



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

Weatherization and Intergovernmental Program

National Residential Energy Efficiency Business Model Summit

Wednesday, May 27 – Thursday, May 28, 2009

Washington, D.C.

Seventy-five energy efficiency experts from across the country participated at the National Residential Energy Efficiency Business Model Summit on May 27th and May 28th in Washington, D.C. After listening to presentations about existing business models, the 75 participants were split into 4 groups (green, blue, yellow and red) to discuss how these models address known obstacles to residential energy efficiency, what is or is not working, and whether these models are scalable. A facilitator led and a scribe took notes for each group.

The groups convened for approximately 4 hours to develop their responses. Each break-out group was comprised of approximately 15-20 energy efficiency experts from the following fields: financial institutions; home performance programs; non-profit organizations and trade associations; state energy offices; public utility commissions; program administrators; energy improvement contractors; and government consultants, and related fields.

Below is a composite of the groups' collective responses*.

- When more than group had the same response, it is denoted as such (i.e., 2 of 4 groups).

*The responses are for question #5 are individualized per group i.e., are not collective responses.

I. What strategies have not worked and should not be used again?

- Lack of sustained and broad-reaching policy and public support for residential energy efficiency
 - Short-term public policies that inhibit market maturity
 - Compartmentalized and inconsistent policy framework approaches
 - Insufficient adoption of broader goals and their integration into climate policies
 - Inadequate communication of complex goals
 - Short-term duration of existing public programs
 - Fragmented standards that confuse public policy and market participants
- Attempting to use, or develop, silver bullet strategies – one program, investor, technology, education, marketing strategy, or business model that can magically transform the residential energy efficiency market (2)
- Non-actionable or stranded energy audits – audits which are not connected with product and service providers (i.e. those contactors who can install the energy improvements or equipment) (2)
- Marketing to consumers using only an energy savings messaging (2)

- Basing incentives on energy efficiency measures costs instead of energy savings performance
- No major involvement and investment from the private sector
- Energy Efficiency Mortgages (EEMs)

II. What 3-5 strategies have worked and could be replicated?

- Long-term commitment, consistency, and a transparent and comprehensive approach to drive results (3)
- National standards for (3):
 - Energy audits
 - Energy improvement installations
 - Labels (i.e. ENERGY STAR)
 - Quality control and assurance
 - Training
 - Building codes
- Comprehensive marketing strategies that change consumer behavior (2)
 - Home Performance with ENERGY STAR® as a platform
 - Focus on understanding the customer (wants and behaviors) as well as the building
 - Frame the marketing (i.e., cost, energy security, comfort, consumer choice, and health)
 - Get the numbers right (e.g., energy savings estimates)
- Contractors leading and selling energy efficiency projects (2)
- Clear and innovative policies accompanied by strong support by key stakeholders (2)
- Support contractor industry advocacy groups (replicate what the solar industry did with trade association and advocacy) such as Efficiency First
- Clear and easily-implemented performance-based incentives and tax credits
- Setting bold goals and actions and encouragement by the country's leadership
- Mandatory time-of-sale energy efficiency requirements for home sales
- Have trusted partners manage programs (e.g., using the contractor model and consultant model within Home Performance with Energy Star program)
- Have educated, specialty lenders

III. How do these models relate to the critical changes that are needed in technologies, markets, policies, or other factors to achieve scale in the residential market?

- Create a strong federal, state, public, and private home retrofit partnerships and policies (3)
 - Inspire a national call to action with a long-term commitment
 - Build stronger partnerships between federal agencies including: Department of Energy (DOE); Environmental Protection Agency (EPA); Federal Energy Regulatory Commission (FERC); Health and Human Services (HHS); Housing and Urban Development (HUD); and Department of Labor (DOL) and state and local governments, public utility commissions and state energy offices

- Articulate roles of those mentioned above
- Resolve federal and state conflicts and inconsistencies on the creation of national codes and standards
- Transform the market tied to national training and performance standards under the ENERGY STAR brand (2)
- Provide sustained funding for programs and industry infrastructure leading to market transformation
- Implement energy efficiency resource standards, climate change legislation, retrofits for energy and environment performance, and other policies
- Allow carbon revenue to be utilized for financing efficiency projects
- Build and maintain infrastructure after stimulus money is gone
- Assure climate legislation contains provisions for large-scale deployment with regard to weatherization and residential energy efficiency
- “Pay for Performance” (i.e., incentivize energy savings)
- Federal government must provide credit enhancement mechanisms for all who need them
- Address the barriers for large-scale private investment, creating federal mechanisms for residential energy efficiency financing
- Leverage public money to develop sustainable investments
- Develop new approaches and intermediaries assuring low-income will benefit (including expansion of existing networks)
- Reform public policy to create comprehensive energy efficiency initiatives
- Integrate funding sources
- Educate consumers with new technology and approaches
- Focus on markets not programs (2)
- Develop appropriate and needed financing mechanisms for energy improvements (2)
 - Secondary Funding Markets (loan guarantees, backstops)
 - Creating mechanisms that will attract large-scale capital
 - Financing and incentives tied to building energy performance
- Accelerate measurement and verification (M&V) to expedite program scale-up
- Develop career paths (education, workforce development, realistic training demand/supply forecasting) (3)
- Merge existing contracting and infrastructure “silos” into a cohesive industry
- Educate and garner support from additional market participants (i.e., realtors and insurance companies)
- Standardize, streamline and simplify products and approaches
 - Develop national penetration of Home Performance with ENERGY STAR program
 - Mandate time-of-home-sale energy performance disclosure
 - Information technology improvements to facilitate data sharing
- Establish effective energy efficiency marketing strategies

- Identify successes at the local and contractor level and develop complementary marketing strategies
- Modify the “value proposition” of energy efficiency to strengthen consumer demand
- Develop a risk mitigation marketing strategy to reduce effect of energy price volatility
- Private sector must take lead in promoting energy efficiency, including non-energy benefits
- Identify and educate national champions
- Create measurably effective marketing programs (e.g., co-op, direct marketing) tied to program standards
- Match the value proposition (comfort, convenience, health, air quality, safety, etc.) to the price tag of the energy retrofit
- Leadership campaigns and public images (look to other examples of success)
- Do not lose the sense of urgency (has not worked in the past)
- Educate consumers with new technology and approaches
- Establish real and stable energy prices (e.g., eliminate utility subsidies)

IV. Are there models or strategies that have not been tried and should be tried?

- Support current Residential Energy Efficiency Program (REEP) legislation (3)
- Create a single coordinated set of national standards for quality of work and competency of workers and contractors for all federal residential energy efficiency programs (i.e., same standards)
- Create a nationally-coordinated marketing and outreach campaign that includes specific calls to action targeted at the voluntary consumer – individualized and personalized...not general awareness (3)
 - Create additional community-based promotion of energy efficiency programs
 - Facilitate public-private partnerships between for-profits and non-profits at community and neighborhood levels to reach a variety of populations (e.g., Home Performance with ENERGY STAR and low-income Weatherization Assistance Program)
 - Encourage that national and state energy programs must consider both behavior and technology
 - Establish a marketing campaign to advertise greater incentives for incrementally-more comprehensive “whole house” measures
 - Raise knowledge/awareness among students and build it into K-12 education curriculum
 - Standardize estimation of energy savings
- Develop prevailing worker career paths and wages
 - Review worker wages state by state within the Weatherization Assistance Program
 - Get the provisions of REEP “on the street” transitions for single technology installers and comprehensive technology installers
 - Establish appropriate new job titles
 - *Training programs*

- *Wage scales*

- Focus on bringing new investment sources both private and government
 - Applied successful economic development models
 - Municipal bond financing
 - Financing through property tax assessments
 - Investigate community scale ESCO models
 - Federal loan guarantees for residential energy efficiency improvements
 - Viable workable energy efficiency mortgages
 - Incentivize networking for “single technology” contractors
 - Sustainable Energy Utility models
 - 20% direct support from government and federal guarantee for additional 40% (based on \$100 billion per year industry at scale)
 - Create central national credit-support structure (combination of loan guarantees, loss reserves, etc.)
 - Create a national secondary market for energy efficiency financing that accommodates local differentiation
 - Small percentage of financing charge to fund a pool for fuel-neutral energy efficiency implementation
 - Incentivize energy savings for the homeowner
 - Business model (contractor/financing) needs to recognize customer gradient as it currently exists while developing progressions toward “five-star” technology installations
 - Create secondary financing market
- Explore options for more transparency of consumption benchmarking for interested consumers and make property-specific energy consumption data publicly available from utilities and other sources (2)
- Establish a national residential energy efficiency goal (such as 25% reduction in energy consumption by 2030) and:
 - National, multi-year public awareness campaign on energy efficiency
 - DOE should create a competition similar to X-Prize to create buzz for residential energy efficiency
- Expand non-sponsored Home Performance with ENERGY STAR programs
- Establish mandatory home energy usage and improvements labeling for use at time of home ownership transfer

V. Paths Forward: As individuals, organizations, and as a nation, what actions should we take over the next year to follow up from this Summit and help ensure success?

Green Group

DOE should present a draft action plan, developed with input from other federal agencies (including EPA, HUD, DOL, DOE, and others) to retrofit 1 million homes annually beginning in 2010 within 90 days after this Summit to participants. Summit participants will take the draft

action plan back to constituents and provide feedback within 30 days and pledge support to the collectively developed plan. Components of the action plan would include:

- Sufficient long term investment and funding to scale up program so as to achieve the to be established national 2050 climate change goals
- National communications and media/outreach campaign
- Workforce training
- National standards for all federal energy efficiency programs
- Performance metrics, including identification of participants roles and responsibilities (federal, state, and local government; private; and utility)
- Strategies for addressing occupant behavior

Blue Group

DOE and EPA need to further develop and nationalize Home Performance with ENERGY STAR (HPwES) as the standard structure and marketing platform for market-rate home performance (through a stakeholder process). The following action items are offered to support the HPwES platform:

- Obtain additional buy-in from HUD and DOD
- DOE OWIP should build-out the necessary framework and reconcile differences in recommendations
- Develop standards, templates, and tools to facilitate further HPwES implementation
- Develop and publish key principles of residential energy efficiency infrastructure development with assistance from the federal government
- Provide direct federal subsidies in the form of loan guarantees and tax credits and grants
- Test financing mechanisms from federal dollars as soon as possible
- Establish rigorous DOE oversight in holding recipients of federal funds accountable
- Establish “soft” venture capital for entrepreneurial models
- Test and calibrate performance-based measurement models (beyond BESTEST EX)
- Insure that all mechanisms and actions apply to multi-family sector
- Emphasize workforce development by governments, communities, and utilities—identify top contractors and transition them toward “whole house” installations

Yellow Group

Establish a national policy agenda around expanding the *Home Performance with ENERGY STAR* program, supporting and funding the Weatherization Assistance Program long term, and supporting the current REEP and EERS legislation. To get organized to promote the agenda, the following suggestions are offered:

- Acknowledge and promote the presence of a building energy retrofit coalitions and campaigns, such as the Efficiency First lobbying campaign, both grassroots and business-based multi-media campaigns
- Identify Administration champion(s)
- Band energy efficiency communities together NOW to create messages for political leadership to compete with the messages from nuclear and clean coal
- Provide leadership and expertise with assistance for SEP, WAP and EECBG recipients to maximize impact and sustainability of residential energy efficiency retrofit programs

- Analyze current utility business and investment models and engage with utilities in re-working current business models
- Encourage public utility commission, state energy office, and business leaders should ask themselves how they can provide greater leadership within their constituent organizations to influence the policy-making process

Red Group

- Standardize prediction of energy savings
 - Expedite BESTEST EX methodology
 - Harmonize BPI and RESNET comprehensive home assessment methodologies
- Develop and implement a large energy efficiency educational campaign
 - Coordinate of NGOs, government, and other stakeholders
 - Implement a comprehensive market assessment and Go-To-Market strategy at all levels of government and stakeholders
 - Align incentives against per capita energy reduction and carbon abatement
 - Create Contractor-specific portal for information on weatherization messaging
 - Get marketing professionals involved (e.g., not to just promote kWh savings)
 - Get Presidential support to engage foundations to support these efforts in the billions of dollars scale
 - Develop easy-to-use training materials
- Improve accessibility of energy usage and savings data
 - Support CA AB2021-like measures for utility data sharing
- Expand the non-sponsored HPwES program model
 - Engage HVAC and home performance contactors
- Replicate Sustainable Energy Utility models
- Encourage community-based promotion of energy efficiency programs
 - Immediately engage (with DOE technical assistance) cities, counties, associations, and States to support energy efficiency measures while using SEP funds to ensure transparent, accountable results
 - Use regional nodes to disseminate best practices and identify barriers
- Develop and use secondary financing markets
 - Demonstrate Loan Guarantee Pilot program
- Implement cross-cutting approaches
 - Provide significant resources to standard-setting organizations, conferences, and training organizations
 - Define energy efficiency as a public benefit in the IRS Code
 - Create “how-to” and best-practices guides to identify what is working
 - Accelerate the adoption and creation of standards
 - Bolster train-the-trainer programs
 - Look to outside success of micro-finance and healthcare programs and identify the social benefits