



American Council for an Energy-Efficient Economy
Washington, DC

Comparison of Energy Efficiency-Related Sections of House and Senate Energy Bills
August 2003

Item	House Provision (H.R. 6 as passed)	Senate Provision (S. 14 as voted out of committee)	ACEEE Recommendation
<i>Standards and Labeling</i>			
Standards set directly in legislation	Exit signs, traffic lights, transformers, and torchiere lighting fixtures.	Exit signs, traffic lights, transformers, torchiere lighting fixtures, unit heaters, and compact fluorescent lamps	Accept the Senate provision. It adds two products to the House language based on recent agreements with manufacturers. The basic language in both bills was a consensus item in the 2002 conference.
Standby power from electronic products (Avampires@)	DOE to conduct a rulemaking to set standards for battery chargers, external power supplies, and other products that are Amajor sources@of standby power consumption and priorities for rulemaking activity.	DOE to conduct a rulemaking to set standards for battery chargers, external power supplies, and other products that are Amajor sources@of standby power consumption and priorities for rulemaking activity.	Identical provisions.
DOE rulemakings	Directs DOE to consider standards on vending machines, ceiling fans, commercial refrigerators, and commercial unit heaters.	Directs DOE to consider standards on vending machines, ceiling fans, and commercial refrigerators.	Accept the Senate provision. It reflects the recent consensus agreement with manufacturers to set the unit heater standard via legislation instead of rulemaking.
Furnace fans	No provision in 2003 bill but 2001 bill specifically directed DOE to set standards. This provision was dropped after manufacturers argued that DOE already has authority to set these standards.	Committee staff agreed to add provision clarifying that DOE has authority to set furnace fan standards but along with many other agreements, this was not voted on. This provision is needed because DOE Counsel argue that they presently don't have authority to set these standards.	Add provision agreed to by Senate Committee staff.
Appliance labeling	Directs FTC to review and revise current EnergyGuide label.	Same provision, but also adds specific language on labeling transformers	Consensus provisions. Recommend the the Senate language because it include a specific reference for transformer labeling.
ENERGY STAR	Authorizes EPA and DOE to implement the ENERGY STAR program and provides guidance on process for setting eligibility levels.	Authorizes EPA and DOE to implement the ENERGY STAR program and provides specific requirements on process for setting eligibility levels.	Accept the House version as the Senate version is too rigid and could make it difficult to implement new Energy Star programs in a timely fashion.

Tax Incentives for Efficient Buildings and Equipment

Item	House Provision (H.R. 6 as passed)	Senate Provision (S. 597 as voted out of committee)	ACEEE Recommendation
New homes	Credit up to \$2,000 (for three years) for homes that reduce energy use by 30% relative to reference code. One-third of savings must come from building envelope measures	Credit up to \$1,000 (for two years) for homes that reduce energy use by 30% relative to reference code, and up to \$2,000 (for four years) for homes that save 50%. For manufactured housing, deems ENERGY STAR to meet 30% savings. Committee staff were close to an agreement to extend 30% tax credit to four years but these amendments never reached Senate floor.	Adopt the modified Senate version and keep credits for 30% homes for four years, and eliminate provision on ENERGY STAR manufactured homes or modify to require use of the same reference code as for other homes. The Senate provision on certification of savings, with a few updates, should be used since the House provision is too loose and invites Agaming.@
Existing homes	Credit of 20% up to \$2,000 for homes that upgrade building components to be in voluntary compliance with codes for new buildings.	Credit of 10% up to \$300 for homes that reduce energy use by 30% or upgrade building components to be in voluntary compliance with codes for new buildings.	Accept the Senate provision. The House provision is likely to be very expensive: the Joint Committee on Taxation scored it at \$3.8 billion last year (though the scoring has inexplicably dropped to \$470 million with no changes in the bill). Both provisions would likely achieve only limited savings as experience with existing home credits in the 1980s indicates that most participants would have made their improvements even if there were no tax credits. The Senate provision on certification of savings should be used as the House provision is too loose and invites Agaming.@ Also clarify that all measures that reduce energy loads are eligible, and not just insulation, windows, and heating/cooling equipment.
Appliances	No provision	Credit of \$50B150 to manufacturers for defined high-efficiency clothes washers and refrigerators they sell through 2007, up to a cap per company.	Accept Senate provision.
New commercial buildings	No provision	Deduction (for plans certified through 2007 and buildings completed through 2009) of up to \$2.25/sq.ft. for buildings that reduce energy use by 50% relative to reference code. Committee staff were close to an agreement to clarify that improvements to individual building systems were eligible and shortening the period to complete buildings to 2008 but these amendments never reached Senate floor.	Accept Senate provision including modification to clarify that partial deduction is allowed for improvements to building systems such as lighting, mechanical, and envelope

<p>Hybrid and fuel cell vehicles</p>	<p>Credits through 2006 for fuel cell vehicles, “lean-burn” vehicles, and electric and alternative fuel vehicles. Fuel cell credits range from \$4000 to \$40,000 based on weight, and an added \$1000 to \$4000 based on fuel economy.</p>	<p>Credits for hybrid (through 2006), electric, alternative fuel, and fuel cell (through 2011) vehicles. For hybrids, credit is based on fuel economy, and the amount of power available from the battery. Light-duty hybrid credits go up to \$1000, and up to another \$3000 for fuel economy.</p>	<p>Accept Senate provision. The House provision cuts hybrid credits entirely, and provides credit for lean burn technology, which rewards established diesel technologies with mediocre tailpipe emissions performance, and thus is not a worthy investment of federal funds.</p>
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Combined heat and power systems	10% investment tax credit for systems of 50 kW or more, but requires industrial facilities to use longer depreciation period if they take the credit.	Identical to House bill. However, Finance Committee staff were close to an agreement to modify this credit to eliminate 50 kW floor and eliminate change in industrial depreciation period but to add a size cap of 15 MW. Like many amendments, this never reached the Senate floor.	Use modified version as developed for Senate. This modified Senate provision has a lower cost than the House provision according to an analysis by the Joint Committee on Taxation. With these changes, energy savings will be greater because many of the best opportunities are in the industrial sector but wouldn't be developed if depreciation period lengthened. Large systems (above 15 MW) are being developed without tax credits – many of these would be “free riders”.
Fuel cell power plants	10% investment credit up to \$1,000/kW for stationary fuel cell power plants installed through 2006 with efficiency of 30% or greater.	Similar to House provision but with 30% credit up to \$1,000/kW for systems 500 W or greater installed through 2006.	Accept the Senate provision since a 30% credit is the right order of magnitude for the \$1,000/kW cap.
Micro-turbines	No provision.	10% investment tax credit up to \$200/kW for systems with an efficiency of 26% or more.	Accept the House version. The microturbine systems being promoted are not very efficient nor are they necessarily clean. Tax credits for these systems are a poor investment. This provision should be dropped unless the minimum efficiency level is increased to 30%.
Residential air conditioners and heat pumps	No provision.	Credit of \$250 for air conditioners and heat pumps with a 15 SEER, 12.5 EER, and 9 HSPF.	Accept Senate provision. These credits will spur sales of very high-efficiency equipment, helping to reduce peak electric demand and improve electric system reliability.
Residential furnaces	No provision.	Credit of \$250 for systems with an AFUE of 95% or more. Committee staff were close to an agreement along the lines described at right.	Accept Senate provision including modifications being developed by Committee staff. Modifications would provide a credit of \$125 for 95% AFUE and \$50 for a brushless permanent magnet fan motor (which substantially reduces the amount of electricity used by the furnace fan). This would save more energy but cost less.
Residential water heaters	No provision.	Credit of \$75 for heat pump electric water heaters with an EF of 1.7 and for fossil-fired water heaters with an EF of .80 or more. Committee staff were close to an agreement to increase these credits to \$150 and add a \$50 credit for fossil-fuel water heaters with EF of .65-.79 but like many modifications, this never reached the Senate floor.	Accept Senate provision including Committee staff modifications. These modifications would substantially increase energy savings at a very modest cost.

Ground-source heat pumps	No provision.	Credit of \$250 for systems with an EER of 21.	Change eligibility levels for <u>Aground-source@systems</u> to 18 and for <u>Adirect-exchange@systems</u> to 16. Leave <u>Aground-water@systems</u> at 21. Only ground-water systems can currently meet the 21 level; the lower levels for ground-source and direct-exchange would capture the most efficient systems of these types. These changes would result in a very modest cost.
Real-time metering	No provision	Deduction of \$30 to utilities for devices that enable customers to manage energy use in response to price & use signals. Also specifies 3-year depreciation period for these	Accept Senate provision.
Water submetering for multifamily buildings	No provision.	Deduction of \$30 per meter for the installation of water meters for individual apartment units in multifamily buildings. Also specifies a 3-year depreciation period for these devices.	Accept Senate provision, but add a \$90 per <u>apartment</u> cap on the deduction to restrain the cost where multiple point-of-use meters are installed in a single apartment. Sending a timely price signal to apartment residents through submetering will encourage more efficient use of water, and will reduce energy used by apartment building water heaters and also by pumps in the water supply system.

Item	House Provision (H.R. 6 as passed)	Senate Provision (S. 14 as voted out of committee)	ACEEE Recommendation
<i>Efficiency-Related Provisions in Electricity Title</i> [Note: This page will be updated shortly to reflect the amendment to S. 14 developed by Senator Domenici.]			
PURPA section 210 (must buy and must sell requirements for qualifying facilities)	Requires independent generator access to fully-functioning competitive wholesale markets before repeal is permitted.		
Interconnection and net metering	Provides for net metering for solar, wind, biomass, fuel cell, and combined heat and power systems with a capacity of 500 kW or less. Gives States one year to decide whether to adopt.	Provides for state consideration of interconnection of distributed generation, and net metering for solar, wind, biomass, fuel cell, and combined heat and power systems with a capacity of 500 kW or less. States have one year to decide whether to adopt the net metering provision.	Accept Senate language. While it could be more specific, it is stronger than the House language, which has no specific interconnection requirements.
Real-time pricing	State PUCs required to consider whether they should mandate that utilities offer optional real-time pricing to customers.	State PUCs required to consider whether they should mandate that utilities offer optional real-time pricing to customers.	No recommendation. This provision could have some limited effects. On the other hand, state PUCs may not need federal instructions on this issue.
Demand reduction requirements	Calls for states to study whether to require utilities to install metering and other technology to facilitate demand response. Calls on DOE and FERC to provide technical assistance, regional coordination, and reporting to support state efforts.	Similar to House provision.	This provision is helpful, but should be made more specific to include energy efficiency as a demand response option. Otherwise all the focus will be on short-term load management, and the benefits of efficiency for peak reduction will not be tapped.

Item	House Provision (H.R. 6 as passed)	Senate Provision (S. 14 as voted out of Committee)	ACEEE Recommendation
<i>Fuel Economy and Other Transportation</i>			
Studies	Requires NHTSA to study options for reducing automobile fuel usage by “a significant percentage” by model year 2012	Studies on railroad fuel efficiency and reduction of truck-idling energy use at truck stops.	Keep the Senate studies, and include the House provision on fuel use reduction, which is modest but at least uses the term “significant reductions”. However, none of these provisions are acceptable substitutes for real action on fuel economy.
Rulemaking criteria	No provisions	Adds multiple new criteria that may make it more difficult to set standards that save a substantial amount of oil.	Stay with existing law. Under existing law, DOT needs to consider technological feasibility, economic practicality, the effect of government= other motor vehicle standards on fuel economy, and the U.S.=need to conserve energy. These criteria are sufficient.
Federal fleets	No provision	Requires federal passenger vehicle fleets to reduce average fuel use by 3 mpg by 9/30/2005 compared to a 1999 base year	Accept Senate provision, and add a second tier of efficiency that achieves a 10 mpg increase by 2010.
Dual-fuel vehicles (vehicles that can run on gasoline or E85)	No provision	Extends for 4 years (2005B2008) the existing CAFE credits for manufacturers that produce dual-fuel vehicles. This credit effectively lowers CAFE standards by up to 1.2 miles per gallon.	Accept the House provision, as it would end a serious loophole in the CAFÉ law. Alternately, amend the Senate language to tie the credits for dual-fuel vehicles to actual sales of ethanol fuels. Over 99% of current dual-fuel vehicles operate solely on gasoline.

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<i>Other Efficiency Provisions</i>			
HVAC maintenance	Directs DOE to establish a consumer and small business education program on the benefits of proper HVAC maintenance.	Same provision.	Consensus item
Industrial Voluntary Commitments	Calls on DOE to work with major industries to reduce energy intensity by at least 2.5% annually from 2004 to 2014.	No provision	Accept House provision. Savings from this effort could be large.
High-performance public buildings and schools	Provides for grants to assist units of local government to reduce energy use of new buildings by 30% or more relative to a reference code. Also provides grants to reduce energy use of existing buildings below their baseline consumption.	Same provision	This is a meritorious provision, but specific authorization amounts should be added.
Federal energy efficiency	Range of provisions on overall targets for energy use, equipment procurement, and performance contracting. House bill has more inclusive language on utility energy service contracts.	Similar to House bill, but with improved provisions on agency energy reduction goals, and energy savings performance contracts (ESPCs).	Accept Senate language on energy reduction base year, and on ESPCs. Accept House language on utility energy service contracts.
Public and Assisted Housing	Expands allowable use of CDBG funds for efficiency; increases cap on efficiency in HUD mortgage insurance programs; improves HUD performance contracting rules; provides for efficiency grants to assisted housing; updates efficiency standards for HUD-subsidized housing.	Same provisions	Accept provisions.
Appliance rebates	Authorizes DOE to give matching grants to states for appliance rebate programs. Authorizes \$50 million annually 2004-2008.	Same provision	Accept provision. Effectiveness will depend on appropriations.

<p>Funding authorizations</p>	<p>DOE R&D: \$616 million FY 2004 695 million FY 2005 772 million FY 2006 865 million FY 2007</p> <p>Next-generation lighting initiative: \$50 million each for FY 2004B2007</p>	<p>DOE R&D: \$616 million FY 2004 695 million FY 2005 772 million FY 2006 865 million FY 2007 920 million FY 2008</p> <p>Next-generation lighting initiative: \$20 million FY 2004 \$30 million FY 2005</p>	<p>Accept Senate authorization for overall R&D for FY 2008.</p> <p>Accept Senate authorization for next-generation lighting for FY 2004 and FY 2005, and House authorization for FY 2006 and FY 2007.</p>
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Provisions ACEEE Recommends Be Added to the Senate Bill

Item	Description	Need
National Public Benefits Fund	A small charge on electric bills (two-tenths of one cent per kilowatt-hour) to create a federal trust fund that would support state clean energy programs.	Unchecked electricity demand growth contains multiple risks—blackouts, price spikes in electricity and natural gas, and increased air pollution and greenhouse gas emissions. While some states have created public benefits funds, most have not, and this fund would encourage more states to start them.
Improve the tax incentive for Combined Heat and Power (CHP)	Reduce the size cap for projects from 50 to 15 Megawatts, eliminate the 50-kilowatt floor, and restore depreciation to 10 years, consistent with current law.	This would encourage the most underdeveloped market for combined heat and power, which is in medium and smaller commercial and institutional projects. Restoring the 10-year depreciation period is key to making these systems economic, as 22-year depreciation in current language makes many projects unattractive.
Create Voluntary Industrial Commitments for Energy Intensity Reduction	See House provision above.	The energy savings potential from existing industrial facilities remains very large. DOE programs have begun to demonstrate this potential, but a more concerted effort, with technical assistance funding, is needed to realize significant results.
Efficiency Standard for Automobile Tires	Make replacement tires at least as efficient as the average new-car tire, in terms of rolling resistance.	This is a simple and cost-effective policy, involving well-known technology that would have little impact on market prices, but would improve overall automobile mileage.
Improve Residential Equipment Tax Credits	Refine current language by reducing high-efficiency furnace credits, adding credits for high-efficiency furnace fans, and increasing water heater credits.	This would improve the overall energy savings impact of this provision, and would have negligible impact on the cost to the Treasury.