

2005 Energy Act: The Impacts on Energy Efficiency



As one in a series, this brief issue paper summarizes the key provisions, impacts, and implications for energy efficiency that ICF International sees in the Energy Policy Act of 2005.

Key Provisions

Commercial and Industrial Buildings

- For 2006 and 2007, tax deductions up to \$1.80 per square foot for energy efficient upgrades to lighting, HVAC, hot water, and the building envelope that reduce energy and power consumption by 50% compared to ASHRAE standards, and 60 cents per square foot for sub-systems.
- State incentives for residential and commercial energy efficiency code improvements.

Residential Buildings

- New Homes—For 2006 and 2007, tax credits for home builders for up to:
 - \$2,000 for new single family and manufactured homes with annual heating and cooling energy consumption less than half a comparable home (with other provisions).
 - \$1,000 for new manufactured ENERGY STAR qualified homes with annual heating and cooling energy consumption less than 70 percent of a comparable home (with other provisions).
- State incentives for residential and commercial energy efficiency code improvements.
- Home Improvements—For 2006 and 2007, tax credits of up to \$500 (\$200 maximum for windows) for energy efficiency improvements to the building envelope, or purchases of qualified electric heat pump water heaters, electric heat pumps, furnaces and boilers, main air circulating fans, geothermal heat pumps, and central air conditioners.

Energy Efficient Products

- For 2006 and 2007, appliance Manufacturer Tax Credits are available (up to a production limit) for:
 - Up to \$100 for ENERGY STAR (2007) qualified dishwashers.
 - \$100 for Energy Star (2007) qualified clothes washers.
 - \$75 for refrigerators that save 15 percent energy from 2001 standards, \$125 for refrigerators that save 20 percent energy, or \$175 for refrigerators that save 25 percent energy.



On a broad scale, the energy efficiency (EE) provisions in the Energy Act of 2005 will make it easier for organizations running voluntary EE programs, if they move quickly to map these new incentives into their strategic planning.

- State Energy Efficient Appliance Rebate program—up to 50 percent of the funds for State-run rebate programs for Energy Star products may be paid by the U.S. Department of Energy (DOE)—up to \$50 million is available each year for 2006 through 2010, divided among eligible States.
- New Energy Conservation Standards or Rulemaking Procedures. New efficiency standards will be established for many items, including compact fluorescent lamps, T12 ballasts, mercury vapor light ballasts, commercial pre-rinse spray valves, dehumidifiers, distribution transformers, battery chargers, external power supplies, illuminated exit signs, refrigerated beverage vending machines, torchiere lamps, traffic signals, unit heaters, ceiling fans and ceiling fan light kits, commercial air conditioning and heating equipment, commercial refrigerators and freezers, commercial ice makers, and commercial clothes washers.

Government Buildings

- Energy Savings Performance Contracts were reauthorized through September 2016.
- An energy and water savings plan for the Capitol must be developed.
- Federal agencies may retain funds appropriated for energy and water expenditures that are saved, to be used for energy efficiency, water conservation, or renewable energy projects.
- There will be new Federal building energy efficiency performance standards.
- Grants are available to States for energy efficiency upgrades in public buildings.

Low-Income

- Includes low income weatherization assistance —\$500 million for 2006, \$600 million for 2007, and \$700 million for 2008.
- Includes grants to low-income communities for energy efficiency improvements—\$20 million/year.
- HUD will develop a strategy to support an initiative for energy efficiency in Public Housing.

Programs and Studies

- Authorization for Energy Star, with functions roughly equivalent to how the program is currently working.
- Authorization for DOE to enter into voluntary agreements with the industrial sector to reduce energy intensity by at least 2.5 percent each year during the period of 2007-2016.
- DOE to develop a \$6 million/year university-based Advanced Building Efficiency Testbed program for advanced technologies in efficiency that contribute to productivity, health, flexibility, technological change and environmental sustainability.
- HVAC Maintenance Consumer Education program, with the DOE and U.S. Environmental Protection Agency (EPA) to share responsibility.
- Energy Efficiency Public Information Initiative (DOE working with States).
- Study with the National Association of Regulatory Utility Commissioners (NARUC) and the National Association of State Energy Officials (NASEO) on state and regional policies to reduce energy consumption.

- Energy Efficiency Pilot Program with 3-7 statewide programs.
- Study of the energy impacts of intermittent escalators.

Hybrid Vehicles

- Provides tax credits of up to \$3,400 for purchasers of hybrid and lean diesel vehicles, capped at 60,000 vehicles per manufacturer, for 2006-2010.

Miscellaneous

- New hours for Daylight Savings will start the second Sunday of March (3 weeks earlier) and end the first Sunday of November (1 week later), beginning in 2007. There will be a study of the energy savings, with the right to revert to the previous schedule.

Anticipated Impacts

- This legislation will continue to move the bar towards energy efficiency in the country. On balance, it is a positive bill in this regard. According to the Alliance to Save Energy, the total of these incentives and mandatory requirements is estimated to save about 1.5% of energy use in this country
- Including tax incentives for alternative-fueled vehicles and non-tax incentives, Congress estimates a total budget impact of \$2.7 billion from these measures, in addition to another \$2.9 billion on renewable and clean energy resources—this is a substantial share of the total of \$14.5 billion in total tax incentives in this legislation.
- The new appliance efficiency standards developed by the Alliance to Save Energy and American Council for an Energy Efficient Economy are estimated to save 0.6% of US energy use. Success will require that DOE follows through to develop and mandate standards. In recent years, DOE efforts have lagged behind the time schedules for already mandated standard settings, leading the States to develop their own minimum standards.
- The hybrid vehicle tax credit will enhance awareness of and interest in hybrid vehicles. However, this awareness may not increase sales, since the caps are already below some manufacturers' current production levels.
- The new home builder tax credits will enhance a builder's ability to manufacture more efficient homes, at the same time as the Energy Star criteria are rising and making it more difficult to achieve.
- Appliance manufacturer tax credits may encourage manufacturers to push the envelope of energy savings potential, especially in refrigerators where a new breakthrough is needed to achieve substantial new energy savings. The clothes washer incentive may help manufacturers make these expensive appliances more affordable to the public.
- The spotlight on energy efficiency created by the tax credits may draw commercial and residential attention to the benefits already inherent in these products and buildings.
- Several new mandatory standards are being set based on voluntary Energy Star criteria that demonstrated the industry could reach a higher level of efficiency for their consumers.

Industry Implications

- Appliance efficiency is one of the few places in the bill where actions are mandated as opposed to encouraged through incentives. If DOE is able to move forward on these new standards, there is a substantial opportunity to legislate efficiency with minimal disruptions for consumers.
- Organizations currently running voluntary programs to promote energy efficiency will need to quickly map the new legislation into their strategic planning to fully leverage the opportunities presented.
- The implications for the State Energy Star rebate program support are difficult to determine—it is unclear who will qualify for funds, and whether current regionally-implemented programs may enhance existing programs with this funding.
- In their planning for new resources such as generating plants and transmission lines, electric utilities should model the impact these new incentives for energy efficiency will have on their load growth and sales of power
- States regulators should develop rational expectations for what can be achieved in terms of the energy savings that these programs will achieve, and should modify existing efficiency programs to take advantage of and supplement Federal incentives
- A number of the energy efficiency provisions apply only for 2006 and 2007. In these cases, commercial building owners, appliance manufacturers, homeowners and home builders should make sure not to miss this window of opportunity.

About ICF International

ICF International (www.icfi.com) partners with government and commercial clients to deliver consulting services and technology solutions in defense, energy, environment, homeland security, social programs, and transportation. Combining passion for our work with industry expertise and innovative analytics, we deliver compelling results throughout the entire program life cycle, from analysis and design through implementation and improvement. Since 1969, ICF International has been serving government at all levels, major corporations, and multilateral institutions. More than 1,600 employees serve these clients worldwide.

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