

# Windows and Doors

Replacement windows, doors, and skylights are available in a large variety of types and prices. Most replacement windows are double pane and insulated to reduce heat loss through the window. Energy efficient windows, doors, and skylights will lower your energy bills and help keep your home's temperature consistently comfortable by keeping heat outside in the summer and heat inside in the winter.

## What kind of windows, doors, and/or skylights should I purchase?

Whenever you are replacing windows, doors, and/or skylights, always purchase units that are ENERGY STAR qualified. ENERGY STAR windows, doors, and skylights are independently certified to perform at levels that meet or exceed U.S. EPA energy efficiency guidelines, which vary by climate zone. You should discuss product features with your contractor to select the best windows, doors, and/or skylights for your needs. If you are looking for a lower-cost alternative, consider installing storm windows over your single pane windows.

## What are the energy efficiency guidelines used to rate windows and skylights?

Windows and skylights are rated by U-factor and Solar Heat Gain Coefficient (SHGC). The lower the U-factor, the greater the insulating value of the window or skylight. A lower Solar Heat Gain Coefficient means that less solar heat will pass through the glass, which can significantly reduce air conditioning costs. Spending more for low-e glass is normally worth the extra price, because it reflects or absorbs heat in the form of infrared light, improving both the U-factor and the SHGC.

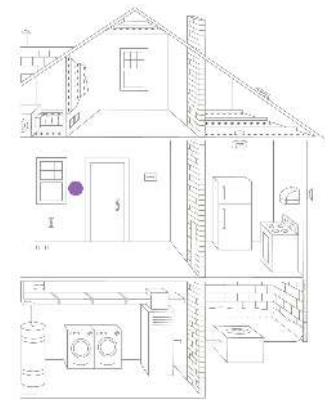


## What is the difference between argon and krypton gas-filled windows?

Argon and krypton are colorless, odorless, and non-toxic gases that are often used between panes of window glass for insulation and energy efficiency. Krypton is more expensive and a better insulator than argon. Manufacturers often blend argon, krypton, and/or air to balance performance and cost. When selecting replacement windows, it is more important to consider the U-factor, SHGC, and ENERGY STAR status rather than specific materials used.

## How much money could I save?

Properly upgrading old windows and doors with ENERGY STAR qualified windows and doors can help you save up to 15 percent on your household energy bills.



## TVA INCENTIVES

Subject to TVA Installation Requirements (see reverse side).

TVA offers incentives of 50 percent of the total installation cost for the following maximum rebates per home:

- Window Replacement – \$25/window up to \$500 max per home
- Exterior Door Replacement – \$50/door up to \$300 max per home
- Add Storm Windows to Single Pane Windows – \$12.50/window up to \$250 max per home

For more details, call 1-855-2eScore (1-855-237-2673) or go to [www.2eScore.com](http://www.2eScore.com)

# TVA Installation Requirements for Windows, Doors, and Skylights\*

## General Installation Requirements for Windows, Doors, and Skylights:

- Presence of lead-based paint shall be assumed unless testing confirms otherwise; Quality Contractor Network (QCN) member shall comply with EPA lead requirements.
- Moisture issues shall be resolved before work begins.
- Product must be new and meet ENERGY STAR criteria for the applicable climate zone.
- Product must have a National Fenestration Rating Council (NFRC) sticker with performance ratings for the window.
- Unit shall be installed per manufacturer requirements and local codes.
- QCN member shall advise participant to install a working carbon monoxide (CO) monitor if the home has an attached garage or any gas appliances.

## Installation Requirements for Prime Window Replacement:

- Replacement of existing single-paned and double-paned windows qualify for replacement.
- If the rough opening is exposed during installation, then a self-adhesive 4" flexible flashing shall be installed to promote drainage from top down, and the space between the window frame and rough opening shall be filled with flexible insulation and sealed airtight with caulk or low expansion foam; do not use expanding foam.
- Interior jambs shall be caulked.

## Installation Requirements for Prime Door Replacement:

- A qualifying replacement door shall separate conditioned from unconditioned or buffered space.
- Doors with sidelights may have single pane glass up to 10 percent of the total door and sidelight area; glass shall be tempered if 18" or lower from floor, or if glass faces bottom of a stairway.
- Door shall have new jambs and new threshold shipped with door from manufacturer; transoms are treated as replacement windows unless built into door frame; installation shall allow for expansion and contraction.
- Three ¼" lines of caulk shall be applied between threshold and subfloor.
- Low expansion foam or silicone caulk (not expanding foam) shall be used to seal gaps between door frame and rough opening.
- Door shall properly fit jamb, and shall operate and lock easily.

## Installation Requirements for Skylight Replacement:

- New skylights may be installed to replace existing skylights that are damaged or if replacement is recommended to improve energy efficiency; tubular skylights are not eligible.
- Skylight shall be mounted above roof surface with a curb and flashing, and all joints sealed; manufacturer's guidelines shall be followed.

\* This sheet is not a substitute for the TVA Standards.



### RECOMMENDED BEST PRACTICES FOR WINDOWS:

- Caulk interior window trim to wall surface to reduce air leakage.

### RECOMMENDED BEST PRACTICES FOR SKYLIGHTS:

- Apply a layer of sheet waterproofing over the flanges/flashing of the skylight, and under the finish roofing material.
- Avoid water diversion devices such as roof crickets or diverter strips which often create more problems than they solve.

### RECOMMENDED BEST PRACTICES FOR DOORS:

- Use shims only on the bottom and sides of door as needed to ensure that the door is properly aligned in the rough opening.
- Use rot-proof shims at the bottom of the door.
- Steel doors should be sealed with a high quality exterior grade paint within a week after installation; apply a second layer of primer over the base primer before adding exterior paint.