

IPU BIBLIOGRAPHY

MICHIGAN STATE UNIVERSITY ■ INSTITUTE OF PUBLIC UTILITIES Regulatory Research and Education

GREEN JOBS

JULY 2011 ■ ipu.msu.edu

- Alvarez, G. C., et al. (2009). Study of the effects on employment of public aid to renewable energy sources. Universidad Juan Carlos. [\[link\]](#).

Abstract: "Europe's current policy and strategy for supporting the so-called 'green jobs' or renewable energy dates back to 1997, and has become one of the principal justifications for U.S. 'green jobs' proposals. Yet an examination of Europe's experience reveals these policies to be terribly economically counterproductive."

- Bezdek, R. H. (2009). Green Collar Jobs in the U.S. and Colorado: Economic Drivers for the 21st Century. *American Solar Energy Society*.

Abstract: "If U.S. policymakers aggressively commit to programs that support the sustained orderly development of RE&EE, our national prospects look even brighter. According to research conducted by the American Solar Energy Society (ASES) and Management Information Services, Inc. (MISI), the renewable energy and energy efficiency industry could—in a crash effort—generate up to \$4.3 trillion in revenue in the United States and create more than 37 million jobs by the year 2030. These 37 million jobs would represent nearly one out of every four jobs in 2030, and many would be jobs that could not easily be outsourced."

- Borenstein, S. (2008). The Market Value and Cost of Solar Photovoltaic Electricity Production (CSEM WP 176). *Berkeley, CA: Center for the Study of Energy Markets*. [\[link\]](#).

Abstract: "The high cost of power from solar photovoltaic (PV) panels has been a major deterrent to the technology's market penetration. Proponents have argued, however, that typical analyses overlook many of the benefits of solar PV. Some of those benefits are in the realm of environmental and security externalities, but others occur within the electricity markets. In this paper, I attempt to do a more complete market valuation of solar PV."

- Chen, C., et al. (2007). Weighing the Costs and Benefits of State Renewables Portfolio Standards: A Comparative Analysis of State-Level Policy Impact Projections (LBNL-61580). *Berkeley, CA: Lawrence Berkeley National Laboratory*. [\[link\]](#).

Abstract: "This report synthesizes and analyzes the results and methodologies of 28 distinct state or utility level RPS cost impact analyses completed since 1998.1 Together, these studies model proposed or adopted RPS policies in 18 different states. We highlight the key findings of these studies on the costs and benefits of state RPS policies, examine the sensitivity of projected costs to model assumptions, assess the attributes of different modeling approaches, and suggest possible areas of improvement for future state RPS analysis."

- The Council of State Governments (2011). Green Jobs Created or Saved in the Final Quarter by the Recovery Act. [\[link\]](#)

Abstract: "The 51,750.84 green jobs created and saved were reported by state and local governments for the period of October 1, 2010 to December 31, 2010. Jobs are not counted cumulatively across quarters because of 2009 OMB guidance. Recovery Act funded projects that created or saved green jobs included any that contributed to energy efficiency, environmental clean-up and protection, sustainable development, or other related ventures. The top map displays the total amount of green jobs created in each state, while the bottom map expresses what percentage of total jobs created or saved in a state through the Recovery Act are considered green jobs under this report's definition."

- Division of Energy Planning (2009). The Economic Impacts of Vermont Feed in Tariffs. *Vermont Department of Public Service*.

Abstract: "The analysis found the Feed in Tariff program is expected to increase Vermont capital investment and create jobs during its 26 year life cycle. However, the net gain in employment was found to be far less than conventionally thought with long term winners and losers by sector. Following an initial increase in temporary construction-related jobs long term employment averaged 13 full time jobs per year. This total includes both direct and indirect employment in the energy sector as well as the job and income related effects of increased electricity costs."

- Engel, D., and Kammen, D. M. (2009). Green Jobs and the Clean Energy Economy. *Copenhagen Consensus Center*. [\[link\]](#)

Abstract: "The jobs study undertaken by UC Berkeley provides a clear indication that the renewable energy sector generates more jobs per unit of energy delivered than the fossil fuel sector. A portfolio of technologies and policies are needed to reach GHG reduction goals in a timely and cost effective manner: energy efficiency, renewable energy mandates (such as a Renewable Portfolio Standard), and nuclear power all have an important role to play in reducing CO2 emissions while generating large numbers of jobs at the same time."

- Global Insight. (2008). U.S. Metro Economies: Current and Potential Green Jobs in the U.S. Economy. *The United States Conference of Mayors*. [\[link\]](#)

Abstract: "Dwindling natural resources, growing global demand for energy, climate change – these issues are irrevocably altering our global economy. In this report, the U.S. Conference of Mayors and Global Insight have examined the economic benefits of the 'Green Economy' - that part of economic activity which is devoted to the reduction of fossil fuels, the increase of energy efficiency, and the curtailment of greenhouse gas emissions. The greening of the U.S. economy, of the global economy, is not a dismantling of the past, but a new step forward – the next step in a continuous process of economic growth and transformation that began with industrialization and led us through the high-tech revolution."

- Gurcan, G. (2011). Defining, Measuring, and Predicting Green Jobs. Copenhagen Consensus Center. [\[link\]](#)

Abstract: "Overall, we conclude that adding "net jobs" cannot be defended as another benefit of investing in green energy (alternative energy technologies, energy efficiency and conservation). Each option offers benefits such as lower emissions and a more diversified portfolio, albeit at different levels. Models in studies reviewed analyze alternative scenarios and show net job gains but these are based on assumptions that are very aggressive (e.g.,

relative to official forecasts) and unrealistic (e.g., relative to the current state of technology, existing set of energy and environmental policies, availability of factors of production including financing – capital, shortage of infrastructure, uncertainty about consumer adoption and so on)."

- Kammen, D. M., et al. (2004). Putting Renewable to Work: How Many Jobs Can the Clean Energy Industry Generate? *Berkeley CA: Renewable and Appropriate Energy Laboratory*. [\[link\]](#).

Abstract: "Expanding the use of renewable energy is not only good for our energy self-sufficiency and the environment; it also has a significant positive impact on employment. This is the conclusion of 13 independent reports and studies that analyze the economic and employment impacts of the clean energy industry in the United States and Europe. These studies employ a wide range of methods, which adds credence to the findings, but at the same time makes a direct comparison of the numbers difficult. In addition to reviewing and comparing these studies, we have examined the assumptions used in each case, and developed a job creation model which shows their implications for employment under several future energy scenarios."

- Michaels, R., and Murphy, R. P. (2009). Green Jobs: Fact or Fiction?. *Houston, TX: Institute for Energy Research*. [\[link\]](#).

Abstract: "In the present article we critically examine four recent studies on the alleged benefits of government programs to foster green job creation: the Center for American Progress' (CAP) Green Recovery: A Program to Create Good Jobs and Start Building a Low-Carbon Economy, the Political Economy Research Institute's (PERI) Job Opportunities for the Green Economy: A State-by-State Picture of Occupations that Gain From Green Investments, the U.S. Conference of Mayors' Current and Potential Green Jobs in the U.S. Economy, and finally the American Solar Energy Society's (ASES) Renewable Energy and Energy Efficiency: Economic Drivers for the 21st Century. Although each report is unique, a common characteristic is that they all rest on incomplete economic analysis, and consequently greatly overstate the net benefits of their policy recommendations. Below we summarize these general problems, while in subsequent sections we analyze each report in turn."

- Morriss, A. P., et al. (2009). Green Job Myths (LE09-001). *Champaign, IL: University of Illinois Law and Economics*. [\[link\]](#).

Abstract: "In this Article, we survey the green jobs literature, analyze its assumptions, and show how the special interest groups promoting the idea of green jobs have embedded dubious assumptions and techniques within their analyses. Before undertaking efforts to restructure and possibly impoverish our society, careful analysis and informed public debate about these assumptions and prescriptions are necessary."

- Pollin, R., and Wicks-Lim, J. (2008). Job Opportunities for the Green Economy: A State-by-State Picture of Occupations that Gain from Green Investments. *Amherst, MA: Political Economy Research Institute*. [\[link\]](#).

Abstract: "This report provides a snapshot of what kinds of jobs are needed to build a green economy in the United States. We focus on six key strategies for attacking global warming and highlight some of the major "green jobs" associated with each of these approaches."

- Pollin, et al. (2008). *Green Recovery: A Program to Create Good Jobs and Start Building a Low-Carbon Economy*. Washington DC: Center for American Progress. [\[link\]](#).

Abstract: "This report outlines a green economic recovery program to strengthen the U.S. economy over the next two years and leave it in a better position for sustainable prosperity. In the pages that follow, we detail how to expand job opportunities by stimulating economic growth, stabilizing the price of oil, and making significant strides toward fighting global warming and building a green, low-carbon economy."

- Singh, V., et al. (2001). *The Work that Goes into Renewable Energy (Report #13)*. Washington DC: Renewable Energy Policy Project. [\[link\]](#).

Abstract: "Specifically, this study estimates the total hours required to manufacture, install and service wind power and solar photovoltaics (PV). For biomass co-firing, this study estimates the hours needed to collect, transport and process biomass to fuel a portion of a power plant primarily fueled by coal. The study is based upon extensive surveys of firms with U.S. operations. The co-firing study also includes literature review since commercial operations are still few."

- Varshney, S. B., and Tootelian, D. H. (2010). *Cost of AB 32 on California Small Business—Summary Report of Findings*. Sacramento, CA: California State University, Sacramento. [\[link\]](#).

Abstract: "On average, the annual costs resulting from the implementation of AB 32 to small businesses are likely to result in loss of more than \$182.6 billion in gross state output, the equivalent of more than 1.1 million jobs, nearly \$76.8 billion in labor income, and nearly \$5.8 billion in indirect business taxes."

- White, S., and Walsh, J. (2008). *Greener Pathways: Jobs and Workforce Development in the Clean Energy Economy*. Madison, WI: Center on Wisconsin Strategy. [\[link\]](#).

Abstract: "Broadly defined, 'green jobs' is not a salient category for policy innovation or workforce training. To make real progress on economic and workforce development in the new energy economy, we must focus more carefully on key clean energy sectors. Greener Pathways does just that, by detailing current economic and workforce development opportunities in three leading industries: energy efficiency, wind, and biofuels. The report also examines federal resources that can support state green jobs initiatives, including programs in the Departments of Energy and Labor, and the Green Jobs Act included in the 2007 Energy Independence and Security Act. We conclude by outlining a plan of action for state policymakers, highlighting policy, program, and system reform opportunities to embrace the greener and more equitable promise of the new energy economy."

- Wiser, R., and Bolinger, M. (2008). *Annual Report on U.S. Wind Power Installation, Cost, and Performance Trends: 2007*. Washington DC: Department of Energy. [\[link\]](#).

Abstract: "The U.S. wind industry experienced unprecedented growth in 2007, surpassing even optimistic projections from years past. This rapid pace of development has made it difficult to keep up with trends in the marketplace. Yet, the need for timely, objective information on the industry and its progress has never been greater. This report—the second of an ongoing annual series—attempts to meet this need by providing a detailed overview of developments and trends in the U.S. wind power market, with a particular focus on 2007."

▯ Worldwatch Institute (2008). *Green Jobs: Towards decent work in a sustainable, low-carbon world*. Nairobi, Kenya: United Nations Environment Programme. [link].

Abstract: "Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World assembles evidence—quantitative, anecdotal, and conceptual—for currently existing green jobs in key economic sectors (renewable energy, buildings and construction, transportation, basic industry, agriculture, and forestry) and presents estimates for future green employment. The pace of green job creation is likely to accelerate in the years ahead. A global transition to a low-carbon and sustainable economy can create large numbers of green jobs across many sectors of the economy, and indeed can become an engine of development. Current green job creation is taking place in both the rich countries and in some of the major developing economies."