

September 20, 2012

VIA ELECTRONIC MAIL

Ray Allshouse
Chair, State Building Code Council
P.O. Box 41449
Olympia, WA 98504-1449

RE: RECA Comments Supporting the Incorporation of the 2012 IECC in the Washington State Energy Code

Dear Mr. Allshouse,

The Responsible Energy Codes Alliance¹ supports the incorporation of the 2012 *IECC* in the latest draft of the Washington State Energy Code (WSEC) as published in the July 31, 2012 Washington State Register, and urges the State Building Code Council (SBCC) to move forward with the process of adopting and implementing this code. We submit the following comments to support specific measures and to offer recommendations on the path ahead.

For many years, Washington has been a leader in building energy efficiency, incorporating new innovations into its own state codes and sharing its expertise at the International Code Council. The latest version of the WSEC appears to parallel the *IECC* much more closely than any previous version. This development will allow Washington to continue to achieve greater energy efficiency in the built environment, and will bring Washington's building energy requirements closer to the nation's model energy code, the 2012 *IECC*.

Washington Will Benefit from Adoption of the 2012 IECC

Washington stands to gain from adopting provisions from the latest model energy code, the 2012 *IECC*. According to the U.S. Department of Energy, the 2012 *IECC* "represents the largest, one-step efficiency increase in the history of the national model energy code."² Moreover, the Department of Energy recently issued its determination on the 2012 *IECC* as required by federal law and confirmed it as the new baseline for state residential energy

¹ RECA is a broad coalition of energy efficiency professionals, regional organizations, product and equipment manufacturers, trade associations, and environmental organizations that promote the adoption and implementation of improved building energy codes and, in particular, the most recent version of the *IECC* nationwide. A list of RECA members is enclosed at the end of this letter. RECA members have been involved in the development of the *IECC*, and the implementation of energy codes in jurisdictions across the country for two decades. For more information about RECA, see our website at www.reca-codes.com.

² See "2012 *IECC* Final Action Hearings Deliver DOE's 30% Energy Savings Goals," at http://www.energycodes.gov/status/2012_Final.stm.

codes, directing all states to certify that they have reviewed and considered adopting it. See *77 Fed. Reg. 29322* (May 17, 2012). A number of jurisdictions are in the process of evaluating the 2012 *IECC* and its provisions for potential adoption or have already adopted the 2012 *IECC*.

The latest WSEC draft incorporates significant parts of the 2012 *IECC*, and RECA supports these measures. The draft also continues Washington's history of improving upon the model codes. RECA does not oppose strengthening amendments, as long as the core *IECC* elements are intact and the strengthening amendments do not complicate the code or create enforcement issues. We have not analyzed individual improvements to the *IECC*, nor have we analyzed Washington's extra measures to determine the long-term impact of these amendments on the state. Our comments are limited to the proposed implementation of the 2012 *IECC* and its requirements.

- **Simple Prescriptive Path and Consistent Climate Zones.** The adoption of the *IECC*'s single prescriptive path in place of Washington's multiple prescriptive paths will greatly simplify the code for code users. This provides a straightforward, component-based means of compliance, while still allowing significant flexibility through the Total UA analysis or Simulated Performance Analysis. Washington's proposed climate zones also match the *IECC*'s climate zones, making code compliance more seamless.
- **Stronger Thermal Envelope and Building Systems.** The 2012 *IECC*'s improved thermal envelope requirements will make homes more comfortable in all seasons, save energy and peak demand, and provide more energy security for Washington's homeowners. Thermal envelope requirements, including insulation and windows, are most cost-effective at initial construction and will yield energy savings for the useful lifetime of the home. The 2012 *IECC* has also upgraded air leakage testing requirements and has reduced the need for inspections by requiring objective and more reliable testing.
- **Performance Path Improvements.** By replacing the Washington-specific systems analysis approach with the *IECC*'s Simulated Performance Alternative, Washington would eliminate the envelope-for-equipment trade-off loophole and require buildings to be built with long-lasting, highly efficient thermal envelope components.

The Simulated Performance Alternative in the draft WSEC Section R405 is modeled after Section R405 of the 2012 *IECC*. As in the *IECC*, the WSEC appears to eliminate the loopholes created by an equipment trade-off. Under the *IECC* (and the draft WSEC), residential buildings will be constructed with highly efficient thermal envelopes, irrespective of the efficiency of heating, cooling, and water heating equipment. This approach was adopted in the 2009 *IECC* and was continued in the 2012 *IECC*, and it will lead to more efficient, more comfortable homes.

Although the assumptions related to cooling and water heating equipment in WSEC Table R405.5.2(1) match those of the 2012 *IECC*, the language related to heating systems should be updated to reflect the improvements made in the 2012 *IECC*. We suggest the following amendment:

Heating systems ^{f, g}	<p>For all system types other than electric heating without a heat pump, the same system type as with the prevailing federal minimum efficiency.</p> <p><u>As proposed for other than electric heating without a heat pump. Where the proposed design utilizes electric heating without a heat pump the standard reference design shall be an air source heat pump meeting the requirements of Section C403 of the <i>IECC—Commercial Provisions</i>.</u></p> <p><u>Capacity: sized in accordance with Section R403.6.</u></p>	As proposed
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- Improvements to Existing Buildings.** We note that the draft WSEC also incorporates renovations requirements that build upon the 2012 *IECC*, such as a requirement in WSEC Section R101.4.3 that existing ceiling, wall or floor cavities exposed during additions, alterations, renovations or repairs be filled with insulation (a minimum of R-15 in 2x4 framed walls and R-21 in 2x6 framed walls). For many years, the *IECC* has improved existing building efficiency through a requirement (R402.3.6) that all replacement fenestration meet the requirements of the prescriptive table, and the draft WSEC includes this requirement as well. The new insulation requirement will yield similar efficiency improvements in the ceilings, walls, and floors of existing buildings.

Conclusion

We encourage Washington to continue its tradition of leadership in building energy efficiency and to move forward with the incorporation of the 2012 *IECC* into the WSEC. We hope that you will not hesitate to draw on RECA’s support and willingness to help. Please contact me at (202) 339-6366 if you have any questions or would like to discuss how RECA can be of assistance.

Sincerely,

Eric Lacey
RECA Chairman

RECA is a broad coalition of energy efficiency professionals, regional organizations, product and equipment manufacturers, trade associations, and environmental organizations with expertise in the adoption, implementation and enforcement of building energy codes nationwide. RECA is dedicated to improving the energy efficiency of homes in Washington and throughout the U.S. through greater use of energy efficient practices and building products. It is administered by the Alliance to Save Energy, a non-profit coalition of business, government, environmental and consumer leaders that supports energy efficiency as a cost-effective energy resource under existing market conditions and advocates energy-efficiency policies that minimize costs to society and individual consumers. Below is a list of RECA Members that endorse these comments.

Air Barrier Association of America

Alliance to Save Energy

American Chemistry Council

American Council for an Energy-Efficient Economy

Cardinal Glass Industries, Inc.

CertainTeed Corporation

EPS Molders Association

Extruded Polystyrene Foam Association

Guardian Industries Corporation

Institute for Market Transformation

Johns Manville Corporation

Knauf Insulation

National Fenestration Rating Council

North American Insulation Manufacturers Association

Owens Corning

Pactiv Corporation

Polyisocyanurate Insulation Manufacturers Association

Sierra Club