



## 2015 IECC – Residential Summary 2013 ICC Public Comment Hearings

There were few significant changes to the Residential code, with the exceptions of RE188 and hot water distribution. The hearings were dominated by successful defenses against many backsliding proposals, most notably RE166. The proposal promising the most significant energy savings, RE186, was defeated.

### Major Proposals Defeated:

- ✓ **RE166 was overturned, avoiding a massive rollback of the code.** This proposal would have reintroduced unrestricted mechanical equipment trade-offs to the Performance path.
- ✓ **Other Rollbacks Overturned** RE72 would have made the air leakage limit Prescriptive while keeping testing Mandatory. RE150 would have changed the simple 75 percent high efficacy lighting requirement to a 100 percent requirement with considerable exceptions.
- ✗ **RE186 was defeated, stymieing a possible 5 percent efficiency gain.** Builders would have had to select from a menu of HVAC, water heating, and envelope options providing further efficiency.

### Energy Efficiency Wins:

- ✓ **RE188 was approved, establishing an energy rating (e.g. HERS) compliance alternative.** Buildings must attain an Index of 51-55 based on Climate Zone (not 59-63, as modified).
- ✓ **Envelope** RE63 relocates the wall bracing insulation exception, stopping its use as a loophole for the U-factor/Total UA methods. RE83 requires R-3 insulation for cavities in corners and headers.
- ✓ **Compliance** RE163 adds a second report based on as-built conditions to the Performance path.

### Energy Efficiency Losses:

- ✗ **Envelope** RE50 slightly weakens wood frame wall U-factor values in Climate Zones 1-5 (but strengthens them for CZ 6-8). RE58 exempts attic doors from meeting wall insulation values.
- ✗ **Duct and Pipe Insulation** RE107 decreases duct insulation requirements for small ducts (< 3" diameter). RE132 deletes the R-3 insulation requirement for some hot water pipe applications.

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### Joint Code Changes (Residential and Commercial):

- ✓ **Compliance** CE4 & CE5 compile the requirements for existing buildings into a new chapter. CE8 curtails the blanket historic buildings exemption. CE37 requires the thermal envelope be shown on building plans. CE38 defines specific inspection requirements.
- ✓ **Service Water Heating** RE136 (and CE282) require demand controls for recirculation systems. RE125 (and CE279) add requirements for hot water circulation and heat trace systems and controls. CE283 adds a Drain Water Heat Recovery option to the Performance path.

Note: code changes in blue were heard with the Commercial proposals, but also apply to Residential



## 2015 IECC – Commercial Summary 2013 ICC Public Comment Hearings

There were many small changes to the Commercial code. The most substantial changes add advanced lighting requirements and incremental energy efficiency gains in lighting and HVAC. Other changes will improve code compliance and hot water distribution, some of which also apply to the Residential code.

### Energy Efficiency Wins:

- ✓ **Lighting** *CE294* adds more requirements for daylighting controls and zones. *CE292* and *CE287* require occupancy sensors in warehouses, lounges, etc. *CE149* extends the minimum skylight area requirement. *CE357* requires commissioning of occupancy sensors and daylighting controls.
- ✓ **Minimum HVAC, Water Heating, and Lighting Efficiency** Minimum performance criteria were improved for the following applications to match ASHRAE 90.1-2013 standards:
  - AC/Heat pump (*CE200*)
  - energy recovery equip (*CE214*)
  - kitchen exhaust flow (*CE220*)
  - refrigeration (*CE239 & CE240*)
  - economizers, controls, and VAV fans (*CE245, CE250, & CE251*)
  - heat rejection equip (*CE255*)
  - 1/12 - 1 hp fans (*CE258*)
  - multi-zone VAV systems (*CE259*)
  - hot water system controls (*CE278*)
  - exterior lighting controls (*CE304*)
  - lighting power densities (*CE310*)
  - electric transformers (*CE329*)
  - electrical motors (*CE 331*)
  - people movers (*CE333*)
  - lighting O&M manual (*CE356*)
- ✓ **Compliance** [see reverse] *CE337* adds three new options to Section C406: (1) enhanced lighting controls, (2) dedicated outdoor air system, and (3) high efficiency service water heating.
- ✓ **Service Water Heating** [see reverse] *CE274 & CE275* reduce the volume of water heated through maximum pipe lengths or volumes.
- ✓ **Envelope** *CE51, CE59, & CE124* revise the definitions of conditioned space (adds semi-heated spaces), vertical fenestration (adds sloped roof windows), and below-grade wall (≥85% below).

### Energy Efficiency Losses:

- ✗ **Envelope** *CE94 & CE95* weaken mass wall minimum U-factors. *CE142* replaces the projection factor SHGC adjustment with a weaker SHGC requirement for North-facing fenestration.
- ✗ **Defeated Envelope Gains** *CE89* would have made the envelope tables at least as stringent as 90.1-2010. *CE164 (AMPC2)* would have required testing or commissioning of air barriers.

### Brand New Items Approved:

- Tropical climate zone (*CE66*)
- Prescriptive Total UA compliance option: no fenestration area limit (*CE88*)
- Air Curtain vestibule exception (*CE192*)

### Brand New Items Defeated:

- ✗ *CE286*, adapted from 90.1, would have been the first IECC plug load provision.
- *CE116* would have required cool roofs in Climate Zone 4.

Note: code changes in blue were heard with the Commercial proposals, but also apply to Residential