

Pikes Peak REGIONAL Building Department

CHANGE IN SPACE CONDITIONING (HEATED GARAGE, SUNROOM, ETC.)

This document outlines the options for changing the space conditioning (heating OR cooling) to an existing, previously unconditioned, space as it relates to the **International Energy Conservation Code (IECC)** and either the State adopted **Model Electric Ready and Solar Ready Code (CO MERSRC)** or the **Model Low Energy and Carbon Code (CO MLECC)**

OPTION 1 - 2021 IECC and CO MERSRC codes (PRESCRIPTIVE COMPLIANCE)

This option requires compliance with any of the prescriptive compliance options of the 2021 IECC. When using a prescriptive compliance option, slab insulation *will be required* for all existing slab-on-grade structures. Slab-on-grade insulation can be installed on the inside, outside, vertical or horizontal. An existing accessory structure is not required to comply with the State solar ready/electric ready provisions. With all the of the tables, 'ci' stands for continuous insulation, such as a rigid foam, which can be installed on the interior or exterior of the walls. Energy efficiency options are not required with a change in space conditioning.

U-FACTOR (R402.1.2)

This methods requires compliance with Table R402.1.2. All insulation installed must meet or exceed tabular values. Slab insulation **is required** with this method of compliance.

Door / Window U-Factor	Skylight U-Factor	Ceiling U-Value	Wood Frame Wall U-Value	Mass Wall U-Value	Floor U-Value	Basement Wall U-Value	Slab R-Value/Depth	Crawlspace Wall U-Value
0.32	0.55	0.024	0.045	0.082	0.033	0.05	10ci/4 ft	0.055

R-VALUE ALTERNATIVE OR COMPUTATION (IECC R402.1.3 OR R402.1.4)

This method requires compliance with Table R402.1.3. All insulation installed must meet or exceed tabular values. Slab insulation **is required** with this method of compliance.

Door / Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.32	0.55	60	30 or 20+5ci or 13+10ci or 20ci	13/17	30	19 or 15ci or 13+5ci	10/4 ft	19 or 15ci or 13+5ci

TOTAL UA ALTERNATIVE (IECC R402.4.5)

This method requires compliance with UA alternative calculations. These can be done manually, or using the Department of Energy's [REScheck](#) program. Slab insulation **is required** with this method of compliance. The compliance report from REScheck, along with the IECC form, is required.

HEATED SUNROOM OR GARAGE (IECC R402.2.12/R402.3.5)

This method requires compliance with Table R402.1.2, as modified for reduced wall, ceiling, and window/door values. Slab insulation **is required** with this method of compliance.

Door and Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.45	0.7	24	13	13	30	19 or 15ci or 13+5ci	10/4 ft	19 or 15ci or 13+5ci

OPTION 2 - 2024 IECC w/ CO MERSRC or CO MLECC codes (PRESCRIPTIVE COMPLIANCE)

This option requires compliance with any of the prescriptive compliance options of the 2024 IECC. When using a prescriptive compliance option, slab insulation *will be required* for all existing slab-on-grade structures. Slab-on-grade insulation can be installed on the inside, outside, vertical or horizontal. An existing accessory structure is not required to comply with the State solar ready/electric ready provisions. Additional energy efficiency options may be required with the 2024 IECC depending on heating method, square footage, and other factors. ***This option also requires the submittal of an [Alternate Materials and Methods request](#) to utilize the 2024 IECC in lieu of the adopted 2021 IECC.***

U-FACTOR (IECC R402.1.2)

This method requires compliance with Table R402.1.2. All insulation installed must meet or exceed tabular values. Slab insulation **is required** with this method of compliance.

Door and Window U-Factor	Skylight U-Factor	Ceiling U-Value	Wood Frame Wall U-Value	Mass Wall U-Value	Floor U-Value	Basement Wall U-Value	Slab R-Value/Depth	Crawlspace Wall U-Value
0.3	0.5	0.026	0.045	0.082	0.033	0.05	R10ci/2.5 ft	0.055

R-VALUE ALTERNATIVE OR COMPUTATION (IECC R402.1.3 or R102.1.4)

This method requires compliance with Table R402.1.3. All insulation must meet or exceed tabular values. Slab insulation **is required** with this method of compliance using the 2024 IECC. If using the CO MLECC, Section R502.2.1 provides an exemption for slab insulation provided the full R-values for walls and ceilings from Table R402.1.3 (below) is used.

Door and Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.3	0.5	49	30 or 20+5ci or 13+10ci or 20ci	13/17	30 or 19+7.5ci or 20ci	19 or 15ci or 13+5ci	10ci/2.5 ft	19 or 15ci or 13+5ci

COMPONENT PERFORMANCE ALTERNATIVE (IECC R402.1.5)

This method requires compliance with UA alternative calculations. These can be done manually, or using the Department of Energy’s [REScheck](#) program. Slab insulation **is required** with this method of compliance. The compliance report from REScheck, along with the IECC form, is required.

HEATED SUNROOM OR GARAGE (IECC R402.2.13/R402.4.5)

This method requires compliance with Table R402.1.2, as modified for reduced wall, ceiling, and window/door values. Slab insulation **is required** with this method of compliance.

Door and Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.45	0.7	24	13	13	30 or 19+7.5ci or 20ci	19 or 15ci or 13+5ci	10ci/2.5 ft	19 or 15ci or 13+5ci

TOTAL/SIMULATED BUILDING PERFORMANCE and ENERGY RATING INDEX (2021 or 2024)

The Total Building Performance / Simulated Building Performance and Energy Rating Index options require an analysis of the space by an approved 3rd party energy rating company.

THIRD PARTY ENERGY RATING COMPANIES

- *EnergyLogic*
<https://theenergylogic.com/>
- *Burgess Construction Consultants, Inc.*
<http://www.burgess-inc.com/>
- *Home Performance Solutions, LLC*
<http://www.hpsenergy.com/>
- *Pinnacle Inspections*
<http://www.pinnacleinspection.com/>
- *Arcxis*
<http://www.arcxis.com>
- *Terracon*
www.terracon.com
- *Breen Design LLC*
<https://www.breenhvacdesign.com/>