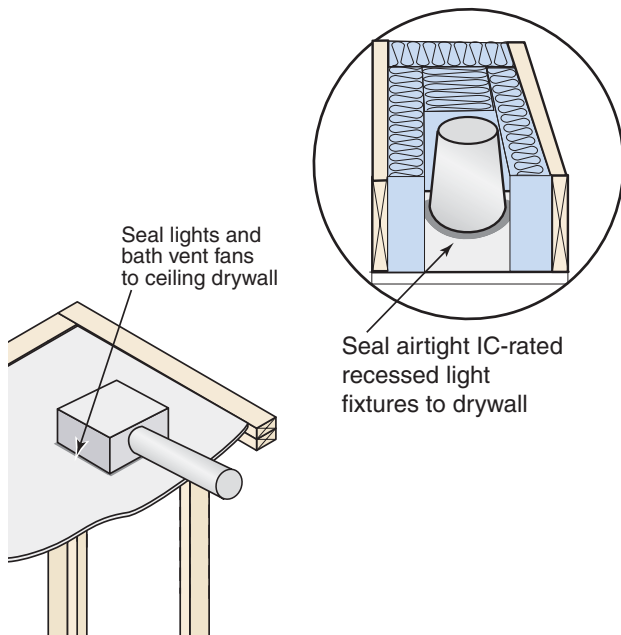


Homeowners often think the surest way to control energy loss in their house is to install insulation in the attic. However, if air leaks in the ceilings aren't sealed first, the money spent on insulation may be wasted because insulation doesn't usually block air flow. Here are tips for fixing some common problems.

### Recessed lights:

Recessed lights, when installed in rooms below an unheated attic, can allow big air leaks. Unless recessed lights are clearly labeled as safe for installation beneath insulation, (I.C., or "Insulated Cover") such lights must be surrounded by an air space at least 3 inches wide. Ideally, lights designated as I.C.A.T. or "Insulated Cover, Air Tight" will provide the least heat loss through the ceiling.

**Bathroom fans:** Caulk around these from below with high-temperature caulk.



### Chimneys:

A chimney that runs from the basement through the attic should be sealed at both the basement ceiling and attic floor by use of sheet metal and fire-rated caulk. Never use combustible materials within 2 inches of chimneys.

### Sewer vent pipes:

A sewer vent pipe typically runs vertically from the basement through the attic and should be sealed at both the basement ceiling and attic floor with wood, sheet metal and expanding foam.

### Other leaks:

Seal holes around pipes or wiring that go through the ceilings with caulk or expanding foam.

### Pull-down doors:

Make attic access doors and stairs airtight by using latch bolts and weather-stripping. Add an insulated cover to the back of the pull-down door. For more information, see the handout on pull-down attic stairs and attic hatches.

A word about a condition called "stack effect." Anytime there is conditioned air exiting through the ceiling, that air is being pulled in from somewhere, and with many homes that means either a crawl space or unconditioned basement. To avoid air loss through the attic, be mindful of holes down below that allow this condition to exist.

By repairing these common ceiling air leaks, up to one-third of a home's overall energy loss can be prevented.