

Approved 5/27/09

Domestic Refrigerators, Full-Sized and Compact

Covered Products:

This category shall cover full-sized and compact refrigerators and refrigerator-freezers.

Definitions:

Refrigerator: A cabinet designed for the refrigerated storage of food at temperatures above 32° Fahrenheit (F) and below 39°F, configured for general refrigerated food storage, and having a source of refrigeration requiring single phase, alternating current electric energy input only. An electric refrigerator may include a compartment for the freezing and storage of food at temperatures below 32°F, but does not provide a separate low temperature compartment designed for the freezing and storage of food at temperatures below 8°F.

Standard Setting and Certification Programs:

Various national and international standards apply to electronic appliances. They are defined here as a guide.

Consortium for Energy Efficiency (CEE) is a nonprofit public benefits corporation that promotes the manufacture and purchase of energy-efficient products and services. CEE members include utilities, statewide and regional market transformation administrators, environmental groups, research organizations and state energy offices in the U.S. and Canada. Also contributing to the collaborative process are CEE partners – manufacturers, retailers and government agencies. The U.S. Department of Energy and Environmental Protection Agency both provide support through active participation as well as funding. For additional information on CEE, including product specifications and a list of qualifying products, visit the CEE website at <http://www.cee1.org/>

ENERGY STAR® is a voluntary energy efficiency program sponsored by the U.S. Environmental Protection Agency. The ENERGY STAR® program makes identification of energy efficient appliances easy by labeling products that deliver the same or better performance as comparable models while using less energy and saving money. For additional information on the ENERGY STAR® program, including product specifications and a list of qualifying products, visit the ENERGY STAR® website at <http://www.energystar.gov>.

Restriction of Hazardous Substances (RoHS) Directive – A European Parliament and Council Directive restricts the use of certain hazardous substances in electrical and electronic equipment. It bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury,

hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants. For additional information on RoHS please visit <http://www.rohs.gov.uk/>.

Specifications:

Energy Use:

All refrigerators and refrigerator-freezers for which the U.S. Environmental Protection Agency and the U.S. Department of Energy have developed energy efficiency standards for compliance with the ENERGY STAR[®] program shall be ENERGY STAR[®] labeled and meet or exceed the ENERGY STAR[®] efficiency standard for such refrigerator or refrigerator-freezer. This standard meets the requirements of Energy Law, Article 5, Section 5-108a and Executive Order No. 111.

Criteria for ENERGY STAR Qualified Refrigerators

Equipment	Volume	Criteria
Full Size Refrigerators and Refrigerator-Freezers	7.75 cubic feet or greater	At least 15% more energy efficient than the minimum federal government standard (NAECA).
Compact Refrigerators and/or Freezers	Less than 7.75 cubic feet and 36 inches or less in height	At least 20% more efficient than the minimum federal government standard (NAECA)

Refrigerator Product Class	NAECA maximum energy use (kWh/year)
1. Refrigerators and Refrigerator-freezers with manual defrost	8.82*AV + 248.4
2. Refrigerator-Freezer—partial automatic defrost	8.82*AV + 248.4
3. Refrigerator-freezers—automatic defrost with top-mounted freezer without through-the-door ice service and all refrigerators—automatic defrost	9.80*AV + 276
4. Refrigerator-Freezers—automatic defrost with side-mounted freezer without through-the-door ice service	4.91*AV + 507.5
5. Refrigerator-Freezers—automatic defrost with bottom-mounted freezer without through-the-door ice service	4.60*AV + 459
6. Refrigerator-Freezers—automatic defrost with top-mounted freezer with through-the-door ice service	10.20*AV + 356
7. Refrigerator-Freezers—automatic defrost with side-mounted freezer with through-the-door ice service	10.10*AV + 406
8. Upright Freezers with Manual Defrost	7.55*AV+258.3
9. Upright Freezers with Automatic Defrost	12.43*AV+326.1
10. Chest Freezers and all other Freezers except Compact Freezers	9.88*AV+143.7
11. Compact Refrigerators and Refrigerator-Freezers with Manual Defrost	10.70*AV+299
12. Compact Refrigerator-Freezer—partial automatic defrost	7.00*AV+398
13. Compact Refrigerator-Freezers—automatic defrost with top-mounted freezer and compact all-refrigerators—automatic defrost	12.70*AV+355
14. Compact Refrigerator-Freezers—automatic defrost with side-mounted freezer	7.60*AV+501
15. Compact Refrigerator-Freezers—automatic defrost with bottom-	12.1*AV+367

mounted freezer	
16. Compact Upright Freezers with Manual Defrost	9.78*AV+250.8
17. Compact Upright Freezers with Automatic Defrost	11.40*AV+391
18. Compact Chest Freezers	10.45*AV+152

Note:

Refrigerator-Freezer Adjusted volume (AV) = Fresh Volume + (1.63 x Freezer Volume)

Refrigerator Adjusted Volume (AV) = (1.63 x Total Volume)

Freezer Adjusted volume (AV) = (1.73 x Total Volume)

Affected state entities are encouraged to purchase compact domestic refrigerators and refrigerator-freezers that meet or exceed the CEE Tier 1 standards for compact domestic refrigerators, which equal 20% above the current federal minimum standard for compact refrigerators and refrigerator-freezers.

Affected state entities are encouraged to purchase mid- and full-sized domestic refrigerators and refrigerator-freezers that meet or exceed the CEE Tier 1 standard for mid- and full-sized refrigerators and refrigerator-freezers, which equals 20% above the current federal minimum standard for mid- and full-sized refrigerators and refrigerator-freezers.

Avoidance of Halogenated Refrigerants (CFCs, HCFCs and HFCs):

All domestic refrigerators shall avoid the use of chlorofluorocarbons (CFCs). In addition, affected state entities are encouraged to purchase domestic refrigerators that avoid the use of hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs).

Restriction of Hazardous Substances (RoHS) Directive:

All affected state entities are encouraged to purchase domestic refrigerators that comply with the final requirements of the European RoHS Directive 2002/95/EC for the restriction of certain hazardous substances in electronic equipment. The Directive addresses cadmium, mercury, lead, hexavalent chromium, and certain brominated flame retardants.

Because New York State Executive Order No. 4 mandates ongoing development of lists and specifications for the procurement of commodities, services and technology that reasonably will reduce or eliminate the health and environmental risks from the use or release of toxic substances, bidders responding to solicitations are encouraged to disclose whether or not the product(s) offered comply with the final requirements of the European RoHS Directive 2002/95/EC. Voluntary responses received will be forwarded to the Executive Order No. 4 Interagency Committee on Sustainability and Green Procurement for informational purposes to enable its periodic review and supplementation of green procurement lists and specifications for use by affected entities.

Remanufactured or Recycled Content

Affected entities are encouraged to purchase domestic refrigerators which are remanufactured or incorporate recycled materials in their manufacture to the extent practicable.

Take-Back / Recycling for Centralized/Statewide Contracts:

When replacing equipment, affected entities should work with the contractor during the purchasing process to evaluate available trade-in options regardless of manufacturer. Contractors are encouraged to offer programs that include take-back or trade-in, and proper environmental disposal of equipment (including equipment manufactured and sold by others). Trade-in value/cost of take-back shall be determined on an individual basis.

State Agencies are reminded to follow State Finance Law § 167 regarding surplus property redistribution before utilizing take-back, trading, recycling or other options for the disposition of any units that are still in operable condition. This standard requires donation of usable equipment to other state agencies prior to declaration of equipment as surplus or waste.

Affected entities should provide details regarding existing equipment for take-back, including make and model of equipment being disposed, location of equipment (i.e. whether equipment is located in a basement; up one flight of stairs; fourth floor location with elevator access; or whether agency will move to dock) and any other pertinent information that will assist the contractor in determining disposal costs.

If units are being transferred for disposition, a record of each disposition shall be retained by the affected entity. Documentation shall be provided to the affected entity demonstrating that these products have been disposed of in an environmentally sound manner in compliance with applicable local, state and federal laws. The contractor or disposing party shall provide assurance to the affected entity that all exports of used equipment collected for reuse, recycling or disposal will be in compliance with the laws of the importing country.

Take-Back / Recycling for Agency-specific purchasing:

When replacing equipment, affected entities should work with the contractor during the purchasing process to look at available trade-in, reuse, and recycling options for their old equipment, regardless of manufacturer. Contractors are required to offer programs that include take-back, trade-in, and proper environmental disposal of equipment (including equipment manufactured and sold by others).

State Agencies are reminded to follow State Finance Law § 167 regarding surplus property redistribution before trading or recycling any units that are still in operable condition. This standard requires donation of usable equipment to other state agencies prior to declaration of equipment as surplus or waste.

Note: Affected entities should provide details regarding existing equipment for take-back when soliciting quotes; including make and model of equipment being disposed, location of equipment (i.e. whether equipment is located in a basement; up one flight of stairs; fourth floor location with elevator access; or whether agency will move to dock) and any other pertinent information that will assist the contractor in determining disposal costs.

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Packaging:

In accordance with Environmental Conservation Law section 37-0205, packaging shall not contain inks, dyes, pigments, adhesives, stabilizers, or any other additives to which any lead, cadmium, mercury or hexavalent chromium has been included as an element during manufacture or distribution in such a way that the sum of the concentrations levels of such lead, cadmium, mercury or hexavalent chromium exceed the following concentration level: 100 parts per million by weight (0.01%).

All bidders are encouraged to offer packaging which minimizes or eliminates the use of disposable containers; is made from recycled content; contains a minimum of 25% by weight of post consumer materials; and/or meets or exceeds the minimum post consumer content level for packaging in the U.S. Environmental Protection Agency Comprehensive Procurement Guidelines.