Title: Clean Energy and Jobs: A comprehensive approach to climate change and energy policy.

Author: James P. Barrett and J. Andrew Hoerner
Contributing Authors: Steve Bernow and Bill Dougherty

Organization: Economic Policy Institute and Center for a Sustainable Economy

Author Contact: http://epinet.org or http://sustainableeconomy.org

Publication Type: Policy analysis case study

Publication Date: 2002

# of Pages: 52 pp.

URL: http://www.epi.org/studies/cleanenergyandjobs.pdf

Summary: "A broad consensus is emerging that the U.S. needs to improve its energy efficiency and diversify its sources of energy supply. Industry and workers realize that they need energy sources that are reliable and secure against international price shocks and domestic market manipulation. Consumers seek lower, more predictable energy bills. Environmentalists seek to reduce adverse impacts at every point on the fuel cycle, from extraction through combustion." "Then, environmental concerns arise from the fact that fossil fuel combustion emits greenhouse gases that most climate scientists believe cause global warming and climate instability."

"This study assesses the impact of an alternative approach to climate and energy policy and attempts to assemble a set of four policies that would provide moderate but steady increases in energy efficiency and reductions in carbon emissions, while improving overall economic efficiency. This alternative policy package would be self-funding, paid entirely by the tax receipts it generates and it’s designed to minimize the burden on workers and consumers and provide help for those who would suffer if energy production were reduced."

Key Findings: Key Findings of Survey/Study:
- Comparable reductions can be achieved when a modest carbon charge ($50/ton) is applied in conjunction with policies designed to promote the adoption of energy-efficient technologies.
- "Modest macroeconomic gains resulting from this policy set, gains that in the aggregate, substantially outweigh the losses forecast for a few sectors."
- There are economic gains to be had by increased adoption of existing technologies where there is an acceleration of the currently occurring rate of energy efficiency and productivity improvement through the additional research and coordination of private efforts.
- The economic impact of this set of policies is small but includes large reductions in oil imports and serious employment declines in certain sectors while the environmental benefits are quite substantial.
- An acceleration of the currently occurring rate of energy efficiency and productivity improvement and a reduction of the cost of transition toward cleaner energy systems.
- Findings suggest that the appropriate direction for both research and policy development lies in the exploration of comprehensive policy packages, as have been pursued in countries that have adopted stronger carbon reduction policies.
- Economic costs and benefits of a climate and energy policy depend critically on elements of the policy design. Costs are reduced and benefits enhanced by returning the revenue from carbon/energy charges through cuts in other taxes, and through more rapid introduction of new energy technologies; these two policies together can yield a net economic benefit.
- The combination of technology promotion and well-designed policies to offset competitive burdens can reduce the harm to most energy-intensive industries to low or negative levels.
- Consumers and income distribution need not be harmed and can even benefit.
- Substantial compensation can be provided to affected workers and industries without negating the general economic benefit.
- The model used in this policy set finds that despite increases in energy prices, expenditures on energy fall substantially, and so family budgets are not adversely affected by rising energy bills.

Recommendations: Alternative policy package:
- A modest carbon/energy tax on major energy sources, with most of the revenues returned through cuts in taxes on wages.
- A set of policies to promote the development of new energy-efficiency and renewable energy technologies.
- Policies to offset competitive impacts on energy-intensive industries.
- Transitional assistance to compensate any workers and communities harmed by the policies.

**Definition of “Green”**

**Green** is any activity or service that sustains the environment.

**Green collar jobs**: blue collar jobs in green businesses, e.g. manual labor jobs in businesses whose products and services directly improve environmental quality.

**Methodology**

Literature research, experience of other nations, macroeconomic analysis, technology assumptions

**Data Sources Cited**

US Department of Energy models and studies, Long-term Interindustry Forecasting Tool (LIFT) macroeconomic) model

**Report Geography**

National

**Green Occupations Cited**

None cited.

**Green Industries Cited**

- Electric and Gas Utilities
- Energy-Intensive Industries
- Manufacturing
- Auto
- Trucking
- Transportation
- Building
- Electricity
- Wind, Solar, Geothermal, and Biomass
- Agriculture, Forestry, and Fisheries
- Natural Gas
- Water and Sanitary Services
- Waste Stream Diversion
- Steel
- Petroleum, Crude Petroleum, and Petroleum Refining
- Paper
- Plastic Products
- Stone, Clay, and Glass
- Metal Products
- Non-metallic Mining
- Construction
- Engines and Turbines
- Railroads
- Water Transport

**Keywords**

Greenhouse gases; Renewable energy sources; Clean energy technologies; Policy package; Energy efficiency; Public energy programs

**Legislation Cited**

Clinton Administration’s BTU tax proposal, Clean Air Act, Climate Change Technology Initiative

**Bibliography (Y/N)**

Yes

**Reviewer Name/Org**

S. Williams, State of California