

Energy Efficiency Tax Incentives in the Energy Policy Act of 2005

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November, 2005



Overview

- Background
- Energy savings impacts
- Energy Efficiency Provisions
- Tax Title
- Energy markets since passage of the Act
- Summary



Background

- First elements of bill discussed in 1997
- First bill introduced 1999
- First omnibus bill passed 2001 (House)
- First bill conference 2002
- First conference report 2003
- Final bill enactment August 8, 2005



Energy Savings Impacts

- Final bill estimated to save 2.5 Quads in 2020—about 2% of total forecast consumption
 - Senate bill would have saved ~ 3.8%
 - Stronger bill could have saved ~ 8-10%
- Oil savings negligible—conferees cut Senate 1 MBD savings target
 - Senate bill would have saved ~ 4% of 2020 oil use
- Electricity savings 206TWH, ~4% of 2020 forecast
- Natural gas savings 1.4 TCF, ~5% of 2020 forecast



Major Provisions in Efficiency Title

- Appliance/equipment standards
 - Established standards on 16 products
 - DOE to develop standards for 5 additional products
- Federal energy management and public housing
 - Updated targets and provisions
 - Extended ESPC's for 10 years
- Appliance labeling
 - Directed FTC to consider improvements



Other Provisions in Efficiency Title

- Items authorized but not yet funded:
 - Public information campaign on saving energy
 - Voluntary industrial savings initiatives
 - State-based appliance rebate programs
 - Efficient public buildings grants program
 - Energy efficiency resource standard pilot program
- DOE to report to Congress on:
 - Demand response
 - Energy efficiency resource standards
 - Schedule for DOE appliance rulemakings
 - Distributed generation interconnection policies



Efficiency Provisions in Electricity Title

- States required to consider improved interconnection policies for CHP and other distributed generation

Tax Title Overview

- Conference report cut about half the value of the Senate tax title
- Years of eligibility cut from 3-4 years to two
- Some credits were cut:
 - CHP
 - Site-built new homes 30% better than code
 - Commercial deduction amount



Efficiency Technologies Covered

- Commercial buildings
- New homes
- Residential heating and cooling equipment
- Shell improvements to existing homes
- High-efficiency appliances
- High-efficiency vehicles
- Stationary fuel cells and microturbines
- Solar systems



Commercial Building Tax Deduction

- Provides \$1.80/SF *deduction* for buildings exceeding ASHRAE 90.1-2001 by 50%
 - Value of deduction depends on tax bracket
 - In 30% tax bracket, deduction worth \$0.54/SF
- Challenge is that building must be “placed in service” by Dec. 31, 2007; Congress being asked to extend date.
- New and existing buildings covered; public buildings may assign deduction to designer



Commercial Building Tax Deduction (continued)

- Prorated deduction available for HVAC, envelope and lighting systems (\$.60/SF each)
- Further proration available for lighting systems, beginning at 25% better than ASHRAE standards, e.g. \$.30/SF
- DOE helping Treasury develop qualification rules



New Homes

- \$2000 credit provided for builders of homes that exceed IECC criteria by 50%
- \$1000 credit provided to manufactured home producers exceeding IECC by 30% or meeting Energy Star criteria
- \$1000 credit for builders of homes 30% better than IECC was eliminated in conference
- DOE helping Treasury develop qualification rules



Residential Heating and Cooling Equipment

- \$300 tax credit for:
 - Central AC with 15 SEER, 12.5 EER
 - Central heat pumps with 15 SEER, 13 EER, 8.5 HSPF
 - Ground source heat pumps meeting Energy Star spec and with integrated water heating
 - Electric water heaters with 2.0 EF (e.g. heat pump water heaters)
 - Gas water heaters with 0.80 EF or CEF



Residential Heating and Cooling Equipment (continued)

- \$150 tax credit for furnaces with AFUE 95%
- \$50 furnace fans meeting CEE/GAMA spec (can earn separately or combine with credit above)
- Cap of \$500 per taxpayer for heating/cooling credits plus building shell credits



Shell Improvements to Existing Homes

- Overall credit limit is \$500 for a given taxpayer including heating/cooling credits on previous slide
- Envelope measures eligible for 10% of cost, for:
 - Insulation
 - Duct and air sealing (not definite – awaiting IRS determination)
 - Windows (capped at \$200)
- DOE helping Treasury develop qualification rules



Appliances

- Credit provided to manufacturers of refrigerators, clothes washers, and dishwashers
- Credits tied to tiered efficiency criteria:
 - For clothes washers, \$100 for meeting 2007 Energy Star specification
 - For refrigerators, \$75 for 15% savings relative to federal standard, \$125 for 20% savings, \$175 for 25% savings
 - For dishwashers, ~\$30 for meeting 2008 Energy Star specification



Appliances (continued)

- Overall cap of \$75 million per manufacturer
- Consumers should see wider availability and good pricing for these models

Passenger Vehicles

- Credits offered for hybrid or diesel vehicles, 2006-2009
- Diesels must also meet emissions targets—none on market will do so until (probably) 2007
- Amount based on a formula based on percentage mileage improvement over a base level, plus total fuel savings
- ACEEE estimates highest credit will go to the Prius (\$3150)
- Sets a per-manufacturer cap of 60,000 vehicles; thereafter credit phases out over 16 months
 - Toyota likely to hit its cap in first half of 2006
- Also incentives for fuel cell vehicles, but none on the market yet



Heavy-Duty Vehicles

- Hybrid vehicles over 8500 lbs. eligible for tax credits – very few of these vehicles now on market
- Credits based on the weight class of the vehicle, its fuel economy relative to a comparable conventional vehicle, and the incremental cost.
- Heavy-duty vehicles credits fall under the 60,000 vehicle-per-manufacturer cap described for light-duty vehicles.
- EPA helping Treasury develop qualification rules, such as how fuel economy will be determined.



Stationary Fuel Cells and Microturbines

- Primarily for business use of this equipment although individuals eligible for fuel cell credit
- For fuel cells, credit is 30% of cost, up to \$1000/kW of output
 - Efficiency must be at least 30% and system at least 0.5 kW
- For microturbines, credit is 10% of cost, up to \$200/kW of output
 - Efficiency must be at least 26% and system less than 2 kW



Solar Systems

- Photovoltaic systems and solar hot water systems eligible
- Photovoltaic systems must meet applicable fire and electrical codes
- Solar hot water systems must provide at least half of a home's hot water and be SRCC certified
 - Pool and hot tub heaters not eligible
- For individuals, credit is 30%, up to a maximum of \$2000 per system (business credit more complicated)



Implications for States & Other Efficiency Program Administrators

- New tax incentives create an efficiency promotion opportunity
 - Provide local promotion and technical assistance
 - Consider coordinated state or utility incentives
 - Promotion coordination via the Tax Incentives Assistance Project (TIAP)—watch www.energytaxincentives.org
- New federal efficiency standards could affect qualification levels for local incentive programs
- If new federal/state programs are funded, they could create additional partnership opportunities



Summary

- The energy bill creates some opportunities that states and utilities can leverage to help its consumers and businesses save energy
- Recent market events add urgency to acting now, to limit the risk of major economic damage
- Federal leadership on energy policy has been weak
- If states and utilities don't pick up the slack, we run the risk of recession and other undesired outcomes



Thank You!

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