openings that require some form of training.¹²

This chapter was adapted from the following publication:

Horton, R. (2008, September). *Wisconsin's workforce development system: A graphical guide to employment training resources in Wisconsin* [Brochure]. Joyce Foundation, Public Policy Forum, and Wisconsin Department of Workforce Development. Retrieved November 23, 2009 from: <http://www.publicpolicyforum.org/pdfs/WorkforceMap.pdf>

Footnotes

¹Federal funding amounts are for Federal Fiscal Year 2008 (FFY08), which runs from October 1, 2007 to September 30, 2008. In certain cases where FFY2008 data were not available, federal program year 2007 data were used. FPY2007 runs from July 1, 2007 to June 30, 2008.

²State funding amounts are for State Fiscal Year 2008 (SFY08), which runs from July 1, 2007 to June 30, 2008. State revenue figures include General Purpose Revenue (GPR), Segregated Revenue (SEG) and Program Revenue (PR).

³"Number of participants" is an annual figure for 2007 unless otherwise noted. Great care should be used in interpreting data in this category. Participant data should not be used to produce cost efficiency comparisons between programs because data in this field varies greatly by source and type.

⁴The WIA number of participants listed does not reflect the actual total number of people having been served by Title I funds. This figure only reflects the number of participants for purposes of performance measure reporting in a snapshot-in-time using Department of Labor requirements.

⁵WETAP program administered and funding in partnership with the Wisconsin Department of Transportation.

⁶Funding data for the Wisconsin Senior Employment Program are FPY2006.

⁷Badger State Industries is funded with self-generated program (SEG) revenue. Funding data shown is SFY07.

⁸"General Purpose Revenue grants" are made up of seven separate competitive grant programs: Basic Skills, Adult Literacy, Workplace Adult Basic Education, Health Care Education Grants, Minority Student Participation and Retention Grants, Transition Services for Individuals with Disabilities Grants, and School-to-Work for At-Risk Youth.

⁹"GROW Report: Regional Workforce Funding," Urban Strategies, November 2007.

¹⁰"WMC Economic Outlook Survey," Wisconsin Manufacturers and Commerce, June 2008.

¹¹"GROW Report on Milwaukee 7 Regional Workforce Funding," Urban Strategies, November 2007.

¹²The \$120 million figure is an estimate. It assumes a 50/50 cost-sharing partnership with employers and is based on a per-worker training cost of \$3,700 which is the average cost to graduate an adult from the WIA program in 2006. For comparison, this estimate is only slightly higher than the average per-worker training cost of \$3,200 budgeted for a new Milwaukee Area Technical College program targeted at training workers for advanced manufacturing jobs.

Workforce Training: What Works? Who Benefits?

by Harry Holzer
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Although some employment and training programs are promising, the results vary by program intensity and demographic group. In general, for adults, modest training and work experience programs generate modest impacts. A small number of more intensive efforts, like the National Supported Work program, have been effective, especially for hard-to-serve women. Training programs that lead to secondary or postsecondary credentials, along with work experience in key economic sectors, are consistently effective for disadvantaged workers. Typically, impacts on earnings are more positive for adult women than men. For parents, supports such as stipends and child care may make it possible to enter and remain in training programs. For youth, Career Academies, job training programs in high schools, have been shown to raise earnings by 11%, and the impacts persist over many years. For ex-offenders, evaluations of one new approach—transitional jobs—suggest a sizeable drop in recidivism for those entering guaranteed employment soon after release.

In the United States each year, private employers spend an estimated \$100 billion or more on employee training, easily dwarfing whatever public funds are expended in this area.¹ Private individuals invest many billions more in their own college education and other forms of postsecondary training. If so much training is privately chosen and financed, then what role should the public sector play?

This chapter begins by discussing whether the public sector should have a role in workforce training and how much funding the federal government provides. Then I turn to evaluation evidence about promising programs and who benefits from them. I conclude with some thoughts on what a state workforce development system might look like.

What Role Should the Public Sector Play in Job Training and Education?

There are two main rationales for public financing of education and job training: (1) to help the private sector meet its labor market demand for skilled workers, and (2) to provide training for the disadvantaged who are less able to access it. Each is considered in turn below:

Meeting Labor Market Demand

Employer “demand” for skills has risen, and the premium paid for those with these skills has increased as well. The “supply” of skilled workers has not grown fast enough to keep pace with growing labor market demand. Whereas private labor markets generate incentives for employers and workers to invest in the education and training needed to meet such demand, a variety of market imperfections prevent them from fully doing so.

Harry Holzer

The supply of skilled workers has not grown fast enough to keep pace with growing labor market demand.

In certain sectors of the labor market (e.g., science/engineering or information technology, health and elder care, construction, and certain parts of skilled manufacturing), too little private education and training occurs, and employers are having difficulty finding skilled or semiskilled workers. The pending retirements of millions of baby boomers might make the search for workers in these sectors even more difficult. Worker shortages are expected in (a) jobs requiring bachelor's degrees or higher, and also in (b) "middle skills" jobs—jobs that require postsecondary education or training but less than a four-year college degree.²

Indeed, many states now see workforce training as critical to their economic development efforts. Key industries will only locate and grow when they are confident that both kinds of skilled labor will be readily available to them when needed.

Providing Access to Training

Public investment may also be needed because disadvantaged youth and adults, like racial-ethnic minorities and the poor, get too little education and training in general. At a time when the gap in earnings between more- and less-educated American workers has risen, disadvantaged workers have less access to employers that provide on-the-job training and promotion opportunities than more advantaged workers.

The disadvantaged have less access to higher education and training for a variety of reasons. Many lack the necessary basic skills, the information about what the labor market values, and the liquid assets to pay for it.³ For low-income parents—especially single parents—the financial and time pressures of bread winning and child rearing make it difficult to remain in education or training programs for very long without additional supports. Their ability to get "good jobs" that provide on-the-job training with advancement prospects is also limited by barriers such as discrimination, inadequate transportation, limited child care, poor health, and fewer informal contacts and networks.⁴ Employers distrust those with criminal records and are reluctant to invest in workers with poor basic skills and weak credentials.⁵ And, even when jobs are obtained, high turnover often results from low wages and other problems that cause instability in the lives of poor workers. Indeed, this expected instability is another reason that employers are reluctant to invest in training the disadvantaged where and when they are hired.

A consensus has developed among economists and policy analysts that workforce skills play an increasingly important role in explaining the inability of the disadvantaged to advance in today's changing labor market. Therefore, an effective public workforce system can help provide access to jobs so the disadvantaged have the opportunity to earn a better living. In Wisconsin, 83% of all public employment and training dollars come from the federal government (see chapter 1). The current state of federal funding is the topic that I turn to next.

What is the Current State of Federal Funding for Employment and Training?

At the federal level, employment and training is underfunded, overstretched, and fragmented. Overall federal funding levels for employment and training programs

For low-income parents to remain in education or training programs, additional supports may be needed.

at the Department of Labor peaked in 1979 at about \$17 billion (current dollars). In the meantime, the economy has more than doubled in size, and the workforce had grown by nearly half. Employer demands for skilled workers have also grown dramatically, and so has the disadvantage of having few skills. One might have expected the resources devoted to workforce training to have risen substantially. In reality, the opposite has occurred.

Federal Workforce Training is Underfunded

Indeed, the Department of Labor funding for employment and training programs has dropped to about \$5 billion annually. This is a decline of over 70% since 1979, and a decline of over 90% relative to the size of the economy. In a \$14 trillion economy, such a small sum cannot be expected to have much of an impact on the economy or on the employment prospects of disadvantaged workers.

Overall, there are 40 federal programs that provide funding for employment and training;⁶ however, total U.S. expenditures are the lowest of any industrial nation in the world.^{7,8} Federal spending in several key areas such as career and technical education, one-stop centers, welfare-to-work programs, and so forth have also fallen over time in real terms.⁹ One exception is Pell grants, which provided about \$14 billion in 2008 for scholarships for college attendance among the poor, primarily at community colleges; further expansions were recently funded by the American Recovery and Reconstruction Act (ARRA) of 2009.

Federal Workforce Training is Overstretched

Existing programs now fund a wider range of services for a broader set of participants than they used to. This means that, while all workforce funding is lower, the decline in spending on the disadvantaged, especially for direct employment or training, has been even greater.

Federal Workforce Training is Fragmented

Federal workforce training is fragmented in several ways. Federal expenditures on employment and training are scattered among many agencies with different agendas. The supports available to disadvantaged workers who need help are often lodged in “silos” that are disconnected from one another. For instance, workers visiting one-stop centers funded by the Department of Labor will likely have incomplete access to resources available for child care (from the Department of Health and Human Services), Pell grants (from the Department of Education), or employment tax credits (from the Department of the Treasury).

The delivery of workforce services is also fragmented geographically. Within any large metropolitan area, multiple local workforce investment boards (WIBs), at the county or municipal level, might be providing different services to their respective populations. What’s more, the capacity of one-stop centers to provide information and services about available jobs and training opportunities across these boundaries remains unclear. It makes little sense for workers in one part of the region to have no access to job training or employment options in another part. Yet it is hard to build regional entities given the different local jurisdictions in which schools and other institutions are located. Differences between state and

At the federal level, employment and training is underfunded, overstretched, and fragmented.

local WIBs, especially over control of funds, can also limit the ability of states to fashion coherent workforce strategies.

Most important, the employers, service providers, and other key players at the local labor market level are often fragmented and fail to form a coherent workforce system.¹⁰ Low-income workers are often disconnected from service providers, employers, and other available sources of support; they lack access to jobs and training providers because of transportation difficulties, inadequate child care, or limited time and information.

What Are Some Promising Programs and Whom Do They Benefit?

The evidence on what works in employment and training programs is mixed.^{11, 12} In general, for adults, *modest* training and work experience programs generate *modest* impacts that are cost-effective even though they do not dramatically improve the lives of the poor. A small number of more intensive efforts, like the National Supported Work program, have been quite effective for hard-to-serve women (and for somewhat older men).

One study of welfare recipients compared the effectiveness of two workforce approaches—“human capital” (training programs) versus “labor market attachment” (job first) strategies. Training programs were less effective than job experience, though impacts from both faded over time. However, in one site (Portland, Oregon), large and lasting impacts were obtained using a combination based on both strategies. Participants were pressured to seek work and to search for higher-paying jobs, rather than taking the first job that came along. Case managers offered access to job training at community colleges for those that might benefit from it. Occupational training appears to be more effective than general adult education,¹³ and earnings supplements have proven beneficial.

The impacts of these programs on workers’ later earnings vary considerably by demographic group. Generally, more positive impacts are observed for adult women than men. Also, impacts tend to be stronger for adults than for out-of-school youth. The impacts of specific programs on specific groups are described below.

Training programs that lead to secondary or postsecondary credentials, along with work experience in key economic sectors, are effective for disadvantaged workers.

Programs for Disadvantaged Adults

One consistent finding is that training programs that lead to secondary or postsecondary credentials, along with work experience in key economic sectors, are effective for disadvantaged workers. More intensive efforts that emphasize work experience plus supports and services for the “hard to employ” also show positive results.¹⁴

Pell Grants

Pell grants do expand access to college for poor adults, who likely benefit when they can attend for at least a year and when they attain a certificate or degree.¹⁵ The grants raise college attendance of poor adults, but not necessarily youth.

Work Experience Programs

Evaluations of specific programs have mixed results. Some programs have increased employment rates (e.g., the mandatory GAIN program in Riverside,

California)¹⁶ and fairly large impacts per dollar spent (the Saturation Work Initiative Model and Community Work Experience Program in San Diego).¹⁷ However, work experience programs with fewer supports and training services were less effective in generating lasting employment increases.

Job Training for the Disadvantaged

Some evaluations have demonstrated the cost effectiveness of training programs. The evaluation of the National Job Training Partnership Act in the 1990s showed a positive impact per dollar spent for disadvantaged adults, although the total dollar impact on earnings was modest and faded with time. However, the returns per net dollar spent were quite impressive; even with the fading impacts, the program paid for itself over 5 years.

Intensive Efforts for the Hard-to-Employ

In the National Supported Work (NSW) demonstration, participants were given 12-18 months of paid work experience plus additional supports. This generated sizable returns per dollar spent for adult women,¹⁸ but not for adult men with criminal records and disadvantaged youth. Yet, when adult men with criminal records were divided by age, those in their late 20s and 30s did benefit from NSW, in terms of reduced incarceration over time.

Promising Newer Approaches

A new generation of programs for the working poor appears promising, but most have not been scaled up or rigorously evaluated. These approaches combine: 1) education and training that give workers a postsecondary credential; 2) direct ties to employers or industries that provide well-paying jobs in key sectors; and 3) a range of supports and services such as child care and transportation during the training period and beyond. In addition, labor market “intermediaries” help ensure that workers are hired once trained, and also arrange for supportive services, such as child care and transportation, when needed.¹⁹ The approaches that combine some or all of these elements include sectoral training, incumbent worker training, and the building of career ladders or career pathways.

Sectoral programs. Many new programs use a sectoral approach, in which workers receive education or training targeted toward local growing economic sectors, where labor demand is strong and well-paying jobs are available for those without four-year college degrees. Several studies claim that sectoral training raises the earnings of disadvantaged workers, but the evidence is mixed. Some well-known sectoral programs are the Center for Employment Training originating in San Jose, California, the Extended Care Career Ladder Initiative in Massachusetts, the Local 1199C training for health care jobs in Philadelphia, the Quest program in San Antonio, and the Wisconsin Regional Training Partnership. Among sectoral programs, the Wisconsin Regional Training Partnership and the Center for Employment Training, are perhaps the only two to be rigorously evaluated.

The Wisconsin Regional Training Partnership (WRTP) is a non-profit association of businesses and unions that has served employers, employees, job seekers, and unions in the Milwaukee area since 1996. WRTP works in several industries including manufacturing, health care, construction, and hospitality. Firms that join WRTP agree to develop education and training programs on-site or at community

The National Job Training Partnership Act had fading impacts, but still paid for itself over 5 years.

Harry Holzer

In a rigorous study of sectoral programs including the Wisconsin Regional Training Partnership, participants earned more, worked more, had higher hourly wages, and were more likely to receive benefits.

colleges, and provide a payroll contribution. In return, they receive technical assistance to strengthen technology and workplace practices, to improve the skills of incumbent workers, and to recruit and train new workers. Nearly 100 employers with about 60,000 workers participate. In a rigorous experimental study of three sectoral programs including WRTP, participants in sector-focused training earned more, worked more, had higher hourly wages, and were more likely to work in jobs with benefits.²⁰

In the Center for Employment Training, the services were closely aligned with the needs of local employers, with whom the training providers were in close touch.²¹ An evaluation of the original program yielded strong evidence of positive impact and program cost-effectiveness, but the national replication effort did not.²² Promising outcomes from less rigorous evaluations in Project Quest and other sectoral programs have also been observed.

Career ladders or career pathways. Career ladder or career pathway initiatives help train workers through a progression of jobs within one or more companies that ultimately provide workers with credentials that ensure higher earnings. Citywide or statewide career pathway programs in various industries can be found in Arkansas, Kentucky, and Portland, Oregon, which combine community college education with other supports to prepare the poor for jobs in key industries.²³

Incumbent worker programs. Incumbent worker training targets entry-level workers in existing jobs and supports efforts to train them for higher-level jobs in the same company. Major incumbent worker training programs have been developed in California, New Jersey, and Pennsylvania. In studies, career ladders and incumbent worker programs can improve the quality of jobs available within firms, thus benefiting both employers and workers.

Programs for Disadvantaged Youth

Training programs for disadvantaged youth have overall been disappointing, particularly those for out-of-school youth. For example, the short-term training provided by the National Job Training Partnership Act was ineffective.²⁴ However, evaluations show some success for in-school youth enrolled in high-quality career and technical education programs (like Career Academies), and also for programs that provide paid work experience. Results do not yet exist for some promising programs.

Career Academies

Career Academies are each a “school within a school,” providing occupational training and work experience to at-risk high school students. Career Academies have been shown to raise earnings by 11%, and the impacts persist for as much as eight years after high school. Importantly, youth who participate in Career Academies are not deterred from postsecondary education.^{25, 26} These gains are larger for disadvantaged young men than for other young men; moreover, results are stronger for young men than women—a rare finding. Nonexperimental evaluations of other school-to-work programs like Tech-Prep²⁷ also indicate similar positive impacts on earnings and on high school graduation.

Job Corps

The Job Corps provides year-long education and training to over 60,000 disadvantaged youth each year in residential settings nationwide. Experimental evaluations of the Job Corps showed positive impacts on youth wages and hours of work for up to 30 months after enrollment; there were also significant increases in the acquisition of GEDs and vocational certificates, and reductions in crime and incarceration. Program costs per participant (roughly \$20,000 currently) were more than offset by social gains; however, the positive impacts did appear to fade away by the fourth year, with the exception of results that persist (somewhat) for those aged 20-24.²⁸

National Guard Challenge

This residential program for young high school dropouts is based on a military model, and aims to get each participant a high school diploma or GED. Recent evaluations show large impacts on these outcomes.

Other programs

The Youth Services and Conservation Corps has shown strong positive impacts on such outcomes as youth behaviors and employment in a small and short-term evaluation during the 1990s.²⁹ YouthBuild has also generated impressive outcomes in nonexperimental studies.³⁰ Additional evaluations suggest that paid work experience tends to successfully motivate disadvantaged youth to participate in schooling or training. Positive impacts have also been documented for mentoring and youth development programs like Big Brothers/Big Sisters³¹ and Quantum Opportunities. Other programs that seek to “reconnect” high school dropouts to educational opportunities at community colleges, like Gateways, look very promising as well.

Programs for Ex-Offenders

One new approach which is particularly important for the ex-offender population is called transitional jobs (TJ). This provides adults, who have little formal work history, roughly 6-12 months of paid experience either in a non-profit or for-profit setting.³² In one case, the Center for Employment Opportunity (CEO) in New York provides every ex-offender leaving Rikers’ Island the opportunity for a transitional job. CEO has been evaluated and the results suggest a sizeable drop in recidivism for those entering transitional jobs (TJ) soon after release.³³ Other versions of TJ are being evaluated in a large study currently underway with funding from the Joyce Foundation. Other programs for ex-offenders (like the Safer Foundation in Chicago) provide training and job placement services without the guarantee of a job; these programs are considerably less expensive, though we do not know how cost-effective they are, or whether they improve employment outcomes.

What Are Some Good Strategies for a New Workforce System?

States can meld economic and workforce development policies by building systems that target good jobs in growing sectors for the disadvantaged with demand-oriented training plus support services. Some guiding principles for policy design, implementation, and funding follow.

Transitional jobs resulted in a sizeable drop in recidivism when ex-offenders entered guaranteed employment soon after release.

Policy Design

One size does not fit all. Those with the greatest educational and employment deficits need more intensive training.

- States should create an “inventory” of targets and opportunities on both the demand and supply side of the market. On the demand side, the state would use available labor market information to identify the key sectors with likely unmet demands for skilled or semiskilled labor that are not likely to be filled by employers on their own. On the supply side, it would identify the various sources of education and training for these jobs and potential funding sources available (federal workforce funds; Pell grants; TANF or Perkins funding; and funds from state, local, and private sources). Several states, including Pennsylvania and Washington, have systematically built the analysis of labor demand in key growing industries into their workforce development plans.³⁴
- It is important to recognize that “one size does not fit all.” What works for in-school youth might differ from that for out-of-school youth, and what works for adults with some labor force attachment is quite different than for the hard-to-employ. Those most at risk and with the greatest educational and employment deficits need more intensive training.
- State systems should seek to enhance the workings of the private-sector labor market, but not replace them.
- For any given sector, a range of pathways should be developed that would enable employed and unemployed workers of different education levels to obtain jobs, including adults with or without diplomas, with stronger or weaker basic skills, and with two- or four-year college degrees.
- For low-income parents—especially single parents—supports such as stipends, child care, and transportation are needed to make it possible to enter and remain in training programs.
- Performance measures should ensure cost-effectiveness.
- Even the best education and training programs will leave many workers facing only low-wage opportunities. A package of publicly-funded supports (including tax credits, child care, and parental/sick leave) will still be needed to supplement private sector earnings for many workers.

Policy Implementation

- Each state should develop these plans, but they would be implemented locally by existing workforce boards.
- Systems should promote partnerships among education providers, employers in key industries, and financial supports that improve access to education and training for less-educated workers.
- State and regional workforce systems should be built that are less fragmented and more coherent, enabling intermediaries to pull together the many strands of funding that exist for education and training.
- Representatives of industry associations should help develop the pathways for their respective industries.

- One-stop offices and other intermediaries should screen applicants. Core and intensive services should still be available, but they would not necessarily be preconditions for training.

Policy Funding

- State policymakers should be mindful to use money for new training and not to create windfalls for firms who would be paying for this training anyway. One way to avoid such windfalls is to focus funding on the poor, since employers on their own are reluctant to invest much training in the poor. However, if training is focused too narrowly on the poor alone, industry interest in participating may be more limited, and political support may be weaker as well.
- With significant new funding now available for “green jobs” and infrastructure repair, job creation could be supported through the funding of apprenticeships and other forms of training.
- If the Obama Administration’s American Graduation Initiative is funded by Congress, it will generate opportunities for states and local community colleges to develop curricula and supports that better serve disadvantaged youth and adults, and to better link community colleges with the workforce system and other sources of supports to workers. Reauthorization of the Workforce Investment Act in 2010 might also generate some new opportunities in this regard.

Conclusion

Many states are seeking to integrate their economic and workforce development policies in order to prepare their workforces for jobs in industrial sectors that are likely to be in high demand over the next few decades. Despite the lack of rigorous research evidence to date on the cost-effectiveness of such integration, this is a promising trend that deserves consideration.

Perhaps workforce development is best seen as an important component of a broader strategy that also includes (a) tax credits for the poor that encourage labor force participation; (b) additional supports and benefits that make work and additional training feasible; and (c) a range of educational approaches that begin (but do not end) with high-quality preschool programs.

Dr. Harry Holzer, Professor of Public Policy at Georgetown University, is a leading authority on employment and workforce training. Over most of his career, his research has focused primarily on the low-wage labor market, and particularly the problems of minority workers in urban areas. In recent years, he has focused on employers’ skill needs and hiring practices, and how these affect the employment prospects of the disadvantaged. Dr. Holzer is currently a National Fellow of the Program on Inequality and Social Policy at Harvard University, Research Affiliate of the Institute for Research on Poverty at the University of Wisconsin-Madison, a Senior Affiliate of the National Poverty Center at the University of Michigan, a Senior Fellow at the Brookings Institute, and a

Workforce development should begin, but not end, with high-quality preschool programs.

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- Holzer, H. J. (2008a). Better jobs for poor workers: Linking economic and workforce development to fight poverty. *Clearinghouse REVIEW Journal of Poverty Law and Policy*, 42, 388-393.
- Holzer, H. J. (2008b, September). *Workforce development and the disadvantaged: New directions for 2009 and beyond* (Brief No. 7). Washington, DC: The Urban Institute.
- Holzer, H. J. (2008c). *Workforce development as an antipoverty strategy: What do we know? What should we do?* (IZA Discussion Papers 3776). Institute for the Study of Labor (IZA).

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Workforce Development Glossary

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Career Academies

An approach to restructuring secondary education that (a) integrates academic studies around themes related to particular careers and (b) builds up student and teacher awareness of and links to careers.¹

Career ladder or career pathway initiatives

Initiatives that help train workers through a progression of jobs within one or more companies that ultimately provide workers with credentials that ensure higher earnings.²

Human capital strategy

A workforce strategy that involves worker training programs.

Incumbent worker programs

Training programs that target entry-level workers in existing jobs and support efforts to train them for higher-level jobs in the same company.³

Job Corps

An education and job training program administered by the U.S. Department of Labor for at-risk 16- to 24-year-olds.⁴

Labor market attachment strategy

A workforce strategy that involves job experience.

Labor market intermediaries

Organizations that proactively address workforce needs using a dual customer approach—one which considers the needs of both employees and employers. Examples of organizations that can function as intermediaries include faith-based and community organizations, employer organizations, community colleges, temporary staffing agencies, workforce investment boards and labor organizations.⁵

Middle skills jobs

Jobs that require postsecondary education or training but less than a four-year college degree.⁶

National Guard Challenge

A residential program for young high school dropouts based on a military model that aims to get each participant a high school diploma or GED.⁷

Pell grants

Federal grants provided by the U.S. Department of Education for post-secondary education and awarded based on the financial need of a grant recipient.

Recidivism

When an offender commits a new crime. Different jurisdictions have different definitions of what qualifies as recidivism, ranging from a new arrest, conviction, or prison sentence, to re-incarceration due to a technical violation of the conditions of release.⁸

Sector strategies

An approach in which workers receive education or training in a growing industry or “sector” through regional, industry-specific programs implemented by an employer-driven partnership of relevant stakeholders.⁹

Semiskilled workers

Workers who have, in part, acquired special skill or knowledge.

Skilled workers

Workers who have acquired special skill or knowledge.

Transitional jobs

An approach that provides adults who have little formal work history (e.g., ex-offenders) with roughly 6-12 months of guaranteed paid work experience, either in a non-profit or for-profit setting.¹⁰

Wisconsin Regional Training Partnership (WRTP)

A non-profit association of businesses and unions that serves employers, employees, job seekers, and unions in the Milwaukee area in several industries, including manufacturing, health care, construction, and hospitality by providing education or training in targeted economic sectors.¹¹

Workforce Investment Boards (WIBs)

County, municipal, or regional entities that provide services relating to workforce development.

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Jobs in a Clean Energy Economy: Science, Engineering, and Policy Perspectives

by Daniel Kammen

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***P**olicymakers are investing in the clean energy industry because it creates jobs at home, contributes to our nation's energy independence, and preserves the environment. The renewable energy sector generates more jobs per unit of energy than the fossil fuel sector. For example, the wind industry generates more jobs per megawatt hour than the coal, gas, and nuclear power industries. Currently, energy efficiency is the most promising clean energy policy direction because it saves the most money and also the most carbon emissions. More than many industries, the clean energy sector demands long time frames and sizeable capital investments. Companies are more apt to make the robust, long-term investments that are needed when governments set consistent and predictable energy and environmental policies. From a family perspective, policymakers need to consider our responsibility for any environmental problems that today's actions are causing for our children, grandchildren, and future generations.*

One of the greatest challenges of the 21st century is the transition to clean energy. Investments are being made in the clean energy industry for three main reasons:

- **Sustainable economic growth** – The development of locally available sources of clean energy will create more local jobs than the fossil fuel economies of the last century. What's more, investments in energy efficiency will redirect money away from being spent on the cost of producing energy and toward the costs of saving energy. This can create a large number of new jobs.¹
- **Greater energy independence** – The more energy dollars that are spent locally, the more money that is reinvested back home rather than being sent overseas to Iraq, Nigeria, Mexico, Saudi Arabia, or Venezuela. Renewable energy is a fuel that, by definition, is free. There is no charge for harvesting the wind or the sun, so more dollars remain for investing in hardware and in people to make those technologies. By contributing to our energy security, clean energy is also an investment in our national security.^{2,3}
- **Reduced greenhouse gas emissions** – The Intergovernmental Panel on Climate Change, which was awarded the 2007 Nobel Peace Prize, has set environmental targets. By the year 2050, industrialized nations need to reduce greenhouse gas emissions (GHG) by 80%-95% from 1990 levels or risk dangerous environmental consequences.⁴

Now is an opportune time to invest in a clean energy economy because it can create jobs in the short run and preserve the environment for decades to come.

Daniel Kammen

The more energy dollars that are spent locally, the more money that is reinvested back home rather than being sent overseas.

Greater investment in renewable energy can build a foundation for economic stability, sustainability, and growth.

In this chapter, I begin by defining a clean energy economy and explaining why this topic is of interest to the Family Impact Seminars. Then I turn to what clean energy sources can offset the demand for fossil fuels, and how many jobs can be created. Next, I cite several examples of specific steps that states have taken as well as steps states can take to build a more independent and secure energy future.

What is a Clean Energy Economy?

In a recent report from the National Governors Association,⁵ clean energy is a broad term that includes the following:

- Renewable energy sources (i.e., non-fossil fuel energy sources that can never be completely consumed such as solar radiation, geothermal, wind, tidal power, biomass, wave power, hydropower, and ocean thermal gradients)
- Clean, nonrenewable energy technologies (e.g., clean coal plants that capture carbon and store it)
- Efficiency technologies (e.g., compact fluorescent lights; efficient water heaters; improved refrigerators and freezers; advanced building control technologies; advances in heating, ventilation, and cooling; and a new generation of solid state lighting)
- Advanced energy storage technologies (e.g., lithium batteries for hybrid and electric vehicles; load leveling and peak shaving for electric power; and electrochemical devices, such as supercapacitors)

Why are the Family Impact Seminars Interested in a Clean Energy Economy?

One of the main benefits of a clean energy economy is quality of life—families live in a cleaner environment. Families also save money and experience fewer fluctuations in cost. Of course, the jobs created by the clean energy industry can help families support the economic well-being of their members.⁶

Moreover, doing harm to the environment is a problem that people of the past and people of today are causing for those yet to come. Our economic system is based on privileging today instead of tomorrow. Yet, when it comes to the environment, our actions or inactions that affect our lives in small ways today, may result in dramatic changes tomorrow. What responsibility do we have for environmental problems that we are causing for our children, for our grandchildren, and for future generations? What steps can policymakers take to ensure inter-generational equity?

What Clean Energy Sources Can Reduce the Use of Fossil Fuels?

Energy efficiency is the most promising policy direction for cleaning up our energy situation. The next most promising investments include renewable energy sources such as solar power, wind, biofuels, hydro power, and harvesting the waste gases from landfills as well as new technologies like Smart Grids.

From a family perspective, policymakers need to consider our responsibility for any environmental problems that today's actions are causing for our children, grandchildren, and future generations.

Energy Efficiency

The biggest success story in the energy economy so far is energy efficiency. It saves the most money and also the most carbon emissions. A few states, including Wisconsin, California, Florida, New York, and Rhode Island, are already leaders in this area. These states have put into place aggressive measures to promote science-based technologies (e.g., advanced building standards, compact fluorescent light bulbs, energy-efficient window materials, a new generation of solid-state lights, tankless water heaters, etc.).⁷ These energy-saving measures are attractive because they come, not at a cost, but at a financial savings. The most energy efficient states are almost half as energy intensive as the rest of the country—an amazing difference given that their life styles are fairly similar. In fact, individuals, families, and companies who have invested in energy efficiency consistently report that they have seen an immediate reduction in their energy bills.⁸

The biggest success story in the energy economy so far is energy efficiency.

Solar and Wind

In 2007, the technologies with the largest share of investment were wind (43%), solar photovoltaic cells (30%), and solar water heaters (10%). In fact, wind and solar have grown more than 25% per year for over a decade. Wind is, by far, the fastest growing sector of the energy economy and is already cost competitive with natural gas. Companies are also working on low-cost solar panels and batteries to store the power.⁹

Biofuels

The United States is finally growing a biofuel economy, based almost entirely on turning corn and soy into ethanol. Biofuels do diversify the economy and reduce the pressure on petroleum. However, corn and soy require so much fossil fuel for fertilizer, for irrigating the crops, for running the tractors, and for operating the distilleries that there is little benefit over using the gasoline itself.

Some new entrants into the biofuel market are more sustainable, such as fast-growing switch grasses and certain tree species that lend themselves to quick harvesting.¹⁰ Other biofuels can be produced from waste materials, waste from power plants, or CO₂ emissions. Feeding these emissions into tanks of algae sucks out the CO₂, thereby cleaning the air and, at the same time, producing ethanol.

The Smart Grid

The electricity sector is responsible for 40% of the world's carbon dioxide emissions. Much like energy efficiency, grid technology would be a long-term investment in the efficient use of electrical power to reduce overall energy use. The Smart Grid, a modernized transmission and distribution infrastructure for electricity, can communicate pricing, supply, and demand information in real time that allows for more efficient purchasing, selling, and use of power.

Summary

Taken together, energy efficiency, renewable energy, nuclear power, and clean fossil fuels all are part of a diverse, high-tech energy economy. This mix of strategies can help insulate the economy from the volatility that stems from overreliance on only a few energy technologies.¹¹

Can Clean Energy Grow the Economy and Create Jobs?

For each unit of energy delivered, the renewable energy sector generates more jobs than the fossil fuel sector.

Clean energy is already a major economic force. Worldwide investments in renewable energy capacity reached \$71 billion in 2007, up from \$40 billion in 2005.¹²

Is economic growth linked to a growth in carbon emissions? Or can renewable energy drive both economic development and employment? In a recent analysis, for each unit of energy delivered, the renewable energy sector generates more jobs than the fossil fuel sector. As shown in Table 1, all renewable energy sources produce more jobs than coal and natural gas.

Table 1. Job creation potential* of different energy technologies and energy strategies

Energy Technology or Strategy	Total Job-** Years per GWh***
Solar Photovoltaic (PV)	0.91
Solar Thermal	0.27
Geothermal	0.25
Biomass	0.22
Carbon Capture and Storage	0.18
Wind	0.17
Nuclear	0.15
Coal	0.11
Natural Gas	0.11
Energy Efficiency	0.38

*Average employment effects normalized to the amount of energy produced (for energy technologies) or saved (for energy efficiency).

**Total job years is one full-time equivalent job meaning a person employed for one year. Note that 50 FTEs could mean either 5 full-time jobs over 10 years, 25 jobs over 2 years, or other such combinations.

***GWh is a gigawatt hour, which is equal to one billion watt hours or one thousand megawatt hours.

Several strategies can contribute to lower rates of CO₂ emissions and higher rates of job creation. Half a million job years (i.e., full-time job equivalents) can be produced by 2020 in any of the following ways:

- (1) Reducing energy growth through greater energy efficiency (.5% per year annual growth compared to 1% growth),
- (2) Increasing standards from 7% to 25% for Renewable Portfolio Standards (RPS), that is, standards that mandate a certain percentage of overall electric power must come from renewable sources by a specified date, and
- (3) Increasing nuclear power generation capacity from 20% to 30%.

Among the common technologies for providing electric power from renewable energy (see Table 1), the most jobs per unit of electric output are provided by solar

photovoltaic technology that converts sunlight directly into electricity. Take the scenario of a 20% RPS target by 2020; doubling the amount of solar PV from 1% to 2% would increase the number of jobs from 399,000 to 732,000 job years. If the national RPS were set at 25% by 2025 and the annual electricity growth rate was .5% instead of 1%, over 2 million jobs would be created; in addition, if low carbon sources were increased by about 50%, over 3 million jobs would be created.¹³

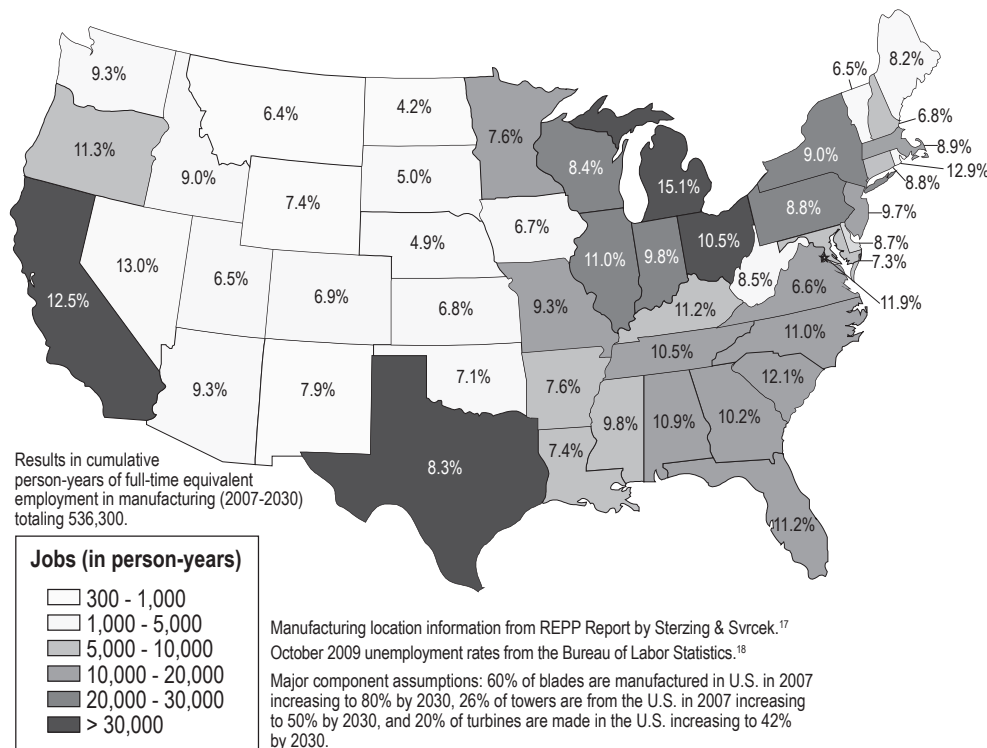
Carbon capture and storage (i.e., capturing and storing carbon from the burning of fossil fuels) has relatively small employment impacts. Currently, there are uncertainties in commercial viability, technology, and regulation (see Table 1).¹⁴

In recent studies, the wind industry generates more jobs than the coal, gas, and nuclear power industry per megawatt hour generated. In Europe, which has been a leader in wind energy, over 60,000 jobs have been created in the last 5 years. This job growth averages 33 new people every day, seven days a week.¹⁵

The U.S. currently employs about 50,000 people in wind energy. According to the U.S. Department of Energy, meeting a goal of 20% wind energy by 2030 will add 260,000 jobs per year. Between 2007 and 2030, that adds 6 million jobs in the construction phase and another 3 million jobs in the operation phase.¹⁶ For example, in Wisconsin, 20,000 to 30,000 jobs would be created between 2007 and 2030. Importantly, these manufacturing jobs would be created and located in many areas hard hit with unemployment (see Figure 1).

To meet a 20% wind energy target, Wisconsin would create 20,000 to 30,000 jobs between 2007 and 2030.

Figure 1. Potential manufacturing jobs needed to fulfill the 20% wind energy target by 2030 per state (the darker the color on the map, the more jobs), compared to the U.S. seasonally adjusted rate of unemployment per state.



Four large wind farms were recently constructed in Washington State. According to the Renewable Northwest Project, they are creating hundreds of new jobs and generating millions of dollars in new property tax revenue and millions more in royalties paid to landowners.¹⁹

Investments in energy efficiency also have positive and immediate economic benefits. For every million dollars invested in energy efficiency, 13 FTE (full-time-equivalent) jobs are created from direct installation and production of the materials alone. What's more, the energy savings that result increase disposable income, which also creates jobs. For example, in a 2008 study, between 1972 and 2006, households had added disposable income of \$56 billion from their energy savings. These savings translated into 1.5 million FTE jobs with a total payroll of \$45 billion.²⁰

What Steps Have States Taken to Move Toward a Clean Energy Economy?

***Renewable
energy can drive
both economic
development and
employment.***

Renewable energy can be a driver for both economic development and employment. The best place for states to start depends upon taking stock of their existing resources whether it be natural resources (e.g., sunlight, wind, or fertile soil), industrial resources (e.g., advanced manufacturing industries or skilled workforces), or intellectual resources (universities or national laboratories).²¹ States with abundant clean energy resources such as wind or solar can benefit from commercializing the technology to utilize these resources. Even in the absence of natural resources, states with strong industrial and intellectual resources can contribute to clean energy development.

Selected examples of pioneering states are given below. For a complete listing, see the 2008 report of the National Governors Association Task Force, *Securing a Clean Energy Future*, chaired by Governor Tim Pawlenty and former Governor Kathleen Sebelius.²²

California

California 2006 Global Warming Solutions Act (AB32) calls for greenhouse gas emissions to be cut to 1990 levels by 2020, a 25% reduction. AB32 is part of a longer-term state plan that Governor Arnold Schwarzenegger enacted to reduce emissions by 80% below 1990 levels by 2050. The benefit of this program lies, not only in reducing greenhouse gases, but also in providing the impetus for technological innovation. This program links a number of state initiatives—solar thermal and solar photovoltaic (PV) technologies, new “zero energy” residential and commercial building standards, and combined heat and power systems.

California, Connecticut, Florida, Illinois, Massachusetts, Minnesota, New Jersey, New York, and Wisconsin

These nine states currently have allocated funds to clean energy research, development, and demonstration (RD&D). States raise money to support clean energy investments in several ways—using public funds, adding surcharges to utility bills, raising funds directly from ratepayers, etc.

Massachusetts

The Massachusetts Renewable Energy Trust is a quasi-public body, established by the state and funded by ratepayers. Each residential customer pays about 50¢ per month. Massachusetts was the one of the first states to implement such an approach to fund clean energy initiatives. A small group of ratepayers challenged the legality of the funding mechanism, but the Massachusetts Supreme Judicial Court ruled unanimously in favor of it. The Trust provides financial support to early stage firms and to those not sufficiently developed to attract private funding. The Trust also works to attract venture capital funds to Massachusetts and to shift the focus toward longer-term investments.

In Massachusetts, residential customers pay about 50¢ per month to fund clean energy initiatives.

Michigan

The 21st Century Jobs Fund is a 10-year, \$2 billion initiative to diversify Michigan's economy. Funded mainly by securitized tobacco settlement funds, the first round of awards provided \$126.3 million to 78 organizations doing high-tech research, commercializing new products, and creating new jobs in four main sectors, including alternative energy.

Minnesota

Minnesota has developed technology to convert manure to electricity using anaerobic digesters. Commercial viability is exemplified by a demonstration project at Haubenschild Dairy Farm with assistance from the Minnesota Department of Agriculture, the University of Minnesota, and the nonprofit Minnesota Project.

Ohio

Ohio's Third Frontier Project was initiated in 2002 to expand the state's high-tech research capabilities. Over 10 years, \$1.6 billion is allocated to build research capacity, support early-stage capital formation, and finance advanced manufacturing technologies. One beneficiary of this state program, the University of Toledo, has become a leading center for research and development of thin-film, solar technology. Numerous companies that were previously automotive industry suppliers have benefited such as the Xunlight Corporation, which develops thin-film coatings to lessen glare on automotive windshield glass.

What Steps Can States Take to Build an Independent and Secure Energy Future?

Apart from allocating funds, states can contribute in other ways to support clean energy initiatives. States can capitalize on funding by venture capitalists. For example, in 2007, venture capitalists invested over \$2.2 billion in more than 200 clean technology deals, a 340% increase from 2005. States can "prime the pump" for private investment in energy research in several ways, six of which are mentioned here.

- (1) States can allocate funds to energy research, which makes private investments more likely to follow.²³

- (2) States can commit to ambitious, long-term energy targets. For example, Renewable Portfolio Standards (RPS) signal to investors that new technologies will be needed to meet the government target.²⁴
- (3) Plans can be made to provide access to and expansion of the infrastructure for electricity transmission.²⁵
- (4) Streamlined planning and permitting procedures can be put in place.²⁶
- (5) States can improve college and university training in the skills needed by leading-edge firms.²⁷
- (6) One of the biggest levers that policymakers have for attracting private investment is ensuring consistent policies relevant to the financial horizon of venture capitalists (i.e., private funding in equity capital in early stage companies).²⁸

Overall, to ensure the best chance for success, public policy needs to have continuity, predictability, and reliability that signals government is serious about supporting clean energy. The energy industry requires substantial investments of tens of millions of dollars for demonstration projects in which state-of-the-art technology is constantly improving. The development time for new technologies can range from 5 to 10 years and up to 30 years. When companies can rely on consistent energy and environmental policies, they are willing to make the robust and long-term investments that are needed because they believe they can profit from the clean energy revolution.²⁹

Based on studies of innovations, several successful policies have been identified for investing in clean energy. Some of these powerful policy tools have a small price tag.

Standards

Standards are one way to encourage the adoption of clean technologies. Standards are legal or regulatory criteria to meet a certain defined performance or criteria. They can be enacted at low cost to the state and are sometimes more politically palatable than a tax. Standards can evolve over time depending on how the technology develops.

Renewable Portfolio Standards (RPS)

Renewable Portfolio Standards mandate that a certain percentage of electricity generation come from renewable sources, which usually increase over time. More than half of states have some type of RPS with standards as high as 30% by 2020. Wisconsin requirements vary by utility with a 10% goal by 2015.

Low-Carbon Fuel Standards (LCFS)

These standards require that fuel providers meet a declining amount of greenhouse gas emissions per unit of fuel sold. For example, in California, by 2020, the LCFS will produce a 10% reduction in the carbon content of all passenger vehicle fuels sold in the state.

Lighting Efficiency Standards

Minimum standards for the efficiency of electric lighting installed in new buildings could jumpstart the development and application of this technology.

Standards are one low-cost way to encourage the adoption of clean energy technologies.

Tax Credits and Taxes

Tax credits have the advantage of being easier to enact, whereas taxes have the advantage of raising revenue. Tax credits can be based on capital investment in the energy system (investment tax credits) or the energy produced by the system (production tax credits). The credits can be applied to property taxes (29 states), income taxes (24 states), and sales taxes (22 states).

Two tax approaches attempt to reduce carbon emissions by putting a dollar value on them. The carbon tax penalizes high carbon emitters and rewards low emitters. “Cap and trade” programs create a system whereby emission rights for carbon (or other pollutants) are limited and can be traded. No state has yet enacted a carbon tax, but several municipalities are in the process of doing so. For example, Boulder, Colorado will tax its residents based on the amount of electricity consumed by businesses and homeowners. The tax will generate about \$1 million annually that will be used to fund energy efficiency programs and educational outreach.

Incentives and Subsidies

Incentives and subsidies incur greater implementation costs to the state but may be more politically acceptable. For example, several states including Arizona, California, Florida, New Jersey, New York, Tennessee, Utah, and Virginia have passed laws or are piloting efforts to open up carpool lanes to hybrid cars or, in some cases, to any car with fuel efficiency greater than 45 miles per gallon.

Enabling Markets

States can change regulations and infrastructure to promote clean energy. For example, net metering can allow customers to sell electricity back to the grid, thereby encouraging residential consumers to install renewable energy systems. States can also provide consumer education such as ensuring widespread availability of “carbon footprint” analysis. For example, if consumers see two brands of toothpaste, one with a good and one with a bad carbon score, they have the option of making a low-carbon choice. Our laboratory has developed a carbon calculator, which is being used by the state of California to help consumers make carbon-conscious decisions (see <http://coolclimate.berkeley.edu/>).

Collaboration Among Industry, Academia, and Government

New energy industries require a scientific advance coupled with supply chains, industrial relationships, and higher education to collectively move scientific advances into practice. Many successful examples exist of states facilitating these kinds of partnerships including Oregon’s proposed National Wave Energy Research and Demonstration Center, Connecticut’s Global Fuel Cell Center, and North Carolina’s Advanced Transportation Energy Center. Sometimes a state’s role is mostly informational and administrative; at other times, states provide a substantial portion of the funding, facilities, personnel, and other resources. In each case, the university’s existing strengths (e.g., electro-chemical and battery research at the North Carolina Center) are recognized and promoted by state government. All

States can provide consumer education by making “carbon footprint” analysis widely available.

else being equal, a clean energy RD&D project is more likely to succeed if it can leverage established expertise, rather than starting from scratch.

Cooperation Between States or Regions

In some cases, the best approach for a state is communication, coordination, and collaboration with its neighbors to capture the full benefits of natural resources that extend across a region. For example, states sharing high-potential wind resources may wish to pool resources not only for RD&D but also for transmission lines and other infrastructure. Several states have a utility-funded RD&D organization. The Energy Center of Wisconsin is one example.

Measurement of Success

Evaluation of the impact of past investment decisions is an important step for making future investment decisions. Markers of success could include patents filed, jobs created, new businesses formed, existing businesses expanded, pollutants reduced, and so forth. States can also calculate the economic value of the jobs and businesses created, as well as the energy saved.

Summary

Clean energy technologies can boost state and regional economies, and create clean jobs. Based on recent evidence, the renewable energy sector generates more jobs per unit of energy than the fossil fuel sector.^{30, 31}

However, investing smartly in clean energy is difficult. More than many industries, the clean energy sector demands long time frames and sizeable capital investments. To encourage private investment, public policy needs to have continuity, predictability, and reliability that signals government is serious about supporting clean energy, conservation, and energy efficiency. States should seek to implement a portfolio of projects with the greatest potential payoffs including energy efficiency, renewable energy, nuclear power generation, and clean fossil fuels.³²

Policymakers and industry leaders can help place the economy back on track by committing to long-term, low-carbon solutions. By so doing, policymakers can decouple economic growth from emissions growth.³³ Clean energy policy has the potential to be one of those rare “win-win” policies that can drive both economic development and employment.

Dr. Daniel Kammen is the founding director of the Renewable and Appropriate Energy Laboratory and the Co-Director of the Berkeley Institute of the Environment. Kammen was coordinating lead author for the Intergovernmental Panel on Climate Change that won the Nobel Peace Prize in 2007. Dr. Kammen is the Class of '35 Distinguished Chair in Energy; a Professor of Public Policy in the Goldman School of Public Policy; and a Professor of Nuclear Engineering. He is author of over 200 journal articles, one book, and 30 technical reports on the science, engineering, management, and dissemination of renewable energy systems. His understanding of energy and the environment is complemented by

To encourage private investment, public policy needs to have continuity, predictability, and reliability that signals government is serious about supporting clean energy.

his knowledge of economic, policy, and health impacts. He has worked with the National Governors Association on energy policy and testified over 30 times before Congress and several state legislatures including Connecticut, Florida, Minnesota, and New York. Kammen advises the African Academy of Sciences, the American Academy of Arts and Sciences, the President's Committee on Science and Technology, the United States and Swedish Agencies for International Development, and the World Bank. Kammen has been a guest on National Public Radio's Science Friday and has been interviewed by CNN and numerous local television and radio stations on energy, environment, and policy issues. Dr. Kammen is married and has one daughter.

This chapter was adapted from the following articles available from the Wisconsin Family Impact Seminars in their entirety.

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Clean Energy Economy Glossary

Compiled by Professor Gregory Nemet,
La Follette School of Public Affairs, University of Wisconsin-Madison
Karen Bogenschneider & Stephanie Eddy, Wisconsin Family Impact Seminars

Cap and trade

Program that reduces emissions of pollutants flexibly and at a lower cost than more prescriptive types of environmental regulation. The cap sets a limit on the total amount of emissions allowed in a year. The trading aspect of the program means that not all entities have to reduce emissions by the same amount. Businesses that are able to reduce emissions cheaply can over-comply and sell emissions permits to businesses for which reducing emissions is more expensive.

Carbon capture and storage

Technology that captures the greenhouse gas carbon dioxide (CO₂) from the burning of fossil fuels at power plants, and buries it underground or undersea. The technology exists but has not yet been deployed at commercial scale.

Carbon footprint

The amount of greenhouse gases (GHG) that are emitted into the atmosphere each year by an entity such as a person, household, building, organization, or company. It is usually measured in units of carbon dioxide equivalents. The carbon footprint of an average American is about 20 tons per year, 10 for a European, and 5 for a Chinese.

Carbon tax

Emissions of carbon are taxed based on the amount emitted. All carbon emitters pay the tax creating incentives to reduce emissions. The tax generates government revenue which can be used in many ways, such as reducing income taxes, investing in clean technology, or for other types of programs.

Clean energy

A broad term that includes several strategies designed to have a low impact on the environment such as renewable energy sources; clean, nonrenewable energy technologies; efficiency technologies; and advanced energy storage technologies.¹

Fossil fuels

Fossil fuels are the nation's principal source of energy. The popularity of these fuels is largely due to their low costs. Fossil fuels come in three major forms—coal, oil, and natural gas. Because fossil fuels are a finite resource and cannot be replenished once they are extracted and burned, they are not considered renewable.²

Greenhouse gases

Gases like carbon dioxide, methane, nitrous oxide, ozone, and water vapor naturally occur in the earth's atmosphere. Human activities can increase concentrations, notably through fossil fuel combustion to produce heat, transportation, and electricity. These gases are dubbed greenhouse gases because

they remain in the atmosphere and intensify the sun's heat as it radiates from the earth, similar to a greenhouse's glass walls heating the air inside of it.³

Emissions

Emissions are gases and particles released into the air as byproducts of a natural or man-made process.⁴

GWh

Gigawatt hour. An amount of electricity, which is equal to one million kilowatt hours or one thousand megawatt hours. A small spaceheater running for 1 hour consumes about 1 kilowatt hour of electricity.

Low-carbon fuel standards

Standards that require that fuel providers meet a specified, and sometimes declining, amount of greenhouse gas emissions per unit of fuel sold.⁵

Net metering

Arrangement that permits residential customers or a facility (using a meter that reads inflows and outflows of electricity) to sell any excess power it generates over its own requirements back to the electrical grid to offset consumption. This encourages residential consumers to install renewable energy systems.^{6, 7}

Non-fossil fuels

Energy sources that can never be completely consumed such as solar power, geothermal, wind, tidal power, biomass, wave power, hydropower, and ocean thermal gradients.⁸

Renewable Portfolio Standards (RPS)

Renewable energy mandates in the United States requiring that a certain percentage of overall electric power come from renewable sources such as wind, solar, biomass, and geothermal by a specified date. Also referred to as Renewable Energy Portfolios (RNP). For example, Wisconsin is required to derive 10% of the electricity it uses from renewables by 2015.⁹

Person-years

A unit of measurement based on an ideal amount of work done by one person in a year consisting of a standard number of person-days.¹⁰

RD&D

Research, development, and demonstration.¹¹

Smart Grid

The Smart Grid is a modernized transmission and distribution infrastructure for electricity that communicates pricing, supply, and demand information to consumers in real time and allows for more efficient purchasing, selling, and use of power. It also allows better monitoring of the system to detect and avoid outages.¹²

Solar PV

Photovoltaic panels that convert sunlight directly into electricity. PV is made from semiconductor materials, and does not create any pollution, noise, or other impacts on the environment. Homes and businesses may incorporate solar panels and arrays as a source of clean energy.¹³

Supercapacitors

A very high-capacity energy storage system consisting of two parallel conductive plates separated by a dielectric material. The electric energy is stored as an electrostatic field between the plates by the electric charges accumulated on the plates.¹⁴

Venture Capital (VC)

Startup or growth equity capital or loan capital provided by private investors (the venture capitalists) or specialized financial institutions (development finance houses or venture capital firms).¹⁵

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Sector Strategies: Revisioning State Workforce Policies

by Larry Good, Chairman
and
Lindsey Woolsey, Senior Policy Associate
Corporation for a Skilled Workforce

An increasing number of states are addressing workforce challenges by establishing sector strategies—policies that support regional, industry-specific programs implemented by an employer-driven partnership of relevant stakeholders. Sector strategies can increase state competitiveness, align resources and strategies, and provide multiple career pathways for all types of workers. In a large study of one sector initiative, the percentage of participants who worked rose from 74% to 94%, and their median earnings increased from about \$8,600 to over \$14,000 in the first year and to over \$17,700 in the second year. Based on earnings, almost half of the study participants moved out of poverty. Employers also benefited from a 41% decrease in turnover and a 23% reduction in customer complaints.

Today U.S. policymakers are facing the stark realities of a growing, persistent, low-skilled labor market. Low-skilled jobs almost always mean low wages, and today more than half of all jobs in the U.S. are poverty-wage or low-wage positions.¹ In fact, approximately 3 million people live in poverty in the U.S. despite working full time. On average, individuals who have exited from the Temporary Assistance for Needy Families (TANF) program earn less than \$10,000 per year.²

Meanwhile, employers confront growing shortages of adequately prepared workers. A recent analysis of the American Community Survey and data from the Bureau of Labor Statistics indicate that two-thirds of the 2020 workforce is already in the labor market, and half of the current workforce possesses only a high school degree or less. The economic vitality of our nation may be at risk, given estimates that by 2014, 24 of the 30 fastest-growing occupations will require postsecondary education or training (either an occupational certificate or degree).³

The shortage of skilled workers also presents a challenge to communities and states, which increasingly experience intense competition to attract and retain employers. Tax breaks alone are no longer a sufficient incentive to bring in new businesses. When making relocation and expansion decisions, businesses consider a region's ability to provide a steady supply of skilled workers. This chapter begins by describing how many states have responded to this workforce need by establishing sector strategies. We discuss their potential benefits, promising state examples, and important considerations for policymakers.

Why Do States Need to Revision Workforce Strategy?

A state's ability to be responsive to industry skill needs is currently hindered by several things, including:

Half the current workforce has a high school degree or less, and 80% of the fastest growing occupations require postsecondary education or training.

- (1) Regional labor markets that are misaligned with local, county, or state political systems;
- (2) The disconnect among overlapping but not identical jurisdictions of workforce, economic, and education agencies;
- (3) The lack of meaningful employer engagement making it difficult to develop an understanding of a particular industry-wide need; and
- (4) The lack of coordination among key stakeholders, due to separate funding streams, divergent organizational cultures, different missions, and disincentives to collaborate.

These challenges call for new approaches to workforce development. Traditional approaches simply do not address the multiple obstacles that industry must overcome to remain competitive and that workers must overcome to secure jobs and opportunities for advancement. An increasing number of states are addressing these challenges by establishing sector strategies—policy approaches that support regional, industry-specific approaches to workforce needs and are implemented by an employer-driven partnership of relevant systems and stakeholders.

What are Key Components of Sector Strategies?

- Sector strategies are regional approaches.
- Sector initiatives develop expertise in a particular industry or “sector” within a regional labor market (e.g., health care, manufacturing).
- Sector initiatives use workforce intermediaries to create regional partnerships that engage employers, training/education providers, community organizations, and other key stakeholders around a specific industry.
- Regional partnerships allow for coordination of information and resources to address employers’ need for a skilled workforce and workers’ need for good jobs.
- Sector initiatives are responsive to industry demand because they focus on specific problems within sectors, and they work with industries collectively, not as individual firms.
- Sector initiatives strive simultaneously to meet the skill, recruitment, and retention needs of employers; and the training, employment, and career advancement needs of workers.

What are Potential Benefits of Sector Strategies?

Benefits for Workers

An Aspen Institute survey of sector initiative participants found the percentage of respondents who worked at some point during the year rose from 74% before training to 94% after training. Among the 94% of respondents who worked, median personal earnings rose from about \$8,600 to just over \$14,000 in the year following training and to over \$17,700 in the second year after training. Based on their earnings alone, almost half (48%) of participants moved out of poverty.⁴ Other potential benefits of

Regional partnerships allow for coordination of information and resources to address employers’ need for a skilled workforce and workers’ need for good jobs.

sector initiatives for workers include improved working conditions for entry-level and low-skilled workers; expanded supply, accessibility, and coordination of work supports for low-income workers that lead to better job retention; and increased opportunities for education and training for high-demand occupations.

Benefits for Employers

In a similar evaluation of sector initiatives in Massachusetts, 41% of surveyed employers reported a reduction in turnover, 19% reported a reduction in rework, and 23% a reduction in customer complaints as a result of sector initiatives in which they took part.⁵ Virtually every participating employer found value in the partnerships they developed with other companies through sector initiatives. Potential benefits of sector initiatives for employers include sharing with other firms the costs and risks of developing skill training programs, increased availability of relevant skills training, and guidance on human resource practices to improve workforce quality and efficiency.

Virtually every employer that participated in sector initiatives found value in the partnerships developed with other companies.

Benefits for Communities

Finally, sector initiatives can benefit communities in several ways. They can close skill and labor gaps in the labor market; enhance a community's ability to attract and retain higher-wage employers; support the retention and expansion of local industries; address poverty and unemployment challenges; increase community cooperation; and use public resources more efficiently and effectively.⁶

For states to realize these benefits of sector strategies, state leadership and guidance at each phase of implementation is essential.

What are Some Promising Examples of State-Driven Sector Initiatives?

At least 25 states currently are implementing sector strategies as a policy approach to meet the needs of their regional industries and labor forces. In 2006, the National Governors Association (NGA), Corporation for a Skilled Workforce (CSW), and the National Network of Sector Partners (NNSP) launched a multi-year project to accelerate adoption and maturation of state sector strategies through a peer-to-peer learning network, policy academies for states in beginning phases of sector strategy adoption, and a knowledge exchange of support tools. During 2008-2009, Wisconsin participated in one of the policy academies to refine and develop the state's sector strategies. Below are examples of several state sector initiatives:

- In 2004, **Michigan's** Department of Labor and Economic Growth used competitive start-up grants to create 34 Regional Skills Alliances that operate in the state. Recently, Michigan announced a second generation version of what are now called Michigan Skills Alliances, which include a major component of Green Sector and Regional Alliances. To support their development and growth, a full-time staff of 10 state employees is dedicated to working with the Alliances.
- **Massachusetts** has a 25-year history of state-supported sector initiatives, currently led by a quasi-public entity, the Commonwealth Corporation.

The rich history of sector success played a significant role in securing \$11 million for a new Workforce Competitiveness Trust Fund, a mechanism to implement local sector initiatives in critical industries across the state.

- Since 2000, **Washington State** has been a leader in sector partnership approaches, competitively building 41 local Industry Skill Panels, and establishing 11 Centers of Excellence within community colleges that focus on building training programs that meet the needs of key economic clusters (i.e., geographic concentrations of firms that do business with each other and draw from the same pool of talent, technology, and infrastructures). The Community and Technical Colleges, Employment Security Department, and State Workforce Board collaborate in leading these activities.

Almost every state using sector initiatives is distributing competitive grants to regional partnerships. This is a concrete way to take a highly customized model of demand-driven workforce development (i.e. sector initiatives) to scale. States consider multiple factors to determine awards: relevant active partners, industry selection, definition of region, long-term funding strategies, demonstrated knowledge of the target industry, and evidence that the partnership is employer-driven. State sector funding is often targeted to support the work of sector initiative conveners (intermediaries), who play a powerful role in pulling partners together and facilitating implementation.

What are Some Policy Considerations?

State sector strategies provide an opportunity to increase state competitiveness, align resources and strategies, and provide entry-level and career pathways for low-income workers while simultaneously growing and maintaining middle-class jobs. Partners involved in the NGA project believe that the following are important considerations for state leaders desiring to build sector strategies.

Funding It

State policymakers can address funding challenges by driving the development of new funding streams, redirecting existing streams, and incentivizing private investments. States utilize several federal, state, and private sources to fund sector initiatives, most commonly tapping public Workforce Investment Act (WIA) discretionary funds. Other potential resources include surplus TANF (Temporary Assistance for Needy Families) funds or state general revenue funds. Many states have also used investments from state and federal funding sources to leverage additional funding from employers, industry associations, and foundations.

Identifying Industry Needs and Skills Gaps

State agencies can use their access to labor market information from various data sources to examine the current state of a regional economy, explore the root causes of skills gaps, and help sector initiatives plan for long-term labor market trends. Some states provide training to help sector initiative partners learn how to collect and use labor market information for decisionmaking.

State and federal dollars can be used to leverage funding for sector strategies from employers, industry associations, and foundations.

Defining Appropriate Regions Within the State

Regions should make sense economically and reflect geography relevant to the sector involved, and not be divided by arbitrary or artificial boundaries.

Aligning Agency Policies and Resources to Support Sector Strategies

This may involve establishing a culture of interagency collaboration, redefining department missions, reallocating resources, and/or reorganizing agencies.

Building Capacity

States can build capacity with sector initiatives in several ways, including offering training and/or technical assistance to leaders of regional partnerships within the state.

Assigning the Right People to Do the Work

Having someone engaged from the governor's office is an important element, as is having a cabinet or associate cabinet-level leader with access to the governor lead the initiative. When this is the case, leading business executives seem more likely to be involved.

Marketing

Inform as many partners, stakeholders, employers, and citizens as possible about what the strategy is, why they would want to be part of it, and how they can become part of it.

Measuring Success

It is important to get baseline data at the start of a strategy as well as gather performance benchmark data throughout the lifespan of the strategy. The NGA project has co-created an evaluation framework that is available at http://sectorstrategies.org/system/files/draft_skill_panel_dashboard.pdf. It is also important to have buy-in of the evaluation framework from those lending their resources and those being evaluated.

Planning for Sustainability

An effective sector strategy will be structured in a way that will build over time and not fizzle with a leadership change. This means that, beyond political and monetary support, it also has solid infrastructure to support it.

Conclusion

The strength of sector strategies is their ability to understand their target industry and to work effectively with business to identify and fill workforce needs. Despite gaps and yet-to-be realized scale, key components of a sectoral approach to workforce development are emerging across the country. When included as part of a comprehensive state policy framework, these sector strategies help states address the rapidly changing economic and demographic challenges they face.

Larry Good is co-founder and Chairman of the Corporation for a Skilled Workforce (CSW). He has an MBA in Finance from Michigan State University and a BA in Political Science from Oakland University. He engages with national policy and practice

The strength of sector strategies is their ability to understand their target industry and work effectively with a business to identify and fill workforce needs.

leaders to inform change in public policy and investment in workforce development. His organization has also partnered with the National Governors Association and the National Network of Sector Partners in managing a 25-state learning network to accelerate use of state sector strategies. Good leads the Corporation's work with state governments in transforming their workforce strategies, having consulted with California, Colorado, Illinois, Michigan, Minnesota, Oklahoma, Washington, and Wisconsin. For six years, he led a major initiative with the Michigan Department of Energy, Labor, and Economic Growth in developing and implementing a total rethinking of state workforce policy, initiatives, and structure. In recent years, his work also has focused on (a) reinvention of adult education and integration of basic skills development with career pathways, and (b) development of sector strategies at a state and regional level to engage groups of employers in developing shared workforce solutions. As CEO, Good has led the growth of CSW from a start-up to a \$3 million per year enterprise with a solid reputation for high-quality work. He and his wife have been married for 36 years.

This chapter was adapted from the following three articles available from the Wisconsin Family Impact Seminar in their entirety:

NGA Center for Best Practices, Corporation for a Skilled Workforce, & National Network of Sector Partners. (2008). *Accelerating state adoption of sector strategies: An eleven-state project to promote regional solutions to worker and employer needs* (Phase I Project Report). Retrieved December 19, 2009, from <http://www.sectorstrategies.org/system/files/AcceleratingSectorStrategies-PhaseIReport.pdf>

NGA Center for Best Practices, Corporation for a Skilled Workforce, & National Network of Sector Partners. (2006). *State sector strategies: Regional solutions to worker and employers needs* (Issue Brief). Retrieved December 19, 2009, from <http://www.nga.org/Files/pdf/06STATESECREG.PDF>

Woolsey, L. (2007). *The policy intersection between sector strategies and low-income workers: The state responsibility to make the connection*. Retrieved December 19, 2009, from <http://www.sectorstrategies.org/sites/all/files/Integrating%20Sector%20and%20Low-Income%20Policies.pdf>

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Selected Resources on Workforce Development and a Clean Energy Economy

For the following resources, we list the organization, a primary contact person (if available), and selected relevant reports from the organization.

Wisconsin Legislative Service Agencies

Wisconsin Legislative Audit Bureau

22 East Mifflin Street, Suite 500
Madison, WI 53703
(608) 266-2818
leg.audit.info@legis.wisconsin.gov
<http://www.legis.wisconsin.gov/lab/>

A review: State economic development programs (Report 06-9, August 2006).
Available at <http://www.legis.state.wi.us/lab/reports/06-9full.pdf>

Wisconsin Legislative Council

1 East Main Street, Suite 401
PO Box 2536
Madison, WI 53701
(608) 266-1304
<http://www.legis.wisconsin.gov/lc/>

Contact: Jessica L. Karls-Ruplinger, Staff Attorney
(608) 266-2230
jessica.karls@legis.wisconsin.gov

Interests: Labor and employment

Chapter C: Economic development and employment (Chapter from Wisconsin Legislator Briefing Book 2009-10, November 2008). Available at http://www.legis.wisconsin.gov/lc/publications/briefingbook/08chC_economic.pdf

Wisconsin Legislative Fiscal Bureau

1 East Main Street, Suite 301
Madison, WI 53703
(608) 266-3847
Fiscal.Bureau@legis.wisconsin.gov
<http://www.legis.wisconsin.gov/lfb/index.html>

State economic development programs administered by the Department of Commerce (Informational Paper 92, January 2009). Available at http://www.legis.state.wi.us/lfb/Informationalpapers/92_state%20economic%20development%20programs%20administered%20by%20the%20department%20of%20commerce.pdf

Commerce Economic Development Programs for Wisconsin Businesses
(Chapter by R. Shanovich and D. Hinz in “Growing the state economy:
Evidence-based policy options” [Briefing Report #27 of the Wisconsin
Family Impact Seminars]). Available at http://www.familyimpactseminars.org/s_wifis27c03.pdf

State Agencies

Wisconsin Department of Commerce

201 West Washington Avenue, PO Box 7970
Madison, WI 53707
(608) 266-1018
<http://www.commerce.state.wi.us/>

Contact: Aaron Olver, Deputy Secretary
(608) 266-8976
aaron.olver@wisconsin.gov

Interests: Economic development strategy, business finance, manufacturing, and entrepreneurship

State of Wisconsin: Annual economic development programs report (Report, October 2008). Available at <http://commerce.wi.gov/BDdocs/BD-Act125-2008.pdf>

Wisconsin Department of Health Services

1 West Wilson Street
Madison, WI 53703
(608) 266-1865
<http://dhs.wi.gov/>

Contact: Nancy McKenney, Director of Workforce Development
Division of Public Health
Nancy.McKenney@dhs.wisconsin.gov

Interests: Public health workforce assessment and policy development (governmental and non-governmental); advancing Healthy Wisconsin 2010 and 2020 (state health plan)

Contact: John Reiser, Director, Office of Independence and Employment
Division of Long Term Care
John.Reiser@wisconsin.gov

Interests: Program and policy development; evaluation and administration that is supportive of community inclusion and participation for people with disabilities and frailties of aging, with an emphasis on employment-focused strategies

Wisconsin Department of Revenue

2135 Rimrock Road
Madison, WI 53713
(608) 266-2772
<http://www.revenue.wi.gov/index.html>

Contact: John Koskinen, Chief Economist and Division Administrator
Division of Research and Policy
john.koskinen@revenue.wi.gov

Interests: Wisconsin economy, tax policy

Wisconsin economic outlook (Report, November 2009). Available at <http://www.revenue.wi.gov/ra/0911/0911econ.pdf>

Wisconsin Department of Workforce Development

201 East Washington Avenue, PO Box 7946
Madison, WI 53707
(608) 267-1410
<http://dwd.wisconsin.gov/>

Contact: JoAnna Richard, Deputy Secretary
(608) 267-3200
joanna.richard@dwd.wisconsin.gov

Interests: Employment and training, equal rights, unemployment, vocational rehabilitation and workers compensation

Universities & Technical Colleges

Center on Wisconsin Strategy, University of Wisconsin-Madison

1180 Observatory Drive
7122 Social Sciences Building
Madison, WI 53706
(608) 263-3889
<http://www.cows.org/default.asp>

Contact: Laura Dresser, Associate Director
(608) 262-6944
ldresser@cows.org

Interests: Wisconsin economy, workforce training systems, and low-wage labor markets

Greening Wisconsin's workforce: Training, recovery, and the clean energy economy (Report, 2009). Available at <http://www.cows.org/pdf/rp-GreeningWisconsin.pdf>

The state of working Wisconsin—Update 2009 (Report, 2009). Available at <http://www.cows.org/pdf/rp-SOWWupdate09.pdf>

Great Lakes Bioenergy Research Center, University of Wisconsin-Madison

1550 Linden Drive
Madison, WI 53706
<http://www.greatlakesbioenergy.org/>

Contact: Timothy Donohue, Director
Professor, Department of Bacteriology
(608) 262-4663
tdonohue@bact.wisc.edu

Interests: Cellulosic biofuels, bio-based renewable energy, bioenergy technology and education, and biofuels economy

Bioenergy research centers: An overview of the science (Report, February 2008). Available at <http://genomicsgtl.energy.gov/centers/brcbrochure.pdf>

Institute for Research on Poverty, University of Wisconsin-Madison

1180 Observatory Drive, 3412 Social Science Building
Madison, WI 53706
(608) 262-6358
<http://www.irp.wisc.edu/home.htm>

Contact: Timothy Smeeding, Director
(608) 890-1317
smeeding@lafollette.wisc.edu

Interests: Antipoverty policy, economic growth, employment of the poor, and work supports

Improving education and employment for disadvantaged young men: Proven and promising strategies (Working Paper by C. J. Heinrich and H. J. Holzer, 2009).

Workforce development as an antipoverty strategy: What do we know? What should we do? (Chapter by H. Holzer in *Changing Poverty, Changing Policies*, edited by M. Cancian and S. Danziger, 2009), NY: Russell Sage Foundation.

La Follette School of Public Affairs, University of Wisconsin-Madison

1225 Observatory Drive
Madison, WI 53706
(608) 262-3581
<http://www.lafollette.wisc.edu/welcome.html>

Contact: Gregory Nemet, Assistant Professor
(608) 265-3469
nemet@wisc.edu

Interests: Energy policy, technological change, science and technology policy, climate change, and research and development

Cost containment for climate policy requires linked technology policies (Working Paper No. 2008-010, April 2008). Available at <http://www.lafollette.wisc.edu/publications/workingpapers/nemet2008-010.pdf>

Implications of climate policy in a carbon-intensive region: Estimating abatement costs under deep policy uncertainty (Working Paper No. 2009-015, September 2009). Available at <http://www.lafollette.wisc.edu/publications/workingpapers/nemet2009-015.pdf>

A ten year outlook for energy (Testimony by Daniel Kammen provided to the U.S. House of Representatives Committee on Appropriations, February, 2007). Available at http://rael.berkeley.edu/files/2007/Kammen_House-Appropriations-2-28-07.pdf

The Nelson Institute for Environmental Studies

550 North Park Street, 70 Science Hall
Madison, WI 53706
(608) 262-7996
<http://nelson.wisc.edu/>

Contact: Steve Pomplun, Assistant Director
(608) 263-3063
spomplun@wisc.edu

Interests: Social and technological innovation essential for an environmentally sustainable future. Regional and global problems stemming from interactions between environmental systems, natural resources, and human activity

**University of Wisconsin-Extension
Community, Natural Resource, and Economic Development**

432 North Lake Street
Madison, WI 53706
<http://www.uwex.edu/ces/cnred/>

Contact: Tom Blewett, Interim State Program Director
(608) 262-9310
thomas.blewett@ces.uwex.edu

Interests: Community-based partnerships for economic development, leadership and organizational development strategies, and public participation

**University of Wisconsin-Extension
Department of Community & Environmental Sociology
Center for Community & Economic Development**

1450 Linden Drive
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<http://www.drs.wisc.edu/>
<http://www.uwex.edu/ces/cced/>

Contact: Gary Green, Professor and Community Development Specialist
(608) 262-2710
gpgreen@wisc.edu

Interests: Community, economic, and workforce development

Does manufacturing still matter? (Article in “Population Research and Policy Review,” vol. 26, pp. 529-551, 2007).

Employer participation in workforce development networks (Article in “Economic Development Quarterly,” vol. 19, pp. 225-231, 2005).

Workforce development networks in rural areas: Building the high road (Book, 2007), Cheltenham, UK and Northampton, MA: Edward Elgar Publishing.

**University of Wisconsin-Extension
Division of Entrepreneurship and Economic Development**

432 North Lake Street
Madison, WI 53706
(608) 263-7794
http://www.wisconsinsbdc.net/uwex_deed/

Contact: Kim Kindschi, Executive Director
(608) 263-8860
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Interests: UW Extension/UW System as a resource for a wide variety of entrepreneurial, small business, and economic development activities

Wisconsin Entrepreneurs' Network (web site). Available at <http://www.wenportal.org/>

Wisconsin Small Business Development Center (web site). Available at <http://www.wisconsinsbdc.org/>

**University of Wisconsin-Extension
Center for Community and Economic Development**

333 Lowell Hall, 610 Langdon Street
Madison, WI 53703
(608) 265-8136
<http://www.uwex.edu/ces/cced>

Contact: Greg Wise, Director
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Interests: Contemporary approaches to community and economic development, research and outreach focused on the importance of entrepreneurship as an economic development component

**University of Wisconsin-Milwaukee
Department of Urban Planning**

2131 E. Hartford Avenue
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Contact: Sammis White, Professor
Associate Dean, School of Continuing Education
161 West Wisconsin Avenue
Milwaukee, WI 53203
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sbwhite@uwm.edu

Interests: Economic development policies, entrepreneurship, and workforce development

Wisconsin School of Business, University of Wisconsin-Madison

975 University Avenue
Madison, WI 53706
(608) 262-1550
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Contact: Stephen Malpezzi, Professor
Department of Real Estate and Urban Land Economics
(608) 262-6007
smalpezzi@bus.wisc.edu

Interests: Real estate, international and domestic economic development

State Organizations

Wisconsin Technical College System

4622 University Avenue, PO Box 7874
Madison, WI 53707
(608) 266-1207
<http://www.wtcsystem.edu/>

Contact: Daniel Clancy, President
(608) 266-7983
dan.clancy@wtcsystem.edu

Interests: Technical college education and training services, workforce and economic development

2005-08 strategic directions: Implementation report (August 2008). Available at http://www.wtcsystem.edu/board/pdf/strategic_directions_implementation_rpt.pdf

Wisconsin Technology Council

455 Science Drive, Suite 240
Madison, WI 53711
(608) 442-7557
<http://www.wisconsintechnologycouncil.com/>

Contact: Tom Still, President
tstill@wisconsintechnologycouncil.com

Interests: Tech-based economic development, angel and venture capital development, and entrepreneurship in high-growth sectors

Vision 20/20: A model Wisconsin economy (Report, 2002). Available at http://www.wisconsintechcouncil.com/uploads/documents/Vision_2020_web2.pdf

National Organizations

Brookings Institution

Washington, DC

<http://www.brookings.edu/>

Better workers for better jobs: Improving worker advancement in the low-wage labor market (Policy Brief No. 7, December 2007). Available at http://www.urban.org/UploadedPDF/1001118_better_jobs.pdf

Living wage laws: How much do (can) they matter? (Discussion Paper No. 7, December 2008). Available at http://www.brookings.edu/reports/2008/1210_living_wage_holzer.aspx

The future of middle-skill jobs (Brief No. 41, February 2009). Available at http://www.brookings.edu/papers/2009/02_middle_skill_jobs_holzer.aspx

Center for Law and Social Policy (CLASP)

Washington, DC

<http://www.clasp.org/>

Pathways to opportunity: Using increased funding under the Workforce Investment Act to create multiple pathways to marketable postsecondary credentials and middle-class employment (Paper, April 2009). Available at http://www.clasp.org/admin/site/publications/files/arra_careerpathways.pdf

Corporation for a Skilled Workforce

Ann Arbor, MI

<http://www.skilledwork.org/>

Building tomorrow's workforce: Promoting the education and advancement of Hispanic immigrant workers in America (Report, 2007). Available at http://www.skilledwork.org/sites/default/files/Lumina_Jan809.pdf

Industry cluster and sector approaches in rural economies (Report, 2008). Available at <http://www.skilledwork.org/sites/default/files/Application%20of%20Sector-focused%20Strategies%20to%20Rural%20Economies.pdf>

Link green job growth with sector strategies to boost economic recovery (Brief, 2009). Available at <http://www.skilledwork.org/sites/default/files/Integrating%20Sector%20Strategies%20with%20Green.pdf>

Database of State Incentives for Renewables and Efficiency (DSIRE)

Raleigh, NC

<http://www.dsireusa.org/>

Wisconsin: Incentives/policies for renewables & efficiency (web page). Available at <http://www.dsireusa.org/incentives/index.cfm?re=1&ee=1&spv=0&st=0&srp=1&state=WI>

Ewing Marion Kauffman Foundation

Kansas City, MO

<http://www.kauffman.org/>

Where will the jobs come from? (Report, November 2009). Available at http://www.kauffman.org/uploadedFiles/where_will_the_jobs_come_from.pdf

MDRC

New York, NY and Oakland, CA

<http://www.mdrc.org/>

Strategies to help low-wage workers advance: Implementation and early impacts of the Work Advancement and Support Center (WASC) demonstration (Report, June 2009). Available at: <http://www.mdrc.org/publications/519/overview.html>

Workforce Investment Act reauthorization: Will the past be prologue? (Presentation remarks, November 2009). Available at <http://www.mdrc.org/publications/532/presentation.html>

Renewable and Appropriate Energy Laboratory

Berkeley, CA

<http://rael.berkeley.edu/>

CoolClimate Carbon Footprint Calculator (Mechanism designed to help U.S. households evaluate their complete climate footprints). Available at <http://rael.berkeley.edu/node/18>

Green jobs and the clean energy economy (Thought Leadership Series Report #4, 2009). Available at http://www.climatechange.ca.gov/eaac/documents/member_materials/Engel_and_Kammen_Green_Jobs_and_the_Clean_Energy_Economy.pdf

Putting renewables to work: How many jobs can the clean energy industry generate? (Report, 2004). Available at <http://rael.berkeley.edu/sites/default/files/old-site-files/2004/Kammen-Renewable-Jobs-2004.pdf>

The Workforce Alliance

Washington, DC

<http://www.workforcealliance.org/site/c.ciJNK1PJtH/b.995605/k.CBB4/Home.htm>

State Training and Education Policies and Statistics (STEPS) Clearinghouse.
Available at http://www.workforcealliance.org/site/c.ciJNK1PJtH/b.1301217/k.7C9/STEPS_Clearinghouse.htm

The Working Poor Families Project (WFPF)

Chevy Chase, MD
<http://www.workingpoorfamilies.org/>

Building a foundation for family economic success (Report, 2009). Available at http://www.workingpoorfamilies.org/pdfs/WFPF_State_Policy_Accomplishments11-02-09.pdf

Urban Institute

Washington, DC
<http://www.urban.org/>

A new safety net for working families: Green jobs and low-wage workers (Audioconference, April 2009). Available at <http://www.urban.org/events/other2/greenjobs.cfm>

Testimony on income and poverty in the United States: 2008 before the Joint Economic Committee of the United States Congress (September 2009). Available at <http://www.urban.org/publications/411957.html>

Workforce development and the disadvantaged: New directions for 2009 and beyond (Report, September 2008). Available at <http://www.urban.org/publications/411761.html>

Workforce development as an antipoverty strategy: What do we know? What should we do? (Paper, October 2008). Available at <http://www.urban.org/publications/411782.html>

W.E. Upjohn Institute for Employment Research

Kalamazoo, MI
webmaster@upjohninstitute.org
<http://www.upjohninst.org/>

Public job training: Experience and prospects (Book chapter, 2004). Available at http://www.upjohninst.org/publications/books/jtp/ch9_oleary_straits_and_wandner.pdf

Assessing the Impact of Policies & Programs on Families

Family Impact Checklist

The first step in developing family-friendly policies is to ask the right questions:

- ▶ What can government and community institutions do to enhance the family's capacity to help itself and others?
- ▶ What effect does (or will) this policy (or program) have for families? Will it help or hurt, strengthen or weaken family life?

These questions sound simple, but they can be difficult to answer. These questions are the core of a family impact analysis that assesses the intended and unintended consequences of policies, programs, and organizations on family stability, family relationships, and family responsibilities. Family impact analysis delves broadly and deeply into the ways in which families contribute to problems, how they are affected by problems, and whether families should be involved in solutions. Guidelines for conducting a family impact analysis can be found at www.familyimpactseminars.org/fi_howtocondfia.pdf.

Family impact questions can be used to review legislation and laws for their impact on families; to prepare family-centered questions or testimony for hearings, board meetings, or public forums; and to evaluate programs and operating procedures of agencies and organizations for their sensitivity to families. Six basic principles serve as the criteria of how sensitive to and supportive of families policies and programs are. Each principle is accompanied by a series of family impact questions.

The principles are not rank-ordered and sometimes they conflict with each other, requiring trade-offs. Cost effectiveness also must be considered. Some questions are value-neutral and others incorporate specific values. This tool, however, reflects a broad bi-partisan consensus, and it can be useful to people across the political spectrum.

Principle 1. Family support & responsibilities. Policies and programs should aim to support and supplement family functioning and provide substitute services only as a last resort.

Does the proposal or program:

- support and supplement parents' and other family members' ability to carry out their responsibilities?
- provide incentives for other persons to take over family functioning when doing so may not be necessary?
- set unrealistic expectations for families to assume financial and/or caregiving responsibilities for dependent, seriously ill, or disabled family members?
- enforce absent parents' obligations to provide financial support for their children?

Principle 2. Family membership & stability. Whenever possible, policies and programs should encourage and reinforce marital, parental, and family commitment and stability, especially when children are involved. Intervention in family membership and living arrangements is usually justified only to protect family members from serious harm or at the request of the family itself.

Does the policy or program:

- provide incentives or disincentives to marry, separate, or divorce?
- provide incentives or disincentives to give birth to, foster, or adopt children?
- strengthen marital commitment or parental obligations?
- use appropriate criteria to justify removal of a child or adult from the family?
- allocate resources to help keep the marriage or family together when this is the appropriate goal?
- recognize that major changes in family relationships such as divorce or adoption are processes that extend over time and require continuing support and attention?



The Policy Institute for
Family Impact Seminars

The Institute aims to strengthen family policy by connecting state policymakers with research knowledge and researchers with policy knowledge. The Institute provides nonpartisan, solution-oriented research and a family impact perspective on issues being debated in state legislatures. We provide technical assistance to and facilitate dialogue among professionals conducting Family Impact Seminars in 28 sites across the country.

The Policy Institute for Family Impact Seminars adapted the family impact checklist from one originally developed by the Consortium of Family Organizations. The suggested citation is Policy Institute for Family Impact Seminars. (2000). *A checklist for assessing the impact of policies on families* (Family Impact Analysis Series No. 1). Madison, WI: Author. The checklist was first published in Ooms, T., & Preister, S. (Eds.). (1988). *A strategy for strengthening families: Using family criteria in policymaking and program evaluation*. Washington DC: Family Impact Seminar.

For more information on family impact analysis, contact Director Karen Bogenschneider of the Policy Institute for Family Impact Seminars at the University of Wisconsin-Madison/Extension, 309 Middleton Building, 1305 Linden Drive, Madison, WI, 53706.

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Principle 3. Family involvement & interdependence. Policies and programs must recognize the interdependence of family relationships, the strength and persistence of family ties and obligations, and the wealth of resources that families can mobilize to help their members.

To what extent does the policy or program:

- recognize the reciprocal influence of family needs on individual needs, and the influence of individual needs on family needs?
- recognize the complexity and responsibilities involved in caring for family members with special needs (e.g., physically or mentally disabled, or chronically ill)?
- involve immediate and extended family members in working toward a solution?
- acknowledge the power and persistence of family ties, even when they are problematic or destructive?
- build on informal social support networks (such as community/neighborhood organizations, religious communities) that are essential to families' lives?
- respect family decisions about the division of labor?
- address issues of power inequity in families?
- ensure perspectives of all family members are represented?
- assess and balance the competing needs, rights, and interests of various family members?
- protect the rights and safety of families while respecting parents' rights and family integrity?

Principle 4. Family partnership & empowerment. Policies and programs must encourage individuals and their close family members to collaborate as partners with program professionals in delivery of services to an individual. In addition, parent and family representatives are an essential resource in policy and program development, implementation, and evaluation.

In what specific ways does the policy or program:

- provide full information and a range of choices to families?
- respect family autonomy and allow families to make their own decisions? On what principles are family autonomy breached and program staff allowed to intervene and make decisions?
- encourage professionals to work in collaboration with the families of their clients, patients, or students?
- take into account the family's need to coordinate the multiple services required? Does it integrate well with other programs and services that the families use?
- make services easily accessible to families in terms of location, operating hours, and easy-to-use application and intake forms?
- prevent participating families from being devalued, stigmatized, or subjected to humiliating circumstances?
- involve parents and family representatives in policy and program development, implementation, and evaluation?

Principle 5. Family diversity. Families come in many forms and configurations, and policies and programs must take into account their varying effects on different types of families. Policies and programs must acknowledge and value the diversity of family life and not discriminate against or penalize families solely for reasons of structure, roles, cultural values, or life stage.

How does the policy or program:

- affect various types of families?
- account for its benefits to some family types but not others? Is one family form preferred over another? Does it provide sufficient justification for advantaging some family types and for discriminating against or penalizing others?
- identify and respect the different values, attitudes, and behavior of families from various racial, ethnic, religious, cultural, and geographic backgrounds that are relevant to program effectiveness?
- acknowledge intergenerational relationships and responsibilities among family members?

Principle 6. Support of vulnerable families. Families in greatest economic and social need, as well as those determined to be most vulnerable to breakdown, should be included in government policies and programs.

Does the policy or program:

- identify and publicly support services for families in the most extreme economic or social need?
- give support to families who are most vulnerable to breakdown and have the fewest resources?
- target efforts and resources toward preventing family problems before they become serious crises or chronic situations?



Where research meets policy on family issues

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