ENERGY STAR® Program Requirements for Water Coolers

Partner Commitments
Version 1.2 – DRAFT 1

Commitment

The following are the terms of the ENERGY STAR Partnership Agreement as it pertains to the manufacturing of ENERGY STAR qualified water coolers. The ENERGY STAR Partner must adhere to the following program requirements:

- comply with current ENERGY STAR Eligibility Criteria, defining the performance criteria that must be met for use of the ENERGY STAR certification mark on water coolers and specifying the testing criteria for water coolers. EPA may, at its discretion, conduct tests on products that are referred to as ENERGY STAR qualified. These products may be obtained on the open market, or voluntarily supplied by Partner at EPA's request;

- comply with current ENERGY STAR Identity Guidelines, describing how the ENERGY STAR marks and name may be used. Partner is responsible for adhering to these guidelines and for ensuring that its authorized representatives, such as advertising agencies, dealers, and distributors, are also in compliance;

- qualify at least one ENERGY STAR water cooler model within one year of activating the water coolers portion of the agreement. When Partner qualifies the product, it must meet the specification (e.g., Tier 1 or 2) in effect at that time;

- provide clear and consistent labeling of ENERGY STAR qualified water coolers. The ENERGY STAR mark must be clearly displayed on the top/front of the product, in product literature (i.e., user manuals, spec sheets, etc.), and on the manufacturer's Internet site where information about ENERGY STAR qualified models is displayed. It is also recommended that the mark appear on the product packaging;

- provide to EPA, on an annual basis, an updated list of ENERGY STAR qualifying water cooler models. Once the Partner submits its first list of ENERGY STAR water cooler models, the Partner will be listed as an ENERGY STAR Partner. Partner must provide annual updates in order to remain on the list of participating product manufacturers;

- provide to EPA, on an annual basis, unit shipment data or other market indicators to assist in determining the market penetration of ENERGY STAR. Specifically, Partner must submit the total number of ENERGY STAR qualified water coolers shipped (in units by model) or an equivalent measurement as agreed to in advance by EPA and Partner. Partner is also encouraged to provide ENERGY STAR qualified unit shipment data segmented by meaningful product characteristics (e.g., capacity, size, speed, or other as relevant), total unit shipments for each model in its product line, and percent of total unit shipments that qualify as ENERGY STAR. The data for each calendar year should be submitted to EPA, preferably in electronic format, no later than the following March and may be provided directly from the Partner or through a third party. The data will be used by EPA only for program evaluation purposes and will be closely controlled. Any information used will be masked by EPA so as to protect the confidentiality of the Partner;

- notify EPA of a change in the designated responsible party or contacts for water coolers within 30 days.

Performance for Special Distinction

In order to receive additional recognition and/or support from EPA for its efforts within the Partnership, the ENERGY STAR Partner may consider the following voluntary measures and should keep EPA informed on the progress of these efforts:

- consider energy efficiency improvements in company facilities and pursue the ENERGY STAR mark for buildings;

- purchase ENERGY STAR qualified products. Revise the company purchasing or procurement specifications to include ENERGY STAR. Provide procurement officials' contact information to EPA for periodic updates and coordination. Circulate general ENERGY STAR qualified product information to employees for use when purchasing products for their homes;

- ensure the power management feature is enabled on all ENERGY STAR qualified displays and computers in use in company facilities, particularly upon installation and after service is performed;

- provide general information about the ENERGY STAR program to employees whose jobs are relevant to the development, marketing, sales, and service of current ENERGY STAR qualified product models;

- feature the ENERGY STAR mark(s) on Partner Web site and in other promotional materials. If information concerning ENERGY STAR is provided on the Partner Web site as specified by the ENERGY STAR Web Linking Policy (this document can be found in the Partner Resources section on the ENERGY STAR Web site at www.energystar.gov), EPA may provide links where appropriate to the Partner Web site;

- provide a simple plan to EPA outlining specific measures Partner plans to undertake beyond the program requirements listed above. By doing so, EPA may be able to coordinate, communicate, and/or promote Partner's activities, provide an EPA representative, or include news about the event in the ENERGY STAR newsletter, on the ENERGY STAR Web pages, etc. The plan may be as simple as providing a list of planned activities or planned milestones that Partner would like EPA to be aware of. For example, activities may include: (1) increase the availability of ENERGY STAR qualified products by converting the entire product line within two years to meet ENERGY STAR guidelines; (2) demonstrate the economic and environmental benefits of energy efficiency through special in-store displays twice a year; (3) provide information to users (via the Web site and user's manual) about energy-saving features and operating characteristics of ENERGY STAR qualified products, and (4) build awareness of the ENERGY STAR Partnership and brand identity by collaborating with EPA on one print advertorial and one live press event;

- provide quarterly, written updates to EPA as to the efforts undertaken by Partner to increase availability of ENERGY STAR qualified products, and to promote awareness of ENERGY STAR and its message;

- join EPA's SmartWay Transport Partnership to improve the environmental performance of the company's shipping operations. SmartWay Transport works with freight carriers, shippers, and other stakeholders in the goods movement industry to reduce fuel consumption, greenhouse gases, and air pollution. For more information on SmartWay, visit www.epa.gov/smartway;

- join EPA's Climate Leaders Partnership to inventory and reduce greenhouse gas emissions. Through participation companies create a credible record of their accomplishment and receive EPA recognition as corporate environmental leaders. For more information on Climate Leaders, visit www.epa.gov/climateleaders; and

- join EPA's Green Power Partnership. EPA's Green Power Partnership encourages organizations to buy green power as a way to reduce the environmental impacts associated with traditional fossil fuel-based electricity use. The partnership includes a diverse set of organizations including Fortune 500 companies, small and medium businesses, governmental institutions as well as a growing number of colleges and universities. Visit http://www.epa.gov/gmpower.

ENERGY STAR® Program Requirements for Water Coolers

Eligibility Criteria
Version 1.2 – DRAFT 1

Below is the DRAFT 1 Version 1.2 product specification for ENERGY STAR qualified water coolers. A product must 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. Water Cooler: A freestanding device that consumes energy to cool and/or heat water for human consumption. Both bottled and bottle-less water cooler types are covered under this category. Bottle-less water coolers include Point-of-Use (POU) and air-source water generating units. Units that provide pressurized water are included as long as they are free standing, i.e., not wall mounted, under sink, or otherwise building integrated.

Note: The definition of a Water Cooler in Section 1A has been broadened from "Bottled Water Cooler" to explicitly allow POUs and other types of bottle-less devices to qualify for ENERGY STAR. This change is based on requests from ENERGY STAR partners who note that the market share for bottle-less water coolers has grown substantially since the last specification revision. EPA previously investigated the standby energy use of bottle-less units compared to bottled units, and has concluded that both types of water coolers could be covered under a single specification. In addition, California Appliance Efficiency Regulations[1] cover both bottled and POU coolers under the same regulation.

   B. Compartment-Type Bottled Water Cooler: A bottled water cooler which, in addition to the primary function of cooling and dispensing potable water, includes a refrigerated compartment with or without provisions for making ice.

   C. Standby Energy Consumption: The required energy to maintain cold and/or hot water at appropriate dispensing temperatures with no water being withdrawn.

2) Qualifying Products: For the purposes of ENERGY STAR, water coolers include the following:

   A. Cold Only Units: These units dispense cold water only. These units have a refrigeration cycle.

   B. Hot and Cold Units: These units dispense both hot and cold water. Some units may have a third room-temperature tap. These units have both an electric resistance heater and a refrigeration cycle.

   C. Cook and Cold Units: These units dispense both cold and room-temperature water. These units have a refrigeration cycle

Note: EPA has amended the definition of Cold Only Units to exclude cold and room-temperature dispensing units, as those are covered in the definition of Cook and Cold Units.

3) Energy-Efficiency Specifications for Qualifying Products: Only those products listed in Section 2 that meet the criteria outlined in Table 1 below may qualify as ENERGY STAR.

[1] California Energy Commission, 2009 Appliance Efficiency Regulations, August 2009, CEC-400-2009-013, pg. 148

Table 1: Energy-Efficiency Criteria for ENERGY STAR Qualified Water Coolers

Water Cooler Category	Energy Use Under Test Conditions
cold only and cook and cold units	≤ 0.16 kW-hours/day
hot and cold units	≤ 1.20 kW-hours/day

Note: EPA has not proposed changes to the energy-efficiency criteria for products covered by this specification at this time. Data collected from qualifying bottled, POU, and other bottle-less types of water coolers, as well as for units employing timers or other features designed to save energy, will be reviewed as part of a larger specification revision effort to be undertaken in the summer of 2010. This data will assist EPA in determining whether energy-efficiency criteria should be established and/or revised for the various subcategories of cooler types.

4) Test Criteria: Test conditions are described below. Tests will focus on overall standby losses and water will not be withdrawn during the testing procedure.

   Standby conditions under manufacturer control during the test period must mimic conditions that the unit will experience during typical use. All temperature and other settings shall be the same as when the unit will be shipped.

Note: This section was clarified to ensure that products are confirmed to qualify for ENERGY STAR when tested at conditions that will mimic those experienced by users. For nearly all ENERGY STAR products, these requirements are that they are tested as shipped.

A. Power Measurement: Energy use shall be measured as the total true power (kilowatt-hours) consumed in one 24-hour period. The Wattmeter used to measure the power consumption should have a minimum resolution of 1 Watt and precision +/- 2%.

Note: Guidance on the Wattmeter was added in response to a stakeholder request. EPA believes this level of precision is appropriate for this product and test procedure, and in most cases, the Wattmeter currently being used by manufacturers to test products will meet this requirement.

B. Starting Conditions: Before the power measurements are recorded, the unit should be at operating conditions, with water temperatures as defined in item (F) below.

C. Water Withdrawal: No water may be withdrawn from the unit during the test.

D. Timer Usage: If the unit has an integral, automatic timer, occupancy sensor, or other feature designed to reduce the number of hours during the day the unit is running, the unit shall be tested with these features enabled only if the unit is shipped with these features enabled.

Note: Section 4D was changed to permit and create incentives for incorporation of additional energy-saving features that reduce total run time. This change also allows qualification of units that heat or chill water on demand.

E. Ambient Temperature: Ambient air temperature must be $75^{o} \pm 2^{o}F$ [$23.8 \pm 1.2^{o}C$].

Note: EPA added Celsius and metric system conversions for clarity throughout this draft specification.

F. Dispensed Water Temperatures: Cold water temperature shall not exceed $50^{o}F$ [$10.0^{o}C$] and hot water temperature shall be at least $165^{o}F$ [$73.9^{o}C$]. These temperatures shall be measured before

conducting the standby energy use test described in this specification when the respective function, compressor, or heating element turns on. The unit shall not be turned off, or have any settings adjusted at any time during the test. The cold and hot water temperature settings used during the test must be the default settings at which the unit is shipped. Units designed to provide hot or cold water on demand, as opposed to maintaining a supply of hot or cold water, must provide water meeting these temperature requirements within three minutes of a user calling for hot or cold water.

Note: This clarification ensures that temperature or other settings are not changed during testing.

G. Cooler Location: The unit must be no more than 6 inches (152 mm) from a wall at least 7 feet (2,134 mm) high and extending horizontally at least 2 feet (610 mm) from each side of the unit.

H. Airflow: Airflow around the unit must be natural; no artificial means of increasing the airflow are permitted. Airflow created by components integral to the unit itself, such as internal fans, are permitted.

I. Compartment Temperature: If the unit being tested is a compartment-type water cooler, during the test, there shall be no melting of ice, nor shall the average temperature exceed 46.0 ^{o}F [7.8 ^{o}C] in the refrigerated compartment[2].

J. Dual-configuration Units: Water coolers that can serve as both a bottled unit and a POU, depending on the configuration as shipped by the manufacturer, must be tested in each configuration. That is, the unit will need to be tested both in the bottled water configuration and the POU configuration and have the results from both tests meet ENERGY STAR criteria.

Note: Manufacturers have expressed concern that some water coolers can serve both as bottled and POU, while they may meet ENERGY STAR performance levels in only one configuration. To ensure users who purchase an ENERGY STAR qualified unit experience the expected energy savings, EPA is requiring that manufacturers test and confirm ENERGY STAR qualification of such devices in both configurations.

5) Effective Date: The date that products must meet the requirements specified under the Version 1.2 Water Cooler specification will be defined as the *effective date* of the agreement. Any previously executed agreement on the subject of ENERGY STAR qualified water coolers shall no longer be in effect.

A. Qualifying and Marking Products under the Version 1.2 Specification: The effective date for the Version 1.2 ENERGY STAR Program Requirements for Water Coolers is January 22, 2010. All products, including models originally qualified under the previous Version 1.1 specification, with a date of manufacture on or after the applicable Version 1.2 effective date must meet the Version 1.2 requirements in order to qualify for ENERGY STAR. 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.

B. Elimination of Grandfathering: EPA will not allow grandfathering under this Version 1.2 ENERGY STAR specification. **ENERGY STAR qualification under previous Versions is not automatically granted for the life of the product model.** Therefore, any product sold, marketed, or identified by the manufacturing partner as ENERGY STAR must meet the current specification in effect at the time of manufacture of the product.

6) Future Specification Revisions: ENERGY STAR reserves the right to change the specification should

[2] ARI 2002 Standard 1010 for Self-Contained Mechanically-Refrigerated Drinking-Water Coolers

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 not that ENERGY STAR qualification is not automatically granted for the life of a product model. To carry the ENERGY STAR mark, a product model must meet the ENERGY STAR specification in effect on the model's date of manufacture.