

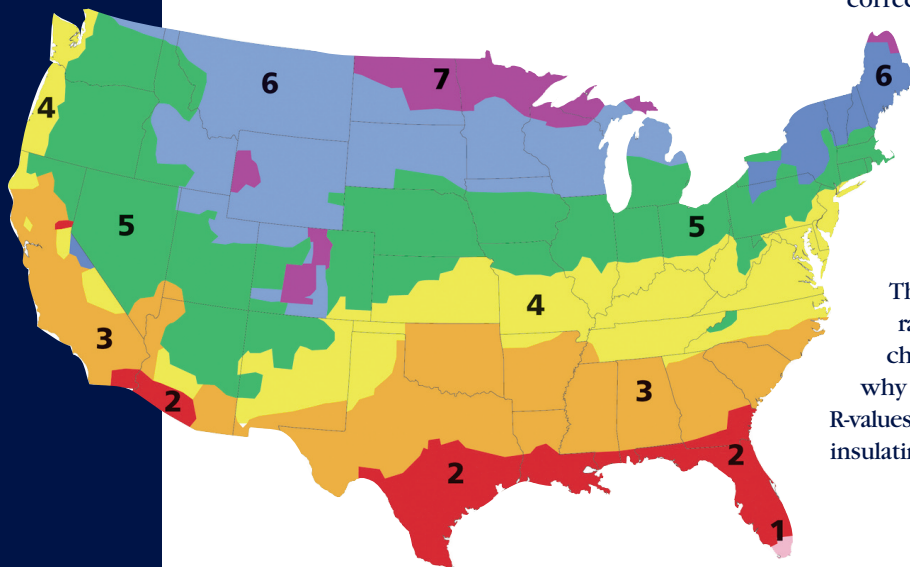
# DOE Releases New R-Value Recommendations

## For Existing Homes

The US Department of Energy (DOE) recently released their new R-value recommendations for new and existing homes. The insulation recommendations for attics, cathedral ceilings, walls and floors have been increased overall and generally exceed those required by most building codes.

The Department of Energy's new range of recommendations is based on comparing future energy savings to the current cost of installing insulation. According to the DOE, providing a range of recommendations is shown for these reasons:

- Energy costs vary greatly over each zone
- Installed insulation costs vary greatly over each zone
- Heating and cooling equipment efficiency varies from house to house
- The DOE's best estimate of future energy costs may not be exactly correct<sup>1</sup>



This map and the table below show the DOE's R-value recommendations for existing homes.

The recommendations show ranges of cost effective R-value choices. Savings vary, find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

### Existing Wood-Frame Houses

Zone	Add Insulation to Attic <sup>1</sup>		Floor
	Uninsulated Attic	Existing 3–4 Inches of Insulation	
1	R30 to R49	R25 to R30	R13
2	R30 to R60	R25 to R38	R13 to R19
3	R30 to R60	R25 to R38	R19 to R25
4	R38 to R60	R38	R25 to R39
5 to 8	R49 to R60	R38 to R49	R25 to R39

**Wall Insulation:** Whenever exterior siding is removed on an:

**Uninsulated wood-frame wall:**

- Drill holes in the sheathing and blow insulation into the empty wall cavity before installing the new siding, and
- Zones 3–4: Add R5 insulative wall sheathing beneath the new siding
- Zones 5–8: Add R5 to R6 insulative wall sheathing beneath the new siding.

**Insulated wood-frame wall:**

- For Zones 4 to 8: Add R5 insulative sheathing before installing the new siding

**For more information:**  
[www.naima.org](http://www.naima.org)  
[www.SimplifyInsulate.com](http://www.SimplifyInsulate.com)



<sup>1</sup> DOE/CE-0180 2008, Insulation Fact Sheet. [www.ornl.gov/sci/roofs+walls/insulation](http://www.ornl.gov/sci/roofs+walls/insulation)

# Places to Add Insulation for Enhanced Home Energy Savings and Comfort

## For Existing Homes

To achieve maximum thermal efficiency and comfort, it is important to insulate any space where energy could be lost. For enhanced energy savings and comfort, consider adding insulation to these areas of your home:

### 1. Attics & Ceilings

Fiber glass and mineral wool insulation in attics and flat ceilings makes homes more resistant to energy loss, and lowers energy bills. To achieve R-values of R-38 and higher, two or more layers of batts can be used and their R-value added. For example, a R-19 batt added to a R-30 will yield a R-49. When installing a second layer, always use insulation without a vapor retarder or kraft paper facing. Also, it is recommended that the second layer be applied across the joists which are perpendicular to the first layer. Fiber glass or mineral wool loose-fill insulation can also be used.

### 2. Exterior Walls

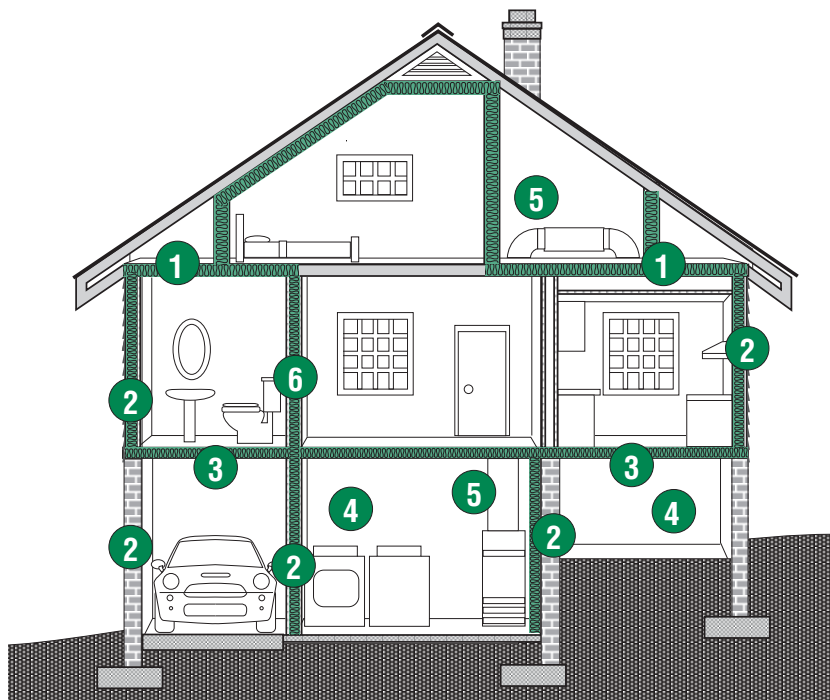
Sections sometimes overlooked in homes are walls between living spaces and unheated garages or storage rooms, dormer walls, knee walls and the portions of walls above ceilings of adjacent lower sections of split-level homes. All of these are considered exterior walls. NOTE: Proper use and placement of vapor retarders is critical. For guidance on the use and location of vapor retarders and kraft paper facing on insulation, please check with your local building department or insulation contractor.

### 3. Floors

Areas that are often not insulated are floors over unheated or open spaces such as garages, porches, crawl spaces and unheated basements. Fiber glass and mineral wool batts can be used to insulate these areas.

### 4. Basements & Crawlspaces

There are many considerations when adding insulation in these areas. Fiber glass and mineral wool batts are good choices if the spaces are dry.



### 5. Ductwork

An HVAC system can deliver heated and cooled air at design temperatures only if the ducts are adequately insulated. For existing ducts that are outside of conditioned space (i.e. in an unheated attic or crawlspace), applying fiber glass duct wrap to the exterior of sheet metal ducts can increase indoor comfort, reduce heat loss or gain, and control condensation. Many ducts may not be accessible, but you should add insulation to any ductwork that is easily accessible.

### 6. Interior Walls

Most walls and ceilings in today's homes are only marginally effective at blocking noise. Adding fiber glass and mineral wool insulation can significantly lower the transmission of noise between rooms. The best time to install acoustical insulation is when remodeling or renovating a home.

#### ABOUT NAIMA

NAIMA is the association for North American manufacturers of fiber glass, rock wool, and slag wool insulation products. Its role is to promote energy efficiency and environmental preservation through the use of fiber glass, rock wool, and slag wool insulation, and to encourage the safe production and use of these materials.

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