

About the Division of Consumer Advocacy

- The Division of Consumer Advocacy (“DCA”), part of the state Department of Commerce & Consumer Affairs, represents, protects, and advances consumer interests before the Hawaii Public Utilities Commission (“PUC”) and other state and federal agencies.
- The DCA assists and represents utility customers as a whole, statewide, as opposed to a single customer or select group.
- The DCA is ex officio a party to every PUC proceeding, pursuant to HRS § 269-51 and HAR § 6-61-62.

About the Division of Consumer Advocacy

- In Hawaii, utility companies must seek PUC approval for rate increases, major capital improvement projects, certificates of authority to operate, company buyouts and mergers, financing, and to implement special programs, among other things.
- The DCA carefully reviews different aspects of a utility company's request to regulators to determine whether it is reasonable and in the public interest and then makes recommendations to the PUC or other regulators on behalf of consumers.
- The DCA focuses its primary review on applications filed or proceedings opened relating to electric, telecommunications, water & wastewater, synthetic natural gas, and some transportation services.

DCA's participation in recent dockets addressing energy matters before the PUC

- **HECO, HELCO, and MECO's ("HECO Companies") and KIUC's Distributed Generation Standby Rate and Interconnection dockets (Docket No. 2006-0497 and 2006-0498, respectively)**
 - The PUC instructed electric utilities to file standby rate tariffs in the distributed generation docket (03-0371). In response to the many concerned comments made by the public about the proposed tariffs, the PUC opened these two dockets.
 - The PUC, DCA, and utilities traveled statewide in February 2007 to take public comment on the proposals of the companies.
 - DCA conducted extensive discovery in both dockets relating to the interconnection and standby components.
 - Next step: The parties in both dockets have engaged in serious settlement discussions, and appear optimistic about the potential to agree upon resolution of most (if not all) of the issues. A status conference in the HECO Companies' standby docket is scheduled for January 18, 2008 and an evidentiary hearing for February 2008. Oral argument in the KIUC docket is scheduled for February 2008.

DCA's participation in recent dockets addressing energy matters before the PUC

- PUC's investigation into Competitive Bidding (Docket No. 03-0372)
 - During the competitive bidding docket, DCA recommended that competitive bidding can and should be established without further delay, since such mechanism can: (a) expand the resource options considered in meeting an identified need; (b) create an opportunity for consumer savings by imposing price competition; and (c) improve the responsiveness of utility resource plans to achieve environmental, fuel diversity, and other public policy goals.
 - The PUC established a competitive bidding framework in Decision and Order No. 23121 (December 8, 2006).
 - The PUC later approved the list of independent observers, the code of conduct for the HECO Companies, and the interconnection and upgrade tariffs.
 - Two new dockets were recently opened to address the first competitive bidding processes:
 - Docket No. 2007-0331– HECO's proposal to acquire 100 MW of non-firm renewable energy on Oahu and
 - Docket No. 2007-0403 – MECO's proposal to acquire two increments of 25 MW of firm generating capacity on Maui.

DCA's participation in recent dockets addressing energy matters before the PUC

- Rate cases filed by HECO (Docket No. 05-0315), HELCO (Docket No. 2006-0386), and MECO (Docket No. 2006-0387)
 - In 2007, the PUC issued interim decisions and orders in all three rate cases.
 - Next step: The parties are determining what amendments, if any, should be made to the HECO Companies' fuel adjustment clauses to comply with Act 162, SLH 2006, and will file such statements of position or other filings with the PUC.

DCA's participation in recent dockets addressing energy matters before the PUC

- PUC's net energy metering ("NEM") investigative docket (Docket No. 2006-0084)
 - DCA Recommended:
 - Increasing the maximum size of the NEM generator qualifying for a NEM arrangement from 50 kW to 100 kW for the HECO Companies and keeping the maximum size of the NEM generator qualifying for a NEM arrangement at 50 kW for Kauai Island Utility Cooperative ("KIUC").
 - Increasing the total rated generating capacity produced by eligible customer-generators to 1% of peak demand for KIUC and the HECO companies.
 - Considering whether the two thresholds (customer-generator size and system peak) should be increased in each company's integrated resource planning docket to ensure regular review of the limits on a system-by-system basis.
 - Next step: Final decision making by the PUC.

DCA's participation in recent dockets addressing energy matters before the PUC

- Investigation into the major power outages that occurred on the islands of Oahu, Maui, and Hawaii (Docket No. 2006-0431)
 - The DCA filed a statement of position with the PUC on August 24, 2007, requesting that the PUC order:
 - The HECO Companies to formalize their training programs for plant and system operators to include more formalized training, practiced simulation, certification, re-qualification and record keeping;
 - HECO to evaluate and pursue providing additional black start capability on its system. In particular, the DCA recommended that HECO consider providing a second site for power restoration capability, such as by adding a black start diesel generator set to its Waiiau 9 and 10 combustion turbines; and
 - HECO to develop and commence a long-term program to implement Supervisory Control and Data Acquisition ("SCADA") control on existing distribution breakers, and the HECO Companies to implement a standard requiring SCADA control for all new distribution breakers that are installed on all three islands.
 - Next step: The HECO Companies are responding to the DCA's claim that the HECO Companies' training programs need more formalization. Thereafter, the proceeding will be ready for decision making.

DCA's participation in recent dockets addressing energy matters before the PUC

- PUC's Renewable Portfolio Standard docket (Docket No. 2007-0008) and Renewable Energy Infrastructure Surcharge docket (Docket No. 2007-0416)
 - On January 11, 2007, the PUC opened an investigative docket to examine Hawaii's Renewable Portfolio Standards law, as amended by Act 162, SLH 2006.
 - DCA recommended:
 - Adoption of a proposed penalty framework and
 - Implementation of a proposed renewable energy infrastructure surcharge on a pilot basis with certain limitations
 - On December 20, 2007, the PUC issued a Decision and Order, which approved the penalty provision of the framework submitted by a majority of the parties, required additional information about the penalties for noncompliance with the RPS, and opened a new docket to examine the renewable energy infrastructure surcharge.
 - Next step: The DCA will submit a statement of position addressing the penalty provision on or before January 31, 2008 and will await further instruction from the PUC on the new surcharge docket.

DCA's participation in recent dockets addressing energy matters before the PUC

- The PUC's investigation of the issues and requirements raised by Hawaii's Public Benefits Fund law, Part VII of Chapter 269, HRS (Docket No. 2007-0323)
 - On February 13, 2007, the PUC issued Decision and Order No. 23258. By the Decision and Order, the PUC, among other things:
 - Ordered that the HECO Companies' energy efficiency and demand-side management programs shall transition from the HECO Companies to a public benefits fund administrator by January 2009 (the HECO Companies' load management programs were excluded from the third-party administrator's area of responsibility); and
 - Instructed that a new docket will be opened to select a public benefits fund administrator and to refine details of the new market structure
 - Next step: In December 2007, the PUC determined the parties for the proceeding. The parties are awaiting further instruction from the PUC relating to a request for proposal to select the public benefits fund administrator and the procedural schedule.

DCA's Reorganization

- At the end of 2007, DCA received approval of its reorganization plan, which provides for more position description and classification flexibility, and assists the DCA's ability to hire, retain, and compensate employees. Act 183, SLH 2007, which provided for the reorganization of DCA, was critical to providing DCA and the reviewing state departments with guidance.

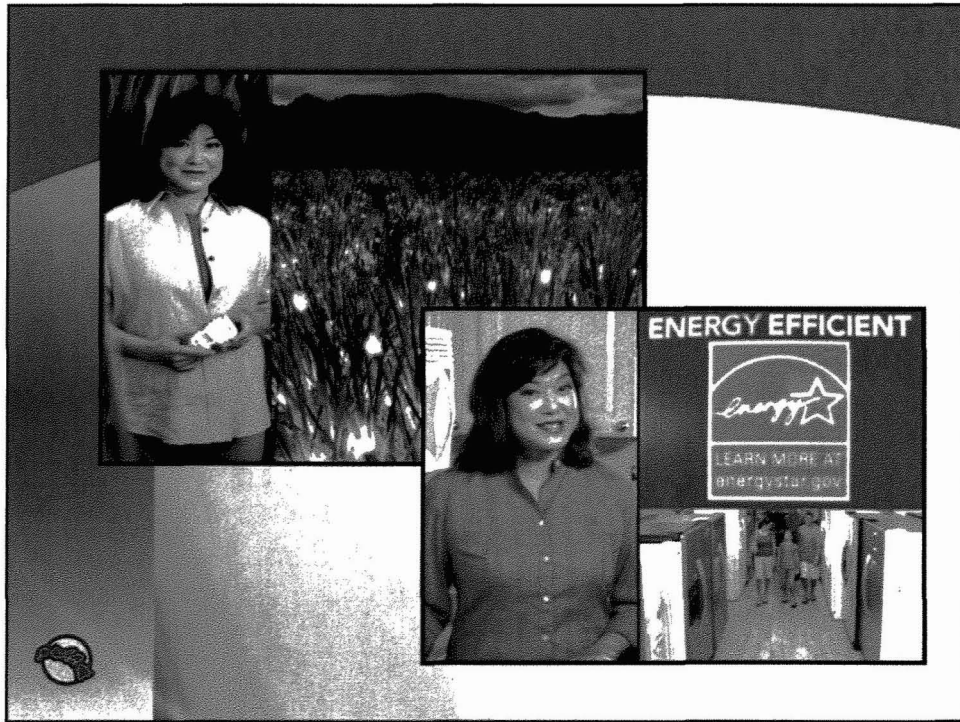


**Briefing to House Committee on
Energy & Environmental Protection /
Senate Committee on
Energy & Environment**

January 17, 2008



ENERGY EFFICIENCY



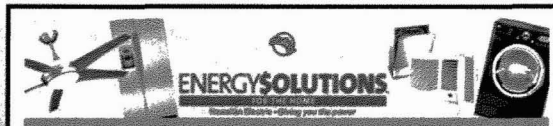
Compact Fluorescents (CFLs)

- 700,000 CFLs installed in 2007
- Est. 5X as many as 2006



Energy Star appliance rebate program

- Launched late summer 2007
- 9000 rebate applications already received in 2007



Choose ENERGY STAR® and Save

Catho home owners can now receive rebates on energy efficient appliances that carry the ENERGY STAR® label, thanks to a new program offered by Hawaiian Electric Company (HECO).

Dish Washers
Qualified ENERGY STAR dishwasher set up to 40% less energy than conventional models. Earn a \$50 rebate from HECO for the purchase.

Refrigerators
Many ENERGY STAR refrigerator models provide energy savings without sacrificing features such as automatic icemakers and through-the-door air dispensers. Qualified models are available with top, bottom and

For those with central air conditioning, HECO also will reward a \$50 rebate if you have it professionally serviced using HECO's service check-list so that the unit performs efficiently. A properly maintained central air conditioning unit can save up to 20% on your cooling costs.

To Qualify

- Check the energystar.gov website to be sure the Brand and Model you plan to purchase is listed.
- Go to heco.com for more details and to

Solar water heating program

- Almost 40,000 SWH installed since program began in 1996



**Savings from HECO, HELCO, MECO
energy conservation programs**

- **Megawatts saved: 103 MW**
- **Annual CO2 savings: 400 million tons**



RENEWABLE ENERGY



2006 RPS status report

	HECO	HELCO	MECO	TOTAL	Percent	
Electrical Energy Generated Using Renewable Energy Sources						
H-POWER	339			339		
Municipal Solid Waste - AES ¹	56			56		
POV		212		212		
Hydro-Makiki		31		31		
Hydro-HELCO owned		24		24		
HRD		23		23		
Wind - Lohalele Wells		1		1		
Small Hydro		1		1		
Other Wind including Kamaea		1		1		
Biomass & Hydro-HECO ²			79	79		
WVP			57	57		
Biofuel			0.2	0.2		
Photovoltaic Systems	0.5	2.2	0.7	3.4		
Subtotal	395.5	0	295.2	0	136.9	69.2%
Electrical Energy Savings Using Renewable Displacement Technologies						
Solar Water Heating ³	56	11	26	95		
Subtotal	56	0	11	0	26	6.8%
Electrical Energy Savings Using Renewable Energy Sources and Renewable Displacement Technologies						
Subtotal	454	0	306	0	163	66.0%
Electrical Energy Savings Using Energy Efficiency Technologies						
Pre-2006 Participants	232	49	77	418		
2006 Participants	48	5	5	58		
Subtotal	340	54	82	476		34.0%
TOTAL	794	360	245	1399		100.0%
TOTAL SALES (GWh)	7,701	1,149	1,266	10,116		
RPS PERCENTAGE⁴	10.3%	31.3%	19.3%	13.8%		

Ocean energy development guidelines

OCEAN ENERGY DEVELOPMENT GUIDELINES

JULY 2007

Oahu wind data offered

PACIFIC BUSINESS NEWS

Wednesday, November 14, 2007 - 12:26 PM HAST

HECO offers free data for wind power

Pacific Business News (Honolulu)

Hawaiian Electric Co. is offering its data on wind conditions and bird activities in the Kahuku area of Oahu to anyone who wants to go into the wind-energy business.

The utility spent millions to develop a wind farm near Kahuku in the 1980s, but pulled the plug after a series of technological and logistical problems made the project untenable.

Some entrepreneurs have expressed interest in using new technology to revive interest in an Oahu wind farm, but so far there are no plans in place and HECO has said it's unlikely to restart the Kahuku project.

Karl Stahlkopf, senior vice president of energy solutions and chief technology officer for HECO, said



Oahu solicitation of interest for 100 MW Renewable Energy

HECO plans new energy project

The utility company looks to increase its renewable energy output by 100 MW

By Jennifer Sudick

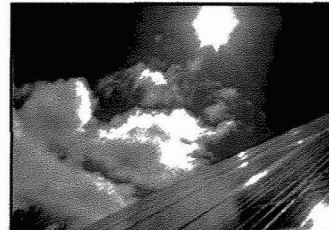
Hawaiian Electric Co. is seeking developers to supply up to 100 megawatts of renewable energy to Oahu's power grid —

an Electric's efforts to diversify renewable power sources, including biofuels, wind, solar and ocean energy, the company said yesterday. It also helps the utility meet a Hawaiian law that requires 20 percent of net electricity sales come from renewable energy by 2020.

"We are committed to making that," said HECO spokesman Peter Rosegg. "The difficulty is of course the amount of electricity used goes up. You can't

non-firm renewable energy starting between 2010 and 2012. The utility said it may consider proposals that will begin commercial operation as late as 2014. No HECO or HECO affiliate bid will be submitted for the project.

Resources eligible to meet the requirements for the proposal include wind, sun, geothermal and ocean currents and waves, the solicitation said. Proposals must use non-firm re-



Big Island Tradewinds agreement

HELCO agrees to purchase more renewable energy

Hawaiian Electric Light Co. on Thursday said it has signed an agreement to purchase renewable energy produced by a biomass-power-plant generation facility under development by Tradewinds Forest Products LLC and Backland Capital Energy Investments.

The cogeneration facility will be part of a veneer mill Tradewinds plans to build in Olohana on the site of the now defunct Hamakua Sugar Mill. Scrap wood from the veneer operation will be used to power Tradewinds' generating unit.

Under the terms of the power purchase agreement, which requires approval by the Public Utilities Commission, HELCO will purchase between 25MW and 100MW of electricity from Tradewinds on a scheduled basis.

The project will also generate additional electricity to power the veneer operation that cost \$5 million and is available to

HELCO if needed to cover a generation shortfall.

Tradewinds designed the project to use 15,000 of the nearly 40,000 acres of existing eucalyptus plantations on the island in a sustainable fashion. Harvested timber will be replanted and forests managed to optimize growth and conserve soil resources.

The project will be a net consumer of carbon dioxide, reducing the amount of greenhouse gases released into the atmosphere. As veneer is produced, carbon contained in the wood will be trapped in the mill's finished products.

An estimated 45 percent power HELCO sells comes from renewable sources such as wind, water and geothermal. The company is committed to providing power to customers upon the cost required, that amount of energy that is not produced by local sources.

HELCO OKs deal

Eucalyptus forests will provide power as well as veneer from factory

By TERRIE HENDERSON
Honolulu Star-Bulletin Staff Writer

Hawaiian Electric Light Co. announced Thursday it has agreed to purchase renewable energy from a biomass-power-plant under development by Tradewinds Forest Products LLC and Backland Capital Energy Investments. The deal is a significant step toward HELCO's goal of providing 100 percent of the island's electricity from renewable sources.

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HECO Ward Avenue PV project (167 kw)



[OUR OPINION]

Going green makes sense for a state rich in renewables

THE ISSUE

Hawaiian Electric Co. plans to install a photovoltaic power system at its Ward Street facility.

HAWAIIAN Electric Co.'s small step toward commercialized photovoltaic power is a welcome if somewhat tardy move toward renewable sources for electricity generation.

As a growing number of consumers acknowledge the need to be green, businesses, housing developers and other non-utility enterprises also should be taking advantage of the islands' abundant sunshine and prolific technology to produce their own power and put up conservation-sensitive buildings.

HECO is negotiating a deal with Kapolei-based Hoku Solar Inc. to install a photovoltaic power system at the electric company's Ward Avenue facility. Though the system would generate just 167 kilowatts — enough for 150 to 200 homes — it could launch HELCO toward larger-scale commercial production, ease the chokehold imported oil has on the islands and even change the way the company distributes power to customers.

Oahu Integrated Resource Plan 4



Charting A Course Towards a
Preferred Energy Future
Integrated Resource Planning



BIOFUELS



Biofuels Milestones

NRDC
National Resources Defense Council

Hawaiian Electric Company, Inc.
Serving you the power

ENVIRONMENTAL POLICY FOR THE HAWAIIAN ELECTRIC COMPANY'S PURCHASMENT OF BIOFUELS FROM PALM OIL AND LOCALLY-GROWN FEEDSTOCKS
PREPARED BY HECO AND NRDC
AUGUST 2007

I. Overview and Context

By developing this policy, the Hawaiian Electric Company, Inc. (HECO) and the National Resources Defense Council (NRDC) join in seeking a way to reduce the environmental and economic impact of burning nearly 100 million gallons per year of petroleum-based electricity for residents and visitors to the Hawaiian Islands. A transition from petroleum-based to biofuels derived from sustainably produced palm oil and locally-sourced feedstocks offers potential for long-term, dramatic reductions in greenhouse gas emissions and increased security from future oil market price hikes and supply uncertainties. In contrast, a failure to act means that Hawaii will remain dependent on petroleum-based diesel for its electricity generation on Maui and longer term of gas turbines to convert additional electrical generation to biofuels will not be realized. This unfortunate circumstance would continue a dependence that carries a high price in terms of greenhouse gas (GHG) emissions and energy security.

We believe that HECO's switch to biofuels derived from sustainable palm oil and locally-sourced feedstocks can help lead the global transition to more sustainable fuels. HECO is the largest utility sector consumer of petroleum-based fuels in the country and, when this transition is complete, will become the largest single consumer of biofuels in the U.S. This effort is part of a broader strategy to transform Hawaii's utilities into a model of diverse, sustainable supply and efficient use, and we believe that this policy represents a large step forward on the path toward increasing self-reliance and sustainability.

NRDC / Hawaiian Electric Sourcing Policy

Biofuels Milestones

Shell in Big Isle biofuel venture

Hawai'i firm teams up with oil giant in algae development

BY CURTIS LUM
Hawaii News Now

A Hawaii-based research firm and oil giant Royal Dutch Shell PLC are forming a joint venture with the ambitious goal of developing an alternative to petroleum-based fuels by growing algae on the Big Island and converting it into a biofuel.

HR Bio Petroleum Inc. and Shell formed

Promising activity for local ag-energy development

Biofuels Milestones

Biodiesel refinery planned

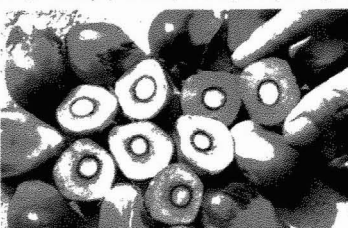
Plan in Kalaheo would be state's second proposed facility to curb dependency on foreign oil

BY ANDREW GORRA

A Kalaheo-based company is planning to build a \$100-million biodiesel refinery in the town of Kalaheo, Hawaii. The project is the second of its kind in the state, following the opening of a similar facility in Hilo last year.

The Kalaheo plant will use locally sourced palm oil as its feedstock. The plant is expected to be completed by late 2008 and will produce up to 10 million gallons of biodiesel annually.

The plant is owned by Kalaheo Biofuels, a subsidiary of the Kalaheo-based company. The plant is expected to create 100 jobs during construction and 50 jobs during operation. The plant is also expected to produce 10 million gallons of biodiesel annually, which will be used to power the state's fleet of vehicles.



SON BING CHONG

PHOTO BY SON BING CHONG FOR THE HAWAIIAN REPORTER



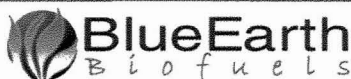
KALAELOA BIODIESEL PLANT

Owner: Kalaheo Biofuels
Construction cost: \$100 million
Employees: 100
Output: 10 million gallons annually
Completion: Late 2008

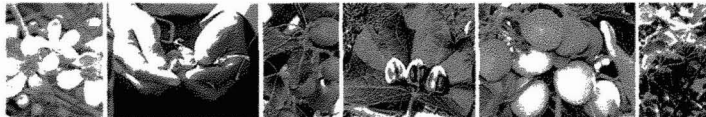
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Contract with biofuels supplier for Oahu

Biofuels Milestones



HOME MAUI PROJECT CHANGING THE GAME FREQUENT QUESTIONS ABOUT US CONTACT US



"Sustainable, local agriculture based biodiesel for Hawaii"

BlueEarth Biofuels

BlueEarth Biofuels is committed to producing Hawaii's biodiesel using sustainable agricultural practices. Our commitment to the environment is the driving force behind our operations. We are currently in the process of building our Maui processing plant, which will be the largest of its kind in the state.

BlueEarth Announces Voluntary EIS

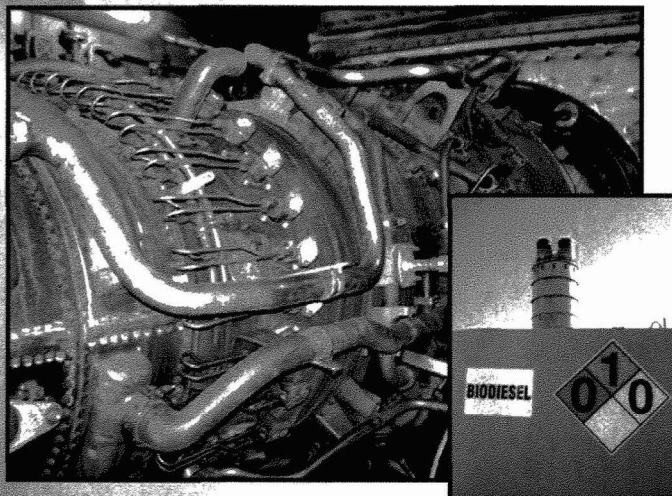
BlueEarth Biofuels is pleased to announce that we have completed our voluntary Environmental Impact Statement (EIS) for the Maui processing plant. The EIS provides a detailed analysis of the potential impacts of the plant on the environment and the community. We are committed to transparency and will continue to engage with the public throughout the project.

Although we believe the information we are providing is accurate, we are building in time for any environmental issues. A voluntary EIS will further provide our community with the most up-to-date information about the project. We are excited to have you, the public, and your input be a part of the final decision on the project. We will be the right way.

Landis Maez

BlueEarth Maui biofuels processing plant

Biofuels Milestones



Successful testing of MECO diesel units

THANK YOU

MAZIE K. HIRONO

2ND DISTRICT, HAWAII

**COMMITTEE ON TRANSPORTATION
AND INFRASTRUCTURE**

SUBCOMMITTEE ON WATER RESOURCES AND
ENVIRONMENT

SUBCOMMITTEE ON AVIATION

SUBCOMMITTEE ON HIGHWAYS AND TRANSIT

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SUBCOMMITTEE ON HIGHER EDUCATION, LIFELONG
LEARNING, AND COMPETITIVENESS

SUBCOMMITTEE ON EARLY CHILDHOOD, ELEMENTARY
AND SECONDARY EDUCATION

**HOUSE DEMOCRACY ASSISTANCE
COMMISSION**

WHIP AT LARGE



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Washington, DC 20515

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MAUI (808) 242-1818

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Website: www.house.gov/Hirono

Following is a synopsis of the energy package that passed last year as well as energy priorities that will be tackled in 2008.

Passage of H.R. 6

Congress passed H.R. 6, the Energy Independence and Security Act, on December 18, 2007. The President signed this bill into law the next day. H.R. 6 is a comprehensive energy package with provisions designed to increase energy efficiency and the availability of renewable energy. Highlights of key provisions enacted into law are as follows:

- **Corporate Average Fuel Economy (CAFE) Standards:** The law sets a target of 35 mpg for the combined fleet of cars and trucks by model year 2020. In addition, a fuel economy program is established for medium- and heavy-duty trucks, and a separate fuel economy standard is created for work trucks.
- **Renewable Fuels Standard (RFS):** The law sets a modified standard that starts at 9 billion gallons in 2008 and rises to 36 billion gallons by 2022. Of the latter total, 21 billion gallons is required to be obtained from cellulosic ethanol and other advanced biofuels.
- **Energy Efficiency Equipment Standards:** The adopted bill includes a variety of new standards for lighting and for residential and commercial appliance equipment.

Energy efficiency standards are set for broad categories of incandescent lamps (light bulbs), incandescent reflector lamps, and fluorescent lamps. A required target is set for lighting efficiency, and energy efficiency labeling is required for consumer electronic products. Also, efficiency standards are set by law for external power supplies, residential clothes washers, dishwashers, dehumidifiers, refrigerators, refrigerator/freezers, freezers, electric motors, residential boilers, and commercial walk-in coolers and freezers. The DOE is directed to set standards for furnace fans and battery chargers.

- **Repeal of Oil and Gas Tax Incentives:** The enacted law includes repeal of two tax subsidies in order to offset the estimated cost to implement the CAFE provision.

Excluded Provisions

Two controversial provisions of H.R. 6 that were not included in the enacted law were the proposed Renewable Energy Portfolio Standard and most of the proposed tax provisions, which included repeal of tax subsidies for oil and gas and new incentives for energy efficiency and renewable energy.

- **Renewable Energy Portfolio Standard (RPS):** Under an RPS, electric utilities must provide a minimum amount of electricity from renewable energy resources or purchase tradable credits that represent an equivalent amount of renewable energy production. The minimum requirement is often set as a percentage share of a supplier's total retail electricity sales. An amendment to H.R. 6 passed by the House on December 6, 2007, proposed a national RPS target that aimed to reach 15 percent of total electricity sales by 2020. Up to 4 percentage points could be met with energy efficiency measures. This provision was stripped by the Senate and was not included in the final version of the bill.
- **Energy Tax Subsidies:** The House also passed an amendment to H.R. 6 that would have repealed about \$22 billion of oil and gas subsidies designed to offset the cost of supporting the energy efficiency and renewable energy tax incentives, including a four-year extension of the renewable energy electricity production tax credit. Most of the provisions were stripped by the Senate and were not included in the final bill. However, enough tax revenue offsets were included to cover the estimated cost of the CAFE provision.

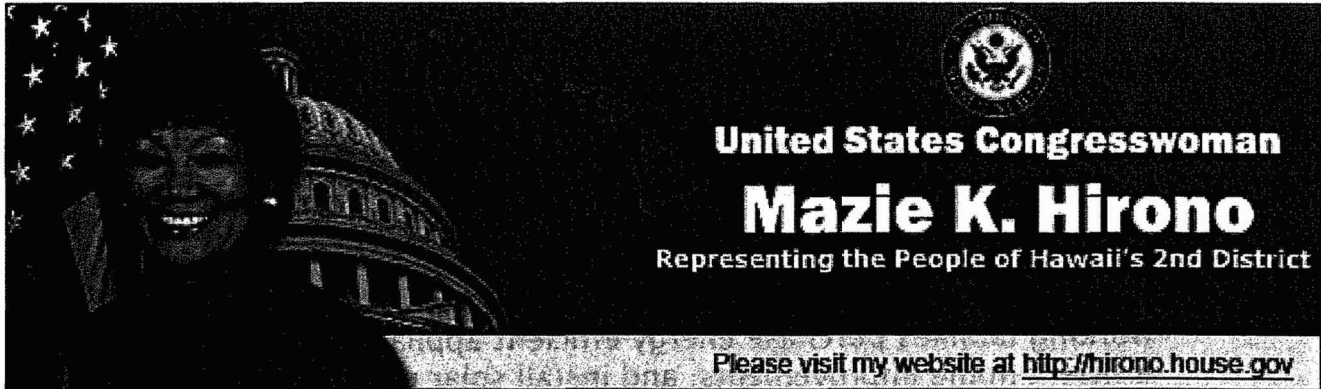
Democratic Priorities in 2008

In 2008, Democrats plan a second push for a **renewable energy mandate on utilities (RPS)** and an extension of tax incentives for wind and solar power. House Democrats have been strategizing with leadership on how to advance the RPS mandate this year, probably as a stand-alone bill.

Alternative energy advocates in Congress will also push for **extensions to the solar and wind energy tax credits** scheduled to expire at the end of 2008. Efforts to include these extensions in the new energy law (H.R. 6, which became PL 110-140) failed, when the Senate came up a single vote short of the 60 votes needed to end debate on the provision. Critics objected to offsetting the tax credits by rolling back tax breaks for oil and gas companies.

Opposition to the RPS is led primarily by senators representing Southeastern states, who argue that their region lacks the resources to affordably meet the mandate. GOP leaders have expressed doubts that supporters can muster the 60 votes needed to break a filibuster without including nuclear energy and "clean" coal as permissible alternative sources. The White House has also opposed what it calls a "one-size-fits-all" renewable electricity standard, contending that it "ignores the specific energy and economic needs of individual states." Many states, including Hawaii, have moved ahead with their own mandates.

Extending the alternative energy tax incentives also faces challenges. Lobbyists state that there is no clear legislative vehicle for the plan, and Democrats will still have to find revenue offsets according to "pay-as-you-go" budget rules. Even so, some Democrats say splitting the RPS and tax credits off from broader energy legislation improves their chances for passage.



ENERGY

Achieving Energy Independence

As your representative, I am committed to helping our nation towards energy independence. We will strengthen our national security by reducing our dependence on foreign oil. By employing new technology we can lower energy costs and have greater efficiency. We must shift to cleaner energy to reduce global warming. Hawaii has significant potential for clean, alternative energy sources including solar, wind and ocean energy.

1. Reduce our dependence on foreign oil: I am working with my colleagues in Congress to lead us on a path to energy independence.

- ✓ **Repeal Big Oil giveaways to invest in clean energy:** I voted for a measure that repeals \$23 billion in tax subsidies and royalty relief provisions for Big Oil companies given during an era of record profits. The bill, which passed the House, closes a tax loophole for these companies and promotes improved accountability for companies that drill for oil and gas on federal lands.
- ✓ **Provide tax incentives to support alternative energy:** I supported an initiative that ends a tax incentive for businesses to purchase gas-guzzlers, establishes a \$4,000 plug-in hybrid vehicle tax credit, extends existing tax credits for the production of renewable energy, and creates new incentives for the use and production of renewable energy.
- ✓ **Boost production of home-grown alternative fuels:** The House passed a measure that includes grants and tax incentives to boost production of biofuels and cellulosic ethanol. The measure also assists with the installation and conversion of E-85 fuel pumps and the production of flex-fuel vehicles running on renewable fuel.

2. Lower energy costs and improve efficiency: We have passed legislation that includes landmark energy efficiency provisions which will reduce energy costs for consumers and businesses through more energy efficient appliances, require more efficient lighting and "green" buildings in the federal and private sector, and speed up Energy Department action on new efficiency standards.

- ✓ **Assist families with energy efficiency:** I voted for a measure that helps states implement low-interest loan and grant programs to help working families purchase energy-efficient appliances, make energy-efficient home improvements, and install solar panels, small wind turbines, and geothermal heat pumps.
- ✓ **Aid small businesses in energy cost reduction:** I voted in support of legislation that provides technical assistance to small businesses to reduce energy costs, increases loan limits to help small businesses develop energy efficient technologies and purchases, and increases investment in small firms developing renewable energy solutions.

3. Reduce global warming. Congress is helping to protect our planet by passing initiatives that target climate change.

- ✓ **Fund climate change research:** We passed legislation that bolsters research on solar, geothermal, and marine renewable energy. This legislation also establishes a comprehensive coastal and ocean observation system that will greatly enhance our ability to monitor and predict climate change and its effects on our oceans, coasts, and Great Lakes.
- ✓ **Promote federal leadership:** As the federal government is the largest energy consumer in the U.S., we passed legislation that requires federal government operations to be carbon-neutral by 2050, with annual government-wide emissions targets. This will save taxpayers \$7.5 billion through 2030.
- ✓ **Mitigate the effects of global warming on wildlife:** I voted in support of legislation that ensures the development of a national strategy to assist wildlife populations and their habitats in adapting to the impacts of climate change. This bill, which passed the House, also provides states with new funding to assist wildlife in adapting to global warming.

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Stay informed about the work Mazie is doing in Hawaii and Washington by signing up for MaziEmail at http://hirono.house.gov/email_signup.html

Congresswoman Mazie K. Hirono – Bills Cosponsored
As of January 17, 2008

ENERGY

H.R. 6, Energy Independence and Security Act of 2007

Sponsor: Rep Rahall, Nick J., II [D-WV-3] (introduced 1/12/2007)

Cosponsors: 198

Latest Major Action: Became Public Law No: 110-140

Note: Omnibus energy legislation.

H.R. 197, To amend the Internal Revenue Code of 1986 to provide a 5-year extension of the credit for electricity produced from certain renewable resources.

Sponsor: Rep Pomeroy, Earl [D-ND] (introduced 1/4/2007)

Cosponsors: 130

Latest Major Action: Referred to the House Committee on Ways and Means.

H.R. 539, Buildings for the 21st Century Act

Title: Buildings for the 21st Century Act

Sponsor: Rep Schwartz, Allyson Y. [D-PA-13] (introduced 1/17/2007)

Cosponsors: 144

Latest Major Action: Referred to the House Committee on Ways and Means.

H.R. 550, Securing America's Energy Independence Act

Sponsor: Rep McNulty, Michael R. [D-NY-21] (introduced 1/18/2007)

Cosponsors: 118

Latest Major Action: Referred to the House Committee on Ways and Means.

H.R. 969, To amend title VI of the Public Utility Regulatory Policies Act of 1978 to establish a federal renewable energy portfolio standard for certain retail electric utilities, and for other purposes.

Sponsor: Rep Udall, Tom [D-NM-3] (introduced 2/8/2007)

Cosponsors: 160

Latest Major Action: Referred to the House Energy and Commerce Subcommittee on Energy and Air Quality.

H.R. 1252, Federal Price Gouging Prevention Act

Sponsor: Rep Stupak, Bart [D-MI-1] (introduced 2/28/2007)

Cosponsors: 125

Latest Major Action: Received in the Senate; read twice and referred to the Committee on Commerce, Science, and Transportation.

H.R. 1300, Program for Real Energy Security Act

Sponsor: Rep Hoyer, Steny H. [D-MD-5] (introduced 3/1/2007)

Cosponsors: 110

Latest Major Action: Referred to the House Armed Services Subcommittee on Terrorism, Unconventional Threats and Capabilities.

H.R. 1506, Fuel Economy Reform Act

Sponsor: Rep Markey, Edward J. [D-MA-7] (introduced 3/13/2007)

Cosponsors: 153

Congresswoman Mazie K. Hirono – Bills Cosponsored
As of January 17, 2008

Latest Major Action: 3/14/2007 Referred to House Energy and Commerce Subcommittee on Energy and Air Quality.

H.R. 1551, Healthy Farms, Foods, and Fuels Act of 2007

Sponsor: Rep Kind, Ron [D-WI-3] (introduced 3/15/2007)

Cosponsors: 125

Latest Major Action: Referred to the House Education and Labor Subcommittee on Healthy Families and Communities.

H.R. 2036, Marine and Hydrokinetic Renewable Energy Promotion Act

Sponsor: Rep Inslee, Jay [D-WA-1] (introduced 4/25/2007)

Cosponsors: 21

Latest Major Action: Referred to the House Science and Technology Subcommittee on Energy and Environment.

H.R. 2215, To provide a reduction in the aggregate greenhouse gas emissions per unit of energy consumed by vehicles and aircraft, and for other purposes.

Sponsor: Rep Inslee, Jay [D-WA-1] (introduced 5/8/2007)

Cosponsors: 22

Latest Major Action: Referred to the House Energy and Commerce Subcommittee on Energy and Air Quality.

H.R.2715, To amend the Internal Revenue Code of 1986 to include heavier vehicles in the limitation on the depreciation of certain luxury automobiles.

Sponsor: Rep Blumenauer, Earl [D-OR-3] (introduced 6/14/2007)

Cosponsors: 18

Latest Major Action: Referred to the House Committee on Ways and Means.

H.R.2966, Plug-in Hybrid Opportunity Act of 2007

Sponsor: Rep Markey, Edward J. [D-MA-7] (introduced 7/10/2007)

Cosponsors: 15

Latest Major Action: Referred to the House Committee on Ways and Means.

H.R.3105, Ocean Thermal Energy Tax and Energy Credits Act of 2007

Sponsor: Rep Faleomavaega, Eni F.H. [D-AS] (introduced 7/19/2007)

Cosponsors: 4

Latest Major Action: Referred to the House Committee on Ways and Means.

H.R. 3107, Renewable Energy Tax Parity Act of 2007

Sponsor: Rep Hodes, Paul W. [D-NH-2] (introduced 7/19/2007)

Cosponsors: 18

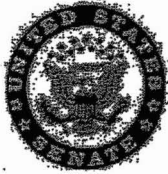
Latest Major Action: Referred to the House Committee on Ways and Means.

H.R.3807, Renewable Energy Assistance Act of 2007

Sponsor: Rep Giffords, Gabrielle [D-AZ-8] (introduced 10/10/2007)

Cosponsors: 32

Latest Major Action: Referred to the House Committee on Ways and Means.



United States Senate Committee on
Energy & Natural Resources

H.R. 6

The Energy Independence and Security Act of 2007

Raises fuel economy standards for cars, trucks, and SUVs for the first time since 1975, increases the renewable fuel standard to 36 billion gallons by 2022. H.R. 6 also contains the most important energy efficiency increase in American history by enacting national efficiency standards for light bulbs.

CAFE

Congress has not mandated an increase in fuel economy standards for passenger cars since 1975. H.R. 6 will require the National Highway Traffic Safety Administration to increase the average fleet fuel economy standards for cars and light trucks to 35 miles per gallon by 2020. The provision that increases CAFE standards is supported by a wide range of groups including auto manufacturers, labor, and environmental groups.

Increases fuel economy standards for all vehicles

- Beginning in 2011, the National Highway Traffic Safety Administration (NHTSA) annually increase the nationwide average fleet fuel economy standard for cars and light trucks to achieve a standard of 35 miles per gallon by 2020. This will be the first statutory fuel economy increase for passenger cars since 1975.
- For the years 2021-2030, car and light truck fuel economy standards would increase at the maximum feasible rate.
- For the first time, NHTSA would establish a program for medium and heavy duty trucks under which fuel economy standards would improve at the maximum feasible rate.
- NHTSA would establish a separate fuel economy standard for work trucks that would increase their fuel efficiency at the maximum feasible rate.

Ensures fuel economy standards will be reached

- H.R. 6 would eliminate the off-ramp, which ensures that NHTSA will mandate a fuel economy standard of 35 mpg by 2020.

- H.R. 6 would eliminate the low volume manufacturer exception, which would have allowed any company that sells less than approximately 64,000 cars and trucks a year in the United States to be exempt from the 35 mpg requirement by 2020 fuel economy standard.

Includes labor protections

- H.R. 6 inserts domestic car production rules that the United Auto Workers believes will keep workers employed in U.S. manufacturing facilities.

Provides manufacturer flexibility

- H.R. 6 would extend the flexible-fuel vehicle (FFV) credit, but taper it so that it is phased out according to the following schedule:

2011: 1.2 mpg

2012: 1.2 mpg

2013: 1.2 mpg

2014: 1.2 mpg

2015: 1.0 mpg

2016: 0.8 mpg

2017: 0.6 mpg

2018: 0.4 mpg

2019: 0.2 mpg

2020: 0 mpg

- B20 biodiesel capable cars would be considered dual-fueled vehicles and eligible for the FFV credit.
- NHTSA would use an attribute system with two separate curves (cars and light trucks) in determining an overall fuel economy average of 35 mpg by 2020. Using this authority, NHTSA would be able to tailor attainable fuel economy standards based on the physical attributes of particular models of cars and light trucks.
- H.R. 6 would give manufacturers the ability to trade extra fuel economy credits earned between the passenger car and light truck fleets when the performance of either fleet exceeds the standards. The amount of credit traded would be limited.

- Automakers would have the flexibility to borrow against future fuel economy gains for up to three years in the future and to carry forward earned fuel economy credits earned for up to five years.

Increases consumer information.

- Automakers would be required to provide clearer fuel economy and emissions information to consumers. A label would be prominently placed on each vehicle that includes information on the fuel economy of the automobile and the greenhouse gas and other emissions consequences of operating the automobile over its likely useful life.
- H.R. 6 would improve consumer information on the fuel efficiency, safety, and durability, and increase consumer awareness of flexible fuel automobiles.

Saves American consumers money and creates jobs.

- By 2020, the new fuel economy standards are expected to save 1.1 million barrels of oil per day, a savings that will continue to increase in subsequent years.
- By 2020, the standards are expected to remove 192 million metric tons of global warming pollution in that year alone, a savings that will continue to increase in subsequent years. That is the equivalent of taking approximately 28 million cars off the road.
- By 2020, the standards are estimated to save consumers \$22 billion in net consumer savings in that year alone, a savings that will continue to increase in subsequent years.
- By 2020, assuming that gas prices remain at \$3.00 and a vehicle travels 14,000 miles a year, a family with two cars would save up to \$1,000 in gasoline costs. (See appendix A for a state-by-state projected consumer savings and job creation numbers).

Renewable Fuel Standard

H.R. 6 would expand the renewable fuels standard to 9 billion gallons in 2008 and progressively increase it to a 36 billion gallon requirement by 2022. Additionally, H.R. 6 makes a historic commitment to develop cellulosic ethanol by requiring that by 2022 the United States produce 21 billion gallons of advanced biofuels, like cellulosic ethanol.

The growth and development of renewable fuels can help solve America's long-term energy and national security problems. Today, the most recently available statistics indicate that the United States produced approximately 5 billion gallons of ethanol from over 130 ethanol plants.

Economic growth. Increasing the renewable fuels standard is a critical component in helping to expand and diversify rural economies. The construction and operation of a 100 million gallon ethanol plant would

- Provide \$150 million in capital construction investment;
- Create \$70 million to the local economy during construction;
- Expand the local economic base by \$233 million each year;
- Create 45 "direct jobs" plus 101 "indirect jobs" throughout the area;
- Raise household incomes by \$7.9 million annually;
- Generate millions more in increased local, state, and federal tax revenues;
- Raise grain prices raised by 3 to 10 cents per bushel; and
- Increase tax revenues of \$5.2 million annually.

Renewable fuels infrastructure and flex fuel vehicles. The new renewable fuel standard would also help to spur the development of a renewable fuel infrastructure, like additional E-85 stations. Due to inadequate renewable fuels infrastructure, many states lack the ability to bring the benefits of enhanced ethanol, like E-85, to consumers who have purchased vehicles that run on E-85.

For instance, while Louisiana has more than 92,000 flex fuel vehicles on its roads, the state has only a single E-85 fueling site. Nationwide, there are only 1,261 public service stations that sell E85 out of 170,000 service stations. (See appendix C for a state-by-state analysis of flex fuel cars and public E-85 stations).

National Efficiency Standards for Light Bulbs

H.R. 6 contains a set of national efficiency standards for light bulbs which represent the most important energy efficiency improvement in American history. The first part of the new energy efficiency standard would effectively phase out most common types of incandescent light bulbs by 2012-2014 by increasing the energy efficiency standards of light bulbs by 30 percent. The new standard would be technology-neutral, allowing consumers a choice among several efficient lighting technologies, including improved halogen-incandescent bulbs, compact fluorescent lamps and eventually light-emitting diodes and other advanced lighting technologies. In 2020, a second set of standards would be established that could at least double the 65 billion kilowatt hours of electricity saved under the first set of standards (depending on how much of the market has shifted to compact fluorescent light bulbs).

Consumer, energy, and environmental savings. Within the 18 months after full implementation of the first energy efficiency standard analysts estimate savings of more than 65 billion kilowatt hours of electricity. An annual savings of 65 billion kilowatt hours of electricity would be nearly as large as combined savings from all federal appliance standards adopted from 1987 to 2000 (68 billion kilowatt hours per year). Savings from this one standard are also two to three times larger than savings from any other single appliance standard, including the 1997 refrigerator standard, the 2001 clothes washer standard, and the 2001 central air conditioner standard.

the single largest consumer of energy in the United States. In 2005, the federal government spent \$14.5 billion on energy. \$5.6 billion of that amount went toward heating, cooling, and powering more than 500,000 federal buildings.

H.R. 6 calls for a 30 percent reduction in energy consumption by 2015 in federal buildings which would save approximately 60 trillion BTUs of energy, 1.5 million metric tons of carbon dioxide, and almost \$4 billion in taxpayers' money.

Geothermal Energy

Today, the United States generates more than 2,800 megawatts of geothermal energy and another 2,500 megawatts are in development. The development of geothermal energy across the country can help stabilize electricity and natural gas prices for consumers while producing new and high-paying jobs across rural America. Unfortunately, the Bush Administration has in recent years been targeting the Department of Energy's geothermal research and development programs for elimination.

H.R. 6 would invest in the promise of geothermal energy. With advances in technologies and sensible tax policies approximately 5,500 megawatts of geothermal energy could come online and be brought to market. H.R. 6 aims to realize that potential by:

- Expanding funding for cost-shared drilling;
- Developing the commercial application for Engineered Geothermal Systems (EGS) techniques;
- Mandating a national geothermal energy resource assessment; and
- Creating a national exploration and development technology and information center.

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The near-term savings from the standard are estimated to be \$6 billion a year. The first part of the new standard will also avoid emitting about 13 million metric tons of carbon dioxide, which is equivalent to approximately 24 new coal plants that each produce 500 megawatts of electricity. The second set of standards, effective in 2020, could at least double the initial savings of 65 billion kilowatt hours of electricity.

Carbon Capture Technology

Carbon capture technology is one of the technological improvements that will help address the challenge of global warming by "capturing" or confining carbon dioxide emissions from power plants and sequestering them within the earth. Carbon capture technology has the potential to play an important part in mitigating against the threats of climate change. Under today's regulatory framework, the Energy Information Administration projects that U.S. carbon emissions will increase by more than one percent annually to at least 2030. Additionally, the Intergovernmental Panel on Climate Change, the current atmospheric carbon dioxide concentration is approximately 386 parts per million volume and increasing at a rate of approximately two parts per million volume annually.

One of the challenges for carbon capture technology, however, is that the technology has performance and cost disadvantages that limit its wide scale use by power plants. H.R. 6 aims to further develop carbon capture technology that would be used to sequester the carbon emissions from fossil fuel power plants by:

- Expanding and improving the Department of Energy's existing carbon sequestration research;
- Requiring a national assessment of capacity to sequester carbon;
- Requiring the Secretary of Energy to conduct no less than seven large-scale geologic sequestration tests, with at least one as an international partnership;
- Increasing the funding authorization for all projects included in the new carbon capture and storage research, development, and demonstration program, with an emphasis placed on large-scale geologic CO₂ injection demonstration projects;

Green Buildings

H.R. 6 accelerates the implementation of new energy efficiency requirements for federal buildings, primarily through new requirements on the General Services Administration (GSA). Today, the GSA owns and leases over 540 million square feet of space in more than 8,900 buildings, located in every state.

Improving the energy efficiency of buildings is important because each year buildings are responsible for 39 percent of U.S. carbon dioxide emissions. Annually, buildings in the United States also account for 70 percent of resource consumption, use 13 trillion gallons of water per year, and consume 3 billion tons of raw materials. The federal government is

- Carbon Capture Technology: To help address the challenge of global warming, HR 6 aims to develop carbon capture technology that can sequester the carbon emissions from fossil fuel power plants.
- Green Buildings: HR 6 accelerates the implementation of new energy efficiency requirements for federal buildings. The Federal Government is the single largest consumer of energy in the US, spending \$14.5 billion on energy in 2005 alone, \$5.6 billion of which went toward heating, cooling, and powering over 500,000 federal buildings. This bill calls for 30 percent reduction in energy consumption by 2015, which would save almost \$4 billion in taxpayer money.
- Geothermal Energy: Currently the US generates over 2,500 megawatts of geothermal energy, and another 2,500 megawatts are under developments. Recent actions by the Administration have targeted DOE's R&D geothermal programs for elimination. HR 6 invests in the promise of geothermal energy.