AT A GLANCE

SINGLE-FAMILY WALL INSULATION

Preparation

- Inspect walls for evidence of moisture damage. If condition of the siding, sheathing or interior wall finish indicates an existing moisture problem, no sidewall insulation should be installed until the moisture problem has been identified and corrected.
- Inspect indoor surfaces of exterior walls to ensure they are strong enough to withstand the force of blowing-in insulation. Add screws or other reinforcement to weak walls, if feasible.
- Inspect for interior openings from which insulation may escape such as balloon-framing openings in the attic or crawlspace, pocket doors, un-backed cabinets, interior soffits and closets. Seal openings as necessary to prevent insulation from escaping.
- Knob-and-tube wiring: active knob-and-tube wiring must be approved in writing by a licensed electrician if it will come into contact with insulation.
- Wall-mounted heaters: blocked to prevent contact with insulation. If blocking can't be installed, cavity isn't filled with insulation.

Recommended

- Holes that will be covered by siding must be plugged and must be completely covered by the siding. If a plug is partially exposed, for example, by falling between two pieces of shake siding, the plug must be covered by properly lapped building paper.
- Holes drilled through the siding must be plugged, sealed, weatherproofed and ready to paint. If the surface of the plug is below the surface of the siding, the hole must be filled with non-shrinking filler.
- If walls are balloon framed, blocking shall be installed at the top and bottom of the walls at each floor.

SPECIFICATION CHECKLIST

For details on all BPA requirements for this measure, please refer to the BPA Residential Weatherization Specifications and Best Practices Guide.

- ☐ Insulate the wall to the highest practical R-value, at least R-11 for 4-inch walls, R-21 for 6-inch walls. Fill all cavities in all exterior walls, including small cavities above, below and on the sides of windows and doors.
- ☐ Blown-in cavity insulation shall be installed so it completely fills the cavity, with adequate density per the manufacturer's specifications to ensure no settling.
  - – Fiberglass dense pack ~2 lb/ft³.
  - – Cellulose dense pack ~4 lb/ft³.
- ☐ Tube-fill method is the preferred methodology for all wall blows, except for scenarios where framing, blocking or restrictions in the wall cavity prevent this method.
  - – Block wall-mounted heaters to prevent contact with insulation. If you can't install blocking, don't fill the cavity with insulation.
- ☐ Open walls: insulated to at least R-11 for 4-inch walls, R-21 for 6-inch walls. Consider moisture when selecting insulation materials for below-grade walls.

Connect with the local serving utility to confirm pre- and post-condition requirements.

PRE-CONDITION:	POST-CONDITION:
R-0	R-11 or Greater

AT A GLANCE

SINGLE-FAMILY WALL INSULATION

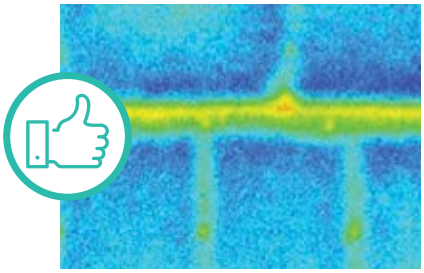
Installation Examples

HOSE HAS NO KINKS AND INCLUDES A SPONGE TO REDUCE LEAKAGE AT PENETRATION WHEN INSULATING
Courtesy of South Seattle Community College

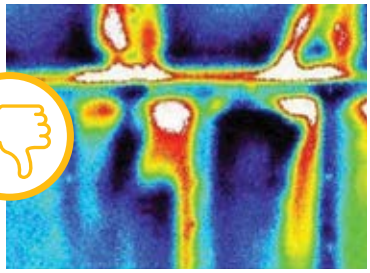
HOSE HAS MAJOR KINK
Courtesy of South Seattle Community College

INSULATION ACCESS HOLES PLUGGED AND SEALED WITH SOLID PLUGS
Courtesy of U.S. Department of Energy

VENTED PLUGS FOR INSULATION ACCESS HOLES



INFRARED DENSE WALL PACK
Courtesy of Advanced Energy



INFRARED POORLY INSTALLED WALL INSULATION
Courtesy of Advanced Energy

INSULATING BRICK OR STUCCO WALL FROM INTERIOR
Courtesy of South Seattle Community College

BRICK WALL TO BE INSULATED FROM EXTERIOR

MINIMUM REQUIRED DOCUMENTATION

Contact the serving utility for specifics on required documentation.

- Documentation that the measure requirements have been met (e.g., manufacturer, model number, type, size and quantity of equipment or product installed or used).
- Documentation of pre-and post-insulation R-values, and square footage of installed insulation.
- Primary heating system type.
- Invoice showing order or purchase date and cost.

PAIRS WELL WITH

- Window and Door Replacement.
- Attic Insulation.
- Underfloor Insulation.
- Air Sealing.