

Proposal Summary



2022 California Energy Code (Title 24, Part 6)

Single Family Energy Savings and Process Improvements for Additions and Alterations – Prescriptive Changes

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Introduction

The document summarizes proposed revisions to the California Energy Code (Title 24, Part 6) that will be discussed during Round 2 of the utility-sponsored stakeholder meeting on March 5, 2020. The Statewide Utility Codes and Standards Enhancement (CASE) Team is seeking input and feedback. Please share comments by email to info@title24stakeholders.com.

Measure Description

This work identifies opportunities for efficiency improvements in residential alterations and additions by expanding existing requirements and proposing new requirements where appropriate. The following specific proposals will be considered.

- Expand the current prescriptive cool roof requirement for steep-slope roof alterations to cover Climate Zones 4, and 8 through 15.
- Expand the current prescriptive cool roof requirement for low-slope roof alterations to cover Climate Zones 4, and 6 through 15.
- Add an R-14 roof deck insulation requirement for low-slope roof alterations in Climate Zones 1, 2, 4 and 8 through 16.
- Add a prescriptive requirement for attic air sealing and R-49 attic insulation for altered ceilings below a vented attic in Climate Zones 2, 4, and 8 through 16. This requirement would also apply when an entirely new or complete replacement duct system is installed in these climate zones.
- Increase the prescriptive requirement for attic insulation in additions ≤ 700 square feet to R-38 from R-30 in Climate Zones 2, 4, and 8 through 10.
- Prohibit electric resistance heating replacement systems prescriptively when the replacement heating system is part of a new or replacement ducted cooling system.
- Prohibit electric resistance water heating replacement systems prescriptively unless the replacement system is located within conditioned space.
- Reduce the prescriptive duct leakage target for altered systems from 15 to 10 percent total leakage.
- Eliminate the 40-foot trigger for prescriptive duct sealing and insulation requirements in all climate zones.



- Increase the prescriptive requirement for duct insulation for new ducts in an alteration to R-8 from R-6 in Climate Zones 1, 2, 4, 8 through 10, and 12 through 13.
- Revise the protocol in RA3.1.4.2 to require that duct leakage airflow targets be calculated using measured system airflow instead of nominal airflow when it is available.
- Include three new performance compliance credits in CBECC-Res:
 - Revise the default infiltration value from 5 to 10 ACH50 and allow full credit for reduction of infiltration based on pre- and post- retrofit blower door values.
 - Fireplace removal credit if prescriptive requirements for sealing and insulation are met.
 - QII compliance credit for altered wall, ceiling, and floor assemblies.

Draft Code Language

The proposed changes to the Standards and Reference Appendices are provided below. Changes to the 2019 documents are marked with red underlining (new language) and ~~strikethroughs~~ (deletions).

Standards

SECTION 110.8 – MANDATORY REQUIREMENTS FOR INSULATION, ROOFING PRODUCTS AND RADIANT BARRIERS

(d) **Installation of Insulation in Existing Buildings.** Insulation installed in an existing attic, or on an existing duct or water heater, shall comply with the applicable requirements of Subsections 1, 2, and 3 below. If a contractor installs the insulation, the contractor shall certify to the customer, in writing, that the insulation meets the applicable requirements of Subsections 1, 2, and 3 below.

1. **Attics.** If insulation is installed in the existing attic of a low-rise residential building, the R-value of the total amount of insulation (after addition of insulation to the amount, if any, already in the attic) shall meet the requirements of Section ~~150.0(a)~~150.2(b)1.

EXCEPTION to Section 110.8(d)1: Where the accessible space in the attic is not large enough to accommodate the required R-value, the entire accessible space shall be filled with insulation provided such installation does not violate Section ~~1202.21~~203.2 of Title 24, Part 2 ~~or Section 806.2 of Title 24, Part 2.5.~~

SECTION 150.2 – ENERGY EFFICIENCY STANDARDS FOR ADDITIONS AND ALTERATIONS TO EXISTING LOW-RISE RESIDENTIAL BUILDINGS

(a) **Additions.** Additions to existing low-rise residential buildings shall meet the requirements of Sections 110.0 through 110.9, Sections 150.0(a) through (q), and either Section 150.2(a)1 or 2.

1. **Prescriptive approach.** Additions to existing buildings shall meet the following additional requirements:
 - B. Additions that are 700 square feet or less shall meet the requirements of Section 150.1(c), with the following modifications:
 - i. ~~Roof and~~ Ceiling insulation shall be installed in a ventilated attic with an R-value equal to or greater than shall be insulated to R38 in Climate ~~Z~~zones 1, ~~2, 4, 8~~11-16 or R-30 in Climate ~~Z~~zones ~~3, 5-7~~2-10 located between the attic and the conditioned space; and

(b) **Alterations.** Alterations to existing low-rise residential buildings or alterations in conjunction with a change in building occupancy to a low-rise residential occupancy shall meet either Item 1 or 2 below.

1. **Prescriptive approach.** The altered component and any newly installed equipment serving the alteration shall meet the applicable requirements of Sections 110.0 through 110.9 and all applicable

requirements of Section 150.0(a) through (l); 150.0(m)1 through 150.0 (m)10, Section 150.0(o) through (q); and

A. Ceiling. Ventilated attics in Climate Zones 2, 4, and 8 through 16 for single family buildings and Climate Zones 2, 8, and 10 through 16 for multifamily buildings shall meet the following:

- i. Insulation shall be installed to achieve a weighted U-factor of 0.020 or insulation installed at the ceiling level resulting in an installed thermal resistance of R-49 or greater for the insulation alone; and:
- ii. Air seal all accessible areas of the ceiling plane between the attic and the conditioned space in accordance with Section 110.7; and
- iii. Recessed downlight luminaires in the ceiling are covered with insulation to the same depth as the rest of the ceiling. Luminaires not rated for insulation contact must be replaced or fitted with a fire-proof cover; and
- iv. Attic ventilation shall comply with CBC requirements.

EXCEPTION 1 to Section 150.2(b)1Aii, iii, and iv: Buildings with at least R-19 existing insulation installed at the ceiling level.

EXCEPTION 2 to Section 150.2(b)1A: Buildings with at least R-38 existing insulation installed at the ceiling level.

EXCEPTION 3 to Section 150.2(b)1A: Buildings without attic access to the attic area.

EXCEPTION 4 to Section 150.2(b)1A: Buildings where the alteration that would directly cause the disturbance of asbestos, unless the alteration is made in conjunction with asbestos abatement.

EXCEPTION 5 to Section 150.2(b)1A: Buildings with knob and tube wiring located in the vented attic.

EXCEPTION 6 to Section 150.2(b)1A: Where the accessible space in the attic is not large enough to accommodate the required R-value, the entire accessible space shall be filled with insulation provided such installation does not violate Section 806.2 of Title 24, Part 2.5.

C. Entirely New or Complete Replacement Space-Conditioning Systems installed as part of an alteration, shall include all the system heating or cooling equipment, including but not limited to condensing unit and cooling or heating coil for split systems; or complete replacement of a package unit; plus entirely new or replacement duct system (Section 150.2(b)1Diia); plus a new or replacement air handler.

Entirely ~~N~~ew or complete replacement space-conditioning systems shall:

- i. Meet the requirements of Sections 150.0(h), 150.0(i), 150.0(j)2, 150.0(j)3, 150.0(m)1 through 150.0(m)10; 150.0(m)12; 150.0(m)13, 150.1(c)6, 150.1(c)7, 150.1(c)10 and TABLE 150.2-A; and
- ii. Be limited to ~~one of the following: natural gas, liquefied petroleum gas, or the existing fuel type:~~
 - a. A natural gas or propane heating system; or
 - b. A heat pump; or
 - c. A heating system of the existing fuel type that is not part of a new or replacement ducted cooling system.

EXCEPTION to Section 150.2(b)1Cii: When the fuel type of the replaced heating system was natural gas or liquefied petroleum gas, the new or complete replacement space-conditioning system may be a heat pump.

- D. **Altered Duct Systems - Duct Sealing:** In all Climate Zones, when ~~more than 40 feet of new or~~ replacement space-conditioning system ducts are installed, the ducts shall comply with the applicable requirements of subsections i and ii below. Additionally, when altered ducts, air-handling units, cooling or heating coils, or plenums are located in garage spaces, the system shall comply with subsection 150.2(b)1Diic regardless of the length of any new or replacement space-conditioning ducts installed in the garage space.
- i. New ducts located in unconditioned space shall meet the applicable requirements of Sections 150.0(m)1 through 150.0(m)~~1011~~, and the duct insulation requirements of TABLE 150.2-A, and

TABLE 150.2-A DUCT INSULATION R-VALUE

Climate Zone	3, 5 through 7 1 through 10, 12&13	1, 2, 4, 8 through 16 11, 14 through 16
Duct R-Value	R-6	R-8

- ii. The altered duct system, regardless of location, shall be sealed as confirmed through field verification and diagnostic testing in accordance with all applicable procedures for duct sealing of altered existing duct systems as specified in the Reference Residential Appendix RA3.1, utilizing the leakage compliance criteria specified in Subsection a or b below.
- a. **Entirely New or Complete Replacement Duct System.** If the new ducts form an entirely new or complete replacement duct system directly connected to the air handler, the duct system shall meet one of the following requirements:
- I. For single family dwellings, the measured duct leakage shall be equal to or less than 5 percent of the system air handler airflow as confirmed by field verification and diagnostic testing utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.1.
- II. For multifamily dwellings, regardless of duct system location,
- A. The total leakage of the duct system shall not exceed 12 percent of the nominal system air handler airflow as determined utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.1, or
- B. The duct system leakage to outside shall not exceed 6 percent of the nominal system air handler airflow as determined utilizing the procedures in Reference Residential Appendix Section RA3.1.4.3.4.

Entirely new or complete replacement duct systems installed as part of an alteration shall be constructed of at least 75 percent new duct material, and up to 25 percent may consist of reused parts from the dwelling unit's existing duct system, including but not limited to registers, grilles, boots, air handler, coil, plenums, duct material; if the reused parts are

accessible and can be sealed to prevent leakage.

Entirely new or complete replacement duct systems shall also conform to the requirements of Sections 150.0(m)12 and 150.0(m)13. If at least 25 percent of the duct system is located within a vented attic the requirements of Section 150.2(b)1A shall also be met.

ii. **Distribution System.** For recirculation distribution system serving individual dwelling units, only Demand Recirculation Systems with manual on/off control as specified in the Reference Appendix RA4.4.9 shall be installed.

iii. **Water heating system.** The water heating system shall meet one of the following:

- a. A natural gas or propane water-heating system; or
- b. For Climate Zones 1 through 15, a single heat pump water heater. The storage tank shall not be located outdoors and be placed on an incompressible, rigid insulated surface with a minimum thermal resistance of R-10. The water heater shall be installed with a communication interface that meets either the requirements of 110.12(a); or
- c. For Climate Zones 1 through 15, a single heat pump water heater that meets the requirements of NEEA Advanced Water Heater Specification Tier 3 or higher. The storage tank shall not be located outdoors; or
- d. If no natural gas is connected to the existing water heater location, one of the following: consumer electric water heater
 - i. A single heat pump water heater; or
 - ii. A consumer electric water heater if the water heater is located within conditioned space or the existing location is not large enough to accommodate a heat pump water heater per manufacturer specifications; or
 - iii. A solar water-heating system meeting the installation criteria specified in Reference Residential Appendix RA4.20 and with a minimum solar savings fraction of 60 percent; or
 - iv. A new solar photovoltaic with a minimum capacity of 1 kilowatt; or
 - v. Grid interactive electric water heater that is CTA-2045 compliant (reference RA under development for 2019 HPWH work).

I. **Roofs.** Replacements of the exterior surface of existing roofs, including adding a new surface layer on top of the existing exterior surface, shall meet the requirements of Section 110.8 and the applicable requirements of Subsections i and ii where more than 50 percent of the roof is being replaced.

i. Low-rise residential buildings with steep-sloped roofs shall meet the following:

New roofing products-in Climate Zones ~~4 and 8~~4 through 15 shall have a minimum aged solar reflectance of 0.20 and a minimum thermal emittance of 0.75, or a minimum SRI of 16.

EXCEPTION 1 TO 150.2(b)1i: The following shall be considered equivalent to Subsection i:

- ~~a. Air space of 1.0 inch (25 mm) is provided between the top of the roof deck to the bottom of the roofing product; or~~
- ~~b. The installed roofing product has a profile ratio of rise to width of 1 to 5 for 50 percent or greater of the width of the roofing product; or~~
- ~~c. Existing ducts in the attic are insulated and sealed according to Section 150.1(c)9; or~~
- ad. Buildings with roof/ceiling assemblies with a U-factor lower than or equal to 0.025 or that are insulated with at least R-38 ceiling insulation in an attic; or
- be. Buildings with a radiant barrier in the attic, where the radiant barrier is not installed directly above spaced sheathing, meeting the requirements of Section 150.1(c)2; or

- cf. Buildings that have no ducts in the attic in Climate Zones 4, 9, 10, 12, and 14; or
- dg. In Climate Zones 10-15, Buildings with R-2-or greater continuous insulation above or below the roof deck or with a roof assembly that has a U-factor lower than or equal to 0.277.

EXCEPTION 2 to Section 150.2(b)11i: Roof area covered by building integrated photovoltaic panels or building integrated solar thermal panels are not required to meet the minimum requirements for solar reflectance, thermal emittance, or SRI.

- ii. Low-rise residential buildings with low-sloped roofs shall meet the following:
 - a. New roofing products Low-sloped roofs in Climate Zones 4, and 6-13 and through 15 shall have a 3-year aged solar reflectance equal or greater than 0.63 and a thermal emittance equal or greater than 0.75, or a minimum SRI of 75.

EXCEPTION 1 to Section 150.2(b)11ii: Buildings with no ducts in the attic.

EXCEPTION 12 to Section 150.2(b)11iii: The aged solar reflectance can be met by using insulation at the roof deck specified in TABLE 150.2-B.

TABLE 150.2-B AGED SOLAR REFLECTANCE INSULATION TRADE OFF TABLE

<u>Minimum Aged Solar Reflectance</u>	<u>Roof Deck Continuous Insulation R-value (Climate Zones 6-7)</u>	<u>Aged Solar Reflectance</u>	<u>Roof Deck Continuous Insulation R-value (Climate Zones 4, 8-15)</u>
0.62 -0.60	2	0.44 -0.40	12 16
0.59 -0.55	4	0.39 -0.35	16 18
0.54 -0.50	6	0.34 -0.30	20
0.49 -0.45	8	0.29 -0.25	24 22
No requirement	10		24

EXCEPTION 2 to Section 150.2(b)11iii: Roof area covered by building integrated photovoltaic panels or building integrated solar thermal panels are not required to meet the minimum requirements for solar reflectance, thermal emittance, or SRI.

- b. Roofs shall be insulated to the levels specified in TABLE 150.2-C.

TABLE 150.2-C INSULATION REQUIREMENTS FOR ROOF ALTERATIONS

<u>Climate Zone</u>	<u>Continuous Insulation R-value</u>	<u>U-factor</u>
3, 5-7	NR	NR
1, 2, 4, 8-16	R-14	0.058

EXCEPTION to Section 150.2(b)11ib:

- i. Existing roofs with R-10 or greater continuous insulation above or below the roof deck; or
- ii. If mechanical equipment is located on the roof and will not be temporarily disconnected and lifted as part of the roof replacement, insulation added may be limited to the maximum insulation thickness that will allow a height of 8 inches from the roof membrane surface to the top of the base flashing; or

- iii. If replaced roofing abuts penthouse and parapet walls, insulation added may be limited to the maximum insulation thickness that will allow a height of 8 inches from the roof membrane surface to the top of the base flashing, provided that the conditions in Subsections 1 through 3 apply:
 - 1. The penthouse or parapet walls are finished with an exterior cladding material other than the roofing covering membrane material; and
 - 2. The penthouse or parapet walls have exterior cladding material that must be removed to install the new roof covering membrane to maintain the minimum base flashing height; and
 - 3. The ratio of the replaced roof area to the linear dimension of affected penthouse or parapet walls is less than 25 square feet per linear foot; or
- iv. Tapered insulation may be used which has a thermal resistance less than that prescribed at the drains and other low points, provided that the thickness of insulation is increased at the high points of the roof so that the average thermal resistance equals or exceeds the required value.

2. Performance approach.

The altered component(s) and any newly installed equipment serving the alteration shall meet the applicable requirements of subsections A, B, and C below.

- A. The altered components shall meet the applicable requirements of Sections 110.0 through 110.9, Section 150.0(a) through (l), Sections 150.0(m)1 through 150.0 (m)10, ~~and~~ Section 150.0(o) through (q) and Sections 150.2(b)1D through 150.2(b)1E. Entirely new or complete replacement space-conditioning systems, and entirely new or complete replacement duct systems, as these terms are used in Sections 150.2(b)1C, and 150.2(b)1Diia, shall comply with the requirements of Sections 150.0(m)12 and 150.0(m)13.

Reference Appendices

Appendix RA3 – Residential Field Verification and Diagnostic Test Protocols

RA3.1.4.2 Determining Air Handler Airflow for Calculation of Duct Leakage Rate Compliance Targets

For use in establishing the target duct leakage rate compliance criteria, the system air handler airflow shall be calculated using RA3.1.4.2.1, RA3.1.4.2.2, or RA3.1.4.2.3. If a system airflow measurement is available, system air handler airflow shall be calculated using RA3.1.4.2.3.

RA3.5.1 Purpose and Scope

RA3.5 is a procedure for verifying the quality of insulation installation and air leakage control used in low-rise residential buildings. This procedure is to be followed by the insulation installer and a qualified Home Energy Rating System (HERS) rater must verify its conformance for meeting the requirements of Sections 150.1(c), and 110.7 of the Standards.

The procedure applies to wood and metal construction of framed and non-framed envelope assemblies. Framed assemblies include wall stud cavities, roof/ceiling assemblies, and floors typically insulated with: (1) batts of mineral fiber and mineral wool; (2) loose-fill materials of mineral fiber, mineral wool, and cellulose; (3) spray polyurethane foam; and, (4) rigid board sheathing materials. Non-framed assemblies include wall, roof/ceiling, and floors constructed of structural insulated panels and insulated concrete forms.

Note 1: For newly constructed buildings, this procedure applies to the entire thermal envelope of the building. For new building assemblies, as part of an addition, this procedure applies to the entire building assembly, including connections to adjacent parts of the existing building. For applicable altered assemblies,

this procedure applies to the altered assembly only. In many instances, residential homes will use several types of insulation material, even in the same framed assembly. Each insulation material and the integrity of air leakage control for the building's entire thermal envelope must be verified by the HERS Rater for the home to comply with the Standards.

RA3.5.3 BATT AND BLANKET INSULATION

RA3.5.3.2 Wall Insulation

Exception to RA3.5.3.2(b): Altered wall assemblies, where the bottom plate to the ground subfloor or slab, and above ground subfloor is remaining and cannot be sealed.

RA3.5.3.2.8 Special Situations—Structural Bracing, Tie-downs, Steel Structural Framing

Exception to RA3.5.3.2.8(b): Altered wall assemblies where structural bracing or tie-downs exist, install insulation to minimize thermal bridging not required if it is not possible without moving the exterior or interior wall plane.

RA3.5.3.2.9 Special Situations—Window and Door Headers

Exception to RA3.5.3.2.9: Altered wall assemblies with existing window and wall headers do not need to meet the insulation criteria.

RA3.5.3.3 Roofs/Ceilings

Exception to RA3.5.3.3(i) and (j): Altered ceiling assemblies with non-IC-rated recessed fixtures shall be allowed to remain if fitted with an approved fire-proof cover. Insulation shall be installed to cover fire-proof cover to same depth as the rest of the ceiling.

RA3.5.4 LOOSE FILL INSULATION

RA3.5.4.2 Wall Insulation

Exception to RA3.5.4.2(b): Altered wall assemblies, where the bottom plate to the ground subfloor or slab, and above ground subfloor is remaining and cannot be sealed.

RA3.5.4.2.8 Special Situations—Structural Bracing, Tie-downs, Steel Structural Framing

Exception to RA3.5.4.2.8(b): Altered wall assemblies where structural bracing or tie-downs exist, install insulation to minimize thermal bridging not required if it is not possible without moving the exterior or interior wall plane.

RA3.5.4.2.9 Special Situations—Window and Door Headers

Exception to RA3.5.4.2.9: Altered wall assemblies with existing window and wall headers do not need to meet the insulation criteria.

RA3.5.4.3 Roofs/Ceilings

Exception to RA3.5.4.3(f) and (g): Altered ceiling assemblies with non-IC-rated recessed fixtures shall be allowed to remain if fitted with an approved fire-proof cover. Insulation shall be installed to cover fire-proof cover to same depth as the rest of the ceiling.

RA3.5.5 RIGID BOARD INSULATION

RA3.5.5.2 Wall Insulation

Exception to RA3.5.5.2(b): Altered wall assemblies, where the bottom plate to the ground subfloor or slab, and above ground subfloor is remaining and cannot be sealed.

RA3.5.5.2.8 Special Situations—Structural Bracing, Tie-downs, Steel Structural Framing

Exception to RA3.5.5.2.8(b): Altered wall assemblies where structural bracing or tie-downs exist, install insulation to minimize thermal bridging not required if it is not possible without moving the exterior or interior wall plane.

RA3.5.5.2.9 Special Situations—Window and Door Headers

Exception to RA3.5.5.2.9: Altered wall assemblies with existing window and wall headers do not need to meet the insulation criteria.

RA3.5.5.3 Roofs/Ceilings

Exception to RA3.5.5.3(d) and (e): Altered ceiling assemblies with non-IC-rated recessed fixtures shall be allowed to remain if fitted with an approved fire-proof cover. Insulation shall be installed to cover fire-proof cover to same depth as the rest of the ceiling.

RA3.5.6 SPRAY POLYURETHANE FOAM INSULATION

RA3.5.6.2 Wall Insulation

Exception to RA3.5.6.2(b): Altered wall assemblies, where the bottom plate to the ground subfloor or slab, and above ground subfloor is remaining and cannot be sealed.

RA3.5.6.2.8 Special Situations—Structural Bracing, Tie-downs, Steel Structural Framing

Exception to RA3.5.6.2.8(b): Altered wall assemblies where structural bracing or tie-downs exist, install insulation to minimize thermal bridging not required if it is not possible without moving the exterior or interior wall plane.

RA3.5.6.2.9 Special Situations—Window and Door Headers

Exception to RA3.5.6.2.9: Altered wall assemblies with existing window and wall headers do not need to meet the insulation criteria.

RA3.5.6.3 Roofs/Ceilings

Exception to RA3.5.6.3(g): Altered ceiling assemblies with non-IC-rated recessed fixtures shall be allowed to remain if fitted with an approved fire-proof cover. Insulation shall be installed to cover fire-proof cover to same depth as the rest of the ceiling.

RA3.5.7 STRUCTURAL INSULATED PANEL (SIP)

RA3.5.7.2 Wall Insulation

Exception to RA3.5.7.2(b): Altered wall assemblies, where the bottom plate to the ground subfloor or slab, and above ground subfloor is remaining and cannot be sealed.

RA3.5.7.2.6 Special Situations—Structural Bracing, Tie-downs, Steel Structural Framing

Exception to RA3.5.7.2.6(b): Altered wall assemblies where structural bracing or tie-downs exist, install insulation to minimize thermal bridging not required if it is not possible without moving the exterior or interior wall plane.

RA3.5.7.2.7 Special Situations—Window and Door Headers

Exception to RA3.5.7.2.7: Altered wall assemblies with existing window and wall headers do not need to meet the insulation criteria.

RA3.5.7.3 Roofs/Ceilings

Exception to RA3.5.7.3(d) and (e): Altered ceiling assemblies with non-IC-rated recessed fixtures shall be allowed to remain if fitted with an approved fire-proof cover. Insulation shall be installed to cover fire-proof cover to same depth as the rest of the ceiling.

RA3.5.8 INSULATED CONCRETE FORM (ICF)

RA3.5.8.2 Wall Insulation

Exception to RA3.5.8.2(b): Altered wall assemblies, where the bottom plate to the ground subfloor or slab, and above ground subfloor is remaining and cannot be sealed.

RA3.5.8.2.6 Special Situations—Structural Bracing, Tie-downs, Steel Structural Framing

Exception to RA3.5.8.2.6(b): Altered wall assemblies where structural bracing or tie-downs exist, install insulation to minimize thermal bridging not required if it is not possible without moving the exterior or interior wall plane.

RA3.5.8.2.7 Special Situations—Window and Door Headers

Exception to RA3.5.8.2.7: Altered wall assemblies with existing window and wall headers do not need to meet the insulation criteria.

RA3.5.8.3 Roofs/Ceilings

Exception to RA3.5.8.3(d) and (e): Altered ceiling assemblies with non-IC-rated recessed fixtures shall be allowed to remain if fitted with an approved fire-proof cover. Insulation shall be installed to cover fire-proof cover to same depth as the rest of the ceiling.

Appendix RA4 – Eligibility Criteria for Energy Efficiency Measures

This compliance credit will add a new subsection called Masonry Fireplace Removal in an Alteration either under RA4.2 Envelope Measures or RA4.5 Other Measures.

RA4.XX – Masonry Fireplace Removal in an Alteration

Wood burning masonry fireplaces in older homes can represent a significant amount of building air leakage. Fireplace removal reduces air leakage, improves thermal performance of building assemblies, and improves indoor air quality.

Decommissioning. The existing masonry fireplace must be completely removed from its foundation through termination point at the roof. All altered assemblies, including floors, walls, ceiling, and roofs, shall be sealed as specified in Section 110.7 of the Standards. Altered assemblies shall be insulated to meet the prescriptive requirements of Section 150.2(b)1 of the Standards.