Focus on Energy, Wisconsin utilities' statewide program for energy efficiency and renewable energy, helps eligible residents and businesses save energy and money while protecting the environment. Focus on Energy information, resources and financial incentives help to implement energy efficiency and renewable energy projects that otherwise would not be completed.

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2017 Updates At-A-Glance

Site Visit Protocol – Final Site Visit – Ventilation Capacity Testing (Page 3)
• Added “2010” to the ASHRAE 62.2 reference (ASHRAE 62.2 – 2010).

Program Standards (Pages 4–7)
Standard 1: Energy Efficiency Requirement
• Changed minimum percent better than code value from 15 percent to 25 percent.

Standard 7: Whole-House Ventilation
• Added “2010” to the ASHRAE 62.2 reference (ASHRAE 62.2 – 2010).
• Deleted the paragraph regarding the whole-house ventilation requirement relative to REM/Rate™ version 15.0.

Standard 12: Carbon Monoxide Detectors
• Removed this standard as it is now a code requirement.

Standard 13: Insulated and Air-Sealed Attic Access Hatch
• Removed this standard as it is now a code requirement.

Standard 14: Duct Testing
• Removed this standard as it is now a code requirement.

The following items from pages 7–12 of the previous Program Guide have been modified, deleted, and/or condensed onto page 8 of this Guide:

Performance Incentives
• Replaced tiered incentive structure with one energy efficiency measure: at least 25 percent better than code.

Technology Packages
• Discontinued.

Appendix A: Renewable Energy Program
• The administrative process for obtaining incentives for qualifying geothermal and/or solar PV systems has been transferred to a different Program Implementer. For additional information regarding this process, please contact Nancy Alberte at 608-358-8212 or ask your renewable energy system installer to complete the appropriate application.
New Homes Program Mission

Help builders and home buyers construct the most energy-efficient, comfortable, durable, and safest homes they can afford.

Eligibility

Any single-family home built in Wisconsin receiving natural gas and/or electricity from a utility participating in Focus on Energy is eligible. Homes may be stand-alone or part of a multi-unit building three stories or less. Homes must meet all applicable requirements contained within this document.

Building Performance Consultant Partnership

Participating builders must establish a partnership with a Building Performance Consultant (BPC). Both parties must complete a Trade Ally Application in order to participate in the Program and receive incentive payments. A signed and completed W-9 form is also required. Apply online: focusonenergy.com/trade-allies

BPC Accreditation

BPCs associated with the Program must be Residential Energy Services Network (RESNET®) certified or possess an approved equivalent.

Computer Modeling

BPCs must use the Wisconsin version of REM/Rate energy modeling software to calculate each home’s estimated energy savings. REM/Rate can also be used to demonstrate current code compliance.
Site Visit Protocol

A minimum of two site visits are required for each Focus on Energy Certified New Home.

Initial Site Visit • Framing and Insulation Review
The BPC reviews the framing for potential air bypasses, insulation installation, and ensures the home is on track to meet all Program requirements. Upon completion, the BPC submits a report to the builder indicating their findings.

Final Site Visit • Performance Testing
The final site visit consists of the following:

- **Blower Door Test:** A blower door test is conducted to verify that the home meets Program requirements for air tightness. Refer to Program Standard 2 for the air tightness requirement.

- **Ventilation Capacity Testing:** All ventilation equipment is tested to ensure performance meets the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 62.2 – 2010 Standard, as well as New Homes Program requirements. Refer to Program Standards 7 and 8 for additional information.

- **Program Standards Verification:** The BPC confirms all applicable Program standards have been met. Upon completion, the BPC submits a report to the builder indicating their findings.

Why are Site Visits Important?

**Verification**
Ensure your homes meet Program requirements.

**Differentiate Your Business**
Provide proof that builders associated with the New Homes Program build more energy-efficient, comfortable, durable, and safer homes.

**Peace of Mind**
Site visits result in reduced likelihood of customer callbacks.
Program Standards

All applicable Program standards are required for certification.
Note: When Wisconsin Uniform Dwelling Code (UDC) requirements exceed Program standards, UDC requirements shall prevail.

**Standard 1: Energy Efficiency Requirement**

**Description:** The home must be at least 25 percent more energy efficient than the current Wisconsin UDC. Efficiency is based on total MMBtu/year fuel consumption as calculated by the Wisconsin version of REM/Rate energy modeling software.

*Note: Homes with any negative energy savings values cannot be certified.*

**Rationale:** This requirement establishes a minimum baseline for energy efficiency.

**Verification:** REM/Rate’s customized Focus on Energy Certification Report calculates the percent better than code value.

**Standard 2: Air Tightness Requirement**

**Description:** Building air tightness must be equal to or less than 0.20 cubic feet per minute (cfm) per square foot of the total building shell area when the home is depressurized to minus 50 Pascals.

**Rationale:** Building air tightness plays the most significant role in residential energy efficiency. Air tightness not only influences heating and cooling energy consumption, but also provides draft-free comfort and contributes to overall building durability.

**Verification:** Blower door test during the final site visit.

**Standard 3: Sealed Sump Basin**

**Description:** All sump basins must have an air-tight cover with all piping and electrical penetrations sealed. Approved methods for air sealing a sump basin cover include a manufactured air-tight sump basin cover, or a custom-fit cover caulked in place.

**Rationale:** This requirement eliminates moisture and soil gas infiltration. It also contributes to improved indoor air quality and home durability.

**Verification:** Visual verification during either site visit.

**Standard 4: Sealed Plumbing Rough-in**

**Description:** Any plumbing rough-in in the slab must be completely air sealed. Rigid code-approved material, such as foil faced THERMAX™ sheathing, or pressure-treated wood cut to fit and caulked in place, are acceptable methods of air sealing.

**Rationale:** This measure eliminates moisture and soil gas infiltration, contributing to improved indoor air quality and home durability.

**Verification:** Visual verification during either site visit.
Standard 5: Full Coverage Foundation Insulation

**Description:** The entire foundation wall surface must be insulated. The insulation can be located on the interior, exterior, or a combination of both.

**Exceptions:** Brick ledges or exposed foundation walls located inside an attached garage, and exposed foundation walls along stairways from the basement into an attached garage. However, it is highly recommended that these surfaces be insulated when possible. The exposed foundation walls shall be modeled separately in REM/Rate.

**Rationale:** Insulating the foundation wall reduces heat loss and increases comfort.

**Verification:** Visual verification during either site visit.

Standard 6: Slab-on-Grade Thermal Isolation

**Description:** Slab-on-grade construction is defined as a home without a basement or crawl space. With slab-on-grade construction, any concrete slab between the conditioned and unconditioned space must be thermally isolated with a minimum R5 thermal break. The thermal values for complete slab-on-grade construction must meet or exceed current Wisconsin UDC requirements SPS 322.33 - Slab Floors.

**Rationale:** Thermal isolation reduces heat loss and increases comfort.

**Verification:** Visual verification during site visit 1.

Standard 7: Whole-House Ventilation

**Description:** A mechanical ventilation system ducted to the outdoors must be installed to provide whole-house ventilation, compliant with both the ASHRAE 62.2 - 2010 Standard and New Homes Program requirements.

- A bathroom exhaust fan can be used to satisfy the whole-house ventilation standard. If this is the chosen method of whole-house ventilation, the control device operating the fan must be appropriately labeled (a simple label identifying the appropriate control device/switch fulfills this requirement).
- Dual-function bathroom fans with built-in override switching capability also satisfy the intent of this standard.
- Ventilation fans with a sone (loudness) rating of one or less are highly recommended.
- When a balanced ventilation system is used (Heat Recovery Ventilator/ Energy Recovery Ventilator), it becomes, by default, the whole-house ventilation device.

**Rationale:** Whole-house ventilation ensures adequate indoor air quality management, resulting in improved home durability and comfort.

**Verification:** Performance testing during the final site visit.
Standard 8: Spot Ventilation for Bathrooms with a Tub or Shower

Description: An exhaust ventilation system ducted to the outdoors must be installed in any bathroom with a tub or shower. One of the following options may be implemented:

- Exhaust fan: Minimum tested flow of 50 cfm if a single-speed intermittent fan is used, or 50 cfm intermittent boost capacity if a multi-speed fan is used.
- Central exhaust systems: Minimum tested flow of 20 cfm continuous flow, with 50 cfm boost capacity at each pick-up.
- Whole-house ventilation systems also providing spot ventilation: Minimum tested flow of 20 cfm continuous flow with 50 cfm boost capacity at each pick-up.

Note: An appropriately-sized bathroom exhaust fan can be used to satisfy the whole-house ventilation standard. If this is the chosen method of whole-house ventilation, the control device or switch operating the fan must be labeled as “ventilation” to meet the requirement. Dual-function bathroom fans with built-in override switching capability also satisfy the intent of this standard. Ventilation fans with a sone rating of one or less are highly recommended.

Rationale: Spot ventilation removes moisture-laden air from the home at its source, providing adequate indoor air quality management, home durability, and comfort.

Verification: Performance testing during the final site visit.

Standard 9: Spot Ventilation for Gas and Electric Ranges

Description: An exhaust system ducted to the outdoors must be installed with the following criteria:

- Gas cooktops: A range hood or microwave exhaust system with a minimum rated capacity of 100 cfm.
- Electric cooktops: A range hood or microwave exhaust system with a minimum rated capacity of 100 cfm, or a central system with a minimum tested flow of 20 cfm continuous flow with a pick-up and control switch located in the kitchen.
- Cooktops with downdraft ventilation with a capacity of 100 cfm meet the requirements of this standard.

Rationale: Spot ventilation removes moisture-laden air and odors from the home at their source, ensuring adequate indoor air quality management, home durability, comfort, and safety.

Verification: Performance testing during the final site visit.
Standard 10: Space Heating and Water Heating System Design

Description:
- Any fuel-burning, forced-air space heating system must be closed combustion design with the piping for the combustion and exhaust air connected directly to the outdoors.
- Any boiler must be either closed combustion or power vent design.
- Any natural gas or liquid propane water heating system must be:
  - Power vent design with the piping for the exhaust air connected directly to the outdoors.
  - Direct vent design (i.e., pipe within a pipe) with the piping for exhaust and combustion air connected directly to the outdoors.
  - Closed combustion design with one pipe for the exhaust and one pipe for combustion air connected directly to the outdoors.
- Electric water heating systems are acceptable, but not recommended, as they substantially increase water heating cost.

Rationale: This measure facilitates combustion safety by reducing the possibility of backdrafting.

Verification: Visual verification during either site visit.

Standard 11: Hearth Products

Description:
- Any gas fireplace must be direct vent design with the piping for combustion and exhaust air connected directly to the outdoors.
- Any solid fuel-burning fireplace or stove must be closed combustion design, with the piping for combustion air connected directly to the firebox and the outdoors.
- Power-vented pellet stoves must have a depressurization safety shut-off switch.
- If a solid fuel-burning fireplace or stove meeting the requirements above is installed in the home, a whole-house depressurization test must be conducted. Home depressurization shall not be greater than -50 Pascals with the largest tested exhaust ventilation device running. If the home exceeds -50 Pascals, sufficient make-up air must be provided to bring the depressurization below -50 Pascals.
- Atmospherically vented (B-vent) fireplaces or stoves are prohibited.

Rationale: These guidelines facilitate combustion safety by reducing the possibility of backdrafting.

Verification: Visual verification and performance testing during the final site visit.
Performance Incentives and Eligibility

Builders who construct homes at least 25 percent more energy efficient than the Wisconsin UDC are eligible to receive financial incentives from the Program. Program incentives are awarded to the builder of the home only. Incentives are available on a first-come, first-served basis, and amounts are subject to change.

**Homeowner Eligibility:** Homeowners are eligible to receive performance incentives only if they acted as the general contractor—meaning they hired and managed the subcontractors who built their home.

**Determining Incentives:** Builders are eligible for one of two incentive categories (A or B), as noted in Tables 1 and 2 below. The categories are based on the home’s fuel sources, and whether the utility (or utilities) that supply the energy participate in Focus on Energy.

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**Table 1 • Eligibility**

<table>
<thead>
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<th>Incentive Eligibility Type</th>
<th>A</th>
<th>B</th>
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<td>Utility service from Focus on Energy / Participating utility type</td>
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<tr>
<td>Electric only</td>
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*Natural gas is available, but not used as the primary space heating fuel source

**Table 2 • Incentives**

<table>
<thead>
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<th>Performance Incentives</th>
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<td>Utility service from Focus on Energy / Participating utility type</td>
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<tr>
<td>At least 25 percent better than Wisconsin UDC</td>
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FOCUS ON ENERGY MISSION STATEMENT

Focus on Energy empowers the people and businesses of Wisconsin to make smart energy decisions with enduring economic benefits.

ACTING WITH INTEGRITY  CULTIVATING OPPORTUNITY
DELIVERING INNOVATION  FOSTERING PROMOTERS