

Designed to Earn the ENERGY STAR Version 3.0 Plan Review Checklist

Home plans that are *Designed to Earn the ENERGY STAR* Version 3.0 explicitly specify energy efficiency features and construction details, including mechanical equipment efficiencies and air barrier installation details, for particular climate locations. State, local, and regional codes, as well as regional ENERGY STAR program requirements, supersede the items specified in this Checklist.

Attach the completed Checklist and the documents specified below to the final home plan.

Architect/Designer:		Model Name:	
Verification Organization ¹ :			
Review Method:	<input type="checkbox"/> Projected Rating ^{2,3} Software: Weather file:		
	<input type="checkbox"/> National Prescriptive Path ^{3,4} Location:		
Reviewer Name:		Date of Review:	
Reviewer Signature:		<input type="checkbox"/> Passes <input type="checkbox"/> Corrections Needed	
Review Guidelines	Passes	Corrections Needed	Comments
Attached Documents			
1.1 Projected HERS Rating report or appropriate Prescriptive Path ⁵	<input type="checkbox"/>	<input type="checkbox"/>	
1.2 Thermal Enclosure Checklist with all N/A items checked.	<input type="checkbox"/>	<input type="checkbox"/>	
1.3 HVAC Contractor Checklist with all N/A items checked ⁶ .	<input type="checkbox"/>	<input type="checkbox"/>	
1.4 HVAC Rater Checklist with all N/A items checked.	<input type="checkbox"/>	<input type="checkbox"/>	
1.5 Water Management System Checklist with all N/A items checked.	<input type="checkbox"/>	<input type="checkbox"/>	
1.6 Any required details or specifications below not included directly on the plans	<input type="checkbox"/>	<input type="checkbox"/>	
Details and Specifications on Plans			
2.1 Inclusion of the following required text: <i>Note: This house must be field inspected by a Rater to be labeled as ENERGY STAR⁸.</i>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2 Inclusion of the following required text: <i>Note: HVAC sizing calculations for the heating and cooling equipment must be provided and verified for this home to be labeled as ENERGY STAR.¹¹</i>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3 Inclusion of one of the following required text: <ul style="list-style-type: none"> <i>Note: This house was rated using the size adjustment factor including the basement area.</i> <i>Note: This house was rated using the size adjustment factor excluding the basement area.</i> 	<input type="checkbox"/>	<input type="checkbox"/>	
2.4 Inclusion of climate zones that this plan can be built for ENERGY STAR qualification.	<input type="checkbox"/>	<input type="checkbox"/>	
2.5 Wall sections delineating complete thermal boundary of home	<input type="checkbox"/>	<input type="checkbox"/>	
2.6 High-Performance Window specifications including window and door SHGC and U-value(s) ⁵	<input type="checkbox"/>	<input type="checkbox"/>	
2.7 Quality-Installed Insulation specifications including R-value of insulation assemblies and proper installation details ^{8, 10}	<input type="checkbox"/>	<input type="checkbox"/>	
2.8 Reduced Thermal Bridging specifications and the details intended to achieve them. ¹¹	<input type="checkbox"/>	<input type="checkbox"/>	
2.9 Air Sealing performance specifications and the details intended to achieve them ^{7, 9}	<input type="checkbox"/>	<input type="checkbox"/>	
2.10 Fuel type of HVAC equipment and hot water systems	<input type="checkbox"/>	<input type="checkbox"/>	

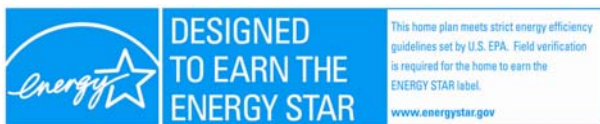


DESIGNED
TO EARN THE
ENERGY STAR

This home plan meets strict energy efficiency
guidelines set by U.S. EPA. Field verification
is required for the home to earn the
ENERGY STAR label.
www.energystar.gov

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Review Guidelines	Passes	Corrections Needed	Comments
2.11 Water heater capacity (gallons), fuel type, and minimum energy efficiency rating	<input type="checkbox"/>	<input type="checkbox"/>	
2.12 HVAC equipment capacity (tons or kbtu/h), ⁸ fuel type, and minimum energy efficiency rating ⁸	<input type="checkbox"/>	<input type="checkbox"/>	
2.13 Duct insulation and leakage performance specifications ⁹ (or layout for ductwork and air handlers within the thermal and pressure boundary) and the details intended to achieve them, including those in the HVAC Contractor/Rater checklists.	<input type="checkbox"/>	<input type="checkbox"/>	
2.14 Water Management Checklist details and specifications regarding foundation and site, wall assembly, and roof assembly.	<input type="checkbox"/>	<input type="checkbox"/>	
2.15 Where using the prescriptive path or required under the performance path, specifications requiring, ENERGY STAR qualified products, such as: <ul style="list-style-type: none">• Heating or cooling equipment;• Windows;• Appliances;• Ventilation Fans;• Ceiling Fans; and• 80% of lighting fixtures (% might vary with performance path) and installation locations, ceiling fans equipped with lighting fixtures, or ventilation fans	<input type="checkbox"/>	<input type="checkbox"/>	



Designed to Earn the ENERGY STAR Plan Review Notes

1. This Plan Review Checklist must be completed by an accredited HERS rater, or other EPA-approved verifier.
2. If the plan will be reviewed under the Performance Path, list the software and weather file used to evaluate the plans.
3. Where specific orientation and available options are not completely identified, the plan review must assume worst case orientation and options (e.g., maximum glazing area, conditioned floor area).
4. If the planned house is greater in size than the ENERGY STAR benchmark home, it must be qualified using the performance path and size adjustment factor.
5. If the plan will be reviewed under the Performance Path, attach the full rating report for the Projected Rating, not only the HERS Index. Evaluate the home in its worst-case orientation, unless the orientation is specified in the plans, and with the worst-case combination of elevations and options. If the plan is being reviewed under the Prescriptive Path attach the county-level BOP or national BOP
6. In order for the built home to earn the ENERGY STAR, all heating and cooling equipment must be sized according to the latest editions of ACCA Manuals J and S, ASHRAE Handbook of Fundamentals, or an equivalent computation procedure. Maximum oversizing limit for air conditioners and heat pumps is 15% (but 25% for heat pumps in Climate Zones 5 - 8). Inputs used in the sizing calculations will be verified by the HERS rater or other EPA-approved including.
 - a. The appropriate climate location shall be selected from the ASHRAE Handbook of Fundamentals.
 - b. Outdoor temperatures shall be the 99.0% design temperatures as published in the ASHRAE Handbook of Fundamentals for the home's location or most representative city for which design temperature data are available. Note that a higher outdoor air design temperature may be used if it represents prevailing local practice by the HVAC industry and reflects extreme climate conditions that can be documented with recorded weather data.
 - c. Indoor temperatures shall be 75 F for cooling.
 - d. The infiltration rate shall be selected as "tight" or the equivalent term.

In specifying equipment, the next available size may be used. In addition, indoor and outdoor coils shall be matched in accordance with ARI standards.

HVAC equipment for the built home may be sized based on calculations other than those attached to this plan so long as the calculations fulfill the above criteria and all applicable codes and laws.

7. Air Sealing performance specifications shall consist of a verifiable value for whole-house infiltration (e.g., air changes per hour at 50 Pa) based either on the maximum allowable infiltration determined by the Projected Rating or the climate zones requirement listed in the Version 3.0 National Program Requirements ENERGY STAR Reference Design House. Air Sealing details shall comply with the 'Air Sealing' section of the Thermal Enclosure Checklist
8. Quality-Installed Insulation performance specifications shall consist of specifying appropriate R-value of each construction assembly and necessary details to achieve RESNET Grade I standards (Grade II allowed for walls with rigid insulation sheathing) required for the specific climate zone. Consult www.resnet.us for protocols on how to visually verify insulation grading.
9. Tight duct performance specifications shall consist of verifiable values (e.g., CFM of leakage to the outside per 100 square feet of conditioned floor area at 25 Pa). For plans being reviewed under the Performance Path, the duct performance specifications shall be determined either by the mandatory requirements of the National Performance Path specification or by the maximum allowable duct leakage determined by the Projected Rating, whichever is more rigorous. For plans being reviewed under the prescriptive path, the duct leakage performance specification shall be determined by the ENERGY STAR Reference Design House. Duct installation details shall comply with the 'Duct Quality Installation' section of the HVAC System Quality Installation Rater Checklist.
10. Reduced thermal bridging requires Standard Details shall comply with the 'Reduced Thermal Bridging' section of the Thermal Enclosure Checklist including but not limited to:
 - a. Reduced thermal bridging at walls (rigid insulation sheathing, structural insulated panels, insulated concrete forms, double wall framing, or advanced framing);
 - b. Raised Heel Trusses or equivalent framing method ;
 - c. Attic platforms to allow full depth insulation; and
 - d. Slab edge insulation.
11. The term "Rater" refers to the person completing the third-party inspections required for qualification. This party may be a certified Home Energy Rater, BOP Inspector, or an equivalent designation as determined by a Verification Oversight Organization such as RESNET.
12. It is recommended to provide critical plans and trade details in languages appropriate to the prevailing trade labor pool.