



# ENERGY STAR® Program Requirements Product Specification for Commercial Hot Food Holding Cabinets

## Eligibility Criteria Version 2.0

**Note:** The effective date for this Version 2.0 specification has been revised from July 1, 2011 to October 1, 2011. The ASTM F2140 test standard reference has also been changed from 2010 to 2011.

Following is the **Version 2.0** product specification for ENERGY STAR qualified commercial hot food holding cabinets. A product shall meet all of the identified criteria if it is to earn the ENERGY STAR.

### 1) **Definitions:** Below are the definitions of the relevant terms in this document.

- A. Commercial Hot Food Holding Cabinet: A heated, fully enclosed compartment with one or more solid or transparent doors designed to maintain the temperature of hot food that has been cooked using a separate appliance.
- B. Idle Energy Rate–Dry: The rate of appliance energy consumption while it is maintaining or holding at the control set point, without using a humidity-generating device (if applicable).
- C. Drawer Warmer: An appliance that consists of one or more heated drawers and that is designed to hold hot food that has been cooked in a separate appliance at a specified temperature.
- D. Heated Transparent Merchandising Cabinets: An appliance with a heated compartment that is designed to display and maintain the temperature of hot food that has been cooked in a separate appliance.
- E. Cook-and-Hold Appliance: A multiple-mode appliance intended for cooking food that may be used to hold the temperature of the food that has been cooked in the same appliance.
- F. Proofing Cabinet: An enclosed mobile, portable, or stationary appliance designed to maintain the proper temperature and relative humidity for supporting fermentation of dough products by yeast.
- G. Product Family: Models built based on the same basic engineering design with the same interior cabinet volume. Units within the family may differ in regards to energy consumption as long as cabinet size remains constant. Qualification of the product family shall be based on a representative model, as defined in Section 4 of this specification.

### 2) **Scope**

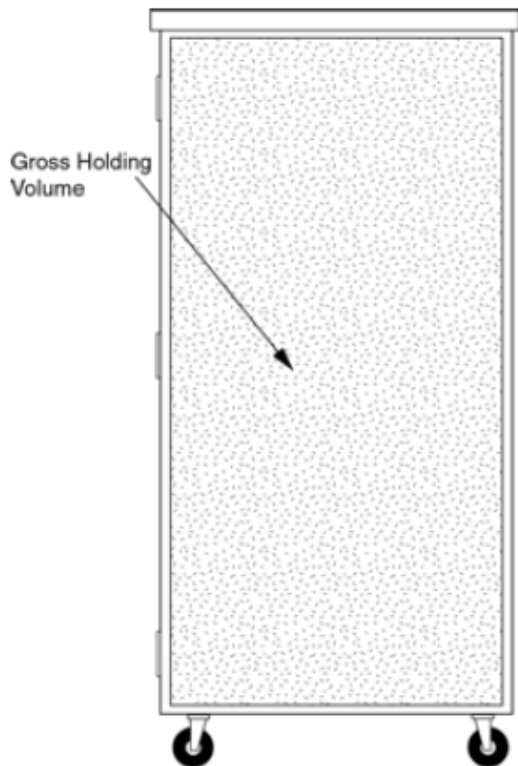
- A. Included Products: Products that meet the definition of a Commercial Hot Food Holding Cabinet as specified herein are eligible for ENERGY STAR qualification, with the exception of products listed in Section 2.B.

This specification is intended for commercial food-grade equipment only. Hot food holding cabinets qualifying under this specification must be third party certified to: (1) ANSI/NSF Standard 4 International Standard for Commercial Cooking, Rethermalization and Powered Hot Food Holding Transport Equipment and (2) ANSI/UL Standard 197 Commercial Electric Cooking Appliances.

- B. Excluded Products: Dual function equipment (e.g., cook-and-hold and proofing units), heated transparent merchandising cabinets, and drawer warmers are not eligible for ENERGY STAR.

**3) Qualification Criteria:**

- A. Measuring Cabinet Interior Volume: Commercial hot food holding cabinet interior volume shall be calculated using straight-line segments following the gross interior dimensions of the appliance and using **Equation 1** below. Interior volume shall not account for racks, air plenums or other interior parts.



**Equation 1:**  $\text{Interior Volume} = \text{Interior Height} \times \text{Interior Width} \times \text{Interior Depth}$

- B. Maximum Idle Energy Rate Requirements:

<b>Table 1: Maximum Idle Energy Rate Requirements for ENERGY STAR Qualification</b>	
<b>Product Interior Volume (Cubic Feet)</b>	<b>Product Idle Energy Consumption Rate (Watts)</b>
$0 < V < 13$	$\leq 21.5 V$
$13 \leq V < 28$	$\leq 2.0 V + 254.0$
$28 \leq V$	$\leq 3.8 V + 203.5$

Note:  $V$  = Interior volume in cubic feet ( $\text{ft}^3$ ).

- C. Significant Digits and Rounding:

- a. All calculations shall be carried out with actual measured or observed values. Only the final result of a calculation shall be rounded. Calculated results shall be rounded to the tenth decimal point.

- b. Unless otherwise specified, compliance with specification limit shall be evaluated using exact values without any benefit from rounding

#### 4) Test Requirements:

- A. Representative Models shall be selected for testing per the following requirements:
  - a. For qualification of an individual product model, the representative model shall be equivalent to that which is intended to be marketed and labeled as ENERGY STAR.
  - b. For qualification of a product family, the most energy consumptive unit within the product family (defined in Section 1) shall serve as the representative model.
- B. When testing commercial hot food holding cabinets, the following test methods shall be used to determine ENERGY STAR qualification:

Table 2: Test Methods for ENERGY STAR Qualification	
ENERGY STAR Requirement	Test Method Reference
Idle Energy Rate	ASTM Standard F2140-11, <i>Test Method for the Performance of Hot Food Holding Cabinets</i>

- 5) **Effective Date:** The ENERGY STAR Commercial Hot Food Holding Cabinet specification shall take effect on **October 1, 2011**. To qualify for ENERGY STAR, a product model shall meet the ENERGY STAR specification in effect on the model's date of manufacture. The date of manufacture is specific to each unit and is the date (e.g., month and year) on which a unit is considered to be completely assembled.
- 6) **Future Specification Revisions:** EPA reserves the right to change the specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. In keeping with current policy, revisions to the specification are arrived at through industry discussions. In the event of a specification revision, please note that the ENERGY STAR qualification is not automatically granted for the life of a product model.