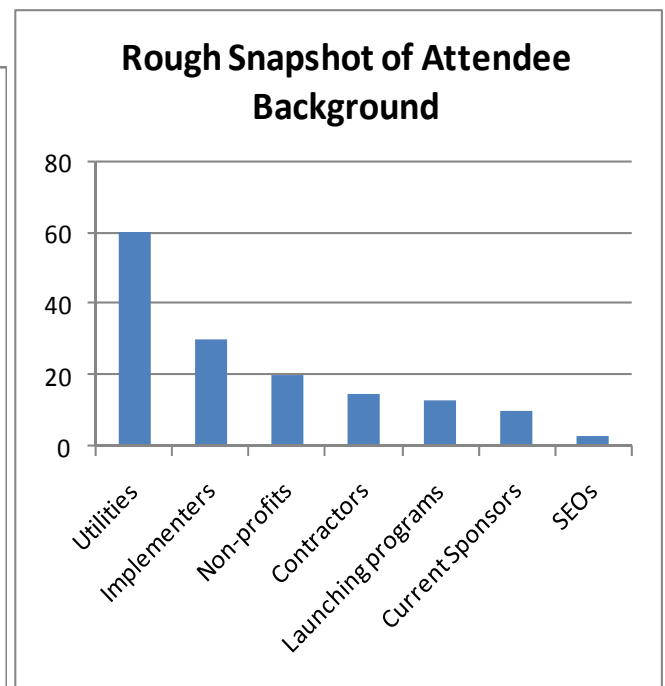
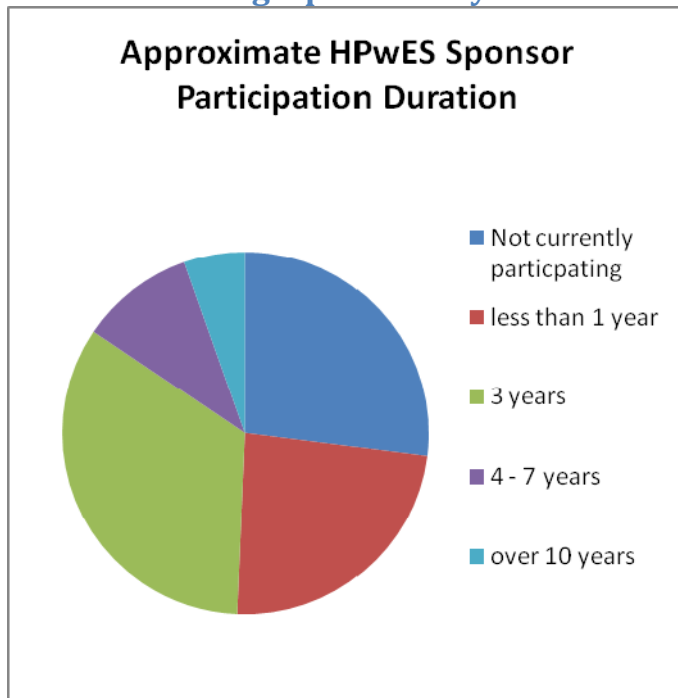


Home Performance with ENERGY STAR National Symposium

April 27, 2009

Purpose: Continue building the Home Performance with ENERGY STAR (HPwES) program infrastructure with national leadership and stakeholder involvement.

Audience demographic survey



Welcome. Chandler von Schrader, EPA.

Keynote Address: Our Time to Lead- Energy Efficiency Industry. Steve Cowell, CSG.

- Winds of change – New administration, upcoming legislation, Recovery Act, increased state role, climate change mitigation
- HPwES Report Card – Currently, there is success in a few states but more market penetration and market transformation is needed.
- New resources are coming fast - EECBG, SEP, WAP, Green Jobs, HUD
 - SEP Program filings due May 12th

- WAP will have increased per house expenditures and income eligibility
- EECBG applications due May 26th for states and June 25th for cities/counties
- Green Jobs will include Department of Labor and Office of Employment and Training Administration. Currently have not disclosed guidance and there is uncertainty to how administration will coordinate needs
- Regional Greenhouse Gas Initiative – first Cap-Trade-Invest Carbon Plan, many NE states are involved in RGGI
- Federal legislation to watch includes Markey-Waxman Bill and Welch Bill
- New financing opportunities for increasing energy efficiency including on bill financing, municipal bonds and AB811 in CA for financing, other innovative usages of tax bills
- New entries into the home performance market
 - Laborers Union has shown interest in looking at residential weatherization as potential new industry
 - Displaced industry with the bust in new housing market
 - Programs for large scale spending using rebates – how will they work together for comprehensiveness?
 - Will deep retrofits be overlooked?
- Meet the Challenges
 - Need to become organized and speak with one voice.
 - Avoid competition between HP programs and sponsors.
 - Join forces with low income weatherization and need to come together for training etc., consider alliances.
 - BPI and RESNET need to come together on standards.
 - New products will be on the market. Consider using them.
 - Participate in legislation.
 - DOE and EPA need to work together.

Questions

- Cynthia Adams, Charlottesville – How do we address venture capitalists and how do we approach them?
- Les L, NV – How are rebates incorporated in HPwES? Can they work together? Would like to see documentation on how individual programs currently function and have implemented programs.
 - Steve Cowell – It might be good to have a summary of rebates for each state and to be able to work together with states, utilities etc. We on the ground have to make that correlation to homeowners.
 - Note: NCI has this rebate information for HPwES programs

How Stimulus Funding will Augment HPwES. Ed Pollock, DOE.

- International and U.S. energy demand
- Ingredients to fixing housing stock – We are now transitioning research to the field and getting into the competitive market based realm. We also need to focus on sustainability.
- NCI and EPA will track programs' progress and evaluate current program offerings
- In order to accomplish improving five million homes, we need to ramp up with a new focus and increased funds while keeping an eye on sustainability
- Community retrofits

BESTEST-EX Update. Marcus Bianchi, NREL.

- Would like to hear from others what pieces of existing residential home topics require more research
- Need to make sure software will be usable and accurately predict energy savings
- BESTEST-EX is mainly used now by software developers and is a test protocol to test software in measuring energy savings, test amount of energy savings possible in existing homes, and help software developers create tools for the market
- Currently have pilots taking place and are waiting to hear back from them
- Timeline: end of May, beginning of June
- EdP- NREL is tasked to use BA Consortia and industry partners to develop products and technologies for the market to address the difficult problems in existing homes.

Questions

- Darren Hughes - Are you looking at data from homes that have already been retrofitted?
 - Answer- Not currently. Would love to have more data but are now using data from simulations. Darren and Marcus will talk more.

HPwES Updates: National Update. Chandler von Schrader, EPA.

- Planting the seed of HPwES now.
- Growth in 2008 and upcoming sponsors
- Growth and large numbers are accomplished mostly by a few sponsors
- Historically, had problems with program reporting
- HPwES is number one in the Rapid Deployment Energy Efficiency Program Toolkit
- Century Club winners – will send out a plaque, letter and help winners to publicize Century Club
- Opportunities
 - Need to find scale while keeping quality
 - Capitalize on flood of funds
 - Need to build supply by training contractors
 - New financing options – need more information to measure energy savings
 - Need to connect QA, national program reliability and level of training
 - Connect QA and program sustainability
 - CHEA needs to be finalized
 - “Smart metering” is coming and need to tie in with renewable
 - Savings tools for contractors’ confidence and to get jobs

HPwES Updates: Northern Virginia Contractor Partnership Pilot. Patricia Plympton, Navigant Consulting, Inc.

- Pilot is a proposed answer to areas of map not covered by local program sponsors. It includes market based QA and 20% proposed savings base
- Direct partnership with contractors, third party QA provider and oversight, partially funded contractor training, consumer incentives will be provided by local municipalities, utilities, states, etc.
- Timeline / Activities in NOVA

Questions

- Les L, NV - Are you using any standardized software in Pilot?
 - Patricia- Tough question, BESTESTEX or RESNET approved software, or weatherization approved software
- How are you finding contractors?
 - Patricia-Talking to local municipalities
- Tom D. – Are you talking to localities on how they can use Recovery Act grants in this program?
 - Al Christopher, VA state energy office - Currently creating a list, possibly create consumer education programs and incentives, workforce development of green jobs, legislation support for localities to have other vehicles for incentives, oversight, coordination of other programs offered in the state and weatherization, find ways to build accountability and transparency
- **Leila Womac, SMUD, CA** – We currently have behavioral based energy savings education but are looking now into life cycle savings.
 - Chandler - Hard to nail down the savings that occurs now. You can talk to Diane Farrington on turning energy audits into improvements. There is a huge need to educate consumers.
- Darren Hughes – Use the energy audit as an educational tool for consumers. What is the incentive for contractors to report to EPA/DOE?
 - Patricia– We are trying to make reporting less onerous and ability to use brand is one incentive and should help differentiate contractors.

HPwES Updates: New Marketing Resources. Casey Murphy, ICF.

- New HPwES promotional video – Can embed on partners’ and contractors’ websites
- ENERGY STAR account – How many people know about it? 1/3 of the room
- Marketing toolkit is available online
 - Banner graphic file – Sponsors can borrow pop up banner and can also download program to create their own customized banner
 - Business tools for contractors, disaggregation tool
 - High resolution image graphics
 - Sample forms – In Sponsor Guide but can download and actively use.
- Sponsors and their contractors should know these tools exist
- Next week we will roll out a new reporting tool.
- Sponsors also need to make contractors aware of tools and contractors should use reporting tools. Hopefully this eases burden on both parties.

Savings at the Kitchen Table —Round Two—Contractors’ issues on using savings tools. Facilitator: Doug Brookman.

Across the panel, there are many different business models and approaches. Panelists are:

- Devon Hartman (Los Angeles) – Has an Architecture/construction company that remodels high end homes. They have only been doing HPwES for a year and jobs are typically \$25-60K, but they also do some small jobs. One focus is working with building inspectors to smooth the process.
- Paul Case (Oregon) – Started in weatherization and then moved to HPwES. Most of his jobs are 1,300 -1,500 sq ft homes; and they do subcontract some of the work. He conveyed that you have to sell the testing before you go out to a home, and the close ratio goes up because you’ve

already sold testing. His company is connected with utilities, and they conduct 15-20 phone screens and send information to homeowners, with some callbacks from the homeowners. Utility incentives help, but mainly for weatherization.

- Chris Strand (Austin, TX) – HVAC, IAQ, plumbing. \$13 million business- 2.4 is Building Performance. The company was always focused on energy efficiency, and they initially did weatherization and moved into HVAC. They pushed the city to have weatherization incentives with HVAC. Estimates are free and they look at 5 main areas: 1) shading since temperature differences average 7 degrees; 2) distribution systems: duct work is majority of air leaks; 3) attic insulation; 4) HVAC equip; 5) minor air infiltration. Austin energy provides incentives for all 5 areas.
- Matt Golden (San Francisco) – Company has 5 years of experience and originally came out of solar industry, but they realized that solar wasn't the answer. They are vertically integrated because subcontracting (jobs under 1500) has very high overhead. They took a comprehensive approach, developing whole house solutions. Use trained crews to fix problems, address everything, and include a lot of solar thermal. Quality Assurance is critical, and they realized cutting corners (audits light) results in problems- less energy savings, unhappy customers, etc. They use software, but training is critical.

Leveraging Energy savings into delivery

- PC - last thing they mention to homeowners is energy savings because rates are low. Customer is paying for assessment so they are serious about purchasing, and can expect a 10 year payback. Customers learn a lot from the assessment and see it themselves. 90% time before leaving house homeowner recognizes need to improve.

Is accurate energy savings info critical to sales?

- DH - Don't know much about modeling, many are problematic. They are approaching remodeling from an architectural side with lots of discussion on scope, and energy savings is on general savings level. Energy savings enrich conversations already in process.
- CS – Savings info is not critical- they just explain the factors that impact use. The key is simply making comparisons and discussing major flaws / problems to get an emotional decision. They're generally called because people want new equipment, but sales staff won't provide equipment estimate without looking at the whole house. It's pretty easy to determine savings when equipment replaced. Only reason to weatherize is to reduce load on house.
- MG – Agrees with others; they're not selling energy savings.

Modeling savings- is it practical for contractors/homeowners and rigorous enough for HPwES?

- CS - Modeling is rigorous enough, and doesn't need dumbed down
- MG – Two different issues: program needs versus homeowner needs. Program needs ways to estimate energy saved to get funding, but he doesn't think we have the data to be very accurate. Programs want to focus on ROI; however, homeowners care less about energy than health and comfort. There's a concern about accuracy and expectations- we really aren't all that accurate.

- PC - Tools are sufficient, simplifying data entry is good. They don't sit down with data and homeowner at table; rather they take the info and then report back.
- CS - Modeling increases costs for contractors. Needs to be done after the fact because they need to do a one-stop proposal. Can do testing as part of installation and they prefer deemed savings program where utility does modeling and doesn't put modeling burden on contractor (what Austin uses).
- MG – If you get anything wrong you pay for it dearly. Deemed savings is a disaster because it means incentives are wrong. Talking customers out of big HVAC rebates because insulation is more important, but with less rebates. Renewables have large incentives but are less effective. Need modeling to get out of prescriptive world. Incentives push people towards products.
- DH – Do excellent work and warranty it. Terrified of setting expectations in modeling and savings percentages. Want ones that are helpful to people. Customer may never want energy savings. Need to know nationally that the dollars spent are saving energy, need to be responsible as an industry for knowing this.

All of the work needs to be translated to customer; the customer may never get the underlying modeling/engineering.

- CS- Austin has complied utility bills so that can be conveyed to the customer. It is obvious that they're saving 15% on cooling portion of their bill.
- PC – Don't want to bog down homeowner with technical information. However, in the future, people are going to be asking more questions about energy efficiency.
- MG – On the incentives system, demand side incentives are a interim measure. Future incentives will be built from cap and trade- will add additional costs that will make it simpler. Supply side will create incentives by raising costs of energy. Focus on solutions selling: selling to pain. If it doesn't hurt, people aren't going to buy so you need to build trust that you can solve their problems.

Questions

- Bob Knight – Models don't do consumers much good. It's very important to know who contractors are doing work for. Do you think it's adequate to convince homeowners that they are going to save significant amount of energy or do they need a hard # or %. Do they understand heating/cooling savings versus whole house savings?
 - DH – We do extrapolations at table. Each homeowner has different points of pain. Not hard to extrapolate savings based on HVAC.
 - CS – Energy savings is at top of list for homeowner (in Austin's very hot climate). Can achieve huge cuts in utility bills- they see \$400-500 utility bills. Homeowners are very interested in statistics over the years- but they won't guarantee savings and promote IAQ and comfort too, since they're all tied together.
- Mark Berman (Davis Energy Group) – Has global warming become a reason? Reducing Carbon?
 - MG – They've had a carbon calculator for 5 years and people give data now, used to not bother. Global warming doesn't hurt yet, just icing on cake. People want to feel good about what they're doing.
 - PC – All those things are factors, need to figure out if it's something that the homeowner cares about- assess consumer and their reasons.
- Tracy Robinson (Housing Louisiana) – Austin will require full audit before selling home. How does this impact HPwES business model?

- PC – Point of sale audit will be required so they've been presenting to Realtors. Part of point of sale ordinance is climate protection plan; however only ½ of that audience believed in climate change. It's just a visual audit (some leakage test) with recommendations before point of sale, yet buyers are going to want those improvements made before buying.
- Keith Aldridge (Adv Energy) – Anyone provide feedback/monitoring?
 - MG – They have web-based energy monitoring on higher end projects, but want to roll it out to all projects and now in testing phase. It makes a lot of sense especially with geothermal. They're trying to build simple systems for homeowner.
- Sue Hanson (WECC) – 1) Do you do comprehensive evaluations on all jobs? 2) Who is the receiver of incentives, contractor or homeowner?
 - DH – Adopted rigorous Home Performance test (½ are just Home Performance jobs, others are architecture/construction). They're terrified not to do whole test.
 - PC- 90% of jobs have whole test. Others have air and duct tests. Depends on job, incentives, etc.
 - CS – For quality control purposes, they are required by Austin to look at: duct leakage (10% or lower), air infiltration, air balancing, static pressures, etc.
 - MG – They always start with full audit. Generally don't win bids unless they take time to ID problems. Don't sell audits. Customer referrals, #1 lead generator. Sometimes have to talk customer down.
 - PC – 60-70% of work through previous customers, referrals. But they do a lot of marketing.
 - CS – Most customers are through utility network.
 - DH – Also a lot of mktg.
- Steven Clarence ??? – Creating customer urgency. Struggling with getting customers to make improvements now. How have you addressed it?
 - CS – When customer calls, wants something done.
 - DH – Try not to force sale. Season is a factor- adjust marketing based on seasons. Sometimes people wait a few years.
- Liz Robinson (Philly) – Cool roofs or smart metering?
 - MG – Do install some roofs. Generally makes sense only when roof is being replaced and in certain climates. Have monitoring, but not sure what smart metering would do for them.
- Terry Freeman (Columbia Water & Light) – What is the greatest sales tool to get them to buy into extra services without overselling and scaring people?
 - DH – Went to sales seminar, was taught how to listen. MUST listen to sell. It is a very complicated system, lives are complicated.
 - PS – Giving people options and priorities so they can use it over a few years. Do talk about the whole job and how everything builds on each other. Do include rebates/incentives on report – makes it more compelling.
 - CS – Very competitive. People only buy from people that they like- need to build trust.
 - MG – Getting people to start saying yes and not stop. Make sure they're actually agreeing with the pains and the solutions. Closing is at kitchen table, selling starts with first contact.
- Darlin Smith (KC weatherization) – Warranty for services & products, how long?
 - DH – Warranty work period. No time.

- PC – Will go back 5-6 years later. Sometimes not their problem but has to clear their name.
- CS – Offer lifetime warranty and will take care of anything that’s their fault.
- MG – Will go back if people don’t think their homes are performing properly. Unhappy customers can do a lot of damage.
- Bruce Mast (Build it Green) - Repeat customers, how to maintain/cultivate?
 - MG – Solutions are discussed in terms of phased approach. Need to create real solution initially- make sure every project produces noticeable results. Using systems/software for additional communication.
 - DH – Existing customer is a goldmine. They created a client touch effort by hosting receptions/events to stay in touch.
 - PC – Have newsletters and referral program.
 - CS – Take care of customer, they will take care of us.

Facilitated Discussion: Building Consumer Demand for HPwES. Facilitator: Doug Brookman.

Panelists:

- Sue Hanson (WECC) – Marketing
- Jerry Hannah (National Grid) – Financing
- Chris Williams (Austin Energy) – Incentives
- Ed Thomas (UtilityExchange.org) – Public Relations

Marketing

- Sue Hanson, WECC – We mimic a lot of EPA suggestions for tools and partner with remodeler associations. Most successful is the primary marketing campaign in the spring to keep a steady amount of business year round. It gives contractors a consistent workload. I would like to learn more about business skills tools.
- Jerry Hannah, National Grid – Does not market due to budget constraints.

What works?

- Janis Erickson, SMUD - Market in February and March. Use bill inserts, promote contractors and give them tools. We include a Cooling Campaign as a part of a package.
- Diane Farrington, Oregon
 - Previously used \$100 off of an assessment and now \$150 if you do 2 improvements. Need to link coupons with action.
 - Also have a coupon for \$100 off for every improvement after the first one.
 - Recently kicked off a Home Show, 3,000 entries, free marketing, used local media, involved contractors, used a preliminary screening “clipboard audit.”
 - Contractors need tiered incentives to get deep retrofits
- Sue Hanson - Has a coupon linked with action. There is an additional \$350 on the table for the consumer if they follow through with multiple improvements. The number of people completing multiple improvements has increased.
- Chris Williams – Uses direct mail. Marketing should be pushed on contractors.

Financing

- Jerry Hannah - They have \$1,300 for equipment change outs and other incentives for contractors. 13% of money went back to customer by taking off administrative overhead costs and now 67% goes back to the consumer. Think about what is the easiest thing for the customer. They offer a personal loan up to \$15,000 for up to 7 years and the contractor can give the consumer a number to call immediately (did around 200 loans). Now they use 12 state banks. Banks charged 4-6% for administering loans. Currently, using a bank out of Salt Lake City. Utilities don't have to deal with overhead, and can let banks deal with it. 80% of people were accepted in the loan, and 76% loans were spent on heating systems.
- Ed Thomas – It is best to give consumers a choice on incentives and give contractors multiple tools to present on how to finance improvements. Give contractors access to everything out there.
- Jerry Hannah - Has a pilot out now for those in a lower income bracket. They can finance improvements if paid for slowly, and therefore they still get offered incentives. Nebraska – has a revolving loan fund through local banks. Nebraska Energy Office covers 50% on principal and there are no defaults on loans currently. Kansas City Power and Light has up to \$600 rebate to do an energy audit and implement an improvement. The drawback is some only do the energy audit and never get the rebate.
- Ed Thomas - Link energy audit to improvements and let consumers be fully aware of what audit entails and comprehensiveness (expense) before the audit is done.
- Les L., NV - Do appraisers understand the value of improvements?
 - Sue Hanson - We are getting there. We have talked with realtors to work with MLS and put checkboxes on MLS even though it is not required. However, we must have documentation to accomplish that task.
 - Claudia Tighe, Arlington, VA - We have had pushback from realtors.
 - Sue Hanson – We have worked more on the side of giving realtors tools to make the sale.
- Leila Womac, SMUD – Building inspectors pushback on the program and are not concerned with the sale.
 - Sue Hanson – The key is to have a robust program and gain trust of all stakeholders in the community.
- Darren Hughes - Why can't contractors have the obligation for the quality and consumer education instead of the high overhead administration costs to utilities? Why not give contractors more incentives along with the consumers.

Incentives

- Chris Williams - Start sale at low level (behavioral education, simple solutions) and step up with the whole house by presenting incentives and additional improvements. Require contractors to get certified and offer equipment rebates. Many contractors have a sales person separate from installers. Keep information on a level consumers can understand, and understand what will make that sale.
- Ed Thomas - Challenge for smaller programs is budget. How can we champion our contractors? Consumers want to work with contractors that are too busy so how do you break into the business?
 - Sue – We have a \$75 referral fee to remodelers for bringing in an energy consultant, with the idea the consultant will refer remodeler. It is important to build a strong

network. Trade allies are important and as well as training contractors in trade allies on example homes.

- Rick Nero, Ibacos – For rental housing, are there going to be incentives for building consumer demand for renters?
 - Chris Williams - Renters can take part in the program with permission of property owner and that owner would receive the incentives.
- Indiana - Multi-family renters program: direct install faucet airators etc. and the program is through a utility.
 - Ed Thomas - On bill financing could benefit both renter and owner since renter still pays utility bill and property is improved, Midwest Energy in KS does it.
- Don Silvers, NJ - What happens when the renter / owner leaves after a year?
 - Utility bill financing stays with utility bill. In Massachusetts it stays with renter / owner to pay.
- Diane Ferrington - Most effective is bundling multiple measures for incentives.
- Jerry Hannah - What is the real value to utilities? Why not give more incentives to get more savings. It is important to look at real value and who ends up with the value in the end? It is utilities' responsibility.
- Sue Hanson - Focus on Energy, Legislative action can determine cost effectiveness. Legislation and policy can help drive this especially as we consider cap and trade and other new strategies.

Public Relations

- Ed Thomas – uses publicity by celebrity audits in the community. Work the media. Green Homes America and Sustainable Spaces are good examples. Hughes Co. has commercials, bigger mileage out of traditional vehicles.
 - Devon Hartman holds open houses for improved homes and includes the community. They broadcast emails to advertise open houses.
 - Change the sales pitch for each customer. Tailor to the individual.
 - Hometown Green holds workshops.
 - Important to understand where your leads are coming from and tie that in to activities.
 - Sears in LA pilot is using new HPwES video
 - Community college involved in home energy makeover.
 - Workshop for contractors - It helped contractors to present to others in the workshop. Charged \$15 and sponsored by local entities. The workshop was about education and generating leads. Contractors had tables set up to generate leads to community members, homenergymakeover.org
 - In Oregon, they are working on having a home energy makeover contest and will incorporate HPwES contractors.
- Sue Hanson - Home energy makeovers are a heavy lift, but used “losers” to market and generate leads. We partnered with Fox news on a TV series based on the makeover and sent emails to leads with embedded coupons.
 - Ed Thomas - Get in-kind donations and support from manufacturers.
- Mike Rogers, Green Homes America – used viral marketing for contest on “Biggest Icicles.” Winner got free audit and they followed up on leads.
- Tarik Rogers, Oncor - Oncor is sensitive about contractors marketing themselves as part of the program.
 - Ed Thomas – You can use BPI or HPwES as risk management for quality and amount of certifications. That puts liability off of utilities.

- Darren Hughes - How can we show the difference between ENERGY STAR product label and the HPwES process label?
- Devon Hartman – We got in late to the program and want to have more opportunity to help shape the organization of the program. We are concerned about synergy in business practices and if resources can be combined like in marketing can have a bigger impact on the market. It needs to be more collaborative. Can cities aid in this, otherwise they need to be more included?
- There is little brand awareness in the general public. EPA/DOE aren't putting funds into general awareness program. A national campaign is needed.
 - Mark Berman, Davis Energy Group - HPwES isn't sexy.
 - David Lee, EPA - DOE/EPA worked together on an awareness campaign for ENERGY STAR. There is no need for process specific campaign. We wanted to allow and give power to the local level to implement program from ground up based on local needs. 80% recognition of ENERGY STAR brand in the market.
 - Ed Thomas - Good tactic is show you are with a national program to show you are trustworthy, go by national standards, and separated from the rest of the media static.

Facilitated Discussion: Building a Sustainable Supply of Good Contractors for HPwES—Best Practices and How to Make them Work for You. Facilitator: Doug Brookman.

Recruitment

- Bob Knight – One of the best recruitment tools is economic turnaround- we're experiencing growth in classes because people are looking for work. Better quality contractors than typical. New job financing (tax lean secure public supported financing, ABA11 in CA- Berkeley) is currently considered in 15 states, 3 adopted. Government sells bonds to finance HP retrofits; pay contractors when they finish a job. They use bridge funding until enough bonds sold. No income required, credit score, loan tied to property. Increment on property tax for 20 year period, rate is 4-5% typically. Now experiencing increased utility support in marketing. CA has an interesting profile where the top ¼ of homes use ½ the energy so you can have a large impact. Right now, having more contractors is better because of greater public awareness. Celebrity home diagnostics are also a good recruitment tool for contractors. Builder Associations are a good source of potential contractors especially during economic downturn. Selling points to contractors: profitability, quality, competitive, seasonal flexibility.
- Kathy Greely (Performance Systems Development, PA) – saw a big spike in interested contractors 1.5 years ago; there are a lot of people moving over from new homes.
- Asa Foss – Low interest loans tied to house is very critical.
- John Jones - Need to know what kind of contractors you need. Have to find champion and watch out for low bidders, but good QA programs take care of that.

- Cynthia Adams– VA just passed a law. You need to talk very carefully with the people that would implement it because otherwise it may pass with flaws. They don't have explicit permission to use certain mechanisms, which is a problem.
 - BK – Also happened in a city in CA. Details hurt the program. Cisco DeVries at Renewable Funding LLC is a good resource for this.

- BK – Charles running training at PG&E. Utility’s ability to reach contractors with authority is very important, good partner.
- Claudia Tighe – If a property changes hands, is there any problem with the seller gaining increased value without having to repay loan? Whereas the buyer is paying twice.
 - BK – Double win for seller, increased value and haven’t paid for whole thing.
- ?? – With a down labor market, recruiting people is easy, but recruiting people who will actually do HP is harder.
 - BK – They have experienced it with 2/3 of initial trainees never appeared again, some people just take courses. Interview everyone before class.
 - JJ – A lot take classes for CEUs and there are rebates. Need to classify training.
 - KG – They get calls for people who want to be auditors. Charge market rates for training and talk to everyone beforehand. Convey that it costs 6-10,000 for equipment, which gets rid of some.
 - Darrel Hughes – The Green trend results in a lot of people.

Training

- Kathy Greely– Until two years ago, there was no energy audit/HP infrastructure. They established a high standard for program: both RESNET and BPI certification to be involved. It is a new/existing homes program so wanted both and there was a substantial modeling requirement (REMRATE or TREAT). Initially, it was slow to get people to sign up. State has launched energy efficiency loan program with criteria of BPI-RESNET certified contractor performing audit. Screening is an issue because of the interest in green, so they convey the time/money investment of the program. 1 week of rater training, break, then BPI building analyst training after that. Both classroom and field training with modeling in both. Have trained 90 people (75% RESNET pass rate, 95% BPI pass rate). There is mentoring on the first few audits, field trainer accompanies contractor. Additional topic-specific training with discounts for HPwES. Existing homes contractors don’t have to be fully-certified rater operating under HERS provider, but loan program requires this & a rating w/ each audit.
- BK – Training used to be 9 days in a row, but it prevented participating. Now it’s divided into 3 day modules, it’s good to give a break (and homework).
- JJ – They’re very close to a training crisis because there isn’t enough trainers, training sites, or funding. Need to make sure that legislatures/others know there are not enough resources/mechanisms in place now. Primary training is training leading to certification, but it must be followed by secondary training (1 week isn’t enough) and then continuing education.
- BK – There is a greater opportunity for training now w/ stimulus funds: there are grants through states and other sources; need for train-the-trainer classes; donating curriculum to community colleges. Training must go hand in hand with building demand. They require that contractors go through 5 in-field mentoring sessions on the job. Now they’re starting to have little seminars on common topics throughout the year. **How do you train field crews best in proper installation?**
 - AF – We’ve figured out energy auditor training, but installation training needs figured out.
 - KG – And training expansion is a huge issue.
 - JJ – Training can’t stay at just the contractor level.

- Ben Adams – Fine line between training and quality assurance. There's a solution that requires contractors to implement their own QA program in addition to HPwES. And a disconnect between who gets trained and who doesn't work.
- Claudia Tighe– What is the barrier to getting contractors out there?
 - KG – Some incentive to get contractors over the initial high cost.
 - JJ – They have some problem with cannibals in field. Need to make sure there's retention
- Mark Berman – Is there multi-lingual training, especially Spanish?
 - BK – would love to but still haven't figured it out all the issues in English.
- ?? (Phoenix) –While HPwES contractors are the ones trained it's the subcontractors that are doing the work. Need to address this issue.
 - KG – everyone has to take some training, right now 1 class of HPwES 101.

Mentoring

- AF- They have 3-5 mentoring sessions after BPI exam. Mentoring is training w/ bottleneck w/ cost and time. Now existing contractors are doing mentoring sessions with program mentor just doing one of those sessions. The mentor contractors gain: partnerships with new companies, a logo from the program (differentiation), potential job through program. Major reason is as a favor to program- shows great commitment. Alternate mentoring session based on mentor contractor's background. Rules: dress code, trainee can't talk to homeowner without permission, have to use trainee's equipment.
- Darrin Hughes – Important to know that remodelers aren't the classroom sort- they understand things better in the field. Overview, review, then go to the field, but provide full training of various steps. They don't think its more resource consuming than classroom.
- ?? (Oregon) – When people get equipment, then learn classroom info, there's greater retention. Hands on is the best. New person is the helper in the field.

Retention

- JJ – What we do in homes has a big impact fast- people live in there. They currently have 160-170 contractors. Kept many for a long time. Contractors need to know what the program's vision is (rebates, contractor, market driven, etc) and expected changes. Need clear policies and procedures and communicate to contractors. If changes are made, need to give contractors time to provide input and react to changes (3-6 months). They must have a voice. Quality assurance program must be strong and tied to standards. Need to make sure contractors know how they're going to be assessed and what on. Technical assistance is very expensive- a lot of man hours with contractors in program helping them in the field. One of the most costly program items. Have to correct contractors and explain what they're doing wrong. Taking action- when you have bad contractors, need to stand up to QA policies/procedures, otherwise the good ones will leave. Healthy competition is ok, not with those that are undercutting. Reward the good work and recognize the best/good ones.
- KG – Rewards are important. Asked the contractors what they want- more training (and PA gives the training at a discount).
- JJ – Look at every single workscope, and they're working on ways to streamline good contractors' processes (also cuts down on costs). Contractors with good work and good internal QA receive streamlining. They conduct 10% QA on regular HPwES.

How are programs funded?

- BK – funded by CA utilities. Blessing and curse- because of total resource cost test. Can't be cost effective under current rules.
- KG – Funded by PA Sustainable Energy fund that resulted from utility deregulation. Now complicated by utility funds.
- AF – Maryland State Energy Office.
- JJ – Electric bills

David Lee, Closing

Five points

1. *Global Warming is real* – have anyone who doesn't believe in it call David Lee.
2. *It is imperative we address global warming.* There are downsides to global warming- even the pentagon is thinking about global warming and they have identified it as a major strategic issue because of potential international disruption. There may be potential migration of large numbers of people in tropical /coastal areas.
3. *There is a rule in regulation: you don't mess with someone's grandmother.* There will be cap and trade legislature. When it happens, the price of energy will increase, and as it increases companies and utilities will pass on costs. Someone's grandmother will be getting bills. We need a solution, a response to the grandmother, explaining why bills are high and have a real solution. We need to get this right because it will become very important in the PR arsenal when there are the complaints of higher costs.
4. *Stimulus funding is fleeting.* Use this money for something smart, to build infrastructure to support HPwES.
5. *One good thing, one bad thing.* The good thing about HPwES is that it's a wide open field- we can make rules and work with the community. The bad thing is that- we don't know what we're doing. It's not about the financing, rebates, marketing, training, modeling, etc. It's about the people. Everyone who spoke today, went out and tried to make the program work through their dedication.