Collaboration & Innovation in Program Delivery

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ENERGY STAR New Homes Sponsor Meeting 2012
A Tale of Two Utilities

Columbia Gas of Ohio

AEP Ohio

Lima
Newark
Columbus
Chillicothe
Canton
Athens
Why Collaborate?

1. Limited potential market
   - New construction vs. retrofit

Permits by Year

- NJ
- OH
- KY
Why Collaborate?

1. Limited potential market
   - New construction vs. retrofit
2. Limited delivery channel
   - With a strong “multiplier” effect
Why Collaborate?

1. Limited potential market
   - New construction vs. retrofit

2. Limited delivery channel
   - With a strong “multiplier” effect

3. Consistent message, consistent process
   - Reduces barriers for participants, stakeholders and consumers

This house is built to reduce energy use by 35% or more!
Why Collaborate?

1. **Limited potential market**
   - New construction vs. retrofit

2. **Limited delivery channel**
   - With a strong “multiplier” effect

3. **Consistent message, consistent process**
   - For participants, stakeholders, and consumers

4. **Single strategy – Shared cost**
   - Stretches budget/improves cost effectiveness
     - Incentives
     - Administration
     - Marketing
     - Training
     - QA
New Construction is Complicated

Building Science

Energy Ratings

HVAC

Lighting & Appliance
Initial Technical/Incentive Strategy

Challenges

- Market driven baseline in danger of attrition
  - Plunging sales driving focus on least first cost
  - Expiration of federal energy tax credit
  - Anxiety over Version 3

- Balancing participant and program cost/benefit
  - Technical requirements that raise the bar
  - But attract and retain builders
2011 Strategy

Transition tiers

1. Version 2.0 (HERS 85)
2. Version 2.0 + HERS 65 or Version 2.5
3. Version 3.0

Additional prescriptive requirements at each level

- HERS score
- HVAC efficiency
- Envelope & duct leakage
- Manual J, S, D
- Mechanical ventilation
- Sealed/power vented combustion appliances
- Energy Star lighting & appliances
2011 Strategy

- Incremental incentives by tier
  - 30-50% of incremental cost

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>[Level 3]</th>
</tr>
</thead>
<tbody>
<tr>
<td>$900</td>
<td>$1,500</td>
<td>$2,000</td>
</tr>
</tbody>
</table>

- Extensive training
- Marketing support for the Energy Star brand
Prepping for Version 3

Challenges

- Lingering IECC 2006 baseline
- Cold climates (CZ>4)
- HVAC certification and checklists
- “Non-energy” requirements and checklists
- Incremental cost vs. value (selling the benefits)
- Incremental cost vs. incremental savings
- EPA schedule
2012 Strategy

- **Two tiers**
  - Plus some additional prescriptive requirements at each level
    1. Version 2.0/2.5 based (“Energy Path” etc.)
      - Entry level / safety net
    2. Version 3.0 (“ENERGY STAR”)
      - Full compliance

- Incremental incentives by **HERS Score**
  - With an adder for ENERGY STAR

- More training, better targeted

- New marketing tactics
### Incentive Strategy

The table details combined incentives by tier, code, and index compared to IECC 2009 and 2006 standards. The incentives are as follows:

- **Multi-Single (Townhomes)**: 75% per unit
- **Multifamily**: 50% per unit

#### Table: Combined Incentives by Tier, Code & Index

<table>
<thead>
<tr>
<th>HERS</th>
<th>vs. IECC 2006</th>
<th>vs. IECC 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tier 1</td>
<td>Tier 2</td>
</tr>
<tr>
<td>85</td>
<td>$350</td>
<td>$850</td>
</tr>
<tr>
<td>80</td>
<td>$500</td>
<td>$1,000</td>
</tr>
<tr>
<td>75</td>
<td>$750</td>
<td>$1,250</td>
</tr>
<tr>
<td>70</td>
<td>$1,500</td>
<td>$2,000</td>
</tr>
<tr>
<td>65</td>
<td>$1,750</td>
<td>$2,250</td>
</tr>
<tr>
<td>60</td>
<td>$2,250</td>
<td>$2,750</td>
</tr>
<tr>
<td>55</td>
<td>$3,000</td>
<td>$3,500</td>
</tr>
</tbody>
</table>
Technical Standards and Incentives Alone Are Not Enough
Standard Training Strategy

Technical Training Series
- Duct design & installation
- HVAC compliance
- Mechanical ventilation
- Moisture management
- Thermal bypasses
- Etc.

Selling ENERGY STAR Homes
- For sales professionals

Meeting the 2012 Program Requirements for HVAC Compliance:
Duct Design

March 5
8 a.m. to 4 p.m.
Stark County Bldg
4344 Metro Circle
North Canton, OH 44720

Keeping the House Dry: Managing Moisture in New Construction
Presented by Terrance Smith of MaGrann Associates

November 2, 2011|
9:00 to 1:00
HBA of Greater Toledo
1911 Indian Wood Cir.
Maumee, OH 43537

November 2, 2011|
9:00 to 1:00
Stark County Bldg
4344 Metro Cir. NW
North Canton, OH 44720

Please Respond by Fri., Oct. 28
For more info and to register:
Email ESHomesOH@magrann.com
or call Alonya Berry at 614-360-9492

Refreshments and Lunch Provided
Who Should Attend?
- Builders and General Contractors
- Home Energy Raters
- Framing/Insulation Contractors
- Air Sealers
- Architects and Design Professionals
- Other Construction Professionals

Many aspects of building design, construction and operation can affect the health and comfort of the people in the building. Three particular areas which can affect this are the flow of air, heat and moisture. This session is designed to help improve moisture control in new homes constructed to homes built to minimum code. We will utilize the Water Management Checklist materials that include:
- Water-managed stucco and foundation
- Water-managed wall assembly
- Water-managed roof assembly
- Water-managed building materials

For each of these issues, the training explores causes, control measures and effects on both buildings and occupants.
Partnering for Training Innovation

Beyond technical basics...

- Process Improvement (TQM) training for the builder's entire team

Success with ENERGY STAR
Getting it Right the First Time
with Industry Expert John Tooley

September 28, 2011
9:00 am to 2:00 pm
Aladdin Shrine Event & Convention Center
2000 Olentangy River Road
Columbus, Ohio 43219

Cost: $195 - $150 rebate upon completion

Please Respond by Wed., Sept. 21
For more info and to register:
Email: ESHomesOH@magrann.com
or call Julia Hall at 614-360-9765

Continental Breakfast and Lunch Provided

Who Should Attend?
This session is designed to ensure that builders and contractors work together with an improved process. Builders are encouraged to bring their entire team.
- Builders and General Contractors
- Home Energy Rates
- Framing, Insulation, HVAC & Plumbing Contractors

New construction is a builder's only chance to get things right the first time – fixing problems later is much more difficult and expensive, if not impossible.

John Tooley is one of the nation's leaders in the area of building science technologies. Hailed as a visionary in energy efficiency, Tooley has diagnosed and repaired more than 5,000 homes. He has participated in the weatherization of more than 16,000 homes.
Marketing Strategy

- “Traditional” support for builders selling to buyers
  - Communicating the value message
    - Brochures, fact sheets, display boards, etc.
  - Differentiating program homes
    - vs. non-program new homes
    - vs. resale homes

- With new twists
  - “Integrated” HERS score
  - ENERGY STAR (v3) differentiation
  - Edgier messages
  - Innovative financing partnership
The HERS Index is a scoring system established by the Residential Energy Services Network (www.HERSscore.com) to which a home built to the specifications of a reference home based on the 2006 International Energy Conservation Code scores a HERS Index of 100, while a home using no net energy scores a HERS Index of 0. The lower a home's HERS Index, the more energy efficient and the lower the energy cost to operate.

An Energy Path Home or an ENERGY STAR Home—why buy anything else?
For additional information about these exceptional homes and list of participating builders, visit gridSMARTOhio.com and ColumbiaGasOhio.com/ESNH or call 1-877-771-5506.

AEP OHIO/COLUMBIA GAS OF OHIO ENERGY STAR® NEW HOMES

More energy savings and value built right in.
Congratulations! You’re ready to make one of life’s biggest investments.

That’s why it’s important that you know about the AEP Ohio/Columbus Gas of Ohio ENERGY STAR New Homes program. With this program, you can have one of these two homes:

1) Energy Path Home
2) ENERGY STAR Home

Both are built to a higher standard for superior energy efficiency, durability and lower operating costs. These homes are tested and proven to perform better than conventional homes built to code. (See the chart on the next page.)

Why buy these homes?
Benefits are built right in, and built in right:
- Lower energy costs—as much as 35% or more
- Improved indoor air quality
- Greater comfort
- Quieter living environment
- Smarter investment—higher resale value
- Better on the environment

Invest confidently.
Only participating builders who meet rigorous energy performance standards will build an Energy Path Home or ENERGY STAR Home as part of this program.

Plus, a home energy rating company can give you peace of mind by conducting independent on-site inspections during construction and final testing to make sure the required higher energy standards of this program are met.

A sustainable future
With concerns about energy costs, “future-proofing” your home for energy efficiency helps ensure that your home maintains and improves its future value for lower energy costs and greater durability. This will be an important feature at resale.

Join the million+ homebuyers nationally who have already selected an ENERGY STAR Home for more energy savings, comfort and value.

“A sustainable future with concerns about energy costs, ‘future-proofing’ your home for energy efficiency helps ensure that your home maintains and improves its future value for lower energy costs and greater durability. This will be an important feature at resale.”

New Homebuyer’s Checklist
Compare the top 14 features of an Energy Path Home or ENERGY STAR Home against other homes. You’ll enjoy the difference in lower energy bills and greater value for years to come.

<table>
<thead>
<tr>
<th>ENERGY EFFICIENCY FEATURE</th>
<th>OTHER HOMES</th>
<th>ENERGY PATH HOME</th>
<th>ENERGY STAR HOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tight, Well-Sealed Construction</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>2. High-Performance Insulation</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>3. ENERGY STAR Qualified Heating</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>4. Mechanical Ventilation</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>5. Well-Designed, Sealed and Insulated Ducts</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>6. ENERGY STAR Qualified Lighting</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>7. ENERGY STAR Qualified Appliances</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>8. Third-Party Verification—Home Energy Rating System</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>9. Thermal Enclosure System</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>10. HVAC System Checklist</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>11. Water Management System</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>12. ENERGY STAR Qualified Windows</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>13. ENERGY STAR Qualified Air Conditioning</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>14. The ENERGY STAR Label</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Everything from the exterior to interior is WOW! Our energy-efficient home is a dream come true.

—Ann Hamilton and Jay Miller, Athens, OH

http://www.MaGrann.com • ColumbiaGasOhio.com/ESNH • 1-877-771-5506
Beyond acceptable. More like exceptional.
Like water off a duck’s back.

AEP OHIO/COLUMBIA GAS OF OHIO ENERGY STAR® NEW HOMES
More energy savings and value built right in.

- Advanced moisture barriers and construction techniques effectively drain water from the roof, walls and foundation
- Preventing water damage is critical for maintaining the performance and durability of your ENERGY STAR Home
This home just raised the bar for energy savings and comfort.
Marketing Challenge

How to position Tier 1 within the marketing program?

- Entry level / safety net theory is working
- Need a clear distinction...
- But more than just comparison by subtraction?
  - “Subset” approach to suite of marketing materials
Partnering for Outreach

- HBAs/BIAs
  - Training venues
  - Speaker engagements
  - Newsletters and journals

- Affordable housing
  - Ohio Community Development Corporation
  - Ohio Housing Finance Agency
  - City of Columbus Neighborhood Stabilization Program
  - Ohio Capital Corporation for Housing
  - Habitat for Humanity
Partnering for Marketing Innovation

- With a regional bank: A preferred construction/purchase financing package...

<table>
<thead>
<tr>
<th>Down Payment</th>
<th>Minimum cash investment of $500 required from the borrower’s own funds – additional funds for down payment and closing costs can come from a variety of sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Mortgage Insurance (PMI)</td>
<td>None required</td>
</tr>
<tr>
<td>Credit Score</td>
<td>Permits lower credit scores</td>
</tr>
<tr>
<td>Fees</td>
<td>Reduced processing and underwriting fees</td>
</tr>
</tbody>
</table>

- With Advanced Energy: A bill guarantee tied to Version 3 participation
Quality Assurance

Field
- Shadow / Blind
- Pre-drywall / final
- Sampled / non-sampled
- Higher rates for new raters, conflict disclosure, sampling

File
- Final ratings
- Documentation (checklists, etc.)

Admin
- Electronic submittals
  - Enrollments
  - Incentive applications
  - REM file crosscheck
Impact/Trends

HERS Distribution (Combined Programs)

- Ohio

<table>
<thead>
<tr>
<th>Year</th>
<th>80+</th>
<th>75-79</th>
<th>70-74</th>
<th>65-69</th>
<th>60-64</th>
<th>55-59</th>
<th>50-54</th>
<th>&lt; 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td>30%</td>
<td>30%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td>25%</td>
<td>15%</td>
<td>20%</td>
<td>5%</td>
<td>10%</td>
<td>0%</td>
</tr>
</tbody>
</table>

2009: Orange Line
2010: Green Line
2011: Purple Line
Impacts/Trends – A Caveat

Completed Program Units vs. Permits & COs
(NJ example)

<table>
<thead>
<tr>
<th>Year</th>
<th>Completed Program Units</th>
<th>Permits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>26%</td>
<td>21%</td>
</tr>
<tr>
<td>2006</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td>2007</td>
<td>22%</td>
<td>20%</td>
</tr>
<tr>
<td>2008</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>2009</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>38%</td>
<td>33%</td>
</tr>
<tr>
<td>2011</td>
<td>38%</td>
<td>31%</td>
</tr>
</tbody>
</table>

COs
Permits
Other Metrics - Cost Effectiveness

- The easiest time to build in savings for the life of a home is during new construction.

- Free drivers & spillover are real but rarely measured:
  - Contractors who adjust practices for all builders, not just program builders.
  - Builders who improve practices to compete with program builders but don’t participate in the program.
  - Builders who attend trainings but don’t participate in the program.

- 100% code compliance is an unrealistic reference:
  - Especially when code changes (compliance is not “overnight”).
  - Enforcement of energy is a low priority vs. health/safety.
  - Enforcement may be under-resourced and under-trained.
  - IECC 2009 provisions are frequently introduced in phases or offset by alternatives (especially verification & testing).
Thank You/Questions

Contacts

Jim Miller
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Megan Bhatt
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Julia Hall
Program Manager, MaGrann Associates............... juliahallmagrann.com