

ENERGY CODE OUTREACH IN PENNSYLVANIA

AFFECTED STAKEHOLDERS, THEIR NEEDS, AND RECOMMENDED ACTIONS FOR 2015-2016

This memo is based on findings from the Pennsylvania Gap Analysis, developed by Building Codes Assistance Project (BCAP) in 2012.ⁱ This memo may be used as an outline for a strategic education and awareness campaign to improve understanding of the benefits of the energy code by key stakeholders and users, create buy-in, and help lead to greater support for energy codes in Pennsylvania. For maximum effectiveness, outreach and education efforts should be led by the state, with partnerships with local governments, nonprofits, educational institutions, and utilities. This memo details strategies to reaching the general public and code stakeholders via these targeted audiences:

- Experts: Architects, engineers, contractors
- Code officials
- General Public
- Decision-makers

This memo also includes examples of ready-made resources that can be customized or updated for Pennsylvania, and disseminated to home buyers and the general public via partnering organizations (see Attachment A).

KEY CHARACTERISTICS ABOUT PENNSYLVANIA

- Pennsylvania's percentage of emissions by the industrial and residential/commercial sectors is higher than the overall U.S. percentage of emissions for the same sectors.ⁱⁱ Pennsylvania is responsible for 1 percent of the planet's man-made greenhouse gas emissions.ⁱⁱⁱ
- The [Pennsylvania Climate Change Action Plan Update](#) does not set specific targets and dates for meeting targets, but does mention supporting "high performing buildings", and "amending the Pennsylvania Uniform Construction Code (UCC) so high reflectivity is mandatory for all commercial buildings to minimize cooling loads should also be considered", as well as adopting the latest version of the International Construction Code to minimize both cooling and heating loads.
- Pennsylvania is fortunate to have abundant energy resources in-state. Yet, the state spends \$30 billion annually to procure energy resources from outside the state's borders.^{iv}
- Pennsylvania households consume an average of 96 million Btu per year, 8 percent more than the U.S. average. They spend 16 percent more than the average U.S. household for energy consumed in the homes.^v
- Jobs in the energy sector are significant in Pennsylvania:
 - According to the Bureau of Labor and Statistics, in February, 2012, there were 30,463 jobs in coal mining, and oil and gas;^{vi} (GET UPDATED INFO FROM DEP or DET)
 - According to Environmental Entrepreneurs (E2) and the Keystone Energy Efficiency Alliance (KEEA), more than 57,000 people are employed in clean energy industry jobs in Pennsylvania^{vii}

TARGET AUDIENCE: ARCHITECTS, ENGINEERS AND CONTRACTORS

Rationale for targeting this audience

As the first line of interaction with code-users, architects, engineers and builders are uniquely poised to influence the inclusion and priority given to the energy efficiency of new structures before they are built. Licensed by the Commonwealth of Pennsylvania to protect the health, safety and welfare of Pennsylvania's citizens, architects and engineers are the professionals responsible for compliance with the Uniform Construction Code, including the energy code, in all commercial and some residential buildings. It is critical that architects and engineers have the know-how, resources, and support necessary to make informed design decisions regarding energy efficiency for every new construction and major renovation project undertaken. Currently, Pennsylvania does not require continuing education for architects, but it is required for engineers. The Commonwealth of Pennsylvania currently has no licensure or certification requirements for most construction contractors.¹

PSD Consulting - a collaborative participant- has funding from the U.S. Department of Energy to assess energy code compliance in single family residential construction in Pennsylvania, and to implement various interventions to increase compliance over a two year period. Some of PSD's proposed interventions include: Conducting focus groups (including code officials, builders, design professionals, third party inspectors, utilities and public utility personnel); traditional in-class training and webinars; providing vouchers to builders for energy code compliance consulting at the time of pulling permits (using HERS Raters to provide the compliance consulting); engaging circuit riders to visit code offices around the state and provide specialized training, (focusing on the 15 Metropolitan Statistical Areas in Pennsylvania). The Collaborative will coordinate outreach efforts with PSD's work.

Strategy: Determine architect's and engineer's needs and provide support

1. Work with the American Institute of Architecture (AIA) Pennsylvania and the Pennsylvania Society of Professional Engineers (PSPE) to determine needs and identify opportunities for ongoing training, technical assistance, and other support. Consider initiating a survey to AIA and PSPE members to:
 - a. Better understand their attitudes and awareness of the energy code: perceived and real barriers; and the best ways to increase the priority they give to the energy code.
 - b. Identify their needs (training, tools, resources, support from state or other entity, etc).
 - c. Identify the parts of the UCC are particularly confusing; and the best way to provide clarifying specialized education to these audiences.
2. Initiate energy code presentations at regularly scheduled AIA or PSPE events, meetings, and conferences.
3. Support AIA PA in their efforts to require architects to obtain continuing education credits to maintain licensure in the state of Pennsylvania. For example, following an initial licensure, architects should be required to uphold their license by obtaining CEUs, including at some education on the energy code.
4. Follow through with findings, which may include offering better and more frequent free training, ready-made inspection resources, plan review assistance, an Energy Code Ambassador Program for Architects, or other support as determined.

¹http://www.portal.state.pa.us/portal/server.pt/community/uniform_construction_code/10524/contractor_licensing/553817

TARGET AUDIENCE: CODE OFFICIALS, INCLUDING LOCAL INSPECTION DEPARTMENTS AND THEIR SUBS

Rationale for targeting this audience

The extent to which local jurisdictions engage in outreach activities varies widely across the state. Most jurisdictions do not have explicit efforts to promote the energy code, either to consumers or industry professionals. Many code officials have limited experience or technical knowledge in the enforcement of the energy code, and many building department resources have been stretched thin; many employ third-party agencies (“TPAs”) to carry out plan review and inspection services.

The Collaborative hopes to glean additional insights from PSD’s survey to code officials and the construction industry, and to incorporate that information into forming messaging that resonates with audiences targeted for outreach. As mentioned in the previous section, the Collaborative will coordinate efforts with PSD Consulting, as they reach out to code officials and the construction industry. In addition, the Collaborative will consider the feasibility of institutionalizing regional peer-to-peer support for local code officials via an Energy Code Ambassador Program in Pennsylvania.

Strategy 1: Institutionalize regional peer-to-peer support for code officials / Launch an Energy Code Ambassador Program (ECAP)

The Energy Code Ambassador Program trains local code officials on the particulars of the energy code and equips them to support their peer code enforcement professionals. ECAP leverages the expertise of existing code officials who have an interest in improving energy code compliance and enforcement, and provides them with recognition of their expertise, and a formal way to share their knowledge. As code officials with the authority to enforce codes, Energy Code Ambassadors possess unique credibility and a local presence unmatched by other trainers. Ambassadors are positioned as local “go-to” resources for code adoption and implementation initiatives. In addition to providing support to neighboring communities, they may present at government hearings, International Code Council (ICC) meetings, state and regional conferences. Since every code training or technical interchange represents an opportunity for advocating on the issues of energy efficiency and codes, they receive targeted training on effective advocacy strategies and tactics.

Example: In Ohio, Energy Code Ambassadors were provided paid honoraria for outreach to neighboring jurisdictions. Over the winter of 2013-2014, they educated more than 650 of their peer code officials in Ohio.

TARGET AUDIENCE: GENERAL PUBLIC AND HOME BUYERS

Rationale for targeting this audience

Engaging the public as advocates for energy codes provides needed support for policy-makers to counter arguments against codes. Ultimately, builders will supply what the public demands. More public outreach will raise awareness of the benefits of energy codes and will build vital support for moving energy codes forward. Most buyers assume that a new home is energy efficient simply because it is new; they aren’t aware of the issues with energy code compliance and enforcement. See Attachment A for examples of ready-made consumer resources and partners that could immediately help disseminate resources to their members and connections. In addition, a public awareness campaign could include the following outreach strategies.

Strategy 1: Conduct a consumer survey to gauge Pennsylvania attitudes and awareness

Using the ready-made BCAP consumer survey as a starting point (the state of Idaho recently used it for a state energy code consumer survey), conduct a survey of Pennsylvania home buyers to determine their specific attitudes and awareness regarding energy codes for the state. See ***LINK HERE*** for an overview of three recent consumer surveys

conducted by BCAP/Consumers Union, the National Association of Home Builders, and the state of Idaho. The insights gleaned from the survey can be used to inform the following strategies.

[Strategy 2: Print Media \(articles in newspapers, magazines, and newsletters\)](#)

Reporters for print media are always looking for new, interesting, and compelling stories with great visuals. Energy code related stories can earn free media coverage when pitched the right way. Create a one-page media backgrounder to communicate the benefits of energy codes. Compose compelling stories, such as:

- Comparison of energy bills between a building built to new code compared to an older one
- How energy codes help to reduce the strain on an aging utility infrastructure
- PA's energy code compared to other states (potentially work with PSD to publicize results of their work)
- PA's actual compliance rates compared to perceived rates
- Energy codes help keep energy rates low by reducing need to build new power plants

Examples: [“Outdated Energy Codes Lead to Uncomfortable Homes”](#) and <http://bcap-ocean.org/news/2011/august/25/utah-media-outlets-draw-attention-energy-codes>

[Strategy: TV and Radio Stories](#)

Likewise, reporters for TV and radio media should be pitched for compelling stories with great visuals.

Example from Utah: <http://www.ksl.com/?nid=148&sid=16538519>

[Strategy: Meet with Editorial Boards; Submit Editorials](#)

In addition to articles, news outlets typically include an editorial section to publish reader's thoughts/opinions. Editorial boards determine and write the paper's (or magazine's) official position on issues. Meeting with newspaper or magazine editorial boards to inform them about the importance of energy codes is a low-cost activity that can increase the chances of getting an editorial about the energy code published. Subsequent to the meetings, key community members should submit editorials.

Example from the Atlanta Journal-Constitution: <http://atlantaforward.blog.ajc.com/2014/12/31/efficiencies-pay-dividends-high-tech-wood/>

[Strategy: TV and Radio Media Tours with Energy Expert](#)

One way to gain media exposure is to pitch interviews with an energy code spokesperson who can convey a specific message. The spokesperson would be interviewed by local TV and radio news outlets in a specified time period. Planning to conduct multiple interviews over one or two days makes pitching the story appear timely and newsworthy, especially if you plan it in advance of an upcoming key meeting or other important date (such as an important state meeting, regional energy rate hike, or even energy awareness month in October or building safety month in May).

[Strategy: Public Service Advertisements \(PSAs\)](#)

PSAs are advertisements that run during free placements in unsold advertising space. PSAs can be created in any format that regular ads come in: TV, radio, Internet, billboards, and print (for newspapers, magazines). The cost of creating a PSA depends on the type of ad you create and the design costs. For example, an in-house black and white print ad costs much less than a professionally designed full-color ad; a TV ad is significantly more expensive than a radio ad. Free placements are not guaranteed and there's lots of competition for unsold ad space from other good causes.

Example of a PSA produced by New Hampshire's Collaborative here:

<https://nhenergycode.wordpress.com/2011/08/29/psa-highlights-the-advantages-of-building-to-new-hampshire%E2%80%99s-energy-code/>

TARGET AUDIENCE: DECISION-MAKERS

Rationale for targeting this audience

It is imperative that individuals in decision-making roles are knowledgeable about the energy code and potential issues with it. We have heard from PECC members that most local officials are unaware of the benefits of the energy code, and some local government officials are actively discouraging code officials from enforcement of the energy code.

Strategy 1: Outreach to Local Government Leaders

The Energy Codes Collaborative could host a special tour of an unfinished home or building for decision-makers and political leaders. They could be invited to a “Breakfast Construction Tour” where they would be given a tour through an unfinished home or building, led by a knowledgeable building science professional, code official, or energy rater. The tour would be arranged so that they would view specific key code provision demo areas, such as insulation, air sealing, windows, HVAC, and even see a blower door demo. The tour could include signage with facts about the energy code, photos of “correct” and “incorrect” applications of specific provisions in the code, and the resulting impact of not adhering to code requirements. Tour participants would enjoy a simple breakfast while reviewing a fact sheet on Pennsylvania’s code, and leave with a deeper understanding of the practical and political implications of their decisions.

POSSIBLE MESSAGING

Energy efficiency measures and development can help retain dollars in-state, strengthen local economies, generate more jobs, and improve the living standards of Pennsylvania families. By reducing the energy demand in buildings, energy codes can be effective instruments in Pennsylvania’s policy toolbox. Energy codes:

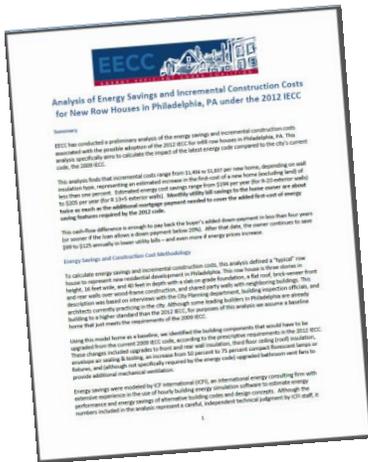
- Decrease peak energy demand, mitigating the construction of expensive new power plants;
- Reduce greenhouse gas emissions and air and water pollution;
- Increase the reliability of the commonwealth’s infrastructure, as lowered demand reduces stress on an aging energy grid system.

The Collaborative hopes to glean additional insights from PSD’s survey to code officials and the construction industry, and to incorporate that information into forming messaging that resonates with the audiences targeted for outreach.

Incremental Cost Analysis

BCAP completed a cost analysis for the state of Pennsylvania, which provides an assessment of the incremental costs of building to the 2012 IECC in Pennsylvania compared to current residential practice, and an analysis of the energy savings and payback period. This nine-page memo includes customized results for each climate zone in the state. Available here:

http://energycodesocean.org/sites/default/files/resources/Pennsylvania%202012%20IECC%20Incremental%20Cost%20Memo_0.pdf



Philadelphia Incremental Cost Analysis In addition, a seven-page cost-analysis report from the Energy Efficient Codes Coalition is available on the impact that the 2012 IECC would have on new row houses built in Philadelphia. Available here: <http://energycodesocean.org/sites/default/files/resources/Philadelphia%202012%20IECC%20Incremental%20Cost%20Memo.pdf>

ⁱ Since December 31, 2009, Pennsylvania's statewide mandatory energy code is the 2009 Pennsylvania Uniform Construction Code (UCC).ⁱ In 2012, the Building Codes Assistance Project (BCAP) interviewed numerous stakeholders impacted by the UCC and published a Gap Analysis report for the state of Pennsylvania, detailing the gaps and opportunities to improve energy code implementation in the state.

ⁱⁱ Pennsylvania Department of Environmental Protection. *Pennsylvania Climate Change Action Plan Update*. December 2013. file:///C:/Users/MJE/Downloads/Final_Climate_Change_Action_Plan_Update.pdf

ⁱⁱⁱ Pennsylvania Climate Change Action Plan, December 19, 2009. Retrieved from: http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_001957.pdf

^{iv} Pennsylvania Department of Environmental Protection. *The Pennsylvania Energy Development Plan*. Oct. 16, 2014 Retrieved from: <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-102875/0120-BK-DEP4454%20combined.pdf>

^v U.S. Energy Information Administration *Household Energy Use in Pennsylvania*. Data derived from EIA's 2009 Residential Energy Consumption Survey. Accessed from: http://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/pa.pdf

^{vi} Bureau of Labor and Statistics. Monthly Labor Review. February 2013. *The Marcellus Shale gas boom in Pennsylvania: employment and wage trends*. The 30,463 jobs include 9,520 jobs in coal mining and 20,943 in oil and gas. Accessed from: <http://www.bls.gov/opub/mlr/2014/article/the-marcellus-shale-gas-boom-in-pennsylvania.htm>

^{vii} Environmental Entrepreneurs and Keystone Energy Efficiency Alliance. *Clean Jobs in Pennsylvania*. 2013. Accessed from: <https://www.documentcloud.org/documents/1359993-cleanjobspennsylvania.html>