SOUTH CAROLINA

Strategic Compliance Plan
Improving Energy Code Compliance in South Carolina's Buildings

November 2011

The Compliance Planning Assistance Program
Acknowledgements

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www.energy.sc.gov

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Introduction

This Strategic Compliance Plan constitutes the final phase of the Compliance Planning Assistance (CPA) program, a collaborative effort undertaken by the Building Codes Assistance Project (BCAP) and the South Carolina State Energy Office. Over the past eighteen months, this project has mapped out the existing energy codes landscape to identify specific hurdles to achieving widespread code compliance across the state’s building sector. The product of this research has been published in a companion piece, BCAP’s South Carolina Gap Analysis. As a follow up to that report, this Strategic Compliance Plan charts a course forward to achieve 90 percent energy code compliance by 2017.

The objectives of this Strategic Compliance Plan are two-fold:

- Provide a realistic and effective model of a well-functioning energy codes environment (see flowchart on the following page);
- Based on opportunities identified in South Carolina’s building code infrastructure, the report proposes a series of near-term critical actions to progress on the path toward 90 percent energy code compliance by 2017.

Challenge

Statewide, South Carolina’s building sector represents over 38 percent of total statewide energy consumption. Many of these buildings are decades old, and substantially reducing their energy use is cost-prohibitive. New construction, however, offers a chance to build energy-efficient buildings when it is easiest and most cost-effective, putting the state on a path to reduced energy use. For homeowners and businesses, locking in efficiency with new construction impacts the bottom line and the larger economy. Not only does efficiency represent a critical hedge on rising energy prices, but money saved on utility bills provides a boost to the state’s economy.

Historically the state of South Carolina has adopted statewide energy codes as a minimum standard of performance, but has deferred to local jurisdictions—sometimes short on both funding and inspection capacity—for implementation and enforcement. As a result, some construction professionals and code officials are left without adequate training and resources to apply current energy codes, the enforcement of which makes small but measurable improvements to baseline construction practices.

In light of this opportunity, the following Strategic Compliance Plan presents the components of a dynamic codes infrastructure that achieves the mutual interests of effective energy codes while limiting the financial and administrative responsibilities of state and municipal governments.

South Carolina’s Strategic Compliance Plan is organized around five focus areas that are considered essential to achieving 90 percent energy code compliance for buildings: funding, training, outreach, state and local policy, and compliance evaluation. The figure below illustrates the collective importance of these five focus areas, and how their influence can lead to improved compliance.

Given the variability of the political and economic landscape in South Carolina, this plan cannot identify every activity involved in reaching the 90 percent compliance target. Rather, interested South Carolinians can use this resource to inform strategic decisions about where and how to allocate resources with the understanding that new opportunities may alter the state’s strategy in the future.
Energy Code Compliance Collaborative CRITICAL TASK

Achieving energy code compliance targets requires buy-in from public officials, the private sector, and citizens. In acknowledgement of the need to bring these various groups together to get things done, this report proposes that the state create an energy codes compliance collaborative by expanding the existing working group. Chaired and led by representatives from the State Energy Office and the South Carolina Building Codes Council, the Collaborative can advise on what can realistically be implemented statewide to ensure greater compliance with the energy code.

Why the Energy Code Compliance Collaborative?
As the representative group of the state’s energy codes stakeholders, the Collaborative can create the vision and broad-based support needed to accomplish compliance goals without placing undue burden on any single constituency.

Roles of the Energy Code Compliance Collaborative
There are a number of synergistic functions that the Collaborative is well-positioned to oversee:

Collective Voice on Code Issues
The Collaborative can provide a collective voice to communicate with policymakers and other stakeholders on a unified front.

A Shared Forum
The Collaborative can become a place to exchange viewpoints and perspectives, organized around productive collaboration.

A Clearinghouse on Code Information
Because of the wide-ranging collective knowledge of its members, the Collaborative can serve as an authoritative source of code-related information for state agencies, policy makers, and others.

Securing Funding for Projects
The Collaborative will be uniquely qualified to advance mutual interests, and therefore well-positioned to secure funding for code-related projects that will have positive effects at the local level.

Targeted Outreach
Collaborative members will likely include a number of active practitioners that can help to craft targeted value propositions for specific market actors. Executing focused outreach campaigns will be critical to achieving code compliance.

Implementation Program Oversight
In cases where the state energy office does not have the resources necessary to oversee specific code implementation programs (a new training series, targeted consumer outreach), the Collaborative could assist with oversight of these specific programs.

Collaborative Structure
It is imperative that the Collaborative includes a diverse set of stakeholders, so that all parties affected by the code are able to participate in designing a functional framework for energy code compliance. In addition to current members, the Collaborative could reach out to the following groups:

- Design and construction professionals
- Representatives from state advocacy groups
- Representatives from state utilities
- Building product manufactures in the state
- State-level laboratories, universities, or other research groups that focus on energy policy or advancing building performance
- Consumer protection and low income advocates
- Real estate and mortgage lenders

Ideally, the Collaborative should meet on a regular basis, as determined by its members. Meetings could be held in a central location, such as Columbia, or rotated to different areas of the state. In West Virginia, where a similar group has been convened, meetings are rotated to different locations in the state.
Utilities in South Carolina have a history of supporting energy code activities within their jurisdictions. Many utilities currently provide various rebates and other incentives to builders and homeowners who elect to make energy efficiency upgrades. In addition to incentives and consumer education, utility support of training and compliance-related activities could include providing funding for training, as well as meeting space and technical expertise.

1. Direct Utility Support

Utilities in South Carolina have a history of supporting energy code activities within their jurisdictions. Many utilities currently provide various rebates and other incentives to builders and homeowners who elect to make energy efficiency upgrades. In addition to incentives and consumer education, utility support of training and compliance-related activities could include providing funding for training, as well as meeting space and technical expertise.

2. Raising Permit and Re-Inspection Fees

Raising permit fees and instituting re-inspection fees for failed inspections are two straightforward ways to offset the additional cost of energy code compliance activities. In Michigan, the state mandates that local governments cover the cost of code enforcement through building permit fees. In this case, permit and re-inspection fees are based on a suggested fee schedule published by the state and flow directly into a local Construction Code Fund, which may only be used to support local code compliance activities. Fee changes would not be significant, as inspecting for the energy code can be done by code officials who are already inspecting for other codes such as the plumbing, electrical, and fire code. The International Code Council (ICC) offers guidance on recommended permit fee amounts.


An EERS is a regulatory mechanism, typically administered by a state’s public utility commission, which requires obligated utilities to meet a specified portion of their electricity demand through energy efficiency within a defined timeframe. To date, more than half of all states have implemented an EERS.

Since the capital costs for building new power plants raises consumer rates, an EERS helps to maintain an affordable cost of energy by helping avoid and/or delay the need for building new generating plants. To satisfy EERS obligations, utilities around the country have focused on the most cost-effective energy efficiency opportunities. Recognizing the role of code compliance in driving efficiency, some states—including Arizona, Minnesota, and Washington—allow utilities to credit energy savings attributable to energy codes toward EERS goals. As a result, utilities have a strong interest in advancing sound energy codes and code compliance. Utility-backed energy codes initiatives are most commonly funded through a System Benefits Charge or a small fee included on consumers’ energy bills (see #4).
4. Public Benefit Funds (PBF), Energy Efficiency Trusts and the System Benefits Charge (SBC)

A Public Benefit Fund (PBF) is a way to provide long-term funding for energy programs, typically via a System Benefits Charge (SBC) — a small, use-related fee added to customers’ electricity bills each month. SBCs are usually collected from customers of investor-owned utilities, and the funds are administered by a state agency, a third-party or the utility. Some states, including New York, are successfully using funds collected from their SBC for energy code-related work.

Other states have simply established trust funds with state monies (often overseen by a public utility commission) that are used to pay for energy efficiency initiatives that benefit the state’s citizens. For example, in Illinois, 2007 legislation that restructured the state electric industry also created a fund that provides $3 million annually to be used for renewable energy and residential energy efficiency. In addition, the Illinois Clean Energy Community Trust was established in 1999 with $225 million – some of which goes toward energy efficiency projects in the state.

5. State Appropriations

A common way to fund energy code training and outreach is leveraging federal funds via State Energy Programs (SEP), or through direct appropriations by the state. In Texas, the state appropriates funds to the Texas State Energy Conservation Office (SECO) for programmatic use. SECO then allocates a portion of these dollars to energy code training and outreach.

The U.S. Department of Energy (DOE) also offers formula and periodic competitive grant awards that could be used for energy code-related projects. Typically, funding proposals are submitted through State Energy Programs (SEP) to compete for these funding opportunities. Planning future programs now can help South Carolina ready its proposal when such opportunities arise.
Energy code training is a critical element of a functional codes system—and because of its low cost, it offers one of the most cost-effective strategies to improving energy code compliance. Ensuring designers, engineers, builders and inspectors are up-to-date on code requirements is a prerequisite for energy code compliance. Codes cover all elements of building science and design, from lighting and insulation to windows, HVAC, and more. Changing technology and building practice also means that even experienced professionals require hours of training to understand the energy code and its application in the field.

### Energy Codes Training Program in South Carolina
Historically, South Carolina has done an excellent job supporting building code training. Not only are code inspectors required to be licensed by the state, the South Carolina Building Code Council provides reimbursement for attendees of approved training courses.

Now, as the key stakeholders consider adoption of the 2009 IECC, trainers and South Carolina building sector professionals can begin to consider changes to residential and commercial training programs to prepare for the updated requirements. In preparation for such a plan, this report proposes that the State Energy Office and Building Code Council conduct a Code Compliance Energy Codes Training Program in South Carolina.

In preparation for ongoing training needs necessitated by the 2009 IECC, this report suggests that the state and interested organizations statewide should provide additional support to highlight training for the energy code. To this end, the following training scheme could be used as a starting point to design an appropriate training program for interested code officials and other building sector stakeholders. Note that Level 1 training includes all construction professionals.

### Tiered Training

<table>
<thead>
<tr>
<th>Level</th>
<th>Training Type</th>
<th>Audience</th>
<th>Length (Residential)</th>
<th>Length (Commercial)</th>
<th>Coverage</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1: Basic Training</td>
<td>All code officials and design and construction professionals</td>
<td>Half-day training</td>
<td>Half-day training</td>
<td>Basic energy code provisions; their integration into existing inspection process</td>
<td>Ongoing; revamped after every code adoption or update</td>
<td></td>
</tr>
<tr>
<td>Level 2: Intermediate Training</td>
<td>All code officials and design/construction professionals</td>
<td>Full-day training</td>
<td>Full-day training</td>
<td>All energy code provisions</td>
<td>Organized around new code adoption—six months prior to and after new effective date</td>
<td></td>
</tr>
<tr>
<td>Level 3: Advanced Training</td>
<td>Multi-daylong training sessions, or on-site training</td>
<td>In-depth coverage of individual aspects of the energy code: HVAC, lighting systems, envelope, scope and administration, etc.</td>
<td>Ongoing; revamped after every code adoption or update</td>
<td>On-site training; Train-the-trainer program; part of community/technical college curriculum</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Perception Survey of code officials statewide (described in greater detail on page 15) in order to develop a training program that fills the knowledge gaps identified and reaches more professionals in the rural regions of the state.

### Designing a Basic Energy Codes Training Curriculum

In preparation for ongoing training needs necessitated by the 2009 IECC, this report suggests that the state and interested organizations statewide should provide additional support to highlight training for the energy code. To this end, the following training scheme could be used as a starting point to design an appropriate training program for interested code officials and other building sector stakeholders. Note that Level 1 training includes all construction professionals.
Energy Code Ambassadors Program CRITICAL TASK

One of the most high-impact ways to keep code officials throughout the state up to date on the energy code is to create an Energy Codes Ambassadors Program (ECAP). This “train the trainer” approach provides in-depth training to a handful of code officials, who in turn become a resource for their peers statewide.

Program Structure
Generally, the initial ECAP training is given by a well-established energy code trainer to three to five selected code officials from the state. This training consists of three parts: energy code advocacy, residential provisions of the code, and commercial provisions of the code. The size of the class allows for the trainer to go at a slower pace, focusing on areas of the code that demand greater in-depth explanation. In some cases the instructor may spend a second day reviewing the content of the three ICC energy certification exams, and then administering the tests to attendees.

Ambassadors can be selected by sending the ECAP description to the state ICC chapter with an invitation for members to apply. Well-known and respected ICC members should be targeted, and the group should be made up of a diverse set of building departments representing different areas of the state.

Impact
Code Ambassadors have an impact because they can in turn be a resource for fellow code officials statewide. Not only could they offer peer-to-peer training events (and lower the cost of recruiting a national trainer), but they could also serve as a resource to fellow code officials. In South Carolina, many ICC members stay connected through informal peer networks—calling one another for assistance interpreting the code and sharing lessons learned. Code ambassadors, likewise, can be established as go-to resources for their peers on energy-code related issues.

Lowering Barriers
Because attendees generally take a day off from work to attend, the ECAP program should be provided to them at little or no cost. This means that if possible, they should be reimbursed for any travel expenses to and from the meeting, as well as for any travel throughout the state to train code officials at other building departments. Additionally, providing the attendees with free code books and ICC vouchers to take the energy certification tests helps defray costs.

Cost Estimate
Based on ECAP programs in other states, the following can be used as a model template for pricing the program for eight ambassadors, spread over two days:

<table>
<thead>
<tr>
<th>Expense</th>
<th>Cost Each</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainers’ Fee</td>
<td>$1,200</td>
<td>$2,400</td>
</tr>
<tr>
<td>Ambassador Travel Reimbursements</td>
<td>$1,000</td>
<td>$8,000</td>
</tr>
<tr>
<td>Code Books</td>
<td>$202</td>
<td>$1,616</td>
</tr>
<tr>
<td>2009 IECC/ASHRAE Standard 90.1-2007</td>
<td>$123</td>
<td></td>
</tr>
<tr>
<td>2009 IECC w/ Commentary</td>
<td>$44</td>
<td></td>
</tr>
<tr>
<td>2009 IECC Workbook</td>
<td>$35</td>
<td></td>
</tr>
<tr>
<td>ICC Energy Exam Vouchers (3 tests per attendee)</td>
<td>$540</td>
<td>$4,320</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$16,336</strong></td>
</tr>
</tbody>
</table>
Energy codes have experienced promising successes in South Carolina, but many residents still remain unaware of building energy codes and their benefits. Because minimum building codes are written into state legislation, many consumers expect that new buildings are necessarily code compliant and that energy codes are enforced.

**Coalescing Around Energy Codes**

Energy code implementation and compliance requires buy-in and support from a diverse group of audiences. On the frontlines are the inspection, design, and construction communities—collectively the professionals who integrate energy codes into existing construction practices. State legislators, city council members, mayors’ offices, and other decision-makers must also recognize the public value of building energy codes, and enact reasonable policies that promote quality construction and assist building practitioners to consistently achieve code compliance. Utilities, state and local agencies, environmental and energy efficiency organizations often view energy codes as a fundamental strategy to advance energy security, temper demand growth and progress toward environmental priorities.

Consumer groups, realtors, lenders, appraisers, and other interested parties, each play a crucial role in promoting energy codes as a market-driven standard of quality construction. Finally, consumers may represent the most important group, given their ability to move real estate markets by making energy savings a purchasing priority—demanding that homes, offices, and public buildings meet or exceed the minimum energy code.

Unifying stakeholders and aligning common interests is an important element of a healthy building codes system. By communicating the benefits of energy codes to relevant market actors, energy savings from construction can emerge as an issue for South Carolina consumers.

**Consumer and Professional Outreach**

**CRITICAL TASK**

**Consumer Outreach to Raise Public Awareness**

Engaging the public provides needed support for policy-makers to counter arguments against codes. Ultimately, builders will supply what the public demands. A public outreach campaign comprised of strategies that raise public awareness of the benefits of energy codes builds vital support for moving energy codes forward. Most buyers assume that new home is energy efficient simply because it is new. They don’t know that energy codes are often not enforced. However, consumers intuitively have a basic understanding of the value of energy codes. According to a nationwide survey of more than 5,000 households conducted by BCAP and Consumers Union (makers of the popular magazine Consumer Reports):

- **82%** believe that homeowners have a right to a home that meets national energy standards;
- **70%** believe that energy codes protect homeowners and renters from excessive energy costs;
- **79%** believe that disclosing a home’s energy usage would enable them to make an informed decision about a new home purchase;
- **84%** believe that more energy efficient buildings will reduce energy use and pollution;
- **74%** believe that energy code standards will help ensure that homeowner and taxpayer dollars are used wisely and efficiently as new building will be required to be built right the first time.
Outreach Strategy

**Use Print Media**

Reporters for print media (articles in newspapers, magazines, and newsletters) are always looking for new, interesting, and compelling stories with great visuals. Energy codes can meet all these needs when pitched the right way. States can create a one-page media “backgrounder” to communicate the benefits of energy codes. In addition, states can compose compelling stories (such as added cost to a new home vs. savings; reduced strain on aging utility infrastructure; state’s energy code compared to other states; keeping rates low by reducing need to build new power plants). For some examples, visit: http://bcap-ocean.org/news/2011/august/25/utah-media-outlets-draw-attention-energy-codes.

**Educate Editorial Boards**

Editorial boards are comprised of editorial writers that meet regularly to discuss the latest news, trends in public opinions, and what the newspaper (or magazine) should say about a current issue. Setting up a meeting with an editorial board to inform them about the importance of energy codes is a no-cost activity that can go a long way toward raising public awareness about energy codes. Present a one-page “backgrounder” with key facts about energy codes to them, along with any other useful information.

**Garner Earned Media**

Earned media refers to publicity gained through outreach efforts rather than paid advertising. This is a low-cost way to reach thousands of people via regular media outlets. States can put together stories that describe to consumers the benefits of energy codes. One example of earned media via TV and a news release (from Utah) can be seen here: http://www.ksl.com/index.php?nid=148&sid=14492845.

States can develop story ideas in the form of a news releases or a media advisory (to invite a TV station to take advantage of a tour or photo opportunity at a home, for example) and pitch the story to targeted consumer or political reporters.

**Conduct a TV and Radio Media Tour**

Another inexpensive way to gain exposure via earned media is by setting aside one day to book interviews with an energy “expert” who can get out a specific message. Develop talking points and practice interviews ahead of time. Pitch to local TV and radio news broadcast outlets (such as morning shows or 6:00 PM news shows) that this expert will be available on a certain day for interviews. 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 meeting or other important date (such as an important state meeting, regional energy rate hike, or even just “energy awareness month” (October).

**Produce a News Story with B-roll**

A state can make it easier for a TV station to cover an energy code story by providing it with ready-made interviews and video (called “b-roll”). These one to two minute news-style stories save TV stations time as they don’t have to travel to get good images of energy efficiency. An example of one such story is found here: http://www.youtube.com/watch?v=D6cumG9i_eg&feature=youtu.be.
Use Public Service Advertisements (PSAs)

PSAs are advertisements that you pay to create, but don’t pay to place. Rather, PSAs are given free placements in unsold advertising space. PSAs can be created in any format that regular ads come in: TV, radio, Internet, 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 can be competition for unsold ad space from other good causes. The following tips should provide a starting point for creating a PSA:

- **Do research.** Energy codes can be confusing to consumers. Prior to designing a PSA, conduct focus group studies with your targeted audience to test different messages and learn what resonates well. Prior to producing a PSA, test it again to determine what’s memorable, and what messages resonate well.

- **Make sure to have only one “call to action”** – what you want the consumer to do upon seeing or hearing your ad. Visiting a website (as long as it’s easy to remember) is a good call to action. During focus groups, test to assure that the placement of the URL is memorable.

- **Educate media on why your PSA should be placed.** After distributing the PSA to media markets in your state, conduct outreach to stations to tell them why energy codes are vital to your state. A simple phone call and email can be the deciding factor on which PSA get placed.

- **Utilize a ready-made PSA.** New Hampshire is willing to share their radio PSA with other states free-of-charge (you just pay to customize the call-to-action for your state). You can listen to this ad here: http://nhenergycode.wordpress.com/2011/08/29/psa-highlights-the-advantages-of-building-to-new-hampshire%E2%80%99s-energy-code/.

Consumer Strategy: Focus on Savings and Economic Benefits

The value proposition for energy codes differs for each stakeholder group, but many outreach strategies can reach multiple groups.

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Value Proposition</th>
<th>Effective Outreach Strategies</th>
</tr>
</thead>
</table>
| Consumers    | Consumers are the greatest beneficiary of sound building energy codes and they stand to gain both immediate and long-term energy cost savings from energy code compliance in the form of lower utility bills. Unlike many high-tech green technologies added to existing buildings, incremental construction costs for energy efficiency can be financed into mortgages from the onset. Educating consumers can help them demand action. | • Public Service Announcements  
• Factsheets  
• Video Spotlights  
• Cost-Benefit Analysis |
## Motivating the Market, Aligning Individual Interests

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Value Proposition</th>
<th>Effective Outreach Strategies</th>
</tr>
</thead>
</table>
| Trades             | Tradesmen have an obligation to perform work that meets or exceeds minimum code requirements. Consistent compliance measurement will help show which contractors are doing the best job – and therefore the best to contract with for future work. | • Factsheets  
• Field Guides  
• Online Best Practice Videos |
| Design Professionals| Design professionals are expected to design projects that meet or exceed minimum code requirements, and are a crucial first step in translating the code into construction practices. | • Factsheets  
• Code Books  
• Energy Code Checklists |
| Builders           | South Carolina builders are required to build to code, although some are not familiar with the latest code. In addition to the increased comfort and performance of code-compliant buildings, builders can market energy cost savings as an added benefit to buyers. Builders accustomed to business-as-usual often require outreach about how to keep incremental construction costs low and market energy savings to consumers. | • Factsheets  
• Field Guides  
• Incremental Cost Studies  
• Online Best Practice Videos |
| Code Officials     | To make their jobs more manageable, code officials value tools and resources to stay up-to-date on the latest energy code. Officials also benefit from outreach to building sector professionals, which increases awareness of energy code requirements and improves code compliance. | • Field Guides  
• Incremental Cost Studies  
• Code Books |
| Real Estate Professionals & Realtors | For cost-conscious buyers, marketing the benefits of energy efficiency can be practical tool to motivate buyers. Understanding the elements of the energy code, benefits, and how to ensure a property meets the 2009 IECC are important to communicate to prospective buyers. | • Fact Sheets  
• Conferences |
| Commercial Lenders | Excessive monthly energy bills can be heavy burden for residents and businesses, and have a direct impact on a property owner’s (or lessee’s) ability to make timely monthly payments. Understanding the effect of current energy codes on monthly operating expenses can have significant implications for lenders and their risk exposure. | • Fact Sheets  
• Incremental Cost Studies |
| Policy Makers      | Statewide, buildings represent roughly 38% of total energy use. Reducing energy demand from the building sector begins with new construction and will help to advance economic objectives within the state to keep energy prices low. Further, money spent to enhance the energy efficiency of buildings in South Carolina will generate local jobs and keep investment dollars within the state. | • Public Service Announcements  
• Factsheets  
• Video Spotlights |

The Energy Code Compliance Collaborative can incorporate these materials into any information they provide to their constituents. Basic materials, such as fact sheets, new home buyer guides, and other resources can be produced at low-cost and rely on existing precedents. With additional funds, these materials could be promoted and enhanced with web efforts, including videos, along with appearances on television or radio, appearances and presentations at conferences, home shows, and events, among other relevant venues. Many resources based on the 2009 IECC are available on BCAP’s website: http://bcap-ocean.org/consumers-take-action.
To achieve 90% compliance, the State Energy Office can employ focused public policies to shape the effectiveness of code enforcement infrastructure on the ground. The state has already taken a number of actions already, including a requirement that all new buildings achieve LEED Silver or equivalent certification. Among other priorities, the state could build on its successes by:

**Moving Forward with the 2009 IECC**
Although administered by the legislature, the state can continue to coordinate with stakeholders to consider the adoption of the 2009 IECC (to bring it into line with the other 2009 codes which were recently adopted).

**Adopting a Stretch Code**
By adopting a voluntary stretch code, such as the 2012 IECC, the state would give interested jurisdictions the opportunity to raise their level of baseline building performance. A stretch code would also offer insight into construction and code compliance issues in future codes. The state could conduct targeted outreach to leading communities to gauge their interest in such a program.

**Empowering Third Party Code Inspectors**
By creating minimum licensure requirements for certified third-party inspectors (and by posting their contact information on the state website) rural communities would have an additional option for achieving code compliance.

**Promoting Home Performance Testing**
Using ARRA funding, the state can continue efforts to put duct blaster and blower door equipment in the hands of inspectors, builders, and third party professionals. Possible partners include the State HBA, and local inspections departments, each of whom could loan out equipment to community colleges, HERS raters, builders, and contractors.
Using State Inspectors for Rural Areas

In addition to support for third party inspectors, to support code inspections for rural areas in the state, the Energy Office could consider creating state-hired inspectors to augment or fully cover energy code plan review and inspection for areas that are not served by a third party firm. Plan review could occur remotely, and an energy code-specific inspection could be accomplished in as little as one site visit for each new single-family home. Additional documentation could be accomplished with photos, which could be sent electronically to state inspectors.

A state inspection program has many precedents in states with rural areas and limited permit activity. For instance, in West Virginia, all homes statewide are inspected for compliance with the fire code. Likewise, in South Dakota all new buildings are inspected by the State’s Plumbing Commission. Currently, the state employs five inspectors in this department, two serving western South Dakota, and three in the eastern part of the state. South Dakota’s state Electrical Commission also performs two electrical inspections statewide: at rough-in and a final inspection.

Given South Carolina’s robust code inspection infrastructure in its major metro areas, statewide inspection efforts would be much smaller in scale (and therefore even more manageable) than comparable programs in West Virginia and South Dakota.
Compliance Evaluation

Program Structure

While the state is responsible for reporting compliance results, the responsibility will fall to local governments—usually their inspection departments—to collect data on how designers and construction professionals are designing and constructing a small sample of buildings. DOE has suggested that evaluation of design and building practice for each state can be structured a number of ways: through first party evaluation by local inspections departments, second-party inspection by the state, or third-party evaluation by private sector firms. In South Carolina, the most efficient and cost-effective program might involve local inspectors reporting compliance results to the state.

Cost

The cost will vary depending on factors including: number of buildings evaluated, method of data collection (telephone, plans-only, or in-person inspections, and the number of inspections), cooperation from code officials in capturing data and contractor cost. Additionally, Compliance Evaluation will vary as a result of what level of detail the State pursues. Due to these factors, DOE’s pilot compliance studies ranged from $75,000 to as much as $750,000. While an exhaustive study could be budgeted for future years, code officials self-certification managed by the state might be more immediately effective (and low cost).
Measuring compliance will require local inspectors (or a third-party firm) to evaluate a small sample of construction projects. To make this process as simple as possible, the state should begin by consulting DOE’s State Sample Generator, an online resource that provides a suggested sample size in four categories: new commercial construction projects, commercial renovations, new residential construction and residential renovations. Sample sizes are relatively small and are based on the recent number of permits over preceding years. For example, for new single family construction, a single run of DOE’s State Sample Generator suggests that fast-growing coastal Horry County would require a sample of only four residential buildings—out of over 1,598 that have been built on average over the last three years. Choosing which buildings to include in the sample should be left up to responsible local jurisdictions. Fortunately, officials are not required to track specific buildings throughout every stage of the inspection process. Instead, to make data collection more efficient, DOE suggests that local officials may perform inspections of various code requirements across a larger group of buildings (each at a different level of completion) simultaneously. By reviewing DOE guidelines, the state will be able to map the geographic and data-gathering requirements of demonstrating code compliance. DOE guidance is available at: http://www.energycodes.gov/arra/compliance_evaluation.stm.

Additionally, this report recommends that the State Energy Office and Building Code Council create an anonymous Code Compliance Perception Survey of code officials statewide in order to develop a baseline on compliance (and specific compliance shortfalls) statewide. By assessing where code compliance may fall short, the state can modify training (and shape outreach materials) to respond to knowledge gaps. An excellent example of such a survey is was recently created by the state of Michigan and is available for review.
Five years ago, it would have been nearly impossible to predict what the energy codes landscape would look like on the national, state, and local levels. Likewise, the next five years will no doubt bring new realities and opportunities dependent on a host of unknown variables.

### Timetable

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<tr>
<th>2009-2011</th>
<th>2011-2012</th>
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<tr>
<td>Multiple ARRA-funded code efforts</td>
<td>Consider Adoption of 2009 IECC</td>
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<tr>
<td>Worked with BCAP to conduct study of current energy code status via “Gap Analysis Report”</td>
<td>Consider Energy Code Compliance Collaborative</td>
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<td>Create additional consumer outreach materials</td>
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<td>Create and distribute Code Compliance Perception Study to Code Officials</td>
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<td></td>
<td>Consider State-supported Energy Codes Training Program to supplement other offerings</td>
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<td>Reach out to utilities to fund code training and compliance efforts</td>
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<td>2012-2013</td>
<td>2013-2017</td>
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<tr>
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<tr>
<td>Consider Adoption of 2012 IECC</td>
<td>Engage Energy Code Compliance Collaborative in expanding consumer outreach efforts</td>
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<tr>
<td>Based on results of Code Compliance Perception Study, adapt and expand consumer outreach program</td>
<td>Engage Energy Code Ambassadors to work regionally</td>
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<tr>
<td>Provide best practices and recommended fee schedule to local building departments</td>
<td>Demonstrate 90% compliance with 2009 IECC</td>
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<tr>
<td>Use results of PNNL/DOE pilot compliance studies to develop methodology for a compliance study</td>
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<tr>
<td>Produce online energy code trainings</td>
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<tr>
<td>Continue working with local utilities</td>
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For more energy code compliance resources, please visit

www.bcap-ocean.org/resources

www.energycodes.gov

For more information on the Compliance Planning Assistance Program, please email bcap-ocean@ase.org

For more information on the South Carolina State Energy Office

South Carolina State Energy Office
1200 Senate Street
408 Wade Hampton Building
Columbia, SC 29201
www.energy.sc.gov

For more information on the Compliance Planning Assistance Program, please email bcap-ocean@ase.org