



National Tax Policy Update: 108th Congress--Incentives for Energy Efficiency in Buildings and Equipment

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Opportunities for Tax Incentives for Energy Efficiency

- ◆ Policy Reasons
- ◆ Pragmatic Reasons



Policy Reasons for Tax Incentives in 2003

- ◆ High energy costs to consumers.
- ◆ Assure electric peak reliability and contain price excursions.
 - Mitigate financial meltdown of energy suppliers.
- ◆ Economic stimulus.



Why Use the Tax System for Energy Policy?

- ◆ Missing piece of the puzzle.
- ◆ Tax incentives can actually generate revenue for the Treasury.



Policy: Context of Tax Incentives

- ◆ Buildings codes provide a minimum floor for efficiency.
- ◆ Utilities can offer incentives for measures that can be installed quickly (within one year).
- ◆ Big improvements in efficiency require long-term commitments that utilities and their regulators do not usually make.



Snowe (R-ME)-Feinstein (D-CA) Bill

- Commercial Buildings
- HVAC Equipment
- New Homes
- Existing Homes
- Solar Energy in Buildings



Principles for Well-Designed Tax Incentives

- ◆ Workable: based on program experience.
- ◆ Verifiable: assure that energy savings are real and can establish market value.
- ◆ Promote market transformation: incentives should be competitively neutral and sustainable in the marketplace.
 - Reasonable dollar amounts.
 - Energy savings goals should be ambitious to minimize free ridership.



Energy Policy Principles

- ◆ Achieve significant energy savings (30% or more)
- ◆ Ensure that savings are verifiable
- ◆ Tie incentives to performance
- ◆ Stimulate the economy (and leverage spending)
- ◆ Transform the market so the same incentive is not required in perpetuity



Incentive Options

◆ Price-based Incentives

- The amount of the incentive is computed based on the price of the product
- Easy to specify

◆ Performance-based Incentives

- The amount of the incentive is computed based on the performance of the product
- Difficult to specify correctly



Price-Based Incentives

- ◆ Tend to increase prices
 - The same percentage of a larger price yields more incentive dollars
- ◆ Tend to invite corruption
 - Tailor made for the confidence artist
 - Can increase price and give part back to consumer in form of sales incentive
 - Can decrease cost (not price) and quality because performance is not considered.



Previous Experience

- ◆ Solar tax credit of the 1980s
 - 40% of purchase price up to \$4,000 credit
 - System prices skyrocketed (\$10,000)
 - Scam artists flocked to the market
 - Solar industry almost perished when tax credit expired in 1985
 - Remaining solar industry just now recovering



“The Sting” (Urban Legend)

- ◆ Price of the solar system = \$10,000
- ◆ \$4,000 tax credit from government
- ◆ **Sales incentive**: Free, 1st-class, week-long trip to Bahamas (supposedly worth \$3,000!)
- ◆ Actual system cost = \$3,000
- ◆ Treasure pays for trip plus large profit
- ◆ No assurance of claimed energy savings



Policy Implications

- ◆ The *true* market competitiveness of the product is decreased over time
- ◆ The consumer, Treasury and society get poor value for their investment
- ◆ Confidence artists proliferate, forcing true entrepreneurs out of the industry
- ◆ When the tax credit sunsets the market for the product evaporates



Performance-Based Incentives

- ◆ Tend to increase competition
 - Lowest price per unit of performance results in the greatest incentive as a % of price
 - Innovation and volume-driven profits become critical to success
- ◆ Tend to reduce corruption
 - Performance rules so scams are difficult
 - Must compete head-on against legitimate entrepreneurs



Policy Implications

- ◆ The *true* market competitiveness of the product is increased over time
- ◆ The consumer, Treasury and society get much more value from their investment
- ◆ Innovation and increased demand work to reduce the price of the product
- ◆ When the tax incentive is reduced or eliminated, the product competes favorably with its less efficient competition



How Much is Enough?

- ◆ 25-50% of typical incremental market price appears appropriate where savings (and barriers) are significant
- ◆ Leverages the Treasury's (and societies) investment by 2-3 times
- ◆ Requires consumer collaboration
- ◆ Less can be appropriate if savings (and barriers) are small



How Much is Too Much

- ◆ 75-100% of typical incremental market price is too much
- ◆ Wrong market transformation signal – devalues the product
- ◆ Little to no leveraging – less economic stimulus
- ◆ Invites corruption and confidence scheming
- ◆ Market for product evaporates when tax incentive sunsets



Tax Incentives for Commercial Buildings

- ◆ Last session's H.R. 4 provided tax deduction for buildings that save 50% compared to ASHRAE 90.1-1999.
 - One third of the incentive is available for each subsystem: envelope, lighting, HVAC.
 - Agreement with NEMA on interim targets for lighting incentives.



Commercial Buildings 2

- ◆ Includes all commercial buildings as well as schools, public buildings, and rental housing.
- ◆ Can actually raise money for the Treasury by reducing tax-deductible energy costs.
- ◆ Was included in both House and Senate versions of H.R. 4 in nearly identical form in the 107th Congress.



HVAC Equipment

- ◆ Senate version of last session's H.R. 4 covered air conditioners, water heaters, geothermal heat pumps, and furnaces.
- ◆ Snowe-Feinstein Bill affects the same products and encourage similar efficiency levels.



New Homes

- ◆ Senate version of H.R. 4 established tiered tax incentives for 30% savings and 50% savings compared to IECC-2000. House version was at 30% only.
- ◆ Workability verification, and free ridership and are critical issues.
 - Energy Star is already making significant progress at inducing 30% savings.



New Homes II

- ◆ Snowe-Feinstein offers \$600 for 30% savings and \$2,000 for 50%.
 - 30% level sunsets after 3 years.
- ◆ Third-party certification is required based on RESNET model.



Existing Homes

- ◆ Considerable political attractiveness for including existing homes in a tax package.
- ◆ An important issue is making the programs performance-based.
- ◆ Cost to the Treasury is an issue.



Existing Homes II

- ◆ Snowe-Feinstein provides \$200 for 30% savings and \$500 for 50% based on a HERS inspection.
- ◆ Dollar amounts are based on levels in Senate H.R. 4.
- ◆ Snowe is a strong advocate of certification.



Solar Energy in Buildings

- ◆ Last session's S. 207 provided performance-based incentives.
- ◆ Last year's H.R. 4 provided cost-based incentives.