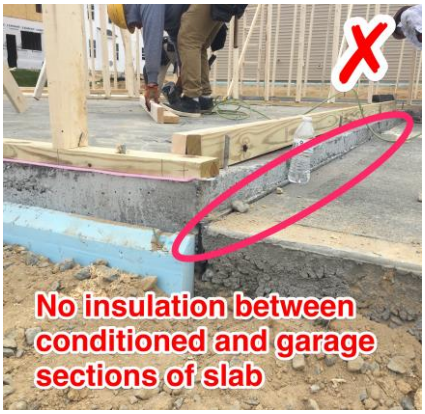
# Technical Bulletin: Slab Insulation

April 2017

Quality installation of insulation at a home's **thermal boundary** (the border between conditioned and unconditioned space), in addition to mandatory performance testing, is essential to meet the North Carolina HERO Code and to qualify for the Duke Energy Progress RNC Program. For homes built on slabs, the perimeter and the underside of the slab are both parts of the home's thermal boundary. Installing slab insulation will both increase a home's energy efficiency and make residents more comfortable.

## Slab Edge Insulation:

Rigid foam board insulation should be installed along the entire outer perimeter of a home's thermal boundary before the slab is poured. This includes sections of a slab that border a garage or a porch. For slabs with stem walls, foam board should be placed along the interior face of the stem wall and beveled at a 45° angle at the top of the slab. For monolithic slabs, foam board should be placed at the outer edge of the footing. Please Note: In North Carolina, residential building code requires a 3" gap between the top of slab edge insulation and the top of a monolithic slab for a termite inspection gap.






## Under Slab Insulation:

While less common than slab edge insulation, rigid foam insulation that sits between the top layer of crushed stone and the concrete slab is another way to improve a home's thermal envelope. For both monolithic and stem wall slabs, the rigid foam board insulation should extend down the interior side of the concrete footing. While this style of slab insulation is most effective if it is installed in contact with the entire underside of a slab, under slab insulation that only follows the perimeter of the slab is still much better for a home's energy efficiency than an uninsulated slab.