



Proposed Recognition Criteria for Refrigerator-Freezers

Scope

Included products. Full-size refrigerator-freezers are eligible for ENERGY STAR® Most Efficient recognition in 2013.

Excluded products. The following products are not eligible for Most Efficient recognition in 2013:

- Compact models. Any refrigerator or refrigerator-freezer with total volume less than 7.75 cubic feet (220 liters rated volume as determined in Appendix A1 and B1 of 10 CFR 430 subpart B) and 36 inches (0.91 meters) or less in height
- Freezers. At the present time, freezers are not eligible for Most Efficient recognition.
- All-refrigerators. At the present time, all-refrigerators are not eligible for Most Efficient recognition.

Recognition Criteria

- 1) Product must be ENERGY STAR qualified consistent with applicable ENERGY STAR Partner Commitments and the requirements set forth in the ENERGY STAR Program Requirements Product Specification for Residential Refrigerators and Freezers Version 4.1. Product performance must be certified by an EPA-recognized certification body.
- 2) Product must use less than or equal to 481 kWh per year and be at least 30% more efficient than federal requirements (see table below), as determined by ENERGY STAR specified federal test procedures.

Product Class		Maximum Annual Energy Use (kWh/year)
1	Refrigerator & Refrigerator-Freezer with manual defrost	$AV \leq 49.8, E_{ann} \leq 6.17 \cdot AV + 173.9$ $AV > 49.8, E_{ann} \leq 481$
2	Refrigerator-Freezer with partial automatic defrost	
3	Top-Mount Freezer without through-the-door ice	$AV \leq 42.0, E_{ann} \leq 6.86 \cdot AV + 193.2$ $AV > 42.0, E_{ann} \leq 481$
4	Side-Mount Freezer without through-the-door ice	$AV \leq 36.5, E_{ann} \leq 3.44 \cdot AV + 355.3$ $AV > 36.5, E_{ann} \leq 481$
5	Bottom-Mount Freezer without through-the-door ice	$AV \leq 49.6, E_{ann} \leq 3.22 \cdot AV + 321.3$ $AV > 49.6, E_{ann} \leq 481$
5a	Bottom-Mount Freezer with through-the-door ice	$AV \leq 29.6, E_{ann} \leq 3.50 \cdot AV + 377.3$ $AV > 29.6, E_{ann} \leq 481$
6	Top-Mount Freezer with through-the-door ice	$AV \leq 32.5, E_{ann} \leq 7.14 \cdot AV + 249.2$ $AV > 32.5, E_{ann} \leq 481$
7	Side-Mount Freezer with through-the-door ice	$AV \leq 27.8, E_{ann} \leq 7.07 \cdot AV + 284.2$ $AV > 27.8, E_{ann} \leq 481$

AV = Adjusted Volume in cubic feet. A refrigerator's adjusted volume is equal to its fresh volume + (1.63 x Freezer Volume). This adjustment factor assures that differences in freezer size are taken into account when determining refrigerator energy consumption limits.

Note: Automatic defrost is assumed unless the product class name specifies another type of defrost (e.g., partial automatic or manual)

Recognition Period

EPA will add eligible models to the 2013 Most Efficient product list for refrigerators from January 1, 2013 through December 30, 2013. The 2013 Most Efficient designation may be used in association with models recognized during this period for as long as the model remains on the market.