



New Hampshire Electric Cooperative ENERGY STAR Qualified Homes Program 2010

RECOMMENDED / REQUIRED GUIDELINES

Building Shell

Fiberglass Batt Insulation can not be installed over strapping. The Insulation and the Pressure/Air Barriers must be continuous, in full contact with each other and aligned for the home to meet Minimum Standards.

Insulation must meet RESNET Performance Standards as Grade I – no voids, compressions, cut to fit around all obstructions

Flat Attics:

R-49 Recommended/R-38 if full depth maintained to Exterior of Wall Plate (Zone 6)

R-38 Recommended/R-30 if full depth maintained to Exterior of Wall Plate (Zone 5)

All access hatches and pull down stairs must be sealed & insulated (equal to adjacent insulation).

Attic access hatches shall be dammed with wood frame 2" higher than surrounding insulation.

Wind baffles must be installed at eaves to above insulation depth to prevent disturbance of material and wind washing (stuffing eaves with batt fiberglass is not acceptable).

Slopes Ceilings:

R-38 Required

Knee Wall Slopes:

The sloped roof surfaces must be insulated and sheet rocked the same as the interior sloped ceilings

Note: This applies to eave spaces where slopes are to be insulated and dry walled instead of knee walls

Above Grade Walls: (including common walls with garage and walk-in attic)

R-21 Required

A batt fiberglass wall to an open attic must be minimum R-21 with house wrap (Tyvar/Tyvex) covering attached to the cold side
Walls to a mechanical room must be R-19 and sheet rocked on both sides per fire code.

Kraft faced batts must be faced stapled.

Soffit or other inset framed system must have solid/continuous rigid air barrier.

Tub/Shower Walls: Exterior walls behind tubs/showers shall have rigid air barrier installed (foam board, drywall or plywood) installed over insulation prior to installation.

Floors:

Floor over cold basement must be R-30, Including stairwell step walls

Fiberglass insulation must be properly installed with permanent contact with sub floor

Floor over garage must be R-30 minimum and completely fill the cavity - R-38 recommended **Air barrier must be installed at any exposed edges of insulation**

Over outside and cantilevered overhangs - must have 100% contact with all sides (must fill cavity)

Solid blocking must be installed between joists which span from conditioned to unconditioned space

Rim & Band Joists:

Same Insulation value as Above Grade Walls - 4" rigid foam board or 4" spray foam is Highly Recommended or **Air barrier must be installed on warm side of insulation.**

Foundation walls must be insulated to R-15 (Zone 6) R-10 (Zone 5)

If the basement ceiling is not insulated the foundation walls must be insulated. Foundation walls should be insulated on either the exterior or interior and extend from the footing to the top of the concrete (not cut off at grade level)

Interior stairwell walls leading to unconditioned basement must be R-13

Exterior Bulkhead and Walk-in entry doors must be insulated and weather-stripped exterior entry units



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Slab:

An unheated slab on grade must be R-10 minimum

A heated slab on grade must be R-12 minimum

Insulation four foot down the slab perimeter wall for slab on grade

Windows& Doors:

Minimum U factor of 0.35

The NFRC stickers must remain on the windows and doors until first inspection

Window/ Door jambs and rough openings must be sealed with Low-Expansion Foam

Ceiling:

All plumbing, electrical, mechanical, and chimney penetrations MUST be tightly sealed with foam, caulk or metal panning.

Open stud or floor frame cavities from conditioned to unconditioned spaces must have solid blocking (garages, cantilevers, frame walls between flat ceiling and slope, etc.)

Basement:

It is recommended that the basement perimeter be well sealed

Bulkhead entry door must be **an** insulated and weather-stripped exterior entry door

Weather-strip doors leading from conditioned space to unconditioned basement

HVAC Mechanicals:

Central air conditioning equipment should be rated at a SEER 13 or greater

Maximum over sizing limit on AC components is **15** percent. (Next available size may be used)

All combustion equipment (fossil fueled) and clothes dryers must be vented to the building exterior

All combustion equipment (fossil fueled) in conditioned spaces must have dedicated combustion supply air

Distribution Systems:

All Supply and Return ductwork must be tightly sealed with mastic or foil tape (Duct tape is not permitted)

All Supply and Return runs must be dedicated ductwork. (No Building Frame Cavities can be used for the HVAC system)

Domestic hot water lines in unconditioned space must be insulated to R-3

Heating distribution pipes **in unconditioned areas** must be insulated to R-4

Heating distribution ductwork **in unconditioned areas**, supplies and returns must be insulated to R-8

HVAC system must provide a means for balancing air and water systems

Ventilation Systems:

An HRV unit - or - High Quality 1.5> sone Bath Fan(s) rated for continuous operation is REQUIRED

Ventilation must be independently controlled by a 24 hour timer, time delay switch, other approved control

All ventilation must be exhausted to the outside of the dwelling (not into soffits). Vent piping must be installed with minimum amount of restrictions (length, elbows, flex duct, etc.) and may be subject static pressure testing.

Propane/Gas cookstoves require range hood vented to the exterior.

Health & Safety:

All fossil fueled heating plants and dryers must be vented to the building exterior.

It is recommended a carbon monoxide alarm be installed according to manufacturer's instructions.

Wood Burning Appliances:

Fireplaces must have combustion air directly from outside and have gasketed doors.

Wood/Pellet Stoves must have direct combustion air from outside.

A solid drywall air barrier must be installed behind insert fireplaces.

