The Energy Rating Index:
UNDERSTANDING THE ERI
Flexible. Enforceable. Effective.

Leading Builders of America
August 2016
The Energy Rating Index (ERI)

Key Facts about ERI:

- A new voluntary performance option in the 2015 IECC (Section R406)
- Developed through collaboration of the Natural Resources Defense Council and Leading Builders of America
- Based on the widely used RESNET Home Energy Rating System (HERS), which has rated 1.5 million new homes
- Requires houses to meet specific ERI scores (lower score = more efficient house), based on climate zone
- Mandatory compliance with building thermal envelope requirements
- Provides new compliance tools, including renewables, equipment trade-offs, and new technologies
- Testing and verification of every home by certified third-party inspectors
ERI Makes the Energy Code Better

The ERI is:

- **Fair**
  - Open to solutions from all industries
  - Useful for all stakeholders (code officials, builders, manufacturers, consumers)

- **Innovative**
  - Encourages emerging energy-efficient technologies
  - Provide optimal compliance paths for stakeholders

- **Simple**
  - Set objective and easily measurable goals
  - Encourage adoption and compliance

- **Enforceable**
  - Consensus-developed standard – ICC/RESNET/ANSI 301
  - Every home rigorously inspected and tested by professional raters
  - Simple compliance report for verification
A Broken Energy Code

- The IECC has been captured by an industry through an “envelope only” approach than requires use of their products *exclusively.*

- Energy saving options are locked out of the code:
  - HVAC and water heating
  - Lighting
  - On-site renewable power generation
  - Emerging smart technologies

- Prescriptive performance paths are needlessly complex and costly

- Difficult for building officials to implement and enforce
  - Requiring extensive field work
  - Other codes (e.g., fire, electrical, structural, plumbing) are priorities
Energy Codes that Aren’t Adopted Don’t Save Energy

- Newer versions of the IECC are slow to be adopted due to implementation and compliance costs
- Where codes have been adopted, they are heavily modified

Eight states + DC have adopted 2012 IECC code statewide

Seven states have adopted 2015 IECC code statewide
AN ENERGY CODE THAT WORKS
Flexible, Enforceable, Effective
IECC: Three Compliance Paths

1. Prescriptive Path: checking a long list of boxes
2. Simulated Performance Path: an outcomes-focused approach
3. **Energy Rating Index (ERI): a flexible path forward**
Encourage Innovation

- Reform the envelope-only approach
- Restore and clarify options to install high-performance HVAC systems and water heating systems
- Acknowledge that renewables belong in the energy code
- Allow use of innovative technologies, such as:
  - High-efficiency lighting,
  - High-efficiency water heating
  - Remote and on-site programing
  - Smart glass
  - Demand-management technology
Simplify Compliance

- Adopt a widely-accepted, open-source standard for measuring energy efficiency
- Use a measurement standard (ANSI/RESNET/ICC 301-2914) that is familiar to consumers, builders, subcontractors, manufacturers and building officials
- Provide flexibility and cost-effectiveness for builders and homebuyers to achieve agreed-upon efficiency goals
- Supply code officials with inspection and testing results from certified third-party inspectors for every house
Improve Enforcement

- Ease inspection/plan review process and simplify compliance report
- Adopt a simple “pass/fail” approach measured by easily-measured criteria
- Inspection and testing for every home
- Augment inspection force with certified third-party participation
- Provide building officials with documentation of inspection and test results
Key Reforms for ERI in the 2018 IECC

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<thead>
<tr>
<th>RE 166</th>
<th>RE 177</th>
<th>What it means</th>
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<tr>
<td>Adopts ANSI/RESNET/ICC 301-2014 for the ERI.</td>
<td>Sets achievable, realistic ERI scores for the energy code.</td>
<td>• Wider adoption of the IECC.</td>
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<td>Restores a renewable energy option.</td>
<td>Sets scores 20% lower than current prescriptive path.</td>
<td>• Simplified compliance.</td>
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<td>Restores technology and equipment trade-off options.</td>
<td>Allows stakeholders to choose the path that works for them.</td>
<td>• Firmly establishes the ERI as a flexible path for the future.</td>
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Building envelope performance requirements are retained in the energy code

• Protects the code from “road blocks.”
• New, innovative options.
Including renewables makes a long-term “net-zero” goal possible

An energy code adopted by more communities will save money and save energy

Improvements to the inspection and compliance reporting process help builders as well as code officials

Wider application of renewable energy and emerging technologies will spur innovation

Maintaining building thermal envelope requirements ensures “backstop” performance

Consensus standards and a transparent process will ensure a flexible and competitive code
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