

➤ ENERGY STAR New Homes

A. Description

The ENERGY STAR® New Homes (ESNH) product provides builders of single-family and small multifamily homes with an incentive to exceed local building codes and common construction practices. Homebuilders are encouraged to look at the “whole house” as a system when considering deployment of energy saving construction methods and installation of energy-efficient appliances. Homeowners benefit with lower energy bills, fewer maintenance concerns, higher resale value, and a more comfortable, quiet home. With interval data, homeowners would also have a way to see how efficient their home is starting out and gain a deeper appreciation and understanding of that efficiency.

The current product structure gives builders the flexibility to mix and match efficient technologies and building practices to meet the product requirements and qualify for a rebate. To qualify for a rebate, participants are required to build homes that exceed local building jurisdictions’ energy codes by at least 10%. To measure this, a rating must be completed on each home by a Residential Energy Services Network (RESNET) certified Home Energy Rating System (HERS) rater. The HERS rater provides a valuable service by consulting with the homebuilder during the construction phase and ensures the designed energy efficiency measures have been properly installed in the home. HERS raters will complete the rating for each home using a RESNET accredited software approved by the Company and will provide select informational details to the Company’s third-party implementer for evaluation. Energy savings are determined individually for each home based on the difference between the energy used by the reference home (or baseline home; modeled to match the local jurisdictional energy code) and the energy used by the new as-built home. The Company plans to evaluate this product structure in 2019 to determine necessary adjustments to help the product remain cost-effective while adapting to accommodate higher energy codes and value-based energy savings.

The Company utilizes a third-party implementer that works directly with local HERS raters to get homes enrolled in the product. HERS raters in the state of Colorado have established strong relationships with the builder community. HERS rating companies have the flexibility to participate in this product by completing a standard scope of work administered and managed by the Company’s third-party implementer. The HERS rater will model each home and test the home to measure the level of energy efficiency achieved. Once the home is completed, the HERS rater provides the required information to the third-party implementer who then determines if the home meets the product requirements and is eligible for a rebate. The third-party implementer is responsible for reviewing the information submitted by the rater, working with the rater to correct or provide missing information and then reporting it to the Company. The third-party implementer provides product training for the rater and will assist with builder training as needed.

B. Targets, Participants & Budgets

Targets and Participants

The product targets builders who construct single-family and small multifamily homes (duplex, triplex, fourplex). Energy savings and participation targets are based on historical product performance and growth forecast assumptions in the residential new construction marketplace. New construction growth continues to improve and barring any significant impacts to the financial sector, the Company anticipates this growth will continue to occur around 5% year over year. As more jurisdictions adopt higher energy codes such as 2012, 2015, and 2018 IECC, it is expected that participation will be lower in the entry level rebate tiers. A home that meets the minimum 10% Better-than-Code (BTC) participation requirement in a 2009 IECC jurisdiction will likely not readily meet the minimum 10% BTC threshold once their jurisdiction adopts the 2012 IECC. Under IECC 2012, the baseline home is now more energy efficient and the energy savings the Company can claim for these homes is reduced. Generally speaking for 2019 and 2020, Public Service expects a shift in participation from mid-level BTC code tiers to lower BTC tiers for jurisdictions adopting higher energy codes. As a result, overall product savings targets are impacted and the Company anticipates the average claimable energy savings on a per-home basis to be lower than in previous years.

Budgets

The product budget is primarily driven by forecasted participation for 2019 and 2020 and established rebate levels are designed to encourage participation. Additional costs include; product administration, promotional and outreach activities, measurement and verification. Product administration costs include Company labor and third-party implementer services, which were competitively bid and implemented beginning in 2015. Builder rebates and energy rater administrative fees together comprise approximately 69% of the product budget and are the single largest expense component.

C. Application Process

Enrollment for this product is typically completed by the HERS raters on behalf of their clients (builders). HERS raters have strong, long established relationships with most of the builders operating within the Company's Colorado service territory. To initiate the enrollment process, HERS raters will contact builders to encourage their participation, or the builder will contact a rater and express interest in constructing an energy-efficient home. The rater will explain the product offering and potential rebates available, review the home's blueprints and building schedule, and enter the home details into the third-party implementer's tracking database. The rater consults with the builder throughout the construction phase to build a home that qualifies for the product rebate.

When the home is completed, the HERS rater will perform an air-tightness test on the house and determine the energy impacts using REM/Rate or Ekotrope. This information is submitted to the third-party implementer who will review and approve each home. The builder will receive a rebate based on the local energy code requirement and the percent BTC achieved. Specific gas and electric energy savings are determined by the Company using the HERS rater's modeling

information. There is no rebate application for the builder or rater to complete since all required information is entered by the HERS rater into the third-party implementer's database using a web portal interface. The third-party implementer reviews and ensures all information is accurate and captured and works directly with the energy rater to correct any omissions or errors. Once the data is deemed complete, the third-party implementer is responsible for manually entering selected portions of the collected data for each home into the Company's database.

D. Marketing Objective & Strategies

The Company will update existing builder and homebuyer marketing materials and make them available to participants. The objective of the builder marketing material is to increase product awareness and effectively communicate product benefits (energy savings, economics, and comfort/durability) along with the requirements for participation. The homebuyer collateral was created as an aid for builders to easily explain the benefits of an energy efficient home to their potential clients. Additionally, a certificate of completion was created for the homebuyer. The certificate demonstrates the home successfully completed the product requirements and contains useful information such as the HERS index achieved and who rated the home. The development of new marketing materials will be driven in part by the outreach plans of the third-party implementer and feedback received from participants. The product does not utilize mass marketing campaign efforts as a method of driving participation.

The Company's third-party implementer will engage in outreach activities with participants and stakeholders. The outreach objectives are intended to maintain good working relationships with builders and raters, ensuring they are satisfied with the product offering and to provide education and training support where needed. The third-party implementer will initiate monthly product update communications to all participants, and hold in-person and conference-call meetings with raters along with routine email and phone communications.

The third-party implementer will provide training to participants (primarily raters) on the product requirements, REM/Rate or Ektrope modeling software and use of their database system to improve efficiency and ensure more accurate data reporting. These activities are expected to encourage energy-efficient building practices resulting in increased energy savings. The third-party implementer will offer up to 30 no-cost professional sales training sessions to realtors and builders' sales agents throughout the year. The Company is also evaluating opportunities to work with the net-zero energy (NZE) home community to jointly provide training on energy efficiency and NZE homes with architects and builders. The Company's third-party implementer is working with ESNH participating energy raters to identify pathways for implementing this joint training activity. The ESNH product shares common interests with the NZE community since the best path to reach net-zero is to start with a highly energy-efficient home. The Company is also considering how renewable programs and the ESNH product may be jointly marketed to customers. Other types of training will be identified with the assistance of the product participants, key stakeholders and the third-party implementer who will be responsible for developing specific outreach plans. Key stakeholders include organizations such as local homebuilder associations, the Colorado Energy Office, the Colorado Code Compliance Collaborative and other related industry organizations.

E. Product-Specific Policies

This product currently applies to builders of residential single-family buildings, small multifamily buildings and townhomes that receive combined electric and natural gas service, or natural gas-only service, from Public Service. Structures that have common conditioned space such as hallways and elevator shafts are not eligible to participate in the product. Additional product requirements are:

1. Raters must be RESNET certified and use the RESNET modeling software approved by the Company to model each home.
2. Raters must provide a RESNET-registered HERS rating for each home. Sample ratings are not accepted.
3. Raters must complete a Rater Field Checklist and the home must pass the applicable sections.
4. Builders will receive a rebate based on the local energy code requirement and the percent BTC. The percent improvement is determined using REM/Rate or Ekotrope software to model the energy used by the reference home (or baseline home; modeled to match the local jurisdictional energy code) and the energy used by the new as-built home. The energy use is converted to MMBTU and the following formula is used to determine the percent improvement:
$$\frac{\text{Ref_Home_MMBTU} - \text{As-Built_Home_MMBTU}}{\text{Ref_Home_MMBTU}}$$
5. Homes that achieve ENERGY STAR certification and receive a percent BTC rebate (as detailed in Section G below) may be eligible for an additional \$100 rebate.
6. Natural gas-only participants are not eligible to receive the ~~rebates for lighting rebate for installing high efficiency lighting~~, ENERGY STAR® radon fans, or heat pump water heater measures.
7. In 2019, homes that receive electric-only service from the Company are not eligible to participate in the product. Beginning in 2020, electric only homes will be eligible to participate.
8. Homes qualifying for a product rebate are not eligible for Company's *separate prescriptive* rebates under the following products; Evaporative Cooling, Heating Efficiency, High Efficiency A/C, Insulation & Air Sealing, Thermostat Optimization, and Water Heating.
9. Impacts from PV or other renewable generation systems installed in the home will not be included in the percent BTC improvement (rebate) or energy savings calculations.

F. Stakeholder Involvement

The Company maintains ongoing relationships with the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy, which jointly oversee the national ENERGY STAR program. The Company is an active Sponsor and participant in the national program, recognizing

the strong customer awareness of the ENERGY STAR brand, and has received several ENERGY STAR awards for this product.¹

This product has received significant interest and input from external Colorado stakeholders in preparation of Plan filings and during Plan Settlement. This input has been valuable and taken under consideration for the product design.

The Company serves on the new home construction committee of the Consortium for Energy Efficiency, which meets regularly and works closely with the EPA. The third-party implementer attends RESNET conferences on behalf of the Company.

Public Service will strive to work with and engage Colorado stakeholders, such as the Colorado Energy Office, Southwest Energy Efficiency Project, Energy Efficiency Business Coalition, the Colorado Energy Code Collaborative, the City of Denver and others to partner when possible and continue the product's success.

The Company will issue monthly communications to participating builders and energy raters, providing year-to-date product updates on participation, achievement, expenditures, and other important product information as it arises. The Company's third-party implementer communicates regularly with participating energy raters and builders, including requests for their input on training and education gaps related to energy efficiency and more specifically, how the product can assist filling those gaps.

G. Rebates & Incentives

Builders with qualifying homes are eligible to receive a rebate based on the local energy code requirement and the percent BTC improvement achieved (see *Product-Specific Policies* for details). A builder's home must achieve a minimum 10% BTC improvement to qualify.

Combo/Gas Only Homes - Rebate Levels – 2009 IECC or Lower, and Percent BTC

Percent BTC	Rebate
10% - 14.999%	\$200
15% - 19.999%	\$350
20% - 24.999%	\$500
25% - 29.999%	\$650
30% - 34.999%	\$800
35% - 39.999%	\$1,000
40% and higher	\$1,400

¹ View the ENERGY STAR Awards Archive: <https://www.energystar.gov/about/awards/awards-archive>

Combo/Gas Only Homes - Rebate Levels – 2012 IECC or Higher and Percent BTC

Percent BTC	Rebate
10% - 14.999%	\$250
15% - 19.999%	\$400
20% - 24.999%	\$600
25% - 29.999%	\$900
30% - 34.999%	\$1,300
35% - 39.999%	\$2,000
40% and higher	\$2,550

Electric Only Homes - Rebate Levels – 2012 IECC or Higher, and Percent BTC

Percent BTC	Rebate
10% - 14.999%	\$650
15% - 19.999%	\$800
20% - 24.999%	\$1000

The ENERGY STAR certified rebate is an *add-on* rebate available to qualifying homes that have earned ENERGY STAR certification and meet the following:

- Home must have both electric and gas service from Public Service. Gas-only or electric-only homes served by the Company are not eligible;
- Home must qualify for a percent BTC rebate;
- HERS rater verifies the home meets all national ENERGY STAR certification requirements and;
- ENERGY STAR label is applied to the home's electrical breaker box.

ENERGY STAR Certified Rebate

ENERGY STAR certified	\$100
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The ENERGY STAR appliance rebate is another *add-on* rebate available to qualifying homes that have earned a percent BTC rebate and installed one or any combination of the qualifying appliances listed below. Homes that receive natural gas-only service from the Company are not eligible for ~~high efficiency lighting~~ rebates, associated with ENERGY STAR® radon fans, or heat pump water heaters.

Appliance & ~~Lighting~~ Rebate Levels for Qualifying Homes

Appliance/ Lamp	Rebate
ENERGY STAR Clothes Washer	\$30
Heat Pump Water Heater	\$400
High Efficiency Lighting — 2009 IECC or lower with LEDs — Minimum 20 lamps	\$20
High Efficiency Lighting — 2012 IECC or higher with 100% High Efficiency (LEDs)	\$10
ENERGY STAR certified Smart Thermostat	\$50
ENERGY STAR radon fan	\$20

