Energy Efficiency Workforce Development in Maryland

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September 14, 2010



Program Background

- 2006: Maryland Energy Administration (MEA) received DOE Building Technologies Program grant to form the Mid-Atlantic Home Performance Collaborative
- Used this funding and other MEA funds to start a 2-county pilot program for market-rate Home Performance with ENERGY STAR (HPwES) in the state
- MEA selected a consultant who was knowledgeable in the field of home energy improvements
- Chose a training standard (Building Performance Institute)
 - •Relied heavily on the experiences of other states when making this decision, particularly New York
 - •BPI focused on existing homes rather than new homes
 - Project team had experience working with BPI
 - WAP training not available in Maryland





Early Successes

- •Used the DOE grant funding and other MEA funds to offer subsidized training for contractors
- Contractors paid for the course upfront and were reimbursed for 75% of the training costs and 100% of the certification costs if they completed a certain number of jobs each month
- Incentives for submitting audit reports
- •First contractor training in November 2007
 - •Relied heavily on word-of-mouth to get area contractors into this training
 - •Held the next training the following week due to huge contractor demand
 - •Trainings held once a month starting in January 2008



Early Successes

- •Energy upgrades program launched to the public on January 1, 2008
- •Contractors saw opportunity for work in the dense, educated Baltimore/Washington area, so the 2-county pilot quickly grew to a statewide program
- •Incorporated many lessons learned from similar programs in other states
- •Trained over 200 contractors and completed 200 Home Performance jobs in the first year





Limited Income

- •MEA saw the need for a home energy improvement program to serve moderate income homeowners who did not qualify for the DOE Weatherization Assistance Program
- •Started the Maryland Assisted Home Performance Program, working with the Department of Housing and Community Development to identify low-moderate income homeowners



- •Used contractors trained in MEA's program to perform the work, rather than Weatherization contractors
- •Partners came to the conclusion that it would be beneficial for <u>all</u> contractors to be trained to the same standards to do work in any sector of the home energy improvement market in the state

•Need:

- •A unified curriculum and training standards, incorporating BPI standards <u>and</u> weatherization core concepts
- Convenient training locations throughout the state of Maryland



Program Expansion - Utilities

- •EmPOWER Maryland Energy Efficiency Act passed in 2008
- •Early training and program successes helped convince the Maryland Public Service Commission to allow local utilities to include HPwES in their EmPOWER Maryland Program suite
- •Goal: For utility EmPOWER programs to become the catalyst for full market transformation of the home energy industry





Program Expansion – Colleges

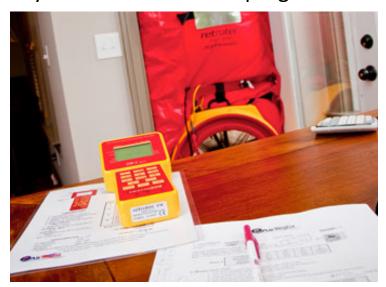
- •MEA's long-term thought was to involve Maryland's community colleges in training
 - •Better equipped than MEA for this type of training
 - Locations around the state
 - Skilled at curriculum development
 - •Could train for Weatherization and marketrate jobs
- •Colleges had experience with workforce development and had facilities for HVAC training
- •Were initially hesitant to get involved. MEA had to be very proactive at convincing the colleges this was something of value for them





Program Transition - Colleges

- •Early 2009: The DOE Mid-Atlantic Home Performance grant was coming to a close, while utility EmPOWER Maryland programs were starting to be finalized
- •After much discussion with MEA and DHCD, a consortium of community colleges signed an Intergovernmental Agreement with MEA and DHCD in June 2009
- •Purpose of the agreement was to fund the creation of workforce training to prepare participants for work in energy improvement jobs
- •Goal: To have the community colleges as the training point for contractors in DHCD Weatherization AND all utility Home Performance programs





Program Transition - Colleges

- •Colleges tasked with:
 - •Building upon existing curricula (BPI and Weatherization) to create customized, unified training materials for MEA and DHCD
 - Training and mentoring for instructors
 - •Establishing and maintaining training hubs throughout the state
 - Developing classroom laboratories, props, and scaled-down instructional houses
 - •Running classes and providing field training, mentoring, and written and field testing for certification
 - •Developing test-out procedures for contractors with prior experience
- No financial incentives for contractors to participate





Where are we now?

- •There are two pieces to the program that is in place:
 - 1. Contractor Training
 - 2. Energy Improvement Work

1. Contractor Training:

- •Maryland's community colleges offer five home energy retrofit courses:
 - Weatherization Tactics
 - •BPI Building Analyst
 - •BPI Building Envelope
 - EPA Lead Paint Awareness
 - HVAC for Weatherization
- •Weatherization and utility HPwES contractors take the same courses
- •On our way to the 1000th participant in the courses
- Different courses are required for different positions (ie, crew member vs. energy auditor)

2. Energy Improvement Work:

- •All five major utilities in the state offer HPwES programs with incentives for consumers, funded through ratepayer surcharges (incentives vary by utility, generally about 15% rebate)
- •Utilities are in charge of marketing and outreach to homeowners
- •Participation has been very slow



Challenges

- 1. Poor economic conditions led to low demand for home energy audits and retrofits
- 2. Utility rebate levels for homeowners are not set at high enough levels to incentivize
- 3. Utility EmPOWER Maryland budgets don't allow for much dedicated marketing
- 4. Participation in courses dropped off once incentives to contractors were discontinued
- 5. Difficulties in spreading the word to the general public about the availability of classes
- 6. Maintaining knowledge base as program transitioned from MEA's consultant to colleges
- 7. Delays in transition from DOE grant to community college program
- 8. Instructors at the colleges were not as experienced as those working for MEA's consultant
- 9. DHCD was initially hesitant to adopt the BPI curriculum, as they were familiar with the Weatherization core concepts
- 10. Determining realistic requirements for required courses



Lessons Learned

- 1. A workforce development program is only valuable if it leads to jobs!
- 2. Importance of proper incentive levels in different areas as the program progresses
- 3. Marketing, marketing! Get the word out about the training to interested groups (ie, HVAC students at the community colleges) and spread the word about the program to homeowners who will talk
- 4. Work with a consultant who has experience in the field, and keep them involved in the program as much as possible, especially through transition periods
- 5. Team-teaching is very valuable in order to get new instructors up to speed
- 6. Provide new teachers an opportunity to shadow auditors and/or installers in the field to get additional experience. This is especially needed if their background is not in energy efficiency.



Lessons Learned (continued)

- Make a plan and stick to it, but be willing to compromise to meet the needs of other organizations and of the students
- 8. Work to the strengths of each organization and be proactive when involving outside groups
- 9. Look to other states and organizations for best practices

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