



# Implications of New Federal Tax Incentives for the Building Performance Industry

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# Tax Incentives in the Energy Policy Act of 2005

- Commercial Buildings
- HVAC equipment
- New Homes
- Appliances
- Existing Homes
- Solar



# The Potential to Transform Markets

- Each of these incentives has the potential to increase dramatically the marketability of advanced levels of energy efficiency in buildings
- In many cases, third-party inspections and testing and plan check are required
- All of these incentives have the potential for being extended for several years and, in the case of retrofits and solar, being replaced with performance-based incentives

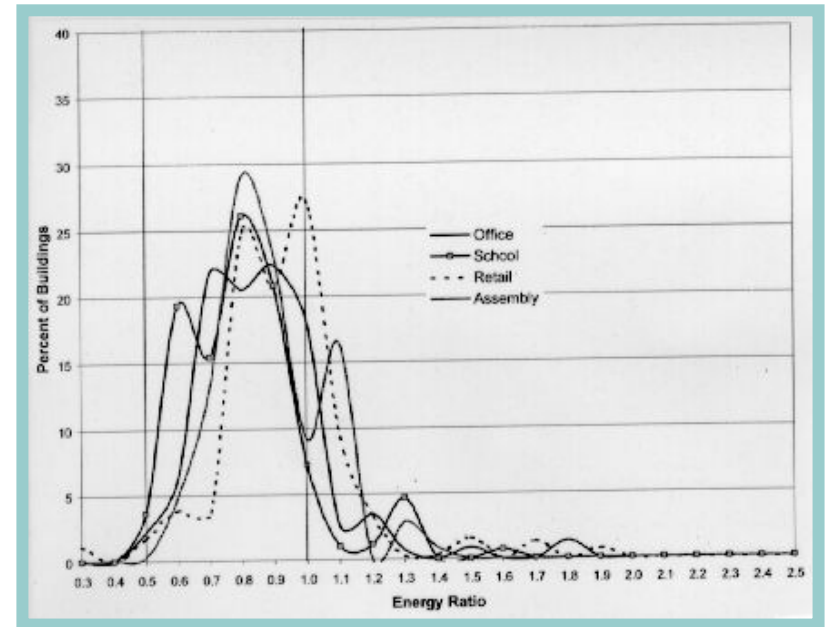


# Tax Incentives have Different Financials than Utility Programs

- **There is No Limit for the Amount of Money Available for These Incentives.**

# Commercial Buildings Tax Deduction

- Tax Incentives for 50% Savings Compared to ASHRAE 90.1-2001 Baseline.
  - 50% is ambitious but achievable:
- NRDC has achieved this goal and saved money in 6 out of 6 of our building renovations.





# Availability of the Deduction

- Incentive of \$1.80 per square foot deduction makes this incentive available to REITs.
- Incentives are available to all applicants until 2007.
- **Extenders may increase the deduction to \$2.25 per square foot and extend eligibility through 2011.**



# Applicability

- Commercial buildings include public buildings such as schools as well as ***high-rise housing***.
- One-Third of the incentive is available separately for each of the main building systems:
  - Envelope
  - HVAC
  - Lighting
    - Interim targets for lighting make these available almost immediately.



# Relevance to RESNET

- Buildings must be certified by third-party inspections of building plans and of the final installation
- Reliable sources say that RESNET membership will be sufficient to qualify raters to make these inspections
  - RESNET immediately will restrict this certification to high rise buildings for which current raters are adequately trained and tested
- RESNET will be developing procedures to assure that raters are competent to do additional inspections





# An Expanded RESNET Role?

- There is likely to be a large demand for commercial buildings energy ratings, particularly since lighting systems can comply for one-third of the incentive independent of other energy efficiency construction
- Question for RESNET: Do we want to certify inspectors for commercial buildings?
  - Possible categories for certification:
    - Building envelopes
    - HVAC and hot water heating systems
    - Interior lighting



# New Homes

- The 50% energy efficiency goal is very ambitious, but not substantially different from levels that DOE programs are promoting.
- Preliminary analysis suggest that compliance is economically feasible, and therefore:
- A significant market in compliant new homes could spring forth.



# HVAC Equipment

- EPAAct offers individual taxpayers credits of up to \$300 for the highest efficiencies for air conditioners, water heaters, furnaces, and furnace fans
- Air conditioner targets are 15 SEER and 12.5 EER (for split systems)
- Water heater targets are EF 2.0 for electric (heat pump water heater) and EF 0.8 for gas (condensing water heater)
- Furnace criterion is AFUE 95 (credit is \$150 plus \$50 for efficient fans)
- All of these incentives are available both for new buildings and retrofits
  - But no double dipping is allowed with new home credit



# RESNET Role in New Homes Provisions

- RESNET procedures are the basis for certifying compliance
- RESNET inspectors can do these certifications



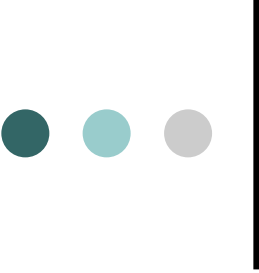
# Appliances Tax Credit

- This tax credit goes to manufacturers, not consumers
- It should result in greater ability of better-than-Energy Star dishwashers, clothes washers, and refrigerators
- Super energy efficient products should cost less



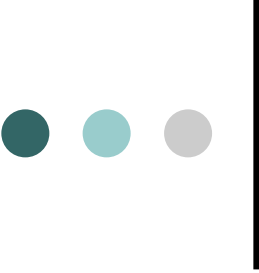
# Existing Homes Tax Incentive

- EPAct offers a credit based on *10% of the cost* for insulation and window improvements that meet IECC
  - But how does the taxpayer know???
- Third-party certification is not required
- Cost-based incentives were tried in the 1970's, when they produced no statistically significant energy savings but cost Treasury over \$5 billion



# Certification: Problems Not Addressed by the IRS Guidance

- Which table in the IECC does one use to establish compliance with the IECC standard? There are over a dozen tables, each of which has different requirements, some of which are based on window area
  - Does homeowner have to determine window area?



# Certification: Problems Not Addressed by the IRS Guidance II

- How does homeowner establish the right combination of preexisting insulation plus upgraded insulation to determine compliance with IECC?





# Solar Photovoltaic and Water Heating Systems

- EPAct offers tax credits of 30% of the cost of solar photovoltaic and water heating systems
- This mirrors the solar tax credits of the 1970's, which nearly destroyed the solar industry



## Next Steps

- Advocacy strategy
- Market transformation strategy



# Advocacy Strategy

- The tax incentives in EPAct apply only to property placed in service in 2006 and 2007
  - This is inadequate time for industries to create additional capacity and for small businesses to gear up to take full advantage of any of the incentives
  - A coalition is working on extending these incentives to the originally envisioned 4-5 year programs
  - Legislation will be introduced shortly by Senator Snowe (R-Maine) and Feinstein (D-California) to accomplish this objective



# Beyond Mere Extension

- The new Snowe/Feinstein Bill will offer performance-based incentives to replace the cost-based incentives for home retrofits and solar
- The home retrofit incentives will be based on percentage of total home energy saved
  - Savings will be determined based on a HERS rating
  - Ratings will be required



# Market Transformation

- Merely changing the tax code will not promote energy efficiency to a significant extent
- Stakeholders in government, utilities, business, and the non-profit world can work cooperatively to promote widespread use of the tax incentives
- Most market transformation programs of this type have led to nearly 100% market penetration of the efficiency technologies within 10 years



# Resources

- Information on coordinated efforts is available at [www.efficientbuildings.org](http://www.efficientbuildings.org) and [www.energytaxincentives.org](http://www.energytaxincentives.org)
- The Energy Star program is an important participant in this process