

**Strategies to Promote U.S. Economic Recovery and Long-Run Growth:  
What Role for Energy and Climate Change Policy?**

**By**

**Margo Thorning, Ph.D.**

**Senior Vice President and Chief Economist**

**American Council for Capital Formation**

**Before the**

**Select Committee on Energy Independence  
and Global Warming**

**U.S. House of Representatives**

**September 18, 2008**

**Executive Summary**

**Is Further Intervention Needed to Restore Strong U.S. Growth?**

The outlook for the U.S. economy is uncertain, credit markets are in turmoil with takeover of Fannie Mae and Freddie Mac, the failure of Lehman Brothers, and the possibility that other large companies may fail. In addition, there is no sign that housing prices have stabilized. Housing prices today are down 16.0% from a year ago and there is a 10-month inventory compared to a normal 6 months' supply. A question facing policymakers is whether the U.S. needs an additional fiscal stimulus package in order to "prime the economic pump." One possible course of action is to try to address the fundamental economic problems bedeviling the U.S.: falling housing prices and turmoil in the financial markets which has led to tight credit for households and businesses.

**Renewable Energy: How Would Additional Spending Impact U.S. Economic Growth?**

Rising energy costs have played a role in the current U.S. economic slowdown and security of supply remains an important concern for households, business, and government. Some suggest that enlarging the current U.S. effort to replace conventional fossil fuels (coal, oil, and natural gas) with renewables could provide new jobs and help restore strong economic growth. For example, a recent report, "Green Recovery: A Program to Create Good Jobs and Start Building a Low-Carbon Economy" by The Center for American Progress (CAP) calls for \$100 billion over 2 years in new expenditures on a variety of programs, including expanding production of wind power, solar power and the next generation of biofuels to help jump start a U.S. economic recovery. The CAP study estimates that \$100 billion in federal spending on green infrastructure would create approximately 2 million jobs within 2 years. CAP proposes to raise the \$100 billion by either an increase in the federal deficit or by imposing a cap and trade system on greenhouse gas emissions that could raise between \$75 and \$200 billion per year.

### **Concerns about the CAP Report**

The analysis uses an inappropriate economic model and omits key factors that could negate its principal conclusions pertaining to job creation. More specifically, the study does not consider the negative economic consequences that would occur from replacing lower cost energy with higher cost energy – a key factor in any analysis of this kind. Furthermore, the report employs questionable use of data and methods in its analysis that further undermines the validity of its results and conclusions.

The CAP report proposes to fund the \$100 billion outlay on green projects by either a cap and trade system which auctions the right to emit carbon or by having the U.S. government run a larger deficit. Imposing a cap and trade system to reduce GHGs would raise energy costs and slow U.S. economic growth.

### **Strategies for Promoting Economic Growth, Energy Security and Global GHG Reductions**

Getting the U.S. economy back on track for strong growth in jobs and household income may require policy changes which restore stability to the housing and credit markets and avoid further disruptions to energy markets. However, at this time it would be prudent to wait to see how the economy reacts to the recent actions of the Federal Reserve Board and the U.S. Treasury to shore up U.S. financial markets before putting any more taxpayer dollars at risk in an attempt to stimulate economic recovery.

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**Introduction**

Mr. Chairman and members of the House Select Committee on Energy Independence and Global Warming, my name is Margo Thorning, senior vice president and chief economist, American Council for Capital Formation (ACCF),\* Washington, D.C. I am pleased to present this testimony to the Committee.

The American Council for Capital Formation represents a broad cross-section of the American business community, including the manufacturing and financial sectors, Fortune 500 companies and smaller firms, investors, and associations from all sectors of the economy. Our distinguished board of directors includes cabinet members of prior Democratic and Republican administrations, former members of Congress, prominent business leaders, and public finance and environmental policy experts. The ACCF is celebrating over 30 years of leadership in advocating tax, regulatory, environmental, and trade policies to increase U.S. economic growth and environmental quality.

Chairman Markey, Ranking Member Sensenbrenner, and the members of the Select Committee on Energy Independence and Global Warming are to be commended for their focus on improving the current sluggish U.S. economy as well as enhancing energy security and reducing the growth of greenhouse gas emissions so as to mitigate the threat of human-induced climate change. The questions we need to ask are first, what policy options will do the most to restore strong U.S. economic growth and second, how do energy and climate change policy fit into the picture? My testimony will address these key issues.

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\* *The mission of the American Council for Capital Formation is to promote economic growth through sound tax, environmental, and trade policies. For more information about the Council or for copies of this testimony, please contact the ACCF, 1750 K Street, N.W., Suite 400, Washington, D.C. 20006-2302; telephone: 202.293.5811; fax: 202.785.8165; e-mail: [info@accf.org](mailto:info@accf.org); website: [www.accf.org](http://www.accf.org)*

## **Is Further Intervention Needed to Restore Strong U.S. Growth?**

The outlook for the U.S. economy is uncertain, credit markets are in turmoil with takeover of Fannie Mae and Freddie Mac, the failure of Lehman Brothers, and the possibility that other large companies may fail. In addition, there is no sign that housing prices have stabilized. Housing prices today are down 16.0% from a year ago and there is a 10-month inventory compared to a normal 6 months' supply. Consumer demand, the major driver of U.S. economic growth, is rising at less than half its normal rate of 3-3.5 % per year. Unemployment rose to 6.1% last month compared to 4.7% last year. The Consumer Price Index rose at an annual rate of 5.4% in August and Gross Domestic Product (GDP) has grown by less than 1% over the last four quarters. Some analysts suggest that the U.S. economy may be entering a period of stagflation (rising prices and little or no economic growth). Another challenge is the rising Federal deficit, which is projected to be nearly 3% of GDP this year. Finally, many of our trading partners such as Germany, the UK, and Japan are close to recession and growth even in boom countries like China, India, and Hong Kong is slowing down. A slowdown in global economic growth makes a U.S. economic rebound more difficult.

A question facing policymakers is whether the U.S. needs an additional fiscal stimulus package in order to "prime the economic pump." One possible course of action is to try to address the fundamental economic problems bedeviling the U.S.: falling housing prices and turmoil in the financial markets which has led to tight credit for households and businesses.

- **Housing Market Stabilization**

Preventing further sharp drops in U.S. housing prices is key to restoring consumer confidence and economic growth, according to many experts. A new analysis Dr. Jan Hatzius of Goldman, Sachs and Co. ([www.brookings.edu/economic/bpea/bpea.aspx](http://www.brookings.edu/economic/bpea/bpea.aspx)) points out that the U.S. housing downturn impacts the economy in four ways: (1) residential construction has declined sharply; (2) declining income in the housing sector impacts other sectors (for example laid-off construction workers and real estate agents cut back on consumer spending, homebuilders and their subcontractors invest less, and so on as the effects ripple through the economy); (3) declining house prices weigh on personal consumption through a negative wealth and/or mortgage liquidity effect; and (4) mortgage credit losses deplete the equity capital of leveraged financial institutions and persuade them to reduce their financial leverage, resulting in reductions in credit to households and nonfinancial businesses.

Breaking this spiral of declining housing prices should be given the highest priority by policymakers, according to experts like Martin Feldstein, George F. Baker Professor of Economics at Harvard and President Emeritus of the National Bureau of Economic Research. In a recent article, Dr. Feldstein notes that 10 million homeowners have mortgages that exceed the value of their homes. For half of this negative equity group, their debt exceeds the value of their house by more than 20 percent. If house prices fall

another 15%, the number of homeowners with negative equity will rise to 20 million. To help stabilize housing prices, Dr. Feldstein proposes a plan of “mortgage replacement loans,” which he suggests would stop the downward spiral of house prices (<http://www.ft.com/cms/s/0/29e69ebc-736f-11dd-8a66-0000779fd18c.html>).

The basic idea is to provide an incentive to stop defaults among those homeowners who have positive equity but are vulnerable to further price declines. Under the Feldstein plan, the federal government would offer every homeowner with a mortgage the opportunity to replace 20% of that mortgage with a low-interest government loan – up to a loan limit of \$80,000 – that reflects the government’s lower borrowing rate. Creditors would be required to accept this partial mortgage pay-down and to reduce the monthly interest and principal by the same 20%. That mortgage replacement loan would not be collateralized by the house but would be a loan that the government could enforce by lodging a claim on an individual who does not pay. With the mortgage replacement loan, people who now have a mortgage equal to 90% of their house value would see that mortgage fall to just 72% of the house value, implying that it would take a very unlikely price fall of more than 28% to push those individuals into negative equity. By stopping the downward overshooting of house prices, Dr. Feldstein concludes that the mortgage replacement program would help all homeowners, including those who now have negative equity. Limiting the destruction of homeowners’ wealth would help to maintain consumer spending, boosting production and employment.

- **Strengthening the U.S. Financial System**

Strengthening the U.S. financial markets and restoring investor confidence should also be a key goal for policymakers. Without access to credit by homeowners and business, strong U.S. economic growth will not resume. The recent actions taken by the Board of Governors of the Federal Reserve, including putting Fannie Mae and Freddie Mac into conservatorship and broadening the types of assets against which financial firms can borrow through its Primary Dealer Credit Facility, should help restore confidence both in the U.S. and abroad.

Longer term reforms such as those outlined in the U.S. Treasury’s *Blueprint for a Modernized Financial Regulatory Structure* in March 2008 should also be given serious consideration. Briefly, the short-term recommendations include improvements to regulatory coordination and oversight that regulators can make quickly. The *Blueprint* recommends creating a new federal commission for mortgage origination to protect consumers better. The report also recommends modernizing the President's Working Group on Financial Markets and clarifying the Federal Reserve's liquidity provisioning. The intermediate-term recommendations focus on eliminating some of the duplication in our existing regulatory system, but more importantly they offer ways to modernize the regulatory structure for certain financial services sectors within the current framework. Recommendations include eliminating the thrift charter, creating an optional federal charter for insurance and unifying oversight for futures and securities. The long-term recommendation is to create an entirely new regulatory structure using an objectives-based approach for optimal regulation. The structure will consist of a market stability

regulator, a prudential regulator, and a business conduct regulator with a focus on consumer protection.

### **What Role Should Energy Policy Play in Stimulating U.S. Economic Recovery?**

- **Renewable Energy: How Would Additional Spending Impact U.S. Economic Growth?**

Rising energy costs have played a role in the current U.S. economic slowdown and security of supply remains an important concern for households, business, and government. Some suggest that enlarging the current U.S. effort to replace conventional fossil fuels (coal, oil, and natural gas) with renewables could provide new jobs and help restore strong economic growth. For example, a recent report, “Green Recovery: A Program to Create Good Jobs and Start Building a Low-Carbon Economy” by The Center for American Progress (CAP) ([http://www.americanprogress.org/issues/2008/09/pdf/green\\_recovery.pdf](http://www.americanprogress.org/issues/2008/09/pdf/green_recovery.pdf)), states that more expenditures on a variety of programs, including expanding production of wind power, solar power and the next generation of biofuels, would help jump start a U.S. economic recovery. The CAP study estimates that \$100 billion in federal spending on green infrastructure would create approximately 2 million jobs within 2 years. CAP proposes to raise the \$100 billion by either an increase in the federal deficit or by imposing a cap and trade system on greenhouse gas emissions that could raise between \$75 and \$200 billion per year.

- **Concerns about the CAP Report**

The analysis omits key factors that could negate its principal conclusions pertaining to job creation. More specifically, the study does not consider the negative economic consequences that would occur from replacing lower cost energy with higher cost energy – a key factor in any analysis of this kind. Furthermore, the report employs questionable use of data and methods in its analysis that further undermines the validity of its results and conclusions.

- **Inappropriate Choice of Economic Model**

The CAP analysis did not employ a macroeconomic model which has the capability to measure the impact of a shock to the economic system of shifting from lower cost fossil fuels for electricity generation to higher cost renewables (see **Figure 1**). A macroeconomic model can measure the impact of an energy price rise as it flows through the whole economy while an input-output model such as that used in by the CAP report is not able to capture the dynamic impact on the economy of increases in factors like interest rates or energy prices. Instead, the CAP analysis uses the U.S. National Input-Output Accounts that are not capable of measuring the dynamic impact of energy price changes.

The CAP report proposes to fund the 100 billion outlay on green projects by either a cap and trade system which auctions the right to emit carbon or by having the U.S. government run a larger deficit. Imposing a cap and trade system to reduce GHGs would raise energy costs and slow U.S. economic growth.

- **Impact of a Cap and Trade Program to Reduce GHGs**

A macroeconomic analysis of the impact of the Lieberman/Warner Climate Security Act (S.2191), which requires a 40% reduction in covered GHG emissions by 2030, released earlier this year by the American Council for Capital Formation and the National Association of Manufacturers showed that by 2014, the total cost of the emission allowances that industry would need to purchase that year amounts to between \$73 and \$78 billion dollars (see **Table 1**). The drag of higher energy prices caused by the cap and trade system in S.2191 reduces total U.S. employment (net of new jobs created in green industries) by 850,000 to 1,860,000 jobs in 2014, depending on whether the low cost or high cost scenario prevails (see study at <http://www.accf.org/pdf/NAM/fullstudy031208.pdf>). Thus, if the CAP “green recovery” plan was paid for by imposing a cap and trade system to raise \$50 billion (or more) per year, economic recovery would be slowed, not enhanced. Similarly, increasing the federal deficit by \$50 billion per year is likely to raise interest rates which will also slow overall economic and job growth.

In addition, the U.S. government is already spending billions of dollars annually to develop renewable energy. In fact, in FY 2007 renewable energy received the largest amount of federal subsidies of all U.S. energy sources (see **Figure 2**). While we need all types of energy, renewables are not expected to increase their share of U.S. energy production to much more than the current level of 7 percent by 2030, according to the U.S. Department of Energy. Furthermore, the U.S. does not have the trained engineers and manpower to spend additional billions of dollars on renewables productively over a two-year period. Much of the money called for in the CAP’s two-year project would simply be wasted. If it is true that the most significant problem facing U.S. homeowners is declining housing prices, it seems unlikely that CAP’s proposal to spend large additional amounts of taxpayer dollars on renewable energy projects will address this fundamental issue.

### **Other Concerns with the CAP Report**

- The analysis makes use of questionable data. The study cites that on average, subsidies and incentives to the oil industry add up to \$9.0 billion annually. However, the Department of Energy’s Energy Information Agency (EIA) reported that during FY 2007 federal subsidies and support to natural gas and petroleum liquids totaled \$2.1 billion (see **Figure 2**).
- In terms of electricity production, EIA reported that natural gas and petroleum liquids subsidies were \$0.25 per megawatt hour, significantly lower than solar (\$24.34 per megawatt hour) and wind (\$23.37 per megawatt hour (see **Table 2**).



- For non-electric energy subsidies it is a similar story. The EIA reports that natural gas and petroleum liquid subsidies in FY2007 were equivalent to \$0.04 per million Btu. *This is significantly lower than either ethanol/biofuels (\$5.72 per million Btu) or solar (\$2.82 per million Btu).*

In sum, the results of the CAP study are suspect due to the deficiencies in the analysis as explained above. There is no doubt that increased use of commercially viable renewable energy and conservation should be objectives of U.S. energy policy going forward. However, these objectives are advanced with analysis that does not stand up to close scrutiny.

### **Accelerating U.S. Energy Efficiency and GHG Reductions**

U.S. economic growth and energy use go hand in hand; each 1% increase in U.S. GDP has historically been accompanied by a 0.3% increase in energy use. The U.S. Department of Energy projects that the U.S. will need approximately 19% more energy by 2030 to accommodate our growing population, higher levels of employment, and economic activity.

The development of various high technology programs and new energy efficient investments can be accelerated through government programs as well as by reforms to the federal tax system. For example, some policies may be of particular help to taxable entities while others would be of more benefit to cooperatives (which pay little or no federal income tax).

### **Companies Subject to the Federal Income Tax**

The efforts of U.S. industries to increase energy security and efficiency and to reduce growth in GHG emissions are hindered by the slow rate of capital cost recovery allowed under the U.S. federal tax code and by the high U.S. corporate tax rate. As a recent Ernst & Young international comparison shows, the U.S. ranks last or nearly last among our trading partners in terms of how quickly a dollar of investment is recovered for many key energy investments. For example, a U.S. company gets only 29.5 cents back after 5 years through depreciation allowances for each dollar invested in “smart meters,” which can substantially reduce electricity use. In contrast, in India an investor gets \$1.00 back in 5 years and in Germany the figure is 63.1 cents. (See full report at: <http://www.accf.org/pdf/Energy-Depreciation-Comparison.pdf>.)

In addition to slow capital cost recovery allowances, U.S. industry faces the highest corporate income tax rates among our primary trading partners. Of the 12 countries in the E&Y survey, only Japan had a higher corporate tax rate than the U.S. Reforms to the U.S. tax code to speed up capital cost recovery allowances and reduce the corporate tax rate would reduce the cost of capital and could have a positive impact on energy sector investment, and help “pull through” more energy efficient, cleaner, less-emitting technologies.



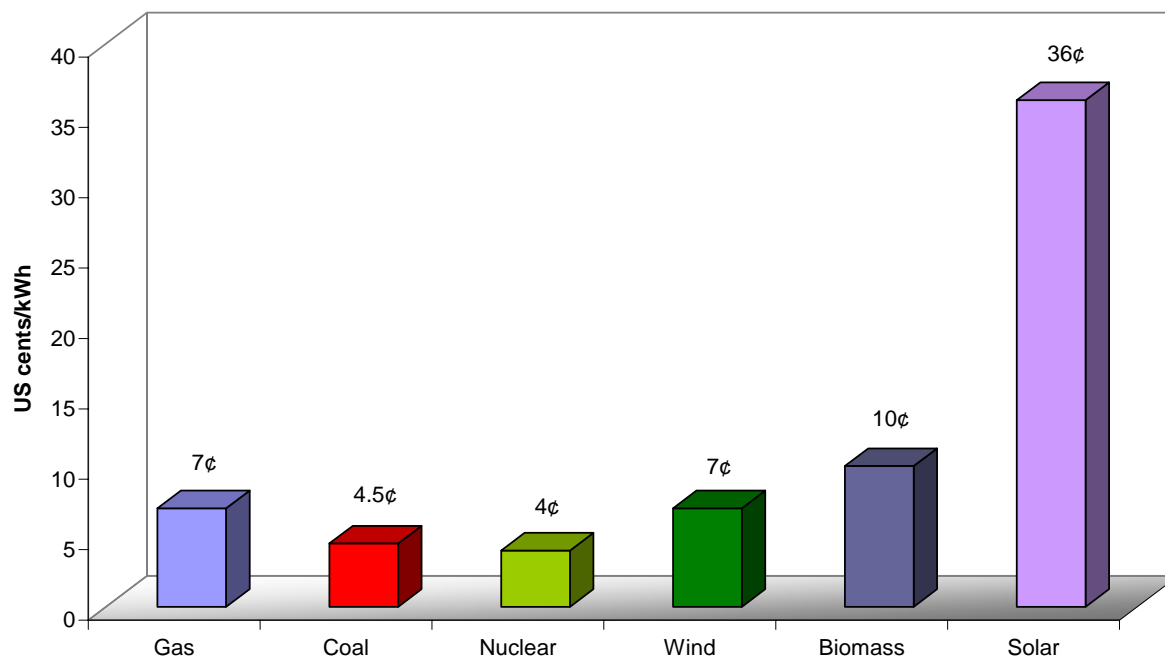
## **Strategies for Promoting Economic Growth, Energy Security and Global GHG Reductions**

Getting the U.S. economy back on track for strong growth in jobs and household income may require policy changes which restore stability to the housing and credit markets and avoid further disruptions to energy markets. However, at this time it would be prudent to wait to see how the economy reacts to the recent actions of the Federal Reserve Board and the U.S. Treasury to shore up U.S. financial markets before putting any more taxpayer dollars at risk in an attempt to stimulate economic recovery. In addition, looking to the next administration, which will take over in January 2009, policymakers need to promote U.S. energy supplies of all types and avoid unrealistic climate change policies. Allowing increased access to both off-shore and on-shore areas for drilling and exploration would also have a positive impact on U.S. energy supplies.

U.S. economic growth and energy use go hand in hand; each 1% increase in GDP is accompanied by a 0.3% increase in energy use. Climate change is a global problem and meaningful reductions in greenhouse gas emissions will require the participation of developing and industrializing countries such as India, China, Brazil, Indonesia, and others whose emissions are growing rapidly. While reducing U.S. GHG growth is a worthwhile goal, it is important to realize that without international participation, U.S. sacrifices in terms of higher energy prices and reduction in energy use will slow our own economy with no meaningful reduction in global GHG emissions.

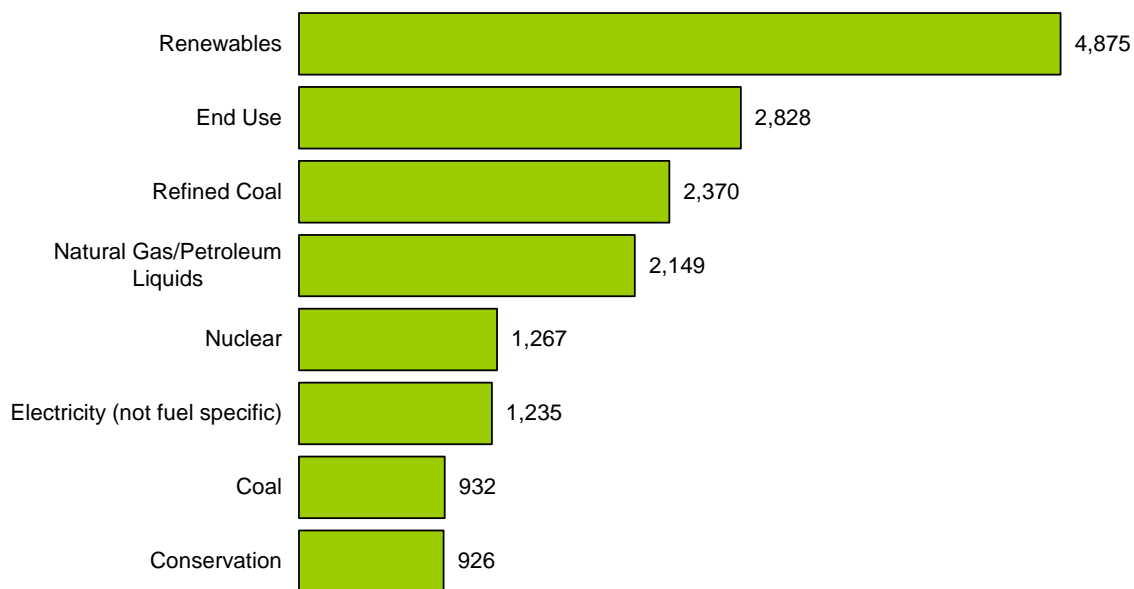
The questions being raised by this committee – specifically linkages between economic recovery, long-run growth combined with the role of energy and climate change policy – are important questions. Finding constructive policies that will create productive jobs for our growing population – while addressing the concern over greenhouse gases at the same time – is a very important policy challenge for this country and it is good those questions are being addressed by this committee.

**Figure 1. Cost of Electricity  
(20 Year Levelized Costs)**



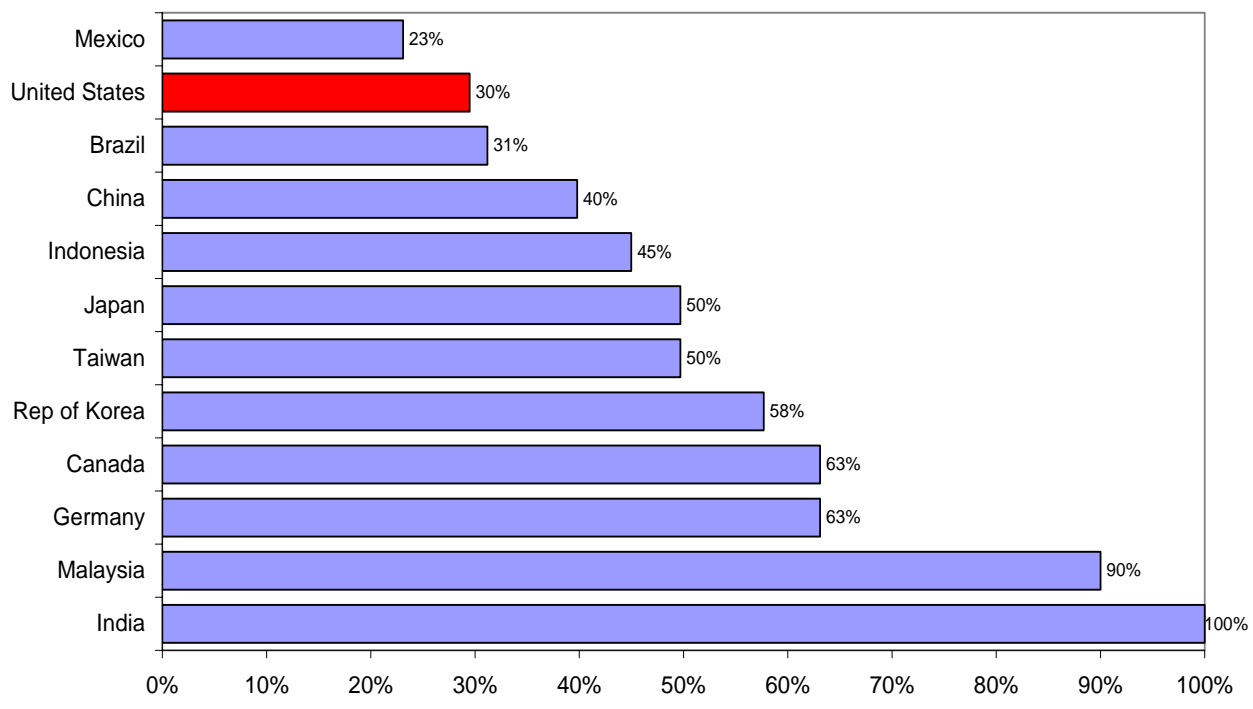
Source: "Hearing on "Unlocking America's Energy Resources: Next Generation," Written Testimony of Victor Abate, Vice President, Renewable Energy, GE Energy, May 18, 2008 (pg 7).

**Figure 2: Renewable Energy Received the Greatest Share of Energy Subsidies in FY 2007.  
Federal Energy-Specific Subsidies and Support FY 2007**



Source: Energy Information Administration, Federal Financial Interventions and Subsidies in Energy Markets 2007 (April 2008)

**Figure 3. U.S. Capital Cost Recovery for Smart Meters  
Compares Poorly with Our Trading Partners**  
(Percent of Nominal Cost Recovered After 5 Years)



**Source:** "International Comparison of Depreciation Rules and Tax Rates for Selected Energy Investments," prepared for the American Council for Capital Formation by Ernst & Young LLP, May 2007.

**Table 1. Impact of Climate Security Act (S.2191) on U.S. Economic Growth  
(Compared to Baseline Forecast)**

	Low Cost Case			High Cost Case		
	2014	2020	2030	2014	2020	2030
GDP (Billion 2007\$)	\$ 16,284	\$ 19,297	\$ 24,043	\$ 16,151	\$ 19,238	\$ 24,005
Loss in GDP (Billion 2007\$)	\$ 135	\$ 151	\$ 631	\$ 269	\$ 210	\$ 669
% Loss	0.8%	0.8%	2.6%	1.6%	1.1%	2.7%
Employment (Millions)	150.66	155.53	163.91	149.66	154.94	162.90
Job Loss (Millions)	0.85	1.22	3.04	1.86	1.80	4.05
% Loss	0.6%	0.8%	1.8%	1.2%	1.2%	2.4%
Industrial Output (Billion 2007\$)	\$ 7,695	\$ 7,844	\$ 8,002	\$ 7,575	\$ 7,726	\$ 7,904
Loss in Industrial Output (Billion 2007\$)	\$ 170	\$ 200.0	\$ 228.21	\$ 289.93	\$ 317.67	\$ 326.09
% Loss	2.2%	2.5%	2.8%	3.7%	3.9%	4.0%
Carbon Allowance Price (2007\$ / Ton CO2)	\$ 36.69	\$ 54.59	\$ 227.52	\$ 38.36	\$ 64.28	\$ 271.27
Cost of Purchasing Carbon Permits (Billion 2007\$)	\$ 77.54	\$ 100.37	\$ 207.58	\$ 77.98	\$ 116.02	\$ 279.34
Average Household Income (2007\$)	\$ 97,597	\$ 111,765	\$ 133,368	\$ 95,827	\$ 109,578	\$ 130,637
Loss (2007\$)	\$ 1,010	\$ 739	\$ 4,022	\$ 2,779	\$ 2,927	\$ 6,752
% Loss	1.0%	0.7%	2.9%	2.8%	2.6%	4.9%
Energy Expenditures (Billion 2007\$)	\$ 1,222	\$ 1,372	\$ 2,358	\$ 1,412	\$ 1,637	\$ 2,829
Loss (2007\$)	\$ 164	\$ 258	\$ 1,038	\$ 354	\$ 522	\$ 1,510
% Loss	15.5%	23.2%	78.7%	33.5%	46.9%	114.5%
Residential Electricity Price (2007\$ Cents/Kwh)	10.6	12.2	20.5	10.7	12.7	23.3
% diff	13%	28%	101%	14%	33%	129%
Industrial Electricity Prices (2007 Cents/Kwh)	7.0	8.4	16.0	7.1	8.9	18.8
%diff	21.8%	41.3%	141.5%	22.6%	49.3%	184.5%

**Source:** "Analysis of the Lieberman-Warner Climate Security Act (S.2191) Using the National Energy Modeling System (NEMS/ACCF/NAM)" (<http://www.accf.org/nam.html>)

**Table 2. Rankings of subsidies and support based on absolute amount and amounts per megawatthour of generation differ widely, reflecting substantial differences in the amount of generation across fuels.**

**Subsidies and Support to Electric Production by Selected Primary Energy Sources**

<b>Primary Energy Source</b>	<b>FY 2007 Net Generation (billion kilowatthours)</b>	<b>Subsidies and Support Allocated to Electric Generation (million FY 2007 dollars)</b>	<b>Subsidies and Support per Unit of Production (dollars/megawatthour)</b>
Natural Gas and Petroleum Liquids	919	227	0.25
Coal	1,946	854	0.44
Hydroelectric	258	174	0.67
Biomass	40	36	0.89
Geothermal	15	14	0.92
Nuclear	794	1,267	1.59
Wind	31	724	23.37
Solar	1	174	24.34
Refined Coal	72	2,156	29.81

**Source:** Energy Information Administration, Federal Financial Interventions and Subsidies in Energy Markets 2007, SR/CNEAF/2008-1 (Washington, DC, 2008).