



U.S. Department of Energy  
Energy Efficiency and Renewable Energy

# The FY 2010 Budget Request

## Clean Energy to Secure America's Future

May 2009



U.S. Department of Energy  
**Energy Efficiency  
and Renewable Energy**



“For everywhere we look, there is work to be done. The state of our economy calls for action: bold and swift. And we will act not only to create new jobs but to lay a new foundation for growth... We will restore science to its rightful place... We will harness the sun and the winds and the soil to fuel our cars and run our factories.

All this we can do. All this we will do.”

President Obama

January 20, 2009



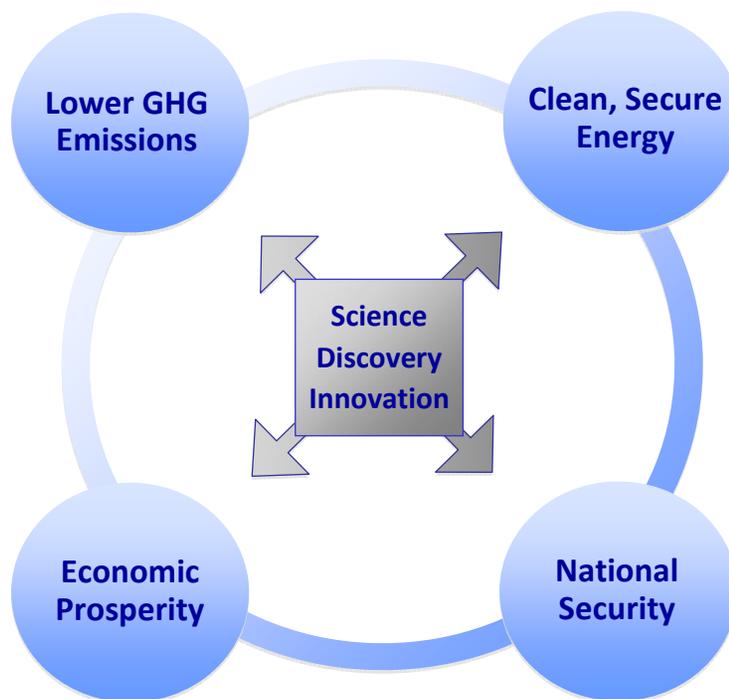
# Advance President's Vision for a Clean Energy Economy

## Environmental

- Closing the carbon pollution loophole.
- Protecting American consumers by returning carbon-generated revenues to them.

## Economic

- Creating new jobs in the clean energy economy.
- Promoting U.S. competitiveness as we address climate change.



## Energy Security

- Investing in the next generation of energy technologies.
- Promoting energy efficiency.
- Breaking our dependence on oil.
- Producing more energy at home.



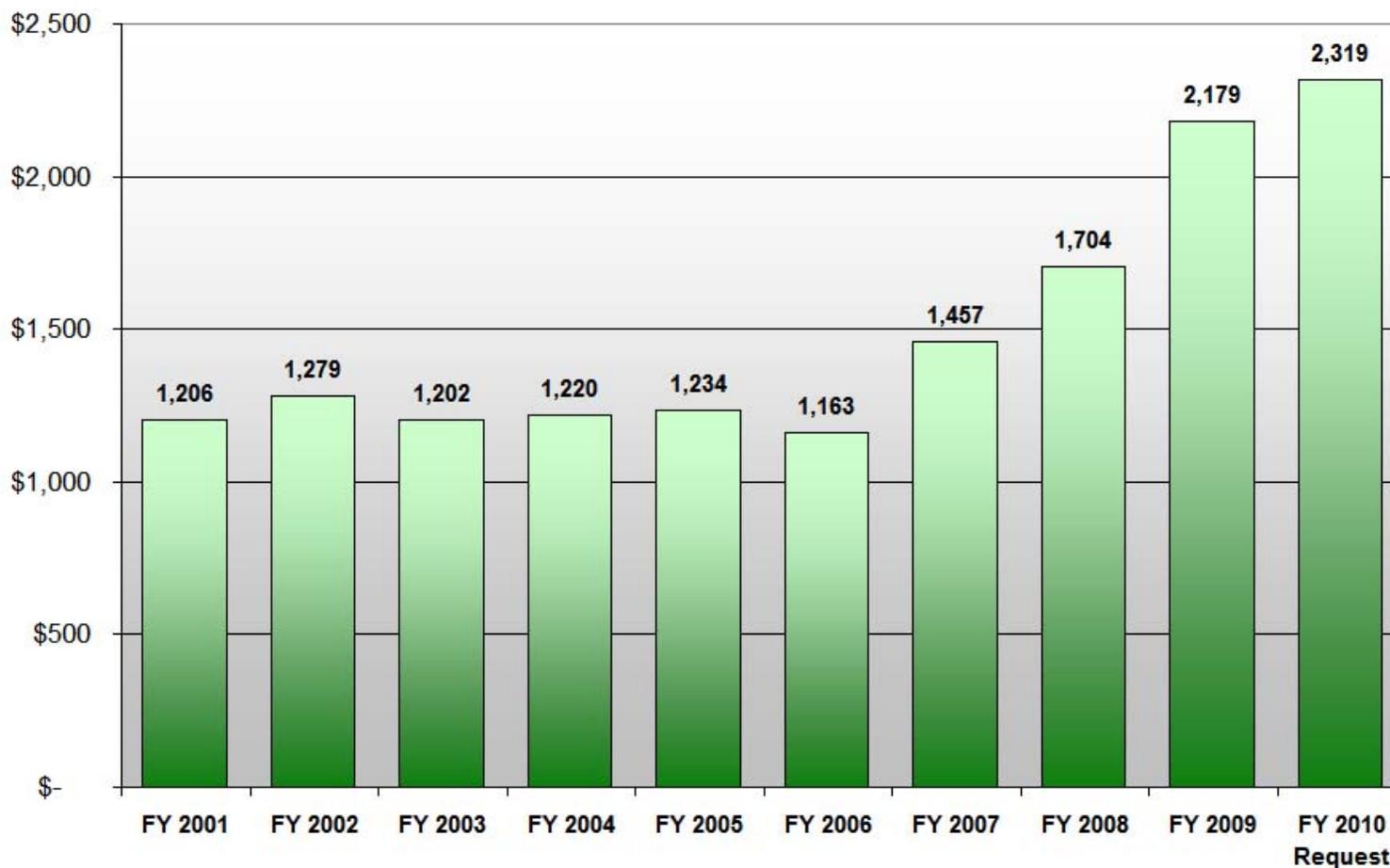
## EERE FY 2010 Priorities Build Off of Recovery Funding

Recovery Act Funding	Recovery Act (\$ Millions)
<b>EERE Discretionary RD&amp;D</b>	<b>\$2,500</b>
Technology RD&D (Solar, ITP, Buildings, Wind, etc.)	\$1,250
Biomass	\$800
Geothermal Technologies	\$400
Information and Communications Technology	\$50
<b>EERE Directed Funding</b>	<b>\$14,300</b>
Energy Efficiency & Conservation Block Grants	\$3,200
State Energy Program	\$3,100
Weatherization Assistance Program	\$5,000
Energy Star Rebates	\$300
Transportation Electrification	\$400
Clean Cities Alternative Fuels Pilot Program	\$300
Advanced Battery & Hybrid Components Manufacturing	\$2,000
<b>EERE Total</b>	<b>\$16,800</b>



# EERE Budget History

Million Dollars





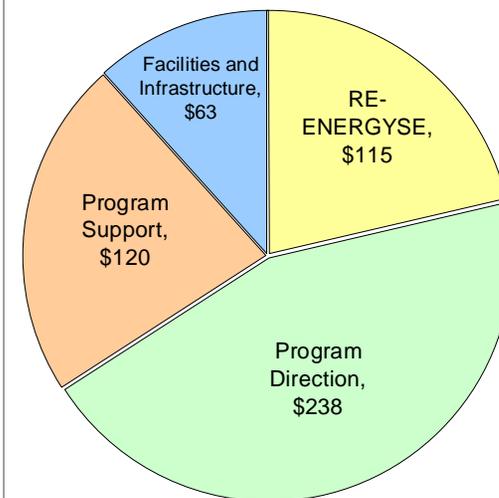
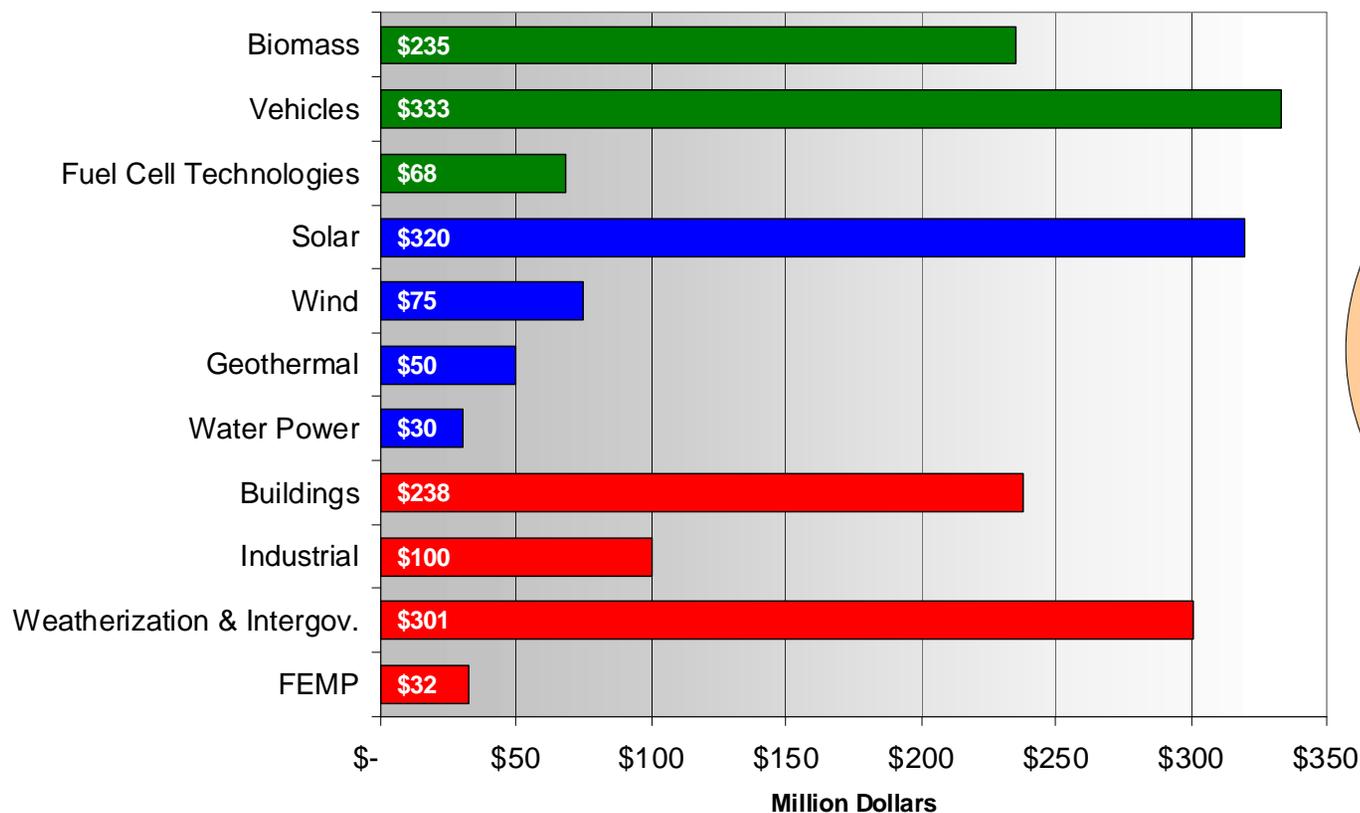
## Fiscal Year 2010 Request

\$2,318.6 Million

Advanced Fuels & Vehicles = \$636

Renewable Electricity = \$475

Energy Efficiency = \$671





# Change the Way We Power Our Vehicles

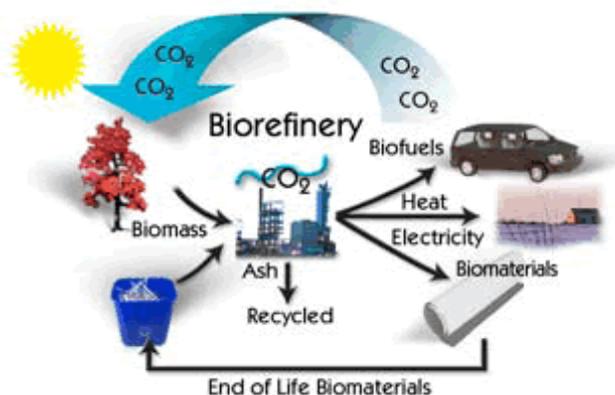
## Advanced Vehicles (\$333.3M)

Advance vehicles R&D to stimulate domestic manufacturing of advanced batteries and electric drive-train components to accelerate the large-scale commercial use of plug-in vehicles in the U.S.



## Fuel Cells (\$68.2M)

Advance fuel cell technologies to increase the commercial availability of fuel cells.



## Next Generation Biofuels (\$235.0M)

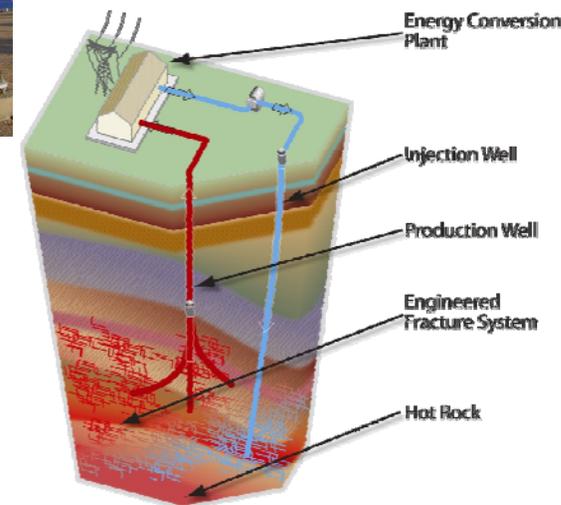
Advance the research and accelerate the demonstration and deployment of cellulosic biofuels technologies to provide a home grown alternative to imported oil.



# Develop Cost-Competitive, Reliable Renewable Generation

## Renewable Electricity (\$ 475.0M)

Accelerate the research, development, demonstration, and deployment of solar, geothermal, wind, and water electricity generation technologies.





# Transform the Way We Use Energy

## Energy Efficiency (\$671.0M)

Provide technology and assistance to help home-owners, businesses, and industry, as well as state and local governments, take immediate steps toward energy efficiency.



## INDUSTRIAL ASSESSMENT CENTER



**Weatherization  
Assistance Program**



## Greening Federal Buildings

Improve the efficiency of Federal Government offices and buildings, reducing energy bills and creating jobs.



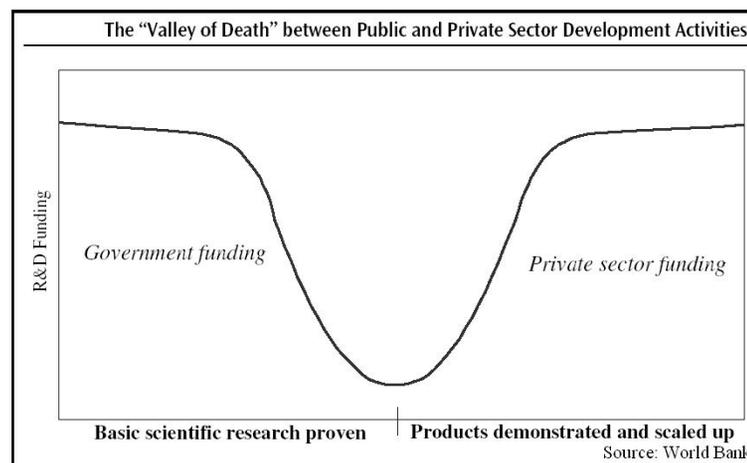
# Grow the Green Economy

## "RE-ENERGYSE" the Workforce (\$115M)

Funding for this new program will help create a highly skilled U.S. workforce dedicated to developing and implementing advanced, low carbon energy technologies and processes (DOE-Wide Initiative).



**GREEN JOBS FOR**  
**America**



## Commercialization and Deployment

Funding to increase the flow of Lab technologies across the "valley of death" and into markets; to strengthen the interface among EERE Labs, industry, and capital markets; and to advise on financial and tax policy to grow the American market for renewable and efficiency technologies.



# Key Budget Priorities

- Contributing to the President's weatherization goals
- Increasing RD&D funding for multi-year activities linked to Presidential priorities:
  - Transportation (batteries, cellulosic ethanol, and other advanced biofuels);
  - Renewables (solar, wind, and geothermal); and
  - Efficiency (residential/commercial buildings, systems integration/controls, appliance standards, advanced industrial technologies, and Federal buildings);
- Expanding planning and analysis capabilities to address climate change.
- Commercializing Lab technologies by funding through the "valley of death" and improving the interface between the National Laboratories, industry, and capital markets.
- Creating a focused program for workforce education and training.
- Increasing EERE staffing, management, oversight and accountability to responsibly execute the budget.



# EERE FY 2010 Budget Request

Energy Efficiency and Renewable Energy	Funding (\$ in thousands)				
	FY 2008 Appropriation	FY 2009 Appropriation	FY 2010 Request	Change FY09 to FY10	Percent Change
<b>Programs:</b>					
Biomass and Biorefinery Systems R&D	195,633	217,000	235,000	+18,000	8.3%
Building Technologies	107,382	140,000	237,698	+97,698	69.8%
Federal Energy Management Program	19,818	22,000	32,272	+10,272	46.7%
Fuel Cell Technologies	206,241	168,960	68,213	-100,747	-59.6%
Geothermal Technology	19,307	44,000	50,000	+6,000	13.6%
Industrial Technologies	63,192	90,000	100,000	+10,000	11.1%
RE-ENERGYSE	—	—	115,000	+115,000	—
Solar Energy	166,320	175,000	320,000	+145,000	82.9%
Vehicle Technologies	208,359	273,238	333,302	+60,064	22.0%
Water Power	9,654	40,000	30,000	-10,000	-25.0%
Wind Energy	49,034	55,000	75,000	+20,000	36.4%
<b>Subtotal, Programs</b>	<b>1,044,940</b>	<b>1,225,198</b>	<b>1,596,485</b>	<b>+371,287</b>	<b>30.3%</b>
<b>State and Other Supporting Activities:</b>					
Weatherization and Intergovernmental Activities	282,217	516,000	301,000	-215,000	-41.7%
Facilities and Infrastructure	76,176	76,000	63,000	-13,000	-17.1%
Program Direction	104,057	127,620	238,117	+110,497	86.6%
Program Support	10,801	18,157	120,000	+101,843	560.9%
Congressionally-Directed Activities	186,664	228,803	—	-228,803	-100.0%
Adjustments	-743	-13,238	—	—	—
<b>Subtotal, State and Other Supporting Activities:</b>	<b>659,172</b>	<b>953,342</b>	<b>722,117</b>	<b>-231,225</b>	<b>-24.3%</b>
<b>Total, Energy Efficiency and Renewable Energy</b>	<b>1,704,112</b>	<b>2,178,540</b>	<b>2,318,602</b>	<b>+140,062</b>	<b>6.4%</b>



Program Focus: To make cellulosic ethanol cost competitive by 2012 through targeted research, development, demonstration, and deployment and to develop alternative advanced biofuels, to support industry's meeting of the EISA 2007 Renewable Fuel Standard.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Feedstock Infrastructure	12,144	15,500	27,500
Platforms R&D	65,844	53,400	59,700
Utilization of Platform Outputs R&D	112,690	148,100	147,800
Cellulosic Ethanol Reverse Auction	4,955	0	0
<b>TOTAL</b>	<b>195,633</b>	<b>217,000</b>	<b>235,000</b>

## Key Activities

- Expand energy crop production trials for greater diversity and scale, to support reductions in feedstock cost and enhance sustainability and stability of domestic supply.
- Continue to develop integrated feedstock logistics systems (e.g. harvesting, collection, and storage systems) for high tonnage feedstocks.
- Improve integrated pretreatment and advanced enzyme technologies for meeting 2012 cost targets.
- Develop alternative advanced biofuels (diverse feedstocks and energy carriers, e.g. green gasoline).
- Validate thermochemical conversion technologies that produce clean synthesis gas or oil suitable for fuels production for meeting 2012 cost targets.
- Initiate construction of two commercial scale biorefineries.
- Complete pre-construction engineering design packages for two 10% of commercial scale biorefineries.
- Continue initial intermediate ethanol blends testing with the Vehicle Technologies Program and other agencies.
- Collect and analyze biofuels environmental sustainability and infrastructure data, and integrate this information into a GIS-based decision-making tool.



Program Focus: Develop and deploy technologies, tools, and standards for making residential and commercial buildings and appliances more energy-efficient, affordable, and better performing.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Residential Buildings Integration	23,725	21,900	40,000
Commercial Buildings Integration	11,891	33,000	40,000
Emerging Technologies	36,546	43,840	92,698
Technology Validation and Market Introduction	13,239	21,260	30,000
Equipment Standards and Analysis	21,981	20,000	35,000
<b>TOTAL</b>	<b>107,382</b>	<b>140,000</b>	<b>237,698</b>

## Key Activities

- Develop and deploy advanced organic and inorganic light emitting diodes (LEDs) with more than double the efficiency of compact fluorescents.
- Advance highly efficient residential and commercial building designs and operations through systems integration and controls that enable buildings to use 40-50% less energy and integrate on-site renewable energy.
- Develop highly insulating and dynamic window technologies and integrated attic-roof systems needed to achieve long term zero energy building goals.
- Meet all statutory requirements for equipment standards and test procedures and accelerate voluntary consensus standards development.
- Accelerate widespread adoption of efficient building technologies through an expanded and modernized ENERGY STAR portfolio, promotion of model building efficiency codes, and public-private partnerships to advance efficient homes, schools, commercial lighting and buildings.



Program Focus: Facilitates the Federal Government's implementation of sound, cost effective energy management and investment practices to enhance the Nation's energy security and environmental stewardship.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Project Financing	8,606	8,000	12,072
Technical Guidance and Assistance	8,153	4,000	8,000
Planning, Reporting and Evaluation	3,059	2,000	3,000
Federal Fleet	0	2,000	3,000
DOE Specific Investment	0	6,000	6,200
<b>TOTAL</b>	<b>19,818</b>	<b>22,000</b>	<b>32,272</b>

## Key Activities

- Project Financing - Secure over \$240 million in alternative financing from private sector investment and utility sources, which will result in about 3.7 million metric tons of carbon dioxide equivalent saved over the lifecycle of the projects.
- Technical Guidance and Assistance - Provide site assessments, technical and design assistance, project identification and prioritization, and audit training for Federal facilities which will result in about 11 trillion Btus in lifecycle energy saved.
- Planning, Reporting and Evaluation – Meet statutory requirements for collecting and reporting on Federal agency progress toward executive and statutory goals of energy efficiency and renewable energy use.
- FLEET – Assist Federal agencies in meeting their requirement to reduce their vehicle fleet's petroleum use 20% by facilitating the expansion of alternative fuel infrastructure and technologies and helping to accelerate the acquisition of advanced vehicle technologies to meet EISA 2007 requirements.
- DOE - Lead implementation of DOE Order 430.2b throughout the DOE complex to achieve renewable energy, energy efficiency, and water goals.



**Program Focus:** Research and develop an array of fuel cell technologies that offer the potential for near-term market entry, in order to establish fuel cells as a competitive option for clean, reliable energy.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp	FY 2009 Approp.	FY 2010 Request
Fuel Cell Systems R&D	0	0	63,213
Hydrogen Production & Delivery	38,607	10,000	0
Hydrogen Storage R&D	42,371	59,200	0
Fuel Cell Stack Component R&D	42,344	62,700	0
Technology Validation <sup>1</sup>	29,612	0	0
Transportation Fuel Cell Systems	7,718	6,600	0
Distributed Energy Fuel Cell Systems	7,461	10,000	0
Fuel Processor R&D	2,896	3,000	0
Safety and Codes and Standards <sup>1</sup>	15,442	0	0
Education <sup>1</sup>	3,865	0	0
Systems Analysis	11,099	7,713	5,000
Market Transformation	0	4,747	0
Manufacturing R&D	4,826	5,000	0
<b>TOTAL</b>	<b>206,241</b>	<b>168,960</b>	<b>68,213</b>

<sup>1</sup>Transferred \$31,500 to EERE Vehicle Technologies Program- Technology Validation (\$15,000); Safety, Codes and Standards (\$12,500); Education (\$4,000)

## Key Activities

- In FY 2010, the Fuel Cell Technologies (FCT) Program, formerly Hydrogen Technologies, proposes to re-focus its efforts on diverse fuel cell technologies for stationary, portable, and transportation applications. This revised effort is aligned with DOE's priority for more near-term impact, improved energy efficiency using multiple fuels, and job creation, consistent with the Presidential objectives.
- FCT will develop multiple fuel cell technologies (including solid-oxide, alkaline and polymer electrolyte) for multiple fuel sources (including diesel, natural gas, biofuels, and fuels derived from other renewable resources). Applications include distributed generation, backup power, auxiliary power units, portable power systems, material handling equipment, specialty vehicles, and transportation.
- Consistent with this new focus, additional funding for hydrogen production and delivery, hydrogen storage, technology validation, safety and codes and standards, education, and manufacturing R&D is deferred.
- The Office of Science will continue basic research relevant to hydrogen and fuel cells, such as catalysis, membranes, and biological approaches, with up to approximately \$50 million planned in FY 2010.



Program Focus: Increase the domestic geothermal resource base and reduce the cost of heat and power through development of Enhanced Geothermal Systems (EGS) technologies.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Enhanced Geothermal Systems	19,307	44,000	50,000
<b>TOTAL</b>	<b>19,307</b>	<b>44,000</b>	<b>50,000</b>

Background: In FY 2008 the program was re-focused to concentrate on Enhanced Geothermal Systems (EGS), which are engineered reservoirs created to produce energy from geothermal resources deficient in economical amounts of water and/or permeability. A number of technologies underdevelopment for EGS also have applicability to hydrothermal resources. The program will work cooperatively with Office of Science and Office of Fossil Energy on technology development of mutual interest.

## Key Activities

- Continue System Demonstrations to:
  - Evaluate and validate stimulation techniques
  - Evaluate and validate stimulated reservoir
  - Demonstrate power generation using coproduced fluid
- Employ dedicated site(s) for innovative EGS technologies.
- Expand critical EGS component R&D.
- Identify research and development needs for extreme high-temperature and high-pressure conditions.
- Support R&D through university partnership.



## Key Activities

Program Focus: Reduce the intensity of energy use in the U.S. industrial sector through voluntary partnerships under the Save Energy Now initiative and research, development, and demonstration (RD&D) of next-generation manufacturing technologies.

## Budget

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Industries of the Future (Specific)	10,969	15,575	12,627
Industries of the Future (Crosscutting)	52,223	74,425	87,373
<b>TOTAL</b>	<b>63,192</b>	<b>90,000</b>	<b>100,000</b>

- Develop tools for industries to implement voluntary agreements to reduce industrial energy intensity and GHG emissions via use of best industry practices, energy assessments and advanced technology deployment through the Save Energy Now initiative.
- Contribute to the Administration's green workforce goal of training more engineers and scientists in the energy field through the Industrial Assessment Centers (IACs) activity.
- Conduct critical industry-specific and next generation manufacturing R&D in partnership with energy intensive industries, such as the steel, chemical, and forest products industries.
- Develop energy efficient distributed energy generation, combined-heat and power systems, and advanced reciprocating engine systems for small to medium-sized (<20 MW) industrial plants and high-growth commercial and institutional applications.
- Continue R&D efforts in industrial-scale nano-manufacturing, advanced materials, and an ultra-high efficiency industrial boiler.



**Program Focus:** Develop the next generation of highly skilled U.S. workers who will help develop affordable, abundant energy and accelerate the U.S. transition to a low carbon economy. **DOE-Wide Initiative**

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Higher Education	0	0	80,000
Technical Training and K-12 Education	0	0	35,000
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>115,000</b>

## Key Activities

- Develop leading scientists and technical workers who can improve the reliability and performance of low carbon energy systems including: solar , wind, geothermal, nuclear or carbon capture and their integration into the grid.
- Support the development of undergraduate and graduate level programs that will generate highly qualified experts who are capable of establishing U.S. leadership in low carbon energy and climate change mitigation.
- Support research fellowships and internships in science, engineering, and other relevant disciplines that focus on low carbon energy at universities, DOE National Laboratories, and the private sector.
- Educate and train American citizens to equip them with the skills needed to enter thousands of jobs to increase U.S. competitiveness in an energy economy.
- Inspire K-12 students to become the next generation of scientists and leaders who can develop solutions to enable the U.S. to achieve a low carbon future.



Program Focus: Enable high penetration of solar energy technologies and achieve cost competitiveness by 2015.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request <sup>1</sup>
Photovoltaic R&D	136,744	145,000	149,470
Concentrating Solar Power	27,617	30,000	78,420
Systems Integration	0	0	29,660
Market Transformation	0	0	27,450
Solar Electricity Energy Innovation Hub	0	0	35,000
Solar Heating and Lighting <sup>2</sup>	1,959	0	0
<b>TOTAL</b>	<b>166,320</b>	<b>175,000</b>	<b>320,000</b>

<sup>1</sup> The Solar Program has been restructured in FY 2010 in order to highlight the crosscutting management of Systems Integration and Market Transformation which include both PV and CSP activities.

<sup>2</sup> Solar Heating and Lighting was transferred to the Building Energy Technologies Program in FY2008

## Key Activities

- Photovoltaics (PV) – Increase PV efficiency, system reliability and manufacturing capability; develop next-generation materials and devices and lower cost production processes for near-term PV systems.
- Concentrating Solar Power (CSP) – increase CSP efficiency and reliability and develop thermal storage technologies to allow CSP to be cost competitive in intermediate and baseload power markets; establish a pilot solar zone to facilitate utility-scale solar deployment.
- Systems Integration – develop energy management and storage technologies and modeling tools to optimize integration of solar systems into the grid.
- Market Transformation – provide assistance in overcoming non-technical barriers to market penetration: codes and standards; permitting, financing, workforce development , etc.
- Solar Electricity Energy Innovation Hub - pursue cutting edge research in solar technology areas involving university, laboratory, and industry expertise.



**Program Focus:** Enable reductions in petroleum use and carbon emissions through R&D to improve the energy efficiency and fuel-diversity of cars and trucks.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request <sup>1</sup>
Hybrid Electric Systems <sup>1</sup>	92,079	125,709	164,661
Advanced Combustion Engine R&D	43,443	40,800	57,600
Materials Technology	38,616	39,903	54,905
Fuels Technology	17,376	20,122	25,122
Technology Integration <sup>1</sup>	16,845	46,704	31,014
<b>TOTAL</b>	<b>208,359</b>	<b>273,238</b>	<b>333,302</b>

<sup>1</sup> Three activities are transferred to the Fuel Cell Technologies Program as part of reprioritization of fuel cell and hydrogen fuel R&D (FY 2009 is not comparable to FY 2010 with funding of \$31.5 M for the three moved activities in FY 2009).

## Key Activities

- Increase R&D for plug-in hybrid electric vehicle (PHEV) technologies - high energy batteries, vehicle demonstration & testing, and power electronics & motors – through expanded industry partnerships.
- Expand commercial vehicle R&D (heavy trucks and buses) for improving energy use efficiency to reduce oil use and carbon emissions.
- Demonstrate conventional passenger vehicles with a 25% to 40% increase in fuel economy resulting from improvements in engine efficiency by 2014.
- Expand R&D to develop lightweight materials for vehicle structures and powertrains. Reduce the modeled weight of a passenger vehicle body and chassis by 50% as compared to a 2002 vehicle.
- Increase effort to develop future engineers in advanced vehicle technologies (EcoCAR competition and GATE).
- Biofuels R&D (E85, biodiesel, etc.) will address engine efficiency optimization, performance, and high-level blends for accelerated market transformation to non-petroleum fuels.
- Increase the emphasis on deployment of alternative fueled vehicles and non-petroleum fuels.
- R&D of next-generation technologies is complemented by \$2.7B of deployment activities funded in the Recovery Act, focused on battery manufacturing, vehicle electrification, and alternative fueled vehicle deployment.



Program Focus: Research, test, and develop innovative technologies capable of generating renewable, environmentally responsible, and cost-effective electricity from water.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Water Power	9,654	40,000	30,000
<b>TOTAL</b>	<b>9,654</b>	<b>40,000</b>	<b>30,000</b>

## Key Activities

- Marine and Hydrokinetic Technologies: Facilitate technology design and development to improve system performance and reduce costs, study environmental effects to reduce barriers to deployment and quantify the potential extractable resources.
- Develop and test advanced devices and components; test and model deployed technologies.
- Conduct assessments to determine new potential energy sources and cost-effective extractable marine and hydrokinetic resources in the U.S.
- Conduct environmental studies to address market barriers to siting and deployment and to identify strategies to minimize and mitigate potential impacts.
- Conventional Hydropower: Increase incremental hydropower, improve environmental performance, and increase value of hydropower to the US electricity grid.
- Develop and deploy new technologies to improve energy efficiency and environmental performance of existing hydropower assets.
- Conduct national assessment to describe the current state of hydropower infrastructure in the U.S. and identify opportunities for upgrading hydropower facilities to increase the quantity and value of generation.



Program Focus: Improve cost, performance, and reliability of large and distributed wind turbine technology; facilitate wind energy's rapid market expansion; and address potential barriers to integrating wind into the electric transmission system.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Technology Viability	26,461	32,000	45,440
Technology Application	22,573	23,000	29,560
<b>TOTAL</b>	<b>49,034</b>	<b>55,000</b>	<b>75,000</b>

## Key Activities

- Improve cost, performance, and reliability of wind technologies.
- Perform detailed testing and analysis of wind turbine drivetrains and blades.
- Install utility scale turbines at National Wind Technology Center for performance testing and reliability R&D.
- Perform independent testing of small wind turbines and support certification.
- Support R&D partnerships to develop wind turbine systems and component.
- Conduct research program aimed at improved understanding of wind turbine reliability, performance, and design.
- Accelerate market penetration and interconnection of gigawatt-level wind energy and other renewables into the national electric power system.
- Complete large multi-state studies with utilities of 20-30% wind energy penetration scenarios, supporting high voltage transmission overlays.
- Advance wind power forecasting and application in utility operations.
- Validate effectiveness of advanced operational strategies for cost-effective integration.
- Perform outreach activities to overcome market and regulatory barriers at the national, state, and local levels.
- Support workforce development through education outreach partnerships and initiatives.



# Weatherization and Intergovernmental Activities

## Key Activities

Program Focus: Accelerate deployment of energy efficiency and renewable energy technologies, policies, and practices by State and local governments, utilities, and Native American tribal governments.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Weatherization Assistance Grants	227,222	450,000	220,000
State Energy Program	44,095	50,000	75,000
International Renewable Energy Program <sup>1</sup>	0	5,000	0
Tribal Energy Activities	5,945	6,000	6,000
Renewable Energy Production Incentive	4,955	5,000	0
<b>TOTAL</b>	<b>282,217</b>	<b>516,000</b>	<b>301,000</b>

<sup>1</sup>EERE is proposing to transfer the International Renewable Energy Program to the Program Support line item in FY 2010.

- Address the needs of low-income homes by maintaining pace of weatherization activities, complementing accelerated Recovery Act Funding.
- Support innovative state and local energy projects, programs and policies, including increased energy efficiency investments by utilities.
- Prepare thousands of workers for “green” careers in the building energy audit and retrofit field.
- Stimulate clean energy project planning and construction on Native American tribal lands.
- Obtain immediate energy savings benefit from weatherizing thousands of low-income homes.
- Encourage increased utilization of energy savings performance contracting, revolving funds and other sustainable energy efficiency financing mechanisms.
- Document success of initiative utilizing non-traditional weatherization providers and funding sources.
- Facilitate expansion of renewable energy certificate trading programs.
- The above efforts are complemented by \$11.6B of Recovery Act efforts focused on state and local clean energy projects.



Program Focus: EERE is responsible for stewardship of the National Renewable Energy Laboratory (NREL) and funds infrastructure related capital investments. These investments maintain and acquire strategic, supporting, and sustaining capabilities at NREL in support of EERE's mission and maintain safety and security standards.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Operation and Maintenance	14,845	22,000	19,000
Construction	61,331	54,000	44,000
<b>TOTAL</b>	<b>76,176</b>	<b>76,000</b>	<b>63,000</b>

## Key Activities

### Operation and Maintenance:

- Provide for upgrade and maintenance of EERE's existing real property and related infrastructure at NREL.
- Maintain EERE's general scientific and administrative equipment through maintenance, repair, or replacement.
- Upgrade and reconfigure the South Table Mountain (STM) east access interchange to improve the safety of NREL employees and the surrounding community during peak arrival and departure times as well as for emergency access and evacuation purposes.

### Construction:

- Construct an additional site ingress/egress route for southern access to STM, which will provide necessary parking and traffic flow enhancements critical to the safe and cost-effective expansion of NREL.



Program Focus: Provide executive and technical direction, oversight, for EERE technology programs.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request
Salaries and Benefits	65,837	78,726	131,117
Travel	3,916	4,772	7,583
Support Services	21,290	27,803	66,097
Other Related Expenses	13,014	16,319	33,320
<b>TOTAL</b>	<b>104,057</b>	<b>127,620</b>	<b>238,117</b>

## Key Activities

- Provide personnel and operational resources for executive leadership, technical direction, management and oversight of EERE technology programs at Headquarters and the Field Project Management Center (PMC). Fund mandatory pay increases, address critical-skill staffing shortfalls and increase support for mission-essential DOE and EERE business management systems
- Significantly ramp up Federal work force to advance the President's priorities to accelerate research, development, deployment and demonstration of EERE programs to enable energy security, economic stability, and address environmental concerns. Provide management resources to sustain the Administration's goals of transparency, oversight and reporting within the specified timeframe.
- Acquire additional office space at Headquarters and the PMC for current and new employees and fund Working Capital Fund activities.



Program Focus: Provide executive and technical direction, oversight, analysis, communications outreach, and commercialization for the implementation of EERE programs.

## Budget Request

Funding (\$ in thousands)

Activity	FY 2008 Approp.	FY 2009 Approp.	FY 2010 Request <sup>1</sup>
Planning, Analysis and Evaluation (Program Performance)	7,333	10,078	11,000
Technology Advancement and Outreach	3,468	8,079	11,000
Strategic Planning and Impact Analysis (to support energy, economic, and climate)	0	0	43,000
Commercialization	0	0	45,000
International	0	0	10,000
<b>TOTAL</b>	<b>10,801</b>	<b>18,157</b>	<b>120,000</b>

<sup>1</sup> Program Support has been restructured to better reflect activities in FY 2010. Additional subprograms are being established to consolidate activities formerly funded within program line items to improve integration, functionality, management, and transparency.

## Key Activities

- Provides for integrated corporate and portfolio strategic management, including the development and corporate integration of portfolio prioritization, analyses, performance, and planning, measurement, outreach, and commercialization.
- Provide information and analysis about EERE technologies and programs to public officials, entrepreneurs, and consumers who will change the landscape of energy demand and supply in the U.S.
- Conduct analysis to help policy makers better understand the implications of policy options.
- Develop credible metrics and methodologies to estimate the impact of EERE programs on jobs, environment, energy and the economy.
- Provides outreach mechanisms to encourage energy efficiency and renewable energy use by consumers and other interest groups.
- Leverage public communication assets to raise awareness of clean energy options among the energy using public, particularly homeowners, drivers.
- Work with the financial community to ensure entrepreneurs commercializing advanced energy technologies have the information and tools they need to provide capital needed to move EERE technology to mainstream markets.
- Help build new clean energy industries that create millions of new jobs in America by fostering new networks among public institutions, universities, National Laboratories, financial institutions, and entrepreneurs.
- Provide coordination, insight, and feedback to accelerate the movement of science and discovery from the laboratory to the marketplace.
- Create international partnerships to advance EERE and Federal Government goals in the development and deployment of renewable energy and energy efficiency technologies