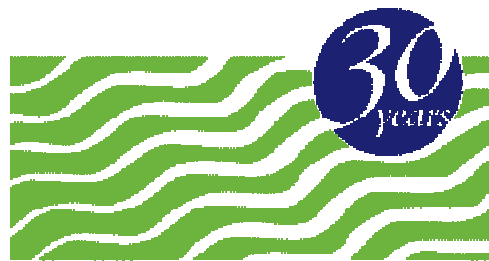


Green Buildings and Codes in the Energy Bill

EESI Briefing
October 17, 2007

Lowell Ungar
Director of Policy
Alliance to Save Energy



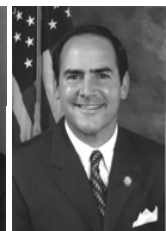
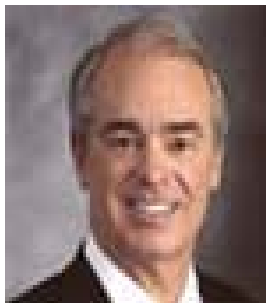
ALLIANCE TO
SAVE ENERGY
Creating an Energy-Efficient World



ALLIANCE TO
SAVE ENERGY

What is the Alliance?

- NGO coalition of prominent business, government, environmental and consumer leaders who promote the efficient and clean use of energy worldwide to benefit the environment, economy, and national security.
- Mission: To advance energy efficiency world-wide through policy, education, research, technology deployment, market transformation and communication initiatives.
- Chaired by Senator Mark Pryor (D-AR) and James Rogers (CEO, Duke Energy) with strong bi-partisan congressional, corporate & public interest leadership



Forging Alliances: Business, Govt. & Public Interests



ALLIANCE TO
SAVE ENERGY

Alliance enjoys sponsorship by more than 100 businesses and organizations across a broad spectrum of economic sectors

Unique structure with expertise in research, policy advocacy, education, technology deployment, and communications



Green Buildings in the Energy Bill



ALLIANCE TO
SAVE ENERGY

- Appliance Standards
- Commercial Buildings Initiative
- Renewable Portfolio Standard
- Building Codes (House only)
- Federal Standards for Buildings
- Federal Energy Management
- Green Buildings Office(s)
- Tax Incentives
- Loan Guarantees, Block Grants, and funding
- Programs at DOE, EPA, GSA, OMB, IRS, USAID, SBA, Coast Guard, ...
-



ALLIANCE TO
SAVE ENERGY

Why Buildings?

- Buildings use 40% of energy in U.S., cause 40% of CO₂ emissions
- Efficient buildings
 - Reduce stress on power grid and natural gas supplies
 - Improve air quality and public health
 - Avoid global warming
 - Save consumers money



ALLIANCE TO
SAVE ENERGY

Appliance Standards

- Many new and updated standards
- Light bulb standard could end traditional incandescent bulbs



Commercial Buildings Init.



ALLIANCE TO
SAVE ENERGY

- Goal: commercial buildings that use no more energy than they produce
- DOE RDD&D program run through a public-private partnership

Renewable Portfolio Standard



ALLIANCE TO
SAVE ENERGY

Why is this a green building policy?

- Meet up to 4% through energy efficiency—utility programs to help their customers save energy
- Cheaper, quicker, and cleaner than providing more energy
 - Reported cost of about 2-4 cents per kWh



ALLIANCE TO
SAVE ENERGY

Why Building Energy Codes?

Key to making all new buildings more efficient

- Makes homes more affordable
 - Monthly ownership cost lowered: mortgage payment + utility bills
- Overcomes economic barriers
 - Split incentive: eg builders pay costs, buyers pay energy bills
- Synergy with high-performance buildings

Potential Savings



ALLIANCE TO
SAVE ENERGY

If all states improved codes, by 2030 our nation could save:

- 5% of its total energy use (6 quadrillion Btu each year)
- \$50 billion each year in consumer energy bills
- greenhouse gas emissions of 70 million cars (100 million tons of carbon each year)



ALLIANCE TO
SAVE ENERGY

How Codes are Set

- States set codes based on national models
 - Independent professional organizations set national model building codes
 - DOE determines whether updates save energy
 - States adopt codes, sometimes with changes
 - States required to *consider* residential model
 - States required to *adopt* commercial model

Goal of Sec. 9031 of HR 3221



- Address national energy needs using current process
 - Energy prices, global warming, energy security
- Set national goals for energy savings



Proposal – energy targets



ALLIANCE TO
SAVE ENERGY

- Set targets for national model codes
 - 30% energy savings by 2010
 - 50% energy savings by 2020
 - DOE set other targets



ALLIANCE TO
SAVE ENERGY

New Building Goals

- American Institute of Architects,
U.S. Conference of Mayors, ...
 - Reduce fossil fuel use for new and renovated buildings by 60% in 2010, rising to 100% by 2030
- ASHRAE (commercial building standards)
 - 2010 Standard 30% more stringent than 2004
- Tax incentives require 50% better than code
 - New homes and for commercial buildings



ALLIANCE TO
SAVE ENERGY

Proposal – model codes

ICC/ASHRAE would still set models

Today	Proposed
ICC and ASHRAE set models	Same
DOE determines if models save energy	DOE also determines if models meet targets
	If they do not meet targets, DOE finds modifications that do.



Proposal – model codes

States would still set building codes

Today	Proposed
States set codes with DOE help	Same
States directed to adopt commercial model, consider residential model	States directed to adopt both models or equivalent
	States directed to improve compliance, with DOE help

Support for proposal



ALLIANCE TO
SAVE ENERGY

- EEI
- APPA
- NRECA
- Duke
- National Grid
- PNM
- PG&E
- SCE
- Sierra Club
- Audobon
- US PIRG
- NWF
- Greenpeace
- NRDC
- UCS
- NAIMA
- PIMA
- NIA
- ICAA
- NFRC
- Johns Manville
- Honeywell
- NASEO
- AIA
- CFA
- ACEEE
- NEEP
- MEEA
- SWEEP
- SEEA



ALLIANCE TO
SAVE ENERGY

Proposal – state codes

States would still set building codes

- States directed to adopt model codes or codes that save at least as much energy
- States directed to achieve high compliance
 - 90% of buildings or 90% of energy savings
- DOE provides technical and financial assistance to states, but no penalties

Thank You!



ALLIANCE TO
SAVE ENERGY

Alliance to Save Energy

1850 M Street, NW

Washington, DC 20036

Phone: 202.857.0666

Website: www.ase.org

www.bcap-energy.org

- Lowell Ungar: lungar@ase.org
- Sean Garcia: sgarcia@ase.org



ALLIANCE TO
SAVE ENERGY

How Codes are Set

- Independent professional organizations set national model building codes
 - International Energy Conservation Code (IECC) for residential buildings
 - ASHRAE Standard 90.1 for commercial buildings
 - Updated every 3 years (or so)
- DOE should make a determination on whether update saves energy
- States adopt codes, sometimes with modifications
 - States required to *consider* residential model
 - States required to *adopt* commercial model

Other codes proposals



ALLIANCE TO
SAVE ENERGY

- DOE set national building codes
- Adopt California's "Title 24" nationwide



ALLIANCE TO
SAVE ENERGY

Proposal – model codes

ICC/ASHRAE would still set models

- ICC and ASHRAE set models through “consensus” process with DOE help
- DOE determines if model codes save energy *and* if they meet targets
- Only if they do not meet targets, DOE finds modifications that do.



ALLIANCE TO
SAVE ENERGY

Proposal – state codes

States would still set building codes

- States directed to adopt model codes or codes that save at least as much energy
- States directed to achieve high compliance
 - 90% of buildings or 90% of energy savings
- DOE provides technical and financial assistance to states, but no penalties

Financial Impacts



ALLIANCE TO
SAVE ENERGY

- Makes housing more affordable
 - Monthly ownership cost is:
mortgage payment + utility bills
 - Up-front cost added into mortgage
 - Energy savings greater than mortgage increase

Federal Standards for Buildings



ALLIANCE TO
SAVE ENERGY

- Update federal standards for:
 - Manufactured housing
 - New homes with federally insured (VA, FHA) mortgages
 - Public housing
 - Federal buildings