



U.S. SENATOR MARIA CANTWELL

WASHINGTON

Report on the Energy Improvement and Extension Act of 2008

On September 23, 2008, the Senate voted overwhelmingly¹ to pass a bipartisan package of critical tax incentives which will provide the certainty and stability companies and the credit markets need to help get our economy back on track. This critical legislative package was included in the Emergency Economic Stabilization Act of 2008² and enacted into law on October 3, 2008.

The Energy Improvement and Extension Act represents real economic stimulus that will accelerate economic growth in Washington and across the country. The bill will: create over half a million new jobs by investing in our country's energy future; put money back in the pockets of middle class families; help businesses pay for R&D and other critical long-term investments; and, help rural communities cover the costs of essential government services.

This report is intended to help Washingtonians learn about these new tax incentives so they can take full advantage of them. They include:

A game-changing \$17 billion clean energy tax package that:

- Spurs renewable energy and green collar jobs growth;
- Helps Americans lower their energy bills;
- Reduces our nation's foreign oil dependence; and,
- Makes America's electricity grid more intelligent and reliable

A Landmark Two Year State Sales Tax Deduction

An Essential Two Year R&D Tax Credit Extension

Fair Treatment for Rural Counties Containing Federal Land

Protection for Families Facing a Higher Alternative Minimum Tax

¹ U.S. Senate Roll Call Vote #202 on S.Amdt. 5633 to H.R. 6049, the Renewable Energy and Job Creation Act, was agreed to by a vote of 93 to 2. Senator Cantwell voted aye.

² Division B of H.R. 1424, commonly referred to as the Economic Rescue Plan or the Wall Street Bailout Bill.

GAME-CHANGING CLEAN ENERGY TAX PACKAGE³

For the first time Congress voted to take embedded subsidies away from the mature and wildly profitable oil and gas industry and reorient \$17 billion to accelerate America's urgently needed transition to a cleaner and more renewable energy system. This bill:

Spurs Renewable Energy and Green Collar Jobs Growth

- The Emergency Economic Stabilization Act of 2008 provides a credit for every kilowatt of electricity generated from renewable sources such as wind, biomass, geothermal, and incremental hydropower for a 10-year period.
 - These credits are essential for the continued growth of the renewable energy industry and will help utilities meet Washington's renewable portfolio standard.
 - In Washington all these credits are passed on to electricity customers which helps cushion the higher transition costs of cleaner energy sources.

Harnessing Abundant and Fuel Free Wind Energy

The wind production tax credit (PTC) allows utilities to utilize a tax credit of \$20 for each megawatt-hour of electricity produced within a 10-year window, lowering the cost of developing wind farms and making wind energy more affordable.

For Puget Sound Energy (PSE), Washington state's oldest and largest energy utility, extending this production tax credit will allow them to go forward with an expansion of their Wild Horse wind farm in Kittitas County, which will employ approximately 150 people during construction. PSE already owns two wind farms that have a combined energy output equivalent to meet the needs of 100,000 homes, support 40 full time jobs, and account for more than \$3.3 million in sales and property taxes in the cities and counties in which they are located.



"The passage of expanded renewable energy credits is good news for PSE customers as they look to control their energy costs, protect the environment and promote sustainable economic growth," said Kimberly Harris, Executive VP and Chief Resource Officer, Puget Sound Energy

Creating New High Wage Green Collar Jobs

The Ports of Vancouver and Longview have become the primary ports of entry for wind turbine components destined for wind farms across the Pacific Northwest. The Port of Vancouver has invested in two of the largest mobile harbor cranes in North America just to unload the turbines from ships. The local union calculates that in 2007 wind energy related work allowed longshoreman crews to clock 72,000 work hours and hire 26 full-time workers. Those work hours are expected to increase with additional wind farm growth spurred by this bill's extension of the production tax credit.



The Port's \$3.2 million heavy lift crane is capable of hoisting up to 140 metric tons, equal to the weight of a Boeing 757.

³ For more details on how to utilize these credits and to determine which complementary incentives may be offered by the state of Washington or your local utility, go to www.dsireusa.org and click on the link for Washington state.

Making the Most of Our Clean Hydropower Resources

This tax package makes it easier for incremental hydropower to qualify for a production tax credit and for the first time provides a per-kilowatt incentive for electricity generated from ocean, wave, and non-dam hydro resources.

According to a March 2007 report released by the Electric Power Research Institute (EPRI), there are 90,000 megawatts of untapped water power generation potential in the U.S. That's three times as much power as Washington state currently produces without building a single large new dam.



Grant PUD plans to use more efficient turbines to increase the capacity of the Priest Rapids and Wanapum Dams by 138 megawatts while making the dams more friendly to migrating salmon.

- The Renewable Energy and Job Creation Act includes an eight year investment tax credit (ITC) for the solar and fuel cell industries.
 - This market certainty will unleash the power of solar energy in America, catalyzing \$232 billion in clean energy investments, creating 440,000 green collar jobs by 2016, and creating as much fuel and emissions free power as 50 new coal fired plants.

Unleashing the Power of Solar

According to Navigant Consulting, the eight year extension of the 30 percent investment tax credit for solar energy properties will create 10,000 new jobs in Washington state.

The investment tax credit will boost promising solar technology manufacturers in Washington, including companies like REC Silicon, which operates the world's first fully dedicated polysilicon plant near Moses Lake. The Tri-Cities is also home to Infinia, whose cutting edge concentrating solar power technology is 25 to 30 percent more efficient than traditional photovoltaic systems.

The eight year investment tax credit also applies to fuel cells, which will help companies like Spokane-based ReliOn which manufactures a range of stationary fuel cells for emergency and backup power requirements. Senator Cantwell was also instrumental in raising an artificial incentives cap which was hindering the growth of the fuel cell industry across the country.



Infinia's Stirling Solar products convert solar energy into electricity at a lower cost and at twice the efficiency of existing solar power generation products.

- The Renewable Energy and Job Creation Act extends and expands the Clean Renewable Energy Bonds (CREBs) program that provides public power entities that cannot benefit from federal tax credits an alternative way to reduce their renewable energy investment costs.
 - The CREBs program provides public entities with “zero” percent interest bonding authority, which they can use to build certain qualifying renewable energy facilities including wind, geothermal, biomass, solar, landfill gas, trash combustion, refined coal production, and hydropower.
 - This bill also reformed the CREBs program to make it more accessible to public power entities like those across Washington. Since the CREBS program began, these Washington entities have been granted 16 CREBS projects (13 wind, one biomass, one solar, two hydro) totaling \$23.6 million

Helps Americans Lower Their Energy Bills

- Consumers can utilize up to \$10,000 in incentives to make their homes and cars more efficient.
- This bill helps homeowners generate their own electricity and hot water by extending to eight years a 30 percent tax credit on the installation of solar electric or hot water systems.
 - The Renewable Energy and Job Creation Act also lifts the previous \$2,000 incentive cap, which will encourage homeowners to put up larger solar arrays and sell their excess renewable energy to their neighbors.
 - For the first time, the credit was expanded to cover residential wind generators and geothermal heat pumps.

Putting Solar Panel on Your Roof Works, Even in Washington

While Western Washington’s solar resources are not as robust as the southwestern United States, they are still better than Germany’s, the world leader in solar installations. Some areas of Eastern Washington also have excellent solar power. In addition, the state provides Washington businesses and homes some of the most generous solar electricity generation incentives in the country. A base credit of 15 cents per kilowatt-hour of electricity generated from photovoltaic (PV) systems, which can increase up to 54 cents (up to \$2,000 annually) if the systems’ components are manufactured in Washington.

With rising and volatile electricity, natural gas, and home heating oil prices, solar power can help a homeowner and business’ bottom line. Solar water heating systems, purchased with the help of this provision, could save the average Washington homeowner \$350 per year in energy costs if they installed a four kilowatt capacity photovoltaic system. And relatively more affordable solar hot water panels can cut home water heating costs by up to 50 percent, saving up to \$125 per year.



Solar panels on a Seattle home

- Consumers can also save up to \$500 on their taxes and thousands of dollars on their energy bills by installing energy efficient products.
 - The Renewable Energy and Job Creation Act provides a 10 percent investment tax credit for purchases of advanced main air circulating fans, natural gas, propane, or oil furnaces or hot water boilers, windows, and other qualified energy-efficient technologies.

Energy Efficiency is the Most Cost-Effective Way to Reduce Energy Bills

According to a May 2008 report by the American Council for an Energy-Efficient Economy (ACEEE), energy-efficient technologies can cost-effectively reduce U.S. energy consumption 25 to 30 percent or more over the next 20-25 years. And investing in more energy-efficient technologies could result in an annual efficiency market of more than \$700 billion by 2030.

Consumers can realize many of these benefits on their home energy bills. For example:

- Homeowners that replace their windows with new Energy Star qualified models can reduce energy bills up to 15 percent, saving a typical home \$125 to \$450 a year when replacing single-pane windows.
- Properly insulating your home can knock off up to 20 percent of your annual heating and cooling bills, or nearly \$170 a year.
- High efficiency heating and cooling equipment can reduce annual energy bills nearly 10 percent, saving homeowners up to \$170 per year.
- High efficiency water heaters can save about 30 percent of a typical homeowner's water heating bill per year, translating into savings of \$75 per year.



- The Renewable Energy and Job Creation Act extends and expands tax incentives for making new residential and commercial buildings significantly more efficient which provides decades of savings.
 - For the next five years, taxpayers can deduct up to \$1.80 per square foot off the cost of constructing a new efficient commercial building.
 - For the next 10 years, contractors will receive a credit of up to \$2,000 for constructing a dwelling that is reduces its heating and cooling energy consumption by 50 percent.
 - Appliance manufacturers that produce energy efficient dishwashers, clothes washers, and refrigerators in the U.S. can also receive a tax credit. Since this incentive applies for the many years a new manufacturing line will operate, the consumer savings estimated from this provision is \$2.5 billion (\$1.7 billion present value).

Leading the Green Building Revolution

Washington state's green building sector is renowned as a world leader in eco-conscious design, architecture, and construction. That includes cutting edge companies like McKinstry, Mithun, and OptimumEnergy. According to a recently released report by Climate Solutions entitled *Carbon-Free Prosperity 2025*, green building design services is one of our regions best opportunities for green collar job growth. In fact, the report estimates that continued growth in green building design services could create over 16,000 jobs by 2025 and can be a key source for new export opportunities.

Reduces our Nation's Foreign Oil Dependence

- The Renewable Energy and Job Creation Act creates a new credit for new car buyers up to \$7,500 to buy plug-in electric cars, trucks or SUVs.
 - Plug-ins will start appearing in showroom in 2010 and can fill up for the equivalent of 70 cents per gallon in Washington state.

Electrifying our National Vehicle Fleet

Plug-in electric vehicles are one of the most promising technologies to reduce our country's over-reliance on oil. Most models will likely be able to drive about 40 miles (which covers over 80 percent of daily car trips) using electricity stored in onboard batteries charged overnight by a standard wall socket. Electricity is a very low cost and low polluting way to power a vehicle, and it is estimated that many plug-ins will get the equivalent of 100 miles per gallon.

According to a study by the Pacific Northwest National Laboratory, our current electricity infrastructure could support an estimated 70 percent of America's passenger vehicle fleet, which would displace 6.5 million barrels of oil each day—an amount equivalent to 50 percent of our oil imports—and cut greenhouse gases by an estimated 20 percent.



This provision is derived from a bipartisan bill authored by Senators Cantwell, Hatch, and Obama last year.

- For the first time, this bill creates a \$300 incentive to help consumer purchase energy-efficient biomass fuel stoves providing an alternative way for homeowners to use renewable resources to heat their homes.

Heating Homes with Renewable Biomass

According to the Energy Department, heating and cooling accounts for 56 percent of the energy use in a typical U.S. home, making it the largest energy expense for most homeowners. Rising energy costs, especially for families that rely on home heating oil, has too many people choosing between heating their homes and other necessities like food and medicine.

This provision provides a \$300 tax credit for the purchase of wood pellet stoves, which are the most efficient biomass heating source on the market. Wood pellets are a renewable fuel that can come from all types of woody biomass and waste products abundantly available across Washington state. Hearth and Home Technologies located in Colville manufactures 60 percent of the wood pellet stoves on the market today and the hearth industry supports at least 1,300 jobs across the state.



- The Renewable Energy and Job Creation Act continues crucial federal support for the domestic biodiesel industry.
 - The bill extends the dollar per gallon tax credit for biodiesel that is produced in the United States.
 - This support is critical to nascent biodiesel manufacturers who are struggling to provide a cost-effective and more environmentally friendly alternative to petroleum diesel due to historically high and volatile feedstock prices.
 - This provision also finally provides parity for non-food feedstock like used cooking oil, protects the industry's ability to grow in the short-term by allowing exports of this home-grown fuels, and closing the "splash-and-dash" loophole that cost taxpayer's dollars without displacing one drop of petroleum.

Makes America's Electricity Grid More Intelligent and Reliable

- For the first time in the tax code we enacted a tax incentive so utilities would install smart meters in Washington homes and businesses.
 - The current grid system is based largely on centralized fossil fuel, nuclear, or hydropower plants managed primarily from the supply side, with little ability to manage demand in ways that are more efficient, reliable or clean. However, with recent and impending advances in sensors, networks and communications, there is now the potential to fully utilize the demand side of the equation to help manage the grid, improve reliability and efficiency, and minimize emissions.
 - Smart meters are the building block needed to take our two-lane dirt road electricity grid and turn it into the superhighway we need. Smart meters are also necessary for businesses, homes, and utilities to cost-effectively generate their own electricity or utilize plug-in electric vehicles.
 - Making our electricity grid more intelligent will provide double digit cost savings and help prevent future blackouts.

Leading the Transition to a Smarter, More Reliable Electricity Grid

Washington state is home to Itron, one of the world's largest smart meter manufacturers, as well as a number of leading edge smart grid companies and researchers. Itron employs more than 8,500 people globally and generated \$1.5 billion in revenues for 2007.

The Pacific Northwest National Lab (PNNL) recently completed a demonstration project that found a 10 percent savings on customers' electricity bills and reduce peak load demand without inconveniencing customers. The study found that there are no technical hurdles standing in the way of wide-scale adoption of grid friendly technologies and that these technologies are projected to reduce the need to build about \$70 billion of new generation, transmission and distribution systems over a 20 year period.

Last year, Cantwell authored the smart grid title of the 2007 Energy Bill which established a \$100 million annual smart grid research and development and demonstration program and required federal officials to establish a smart grid interoperability framework to ensure all these new technologies work seamlessly together. These smart metering tax credits have long been a priority for Cantwell, who first introduced relevant legislation in 2001.



"Our power grid needs to catch up to our 21st century economic and environmental realities," said LeRoy Nosbaum, Itron chairman and CEO. "Financing the Smart Grid requires updating our current accounting practices. That's why it makes sense-and why Itron supports-accelerated depreciation for intelligent devices."

LANDMARK TWO YEAR STATE SALES TAX DEDUCTION

- This deduction provides certainty for 2008 and 2009, putting back an average of \$600 more in the pockets of Washington state taxpayers.
- In 2006, more than 880,000 Washingtonians claimed this deduction.
 - 49 percent of those taxpayers made less than \$75,000.

ESSENTIAL TWO YEAR R&D TAX CREDIT EXTENSION

- Two year extension provides the certainty and stability companies and the credits market need to go ahead with investments that will provide long term economic growth and jobs.
 - In Washington state this tax credit has a strong history of supporting high-wage jobs, from big companies like Microsoft and Boeing to small companies throughout the state.

- In Washington state, R&D makes up four percent of our states' economy.
 - Nationwide this tax credit is estimated to generate \$8.5 billion more in economic activity.

FAIR TREATMENT FOR RURAL COUNTIES CONTAINING FEDERAL LAND

- Some of our rural counties have a very small tax base because Federal lands take up so much of the county. The County Payments makes up for that lost revenue by helping pay for county employees and teachers, road maintenance, general government services, resource conservation projects, forest service land rescue services, and programs to support economic development.
- Extending the program continues a one hundred year old tradition of providing fair and equitable compensation to communities in forest counties.
 - In Washington, that means at least \$47 million a year for the next four years for county services in some of our most impoverished counties.
- For the first time, this bill fully funds the related Payment in Lieu of Taxes (PILT) program, which provides an influx of flexible dollars to counties to make up for the lose of a tax base by the presence of federal land.
 - Washington state will receive approximately \$11 million for Fiscal Year 2009, as opposed to the \$6.3 million received in Fiscal Year 2007.

PROTECTS FAMILIES FROM A HIGHER ALTERNATIVE MINIMUM TAX

- Thanks to this bill, more than 320,000 Washington state taxpayers and more than 25.7 million taxpayers nationwide will be spared having to pay the alternative minimum tax (AMT).
- This tax extender package also provides relief to many taxpayers that were caught after the tech bubble burst in 2000 in a “tax trap” between the regular tax and the AMT when they exercised their stock options but the value of the stock itself declined.