



# ENERGY STAR Certified Homes, Version 3

## Slab Edge Insulation Exemption Details

### Guidance on Item 4.2 of the Thermal Enclosure System Rater Checklist

Item 4.2 of the Thermal Enclosure System Rater Checklist (TES) defines minimum slab edge insulation requirements for certified homes. For slabs on grade in CZ 4 and higher, 100% of the slab edge must be insulated to  $\geq R-5$  at the depth specified by the 2009 IECC and aligned with the thermal boundary of the walls.

Consistent with the 2009 IECC, slab edge insulation is only required for slab-on-grade floors with a floor surface less than 12 inches below grade. Slab insulation must extend to the top of the slab to provide a complete thermal break. If the top edge of the insulation is installed between the exterior wall and the edge of the interior slab, it is permitted to be cut at a 45-degree angle away from the exterior wall.

Where an insulated wall separates a garage, patio, porch, or other unconditioned space from the conditioned space of the house, slab insulation must also be installed at this interface to provide a thermal break between the conditioned and unconditioned slab.

Where specific details cannot meet this requirement, partners must provide the detail to EPA to request an exemption prior to the home's certification. To date, partners have requested and received exemptions to Item 4.2 for the following details:

1. A continuous post-tensioned slab that extends from conditioned to unconditioned space (e.g., from conditioned space to an adjacent unconditioned garage, to a hallway, to a porch).
2. The horizontal brick ledge of a monolithic slab.
3. Where code requires an uninsulated termite view strip in lieu of a termite shield, which creates a gap in the slab edge insulation.

These exemptions are noted in Policy Record ID 00031. In addition, Figures 1 through 3 of this document illustrate these exemptions.

Please submit all requests for additional exemptions to [energystarhomes@energystar.gov](mailto:energystarhomes@energystar.gov). EPA will continue to compile exempted details in this document and work with industry to develop feasible details for use in future revisions to the program. Note that these exemptions will impact the efficiency and comfort of the home; however, EPA is providing them because it has not yet identified a way that insulation can be effectively integrated into the design.



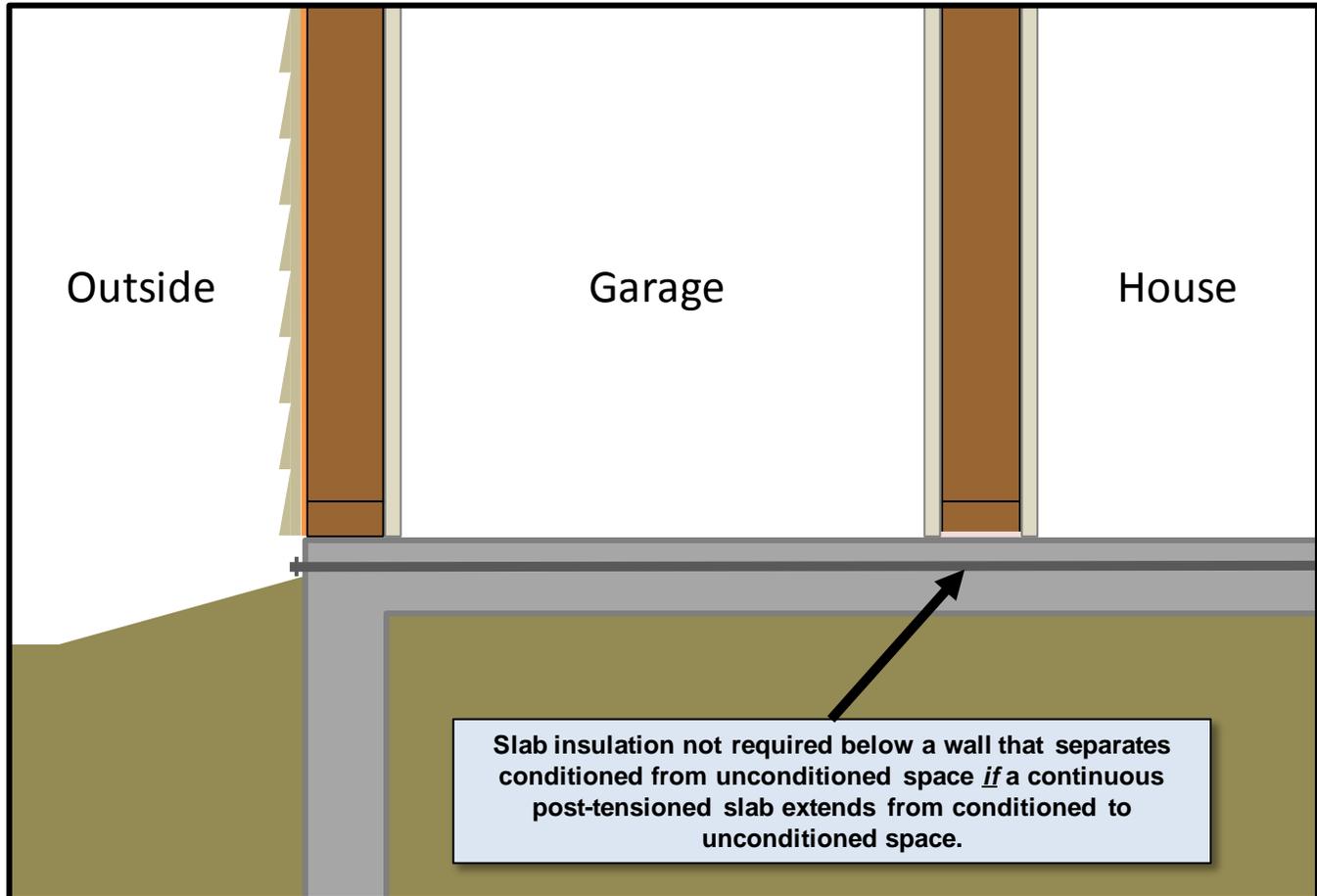
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### Exempted Slab Edge Detail 1: Post-Tensioned Slabs

Per Figure 1, where a continuous post-tensioned slab extends from conditioned to unconditioned space (e.g., from conditioned space to an adjacent unconditioned garage, to a hallway, to a porch), insulation is not required to be provided at this boundary to satisfy Item 4.2. This exemption applies to both multifamily and single-family homes.

Figure 1





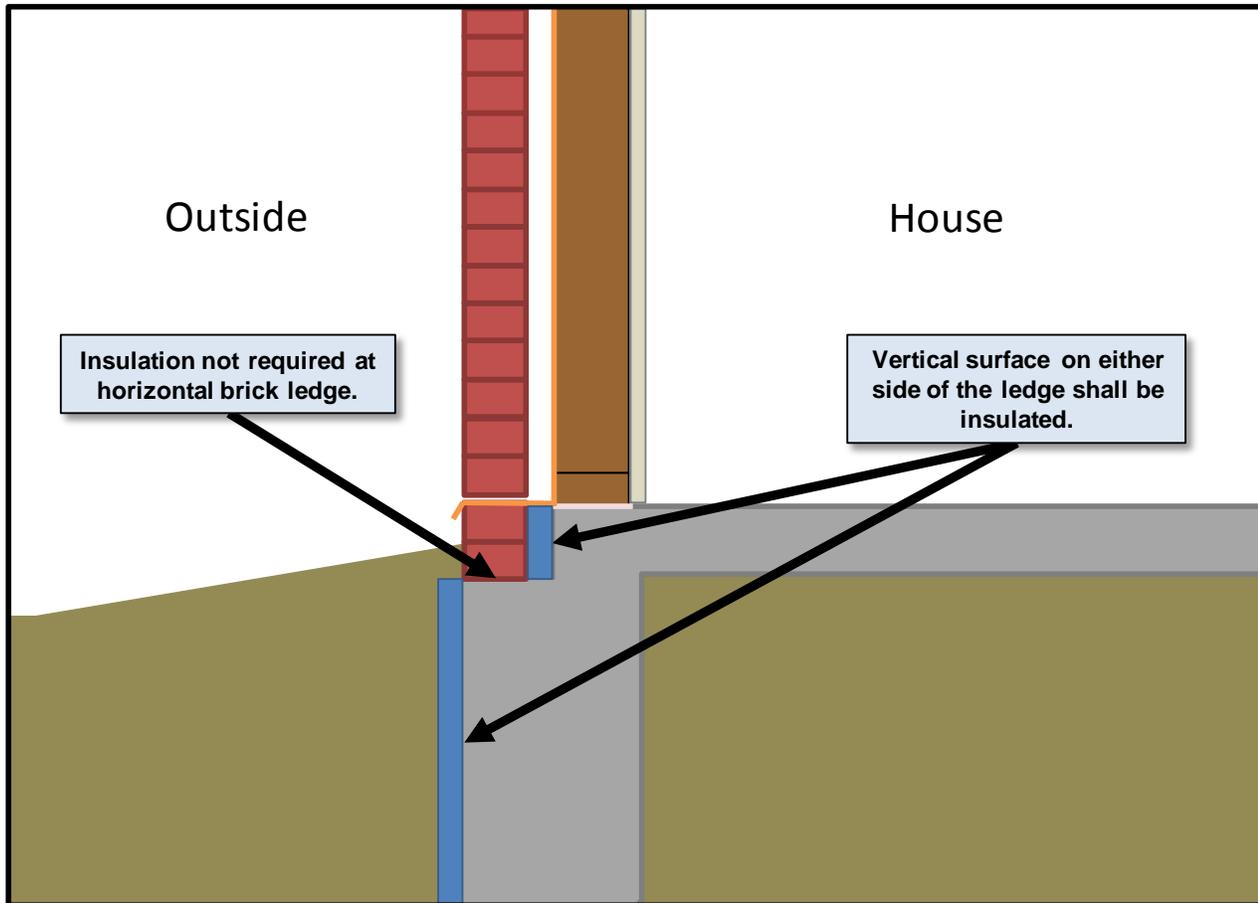
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### Exempted Slab Edge Detail 2: Monolithic Slabs with Brick Ledges

Per Figure 2, insulation is not required at the horizontal brick ledge of a monolithic slab to satisfy Item 4.2. However, the vertical surface on either side of the ledge shall be insulated. Furthermore, floating slabs with brick ledges are not exempted because the insulation layer can be moved to the interior vertical surface of the foundation.

**Figure 2**





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### Exempted Slab Edge Detail 3: Termite View Strips

Per Figure 3, where code requires an uninsulated termite view strip in lieu of a termite shield, insulation is not required at this location to satisfy Item 4.2.

**Figure 3**

