



Designed to Earn the ENERGY STAR Plan Review Checklist

Home plans that are *Designed to Earn the ENERGY STAR* 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 BOP ^{3,4,5}	<input type="checkbox"/> Other BOP ^{3,4,6}	Location ⁶ :
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 BOP ⁷	<input type="checkbox"/>	<input type="checkbox"/>	
1.2 Thermal Bypass Checklist with all N/A items checked	<input type="checkbox"/>	<input type="checkbox"/>	
1.3 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 an EPA-approved verifier to be labeled as ENERGY STAR.</i>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2 Inclusion of the following required text: <i>Note: HVAC sizing calculations for the cooling equipment must be provided and verified for this home to be labeled as ENERGY STAR.</i> ⁸	<input type="checkbox"/>	<input type="checkbox"/>	
2.3 Wall sections delineating complete thermal boundary of home	<input type="checkbox"/>	<input type="checkbox"/>	
2.4 Tight construction details and performance specifications ^{5,9}	<input type="checkbox"/>	<input type="checkbox"/>	
2.5 Thermal Bypass Checklist air barrier details and/or specifications	<input type="checkbox"/>	<input type="checkbox"/>	
2.6 Proper insulation installation details and performance specifications ¹⁰	<input type="checkbox"/>	<input type="checkbox"/>	
2.7 R-value of insulation assemblies ⁵	<input type="checkbox"/>	<input type="checkbox"/>	
2.8 Window and door SHGC and U-value(s) ⁵	<input type="checkbox"/>	<input type="checkbox"/>	
2.9 Fuel type of HVAC equipment and hot water systems	<input type="checkbox"/>	<input type="checkbox"/>	
2.10 Water heater size and minimum energy efficiency rating	<input type="checkbox"/>	<input type="checkbox"/>	
2.11 HVAC equipment minimum energy efficiency rating ⁵	<input type="checkbox"/>	<input type="checkbox"/>	
2.12 Tight duct details and performance specifications ¹¹ and/or layouts for ductwork and air handlers within the thermal boundary	<input type="checkbox"/>	<input type="checkbox"/>	
2.13 Required ENERGY STAR qualified products, including: <ul style="list-style-type: none"> • Heating or cooling equipment; or • Windows; or • Five or more appliances, lighting fixtures and installation locations, ceiling fans equipped with lighting fixtures, or ventilation fans 	<input type="checkbox"/>	<input type="checkbox"/>	
2.14 Provide critical plans and trade details in languages appropriate to the prevailing trade labor pool (<i>Recommended but not required</i>)	<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, BOP inspector, 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 plan will be reviewed under a BOP, the BOP already accounts for worst case orientation.
5. If the plan will be reviewed under the national BOP, the plans must include specifications in all climate zones for the details specified in Items 2.4, 2.7, 2.8, 2.11.
6. If the plan will be reviewed under a county-level BOP, indicate the IECC Climate Zone listed on the BOP as the "Location". If the plan is evaluated under a regional or state-specific BOP, indicate the region or state listed on the BOP as the "Location".
7. If the plan will be reviewed under the Performance Path, attach the full 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.
8. In order for the built home to earn the ENERGY STAR, all cooling equipment must be sized according to the latest editions of ACCA Manuals J and S, ASHRAE 2001 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). Sizing can be verified by the verifier either performing the calculations or reviewing documentation provided by the professional contractor or engineer who calculated the sizing.

The following operating conditions shall be verified:

- a. The appropriate climate location shall be selected from the ASHRAE 2001 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.

9. Tight construction 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 on the infiltration threshold established by the relevant BOP.
10. Insulation installation performance specifications shall consist of specifying Grade of I, II, or III installation for each insulated component (e.g., wall, floor, ceiling) as defined by Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards: On-Site Inspection Procedures for Minimum Rated Features. Consult www.natresnet.org.
11. 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 a BOP, the duct leakage performance specification shall be determined by the relevant BOP.