

SUSTAINABLE LIVING GUIDE:

74. CURTAINS OR PLASTIC FOR INSULATING WINDOWS?¹

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If you want truly energy-saving windows, the best alternative is to augment or replace them with Energy Star-rated products. However, new storm windows can be pricey, so the next best trick is to reduce heat loss. Draperies, blinds, storm windows, and shutters are all very effective. But this time of year, home-improvement stores tout an increasingly familiar alternative: plastic sheets that shrink with a blow dryer for a tight fit. Or should you invest in curtains or drapes?

Drapes

Pros: "With insulating drapes, some tightly cover the whole window so heat can't move around them, and the drape is offering insulation like a nice jacket," says Nils Petermann, manager of the Alliance to Save Energy's Efficient Windows Collaborative project. Under ideal conditions, insulated drapes can make a huge impact on heat loss by creating an insulating air space that keeps cold window surfaces from drawing heat out of the room. According to engineers at the University of Texas, adding insulated drapes to a double-paned window can reduce heat loss by 46 percent, and 58 percent for a single-paned window. Even noninsulated drapes will decrease a room's heat loss by 10 percent. As an added bonus, they reduce heat gain in the summer time, so your up-front investment will save you money year-round. The University of Maine Cooperative Extension service estimates that you could conceivably recoup your investment in insulated draperies within one to two years.

Cons: Improperly installed, draperies can actually add to heat loss. Gaps at the top of the drapes, along the sides, and at the bottom can create a tunnel effect, drawing heated air from your room to behind the drapes, where it cools as it comes in contact with a cold window surface. Correctly installed insulated drapes can also trap warm air next to a cold window surface, causing condensation problems that damage window frames or lead to mold problems.

Plastic Window-Insulation Kits

Pros: Plastic window-insulation kits are easy fixes for cold-weather problems, and some cost as little as \$4 (most in the \$8 to \$16 range). They involve taping a solid sheet of plastic film over an entire window to create an insulating air space, and the entire project takes one afternoon.

Cons: "There's really no good information on how they affect heat loss," says Petermann, "since they've never been independently tested for heat loss." In theory, they function similarly to drapes by creating a dead air space that prevents heat from escaping. But, their effectiveness hasn't been studied. And, although some of the films are made from low-density polyethylene (the same kind of plastic used in plastic bags), others are made from toxic vinyl, which contains hormone-bending chemicals called phthalates and could release toxic fumes during the application process (the plastic films must be heated with a hair dryer so they shrink to fit the window frame). Finally, you can try to save the plastic to reuse it the following winter, but if it gets torn, the plastic film has to go to the trash. If you bought the polyethylene film, it can be

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recycled anywhere plastic bags are recycled, but vinyl films can't be recycled and are destined to spend forever in a landfill or be sent to an incinerator, where they'll release more toxic fumes.