

Energy Efficiency Workforce Development in Maryland

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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 all 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 and 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 market-rate 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, 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)

7. 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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