

National Grid

Energy Code Technical Support

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Eric Beaton

National Grid

DOE National Energy Codes Conference / Nashville, TN.

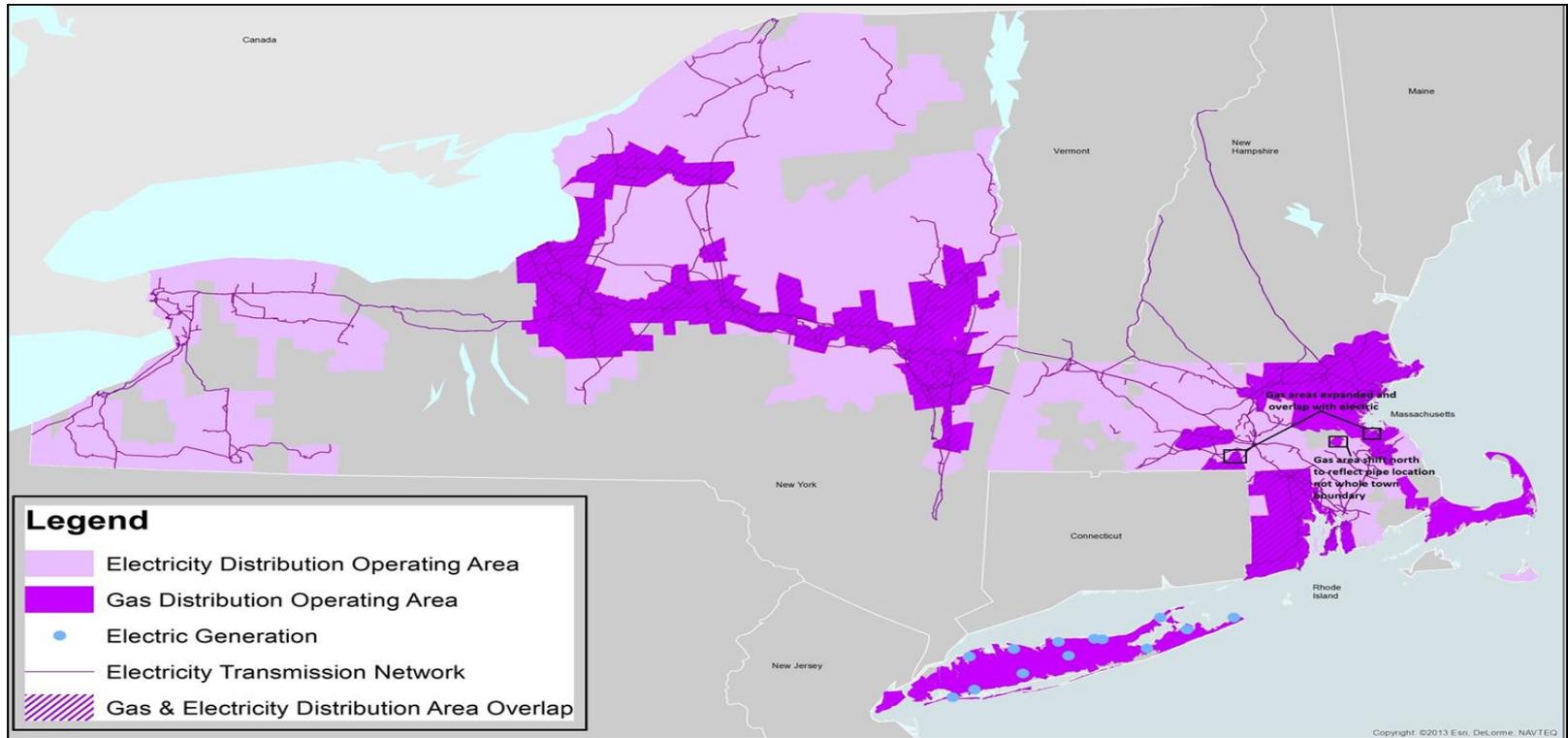
March 25th, 2015



Snapshot of National Grid

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3.3 million electric customers; 3.4 million gas customers



Utility energy efficiency savings

- Utility energy savings goals are set by the RI Public Utilities Commission (our regulators)
- National Grid offers financial incentives, engineering analysis, and education to retrofit projects and new construction projects that exceed the base energy code
- If new construction projects don't 'meet' the base code, there are "lost" energy savings
- Here lies an opportunity for National Grid to address code compliance



Why is the utility involved?

- Statewide energy code compliance rates in RI
 - Residential / 57%
 - Commercial / 70%
 - Baseline studies: expensive, but critical to understanding potential
- New strategy for future portfolio savings
 - Energy codes today are saving more BTU's and kWh's compared to the codes of a decade ago
 - Increasing EE savings goals (as % of yearly sales)
- It's the right thing to do – utility is the enabler and NOT the enforcer



Code compliance enhancement initiative (CCEI)

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■ Rhode Island:

- 2012 IECC formally adopted on July 1, 2013
- Enforcement began on October 1, 2013
- CCEI is for 3 years (2013-2015)
- First classroom training occurred October 16, 2013
- Establishment of collaborative working groups (implementation and evaluation)
 - RI / National Grid, RI Code Commission, NEEP, Lead vendor
 - Monthly or bi-monthly meetings



The core of the initiative

- Energy Code Technical Support consists of:
 - Focus group roundtables – proactive outreach to important stakeholders for input and review
 - Trainings (code officials, builders, architects, etc.)
 - Classroom, Webinars, In-field
 - Energy code circuit rider technical support
 - Code compliance tools
 - Process trainings for 3rd party energy specialists



Classroom trainings

<u>Audience</u>	<u>Topics</u>
<u>Commercial:</u> <ul style="list-style-type: none">■ Code Officials■ Design & Construction Professionals■ Energy Specialists	<ul style="list-style-type: none">■ Commercial Energy Code: Overview■ Envelope and Building Science■ Lighting, Controls, and Electrical■ HVAC / Mechanical Provisions
<u>Residential:</u> <ul style="list-style-type: none">■ Code Officials■ Design & Construction Professionals■ HERS Raters / Energy Specialists	<ul style="list-style-type: none">■ Residential Energy Code: Overview■ Envelope and Building Science■ HVAC and Indoor Air Quality

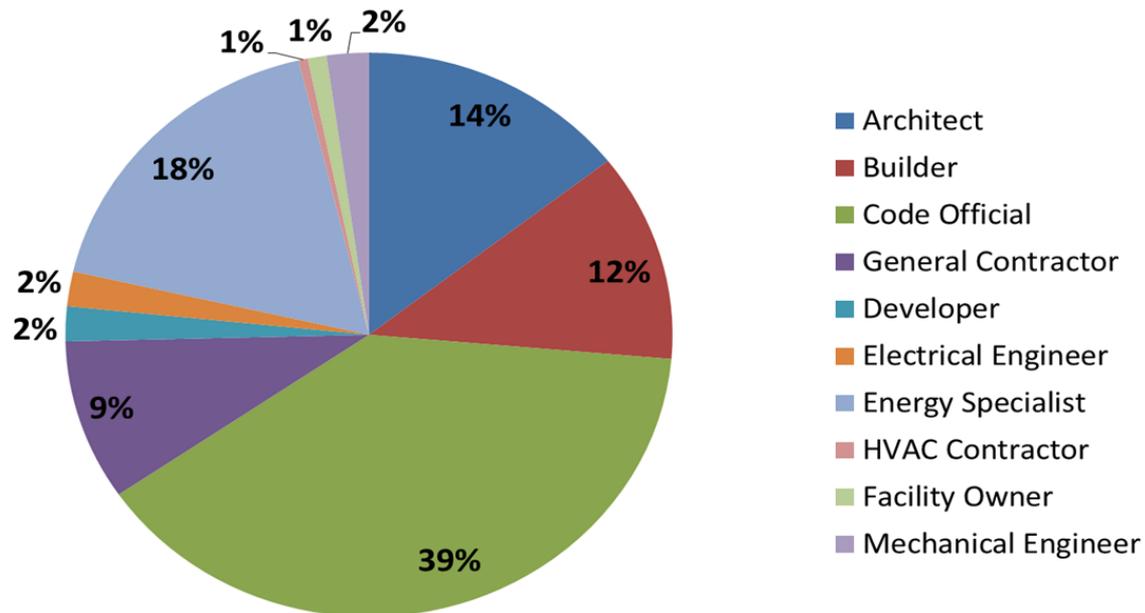


Who is attending the classroom trainings in RI?

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**Attendee Breakdown of Energy Code Technical Support Trainings
(October 2013 - Present)**



Webinars

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<u>Audience</u>	<u>Topics</u>
<u>Commercial:</u> <ul style="list-style-type: none">■ Code Officials■ Design & Construction Professionals■ Energy Specialists	<ul style="list-style-type: none">■ Controlling air & moisture in the building enclosure■ Daylighting requirements
<u>Residential:</u> <ul style="list-style-type: none">■ Code Officials■ Design & Construction Professionals■ HERS Raters / Energy Specialists	<ul style="list-style-type: none">■ TBD



RI in-field trainings

- Typically limited to 10 or less participants
- Blower door and duct blaster hands-on set up and training
- Discussion of code requirements for tests
- Hands on building volume calculations to convert blower door results to ACH50
- Hands-on duct testing

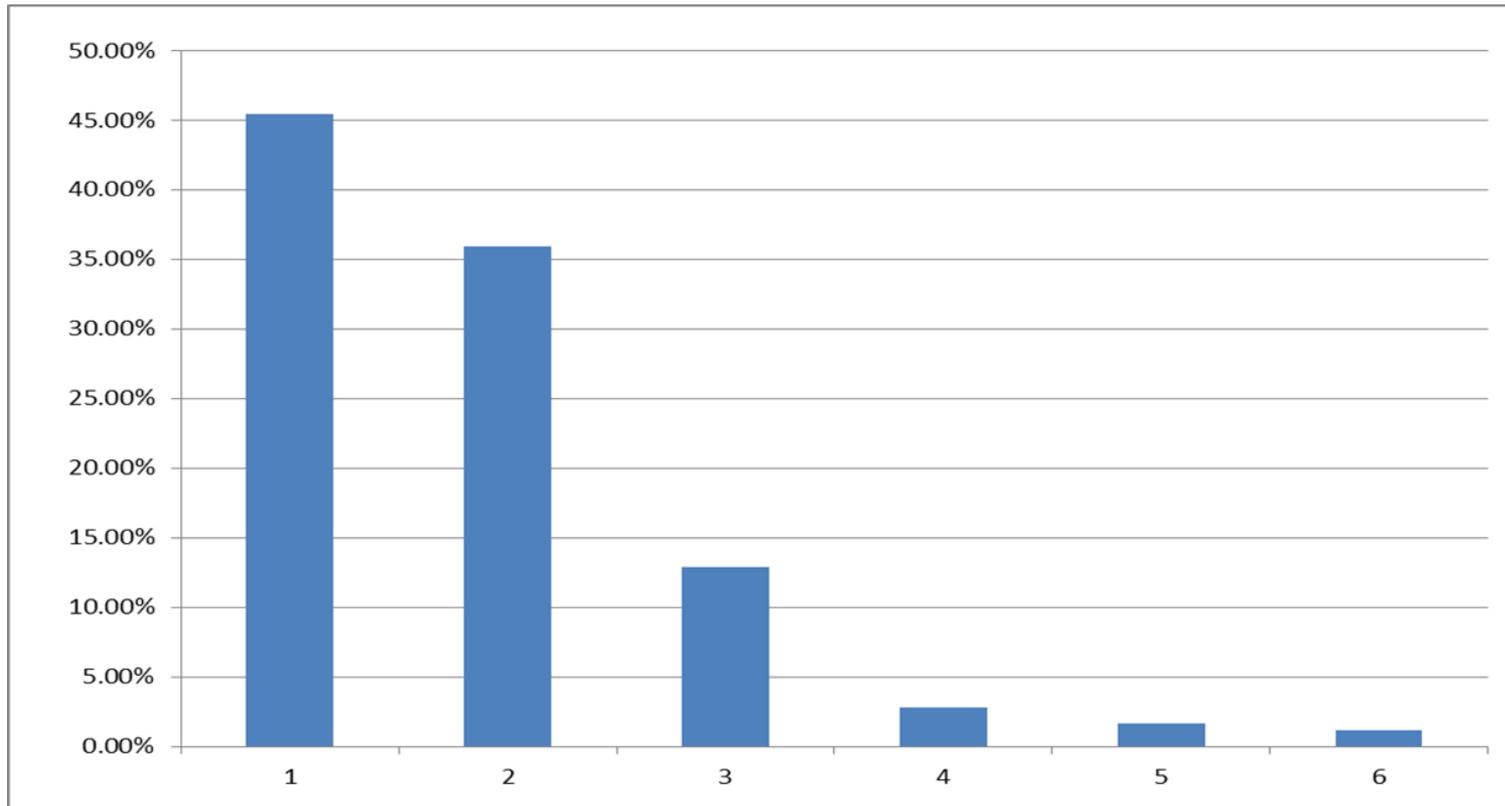


RI CCEI training feedback

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I am better prepared to comply/enforce the energy code



Circuit rider technical support

<u>Audience</u>	<u>Type</u>	<u>Content</u>
<u>Commercial & Residential:</u> <ul style="list-style-type: none">■ Code Officials■ Architects / Designers■ Engineers■ Construction Managers■ Builders / Contractors■ Material Suppliers■ Building Owner	<ul style="list-style-type: none">■ Phone call support■ Office consultation■ On-site consultation	<ul style="list-style-type: none">■ Answers to general energy code questions / interpretations■ Project specific code compliance consulting (conceptual plan and specification review)■ Project specific code compliance verification (on-site physical observation / consultation)

RI results to date: 39 phone calls & 13 site visits (all residential)



Initiative tools

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Audience	Content
<p><u>Commercial & Residential:</u></p> <ul style="list-style-type: none">■ Code officials■ Architects / Designers■ Engineers■ Construction Managers■ Builders / Contractors■ Material Suppliers	<ul style="list-style-type: none">■ Frequently Asked Questions guide■ Residential new construction field guide■ Technical bulletins:<ul style="list-style-type: none">■ Air sealing for savings■ Build tight & ventilate right■ REScheck and COMcheck compliance checklist■ Statewide permit checklist■ TBD (new tools)



Initiative tools

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Dedicated National Grid website in RI

www.ngrid.com/rienergycode

The screenshot shows the website interface for National Grid's Rhode Island Energy Code Technical Support. At the top, there are navigation links for 'Sign in', 'Register', 'Rhode Island', '[Change region]', and 'Report a power outage'. Below this is a menu with categories: 'Electricity and Gas', 'Trains/people and contractors', 'Service requests', 'Energy efficiency services', and 'Business resources center'. The main header features a large image of a city street with the text 'Energy code technical support'. A sidebar on the left lists 'Energy code technical support', 'Toll-free energy code support', 'Training and events', 'Important links', 'Frequently asked questions', and 'Other energy efficiency programs'. The main content area includes a description of the support services, a section for 'RI energy code technical support' with a phone number '855-343-0105' and a 'Learn more' link, and a section for 'Trainings and events' with a 'View training calendar' link. At the bottom, there are 'Important links' and 'Program details and FAQs' sections, each with a representative image.

Rhode Island Energy Code Technical Support



Offering **FREE** building energy code compliance consulting, training, and technical support.

Provided services include:

- Onsite Energy Code Consulting – Circuit Riding
- Code and building science seminars
- In-field training

For more information:

Call
855-343-0105

Visit
ngrid.com/rienergycode

This initiative is funded by the energy efficiency charge on all customers' utility bills, in accordance with Rhode Island law.



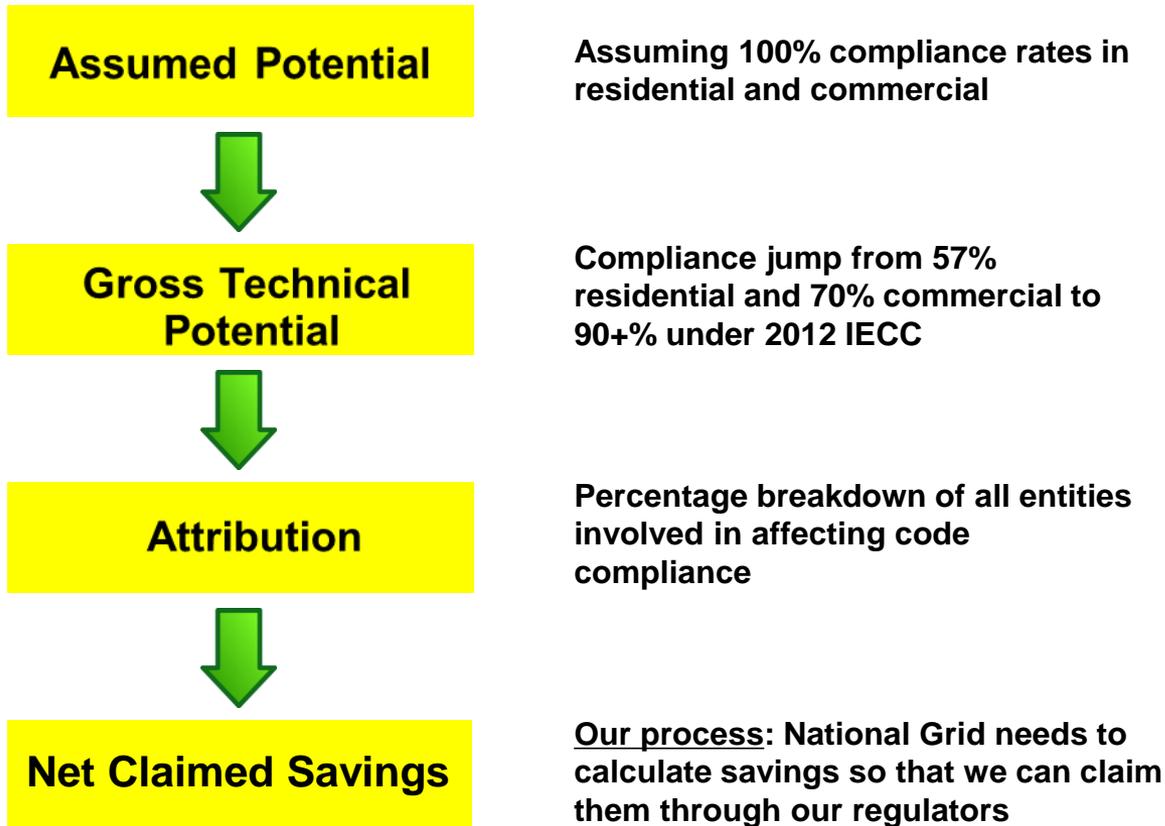
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Evaluation efforts savings flow-chart

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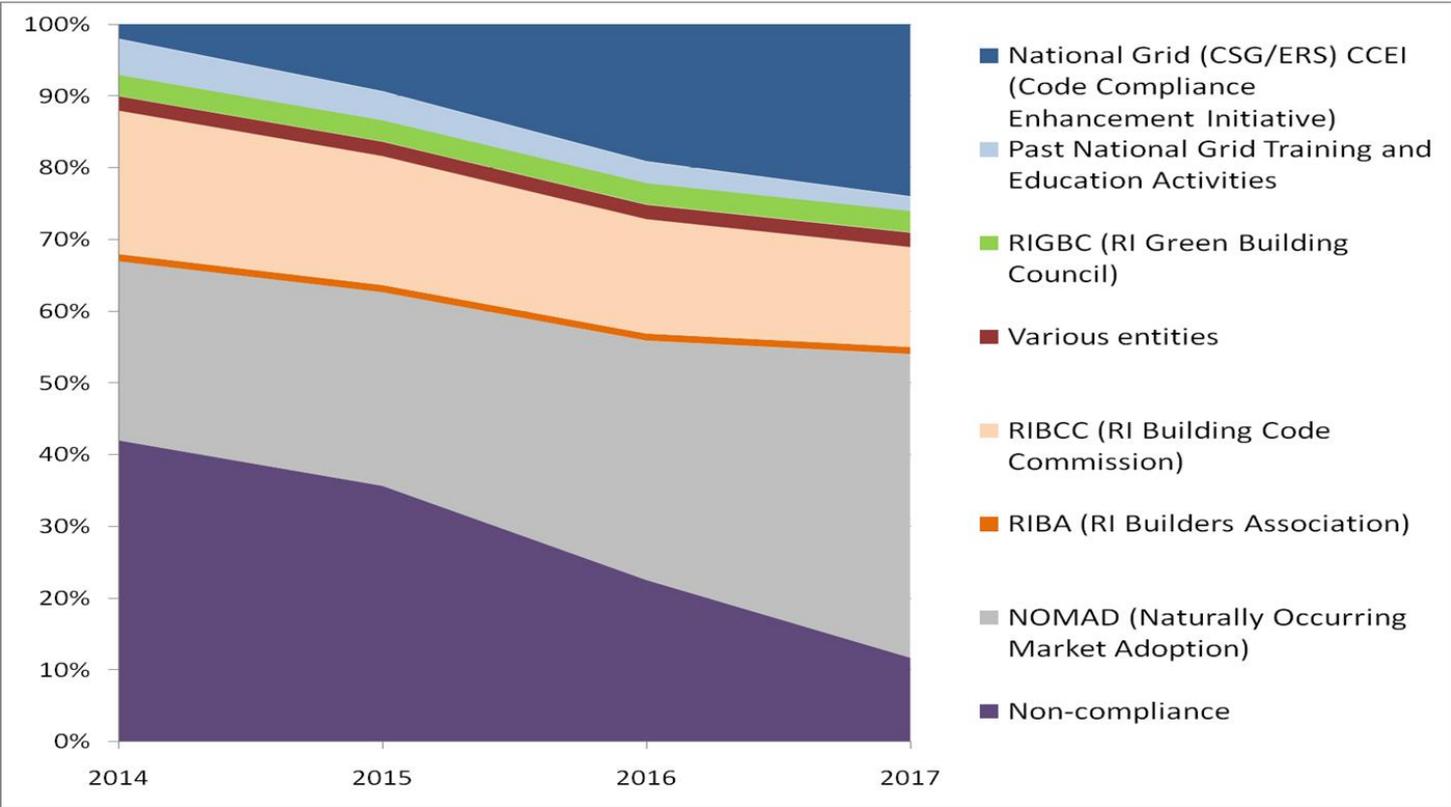
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Determining residential attribution in RI

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1 year later – lessons learned

- Trainings are a success – building good momentum into 2015
- Lack of circuit rider activity
 - Are there not enough buildings being built?
 - Does presence of code officials on site worry builders?
 - Do we need to be more proactive in outreach?
- No continuing education credits required for builders hampers potential for maximum participation
- Initial high spend with low savings – we won't know the exact impact until the next baseline study in 2016



Questions?

To learn more, contact:

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