



DOE Certification, Compliance, and
Enforcement Overview
October 6, 2014

Refrigerators, Refrigerator-
Freezers, Freezers,
Dehumidifiers, Room Air
Conditioners, Clothes
Washers, Clothes Dryers,
Dishwashers

1

Authority, Coverage, and Definitions

2

Importation

3

Basic Models

4

Certified Ratings

5

Certification Requirements

6

Enforcement Overview

7

Pertinent Regulations & Internet Resources

1

Authority, Coverage, and Definitions

2

Importation

3

Basic Models

4

Certified Ratings

5

Certification Requirements

6

Enforcement Overview

7

Pertinent Regulations & Internet Resources

- Energy Policy and Conservation Act of 1975 ("EPCA")
 - Title III created energy conservation program for consumer products, including refrigerators, refrigerator-freezers, freezers, dishwashers, room air conditioners, clothes washers, and dehumidifiers.
 - Codified at 42 U.S.C. § 6291, *et. seq.*
- National Appliance Energy Conservation Act of 1987
 - Set standards for refrigerators, refrigerator-freezers, freezers, dishwashers, room air conditioners, and clothes washers.
- Energy Policy Act of 2005 ("EPACT 2005")
 - Set standards for dehumidifiers.

Regulated Products Include

- Refrigerators, Refrigerator-Freezers, and Freezers
- Dishwashers
- Room Air Conditioners
- Clothes Washers
- Dehumidifiers
- Clothes Dryers

Regulated Entities

- Manufacturers
 - Importers are considered manufacturers
- Private labelers
- NOT retailers or distributors UNLESS also manufacturer or private labeler

A manufacturer

- Is the domestic manufacturer, an importer, or a foreign original equipment manufacturer (OEM).
- May produce equipment at multiple facilities in various locations with the same model characteristics.
- Must determine certified ratings through testing.
- Is responsible for ensuring compliance of products.
- Is responsible for certification of products’ compliance to the Department.
- May elect to use a third-party (e.g., certified laboratory or foreign OEM) for testing and certification submission.

An importer

- Is considered a manufacturer.
- Is the importer of record on a consumption entry filed with U.S. Customs.
- May also be a retailer, distributor, manufacturer of non-covered equipment, etc.
- Is responsible for ensuring compliance of products.
- Is responsible for certification of compliance to DOE.
- Can use a third-party for product testing and certification submission.
 - Must complete proper authorization forms.

1

Authority, Coverage, and Definitions

2

Importation

3

Basic Models

4

Certified Ratings

5

Certification Requirements

6

Enforcement Overview

7

Pertinent Regulations & Internet Resources

- Customs and Border Protection has the authority to refuse admission into the customs territory of the United States to any covered import found to be noncompliant with applicable energy and/or water conservation standards.
- To ensure products imported are compliant, importers of covered products should be aware of and follow DOE regulations regarding testing and certifying these products as compliant.
- Independent of CBP's refusal of admission, DOE has authority to take enforcement actions against importers that import noncompliant products.

Importers **are** responsible for
ensuring compliance of covered
products they import!

- Manufacturers A, B, C, D, and E are foreign OEMs that make clothes washers abroad, and WeBuyEm imports the clothes washers under a WeBuyEm brand name and model number to the United States. Who is responsible for ensuring these clothes washers meet the energy and water consumption standard?

- Manufacturers A, B, C, D, and E are foreign OEMs that make clothes washers abroad, and WeBuyEm imports the clothes washers under a WeBuyEm brand name and model number to the United States. Who is responsible for ensuring these clothes washers meet the energy and water consumption standard?

WeBuyEm is responsible for ensuring the clothes washers comply with the applicable standards and for submitting the required certification reports to DOE.

1

Authority, Coverage, and Definitions

2

Importation

3

Basic Models

4

Certified Ratings

5

Certification Requirements

6

Enforcement Overview

7

Pertinent Regulations & Internet Resources

- **Basic model** is a group of one or more individual models with essentially identical energy and/or water consumption characteristics.
- **Must** be manufactured by a single manufacturer.
- **May** be distributed under different brand names.
- **May** contain multiple individual models/model numbers.
- **May** be made up of only one individual model.
- **Must** have a unique set of supporting test data.
 - o One set of data cannot demonstrate the compliance of multiple basic models. The certification of a given basic model cannot be based upon the test of a different basic model.

- For *refrigerators, refrigerator-freezers, freezers, room air conditioners, and dehumidifiers*: **if** have essentially identical electrical, physical, and functional characteristics that affect energy consumption, **can** be considered same basic model.
- For *dishwashers and clothes washers*: **if** have essentially identical electrical, physical, functional, and hydraulic characteristics that affect energy and water consumption, **can** be considered same basic model.
- **Essentially identical**
 - Manufacturers have wide latitude in groupings; however, groupings must meet certain requirements
- **May not** contain individual models from multiple product classes. (For example, compact dishwasher and standard dishwasher can't be same basic model.)
- **Must** have one rated value for all models within the basic model equal to the least efficient/most consumptive individual model.

	Grouping Maximum Possible Number of Individual Models into Each Basic Model	Testing Each Individual Model and Certifying Each as a Separate Basic Model
Advantages	Minimum testing burden	Reduces compliance risk and potential liability for noncompliance
Disadvantages	Higher risk if found noncompliant: if an individual model fails to meet energy and/or water conservation standard, all individual models within the basic model are deemed noncompliant. Thus the more models grouped in the basic model, the larger the risk associated with a compliance failure.	Higher testing burden

- Manufacturer Awesome Products does not want to test two samples of each individual dishwasher models D, E, and F. Can Awesome Products rely upon the test data of one of these models for the others?

Yes, if D, E, and F have essentially identical energy and water consumption and are in the same product class. Awesome Products would test at least two units of the most consumptive design (if there is any variability between individual models) and submit a certification report stating that D, E, and F are the same basic model and have the same energy and water consumption value.

- If testing later shows that F does not meet the standard, which models will DOE determine are noncompliant?

Models D, E, and F will be found to be noncompliant because they are part of the same basic model.

1

Authority, Coverage, and Definitions

2

Importation

3

Basic Models

4

Certified Ratings

5

Certification Requirements

6

Enforcement Overview

7

Pertinent Regulations & Internet Resources

1. For each basic model, test a sufficient number of sample units to ensure that the represented value of energy and/or water consumption adequately represents performance of all of the units within the basic model.
 - Must test a minimum of two units.
 - No limit on the maximum number of sample units.
 - Must use DOE test procedure.
2. Once testing is complete, calculate energy and/or water consumption rating based upon DOE statistical sampling provisions in 10 C.F.R. Part 429, Subpart B.

...a sample of sufficient size...

Must test at least two individual
units of each basic model.

DOE test procedures have incorporated relevant industry standards

Product(s)	Procedures
Refrigerators Refrigerator-Freezers	Sections 3.30, 4.2, 4.3, and 5.3.2 through 5.5.5.5 of AHAM HRF-1-2008; Appendix M, Sections M3(a)-(c) and M4(a) of AS/NZS 4474.1:2007 (as explained in Part 430, Subpart B, Appendix A)
Freezers	Sections 3.30, 4.2, 4.3, and 5.3.2 through 5.5.5.5 of AHAM HRF-1-2008 (as explained in Part 430, Subpart B, Appendix B)
Dishwashers	Section 4.1 and 5.3 through 5.7 of ANSI/AHAM DW-1-1992; Paragraphs 4.2, 4.3.2, 4.4, 5.1 (note 1), and 5.2 of IEC 62301 (as explained in Part 430, Subpart B, Appendix C and C1)

DOE test procedures have incorporated relevant industry standards

Product(s)	Procedures
Room Air Conditioners	Sections 4, 5, 6.1, and 6.5 of ANSI/AHAM RAC-1-2008; ANSI/ASHRAE Standard 16-1983 (RA 2009); Paragraphs 4.2, 4.3, 4.5, and 5.2 of IEC 62301 (as explained in Part 430, Subpart B, Appendix F)
Clothes Washers	AATCC Test Methods 79-2000, 79-2010, 118-1997, 118-2007, 135-2010; Paragraphs 5.1 (note 1), and 5.2 of IEC 62301 (as explained in Part 430, Subpart B, Appendix J1 and J2)
Dehumidifiers	Sections 3, 5, and 7 of ANSI/AHAM DH-1-2008; Paragraphs 4.2, 4.3.2, 4.4, 5.1 (note 1), and 5.2 of IEC 62301 (as explained in Part 430, Subpart B, Appendix X)

- Manufacturers can either:
 - perform testing themselves, or
 - ask a third-party to complete testing for them.
- Importers often ask the foreign OEM to complete testing.
- DOE does not require that test laboratories have a particular accreditation to test these products, but they must use the prescribed DOE test procedure.

- BuyThem imports dehumidifiers from DehumSupplier and sells them in the United States. Can BuyThem use DehumSupplier's test data to rate its dehumidifiers?

- BuyThem imports dehumidifiers from DehumSupplier and sells them in the United States. Can BuyThem use DehumSupplier's test data to rate its dehumidifiers?

Yes, BuyThem may use DehumSupplier's data as a basis for its rating as long as the tests were conducted in accordance with DOE test procedures. BuyThem is responsible for the compliance of the products, however. BuyThem may want to inquire about how units are selected for testing, what controls are in place to ensure that the units are representative of production units, the qualifications of the test lab, etc. to ensure that it is comfortable relying a test data provided by the OEM.

1. Consult the appropriate product-specific section in Part 429 (e.g., 10 C.F.R. § 429.36 for dehumidifiers).
2. Calculate the mean energy factor from test samples.
3. Calculate the lower confidence limit (LCL) and divide it by the product-specific divisor.
4. Compare and determine certifiable value range.

1. Consult the appropriate product-specific section in Part 429

Example: 10 C.F.R. § 429.36 states that, for dehumidifiers, any represented value of the energy factor of a basic model ... shall be no greater than the lower of:

(i) The mean of the sample, where:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the i^{th} sample;

Or, (ii) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.9, where:

$$LCL = \bar{x} - t_{0.95} \left(\frac{s}{\sqrt{n}} \right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95% one-tailed confidence interval with $n-1$ degrees of freedom (from Appendix A).

2. Calculate the mean using your test data

Example: tested 3 dehumidifiers, obtained results of 1.64, 1.69 and 1.74 liters/kWh.

$$\text{Mean} = \frac{1.64 + 1.69 + 1.74}{3} = 1.69 \text{ liters/kWh.}$$

3. Calculate the lower confidence limit (LCL) divided by the product-specific divisor.

Example: tested 3 dehumidifiers, obtained results of 1.64, 1.69 and 1.74 liters/kWh.

$$LCL = \bar{x} - t_{.95} \left(\frac{s}{\sqrt{n}} \right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{.95}$ is the t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix A).

The t-statistic for a 95% one-tailed confidence interval with (n-1) (here, 3-1 = 2) degrees of freedom is 2.920.

- pulled from chart in Appendix A to Subpart B of 10 C.F.R. Part 429

The square root of n is 1.732.

The standard deviation (s) is 0.05.

So: the LCL = 1.694914

And LCL/0.9 = 1.78412

4. Compare and determine certifiable value range.

Example: tested 3 dehumidifiers, obtained results of 1.64, 1.69 and 1.74 liters/kWh.

Mean = 1.69 liters/kWh

LCL/0.90 = 1.78412 liters/kWh

The maximum rating is the **lower** of LCL/0.90 and the mean.

In this case, **1.69 < 1.78412**, so the mean is the basis for the rating.

Conclusions:

- Although the LCL/0.90 was 1.78 liters/kWh (after rounding to two decimal places), **1.69 liters/kWh** is the **highest** value at which you can certify based on these test results.
- If the dehumidifier had a capacity of between 45.01 and 54.00 pints/day, you could certify a value as low as **1.60 liters/kWh** (the energy factor standard for a dehumidifier with a capacity of between 45.01 and 54.00 pints/day).

- The sampling plans are designed to create conservative ratings, which helps ensure that most consumers get the consumption indicated by the certified rating.
- DOE allows manufacturers to use conservative ratings beyond those provided by the sampling plans. For example, 1.60 liters/kWh is more consumptive than the mean of 1.69 liters/kWh.
- Manufacturers may rate models conservatively. For example, for a energy factor of 1.69 liters/kWh supported by test data, you may use a rated value of as low as 1.60 liters/kWh (the energy factor standard for a dehumidifier with a capacity of between 45.01 and 54.00 pints/day).
- A conservative rating is not a misrepresentation.

1

Authority, Coverage, and Definitions

2

Importation

3

Basic Models

4

Certified Ratings

5

Certification Requirements

6

Enforcement Overview

7

Pertinent Regulations & Internet Resources

- Energy conservation standards regulatory program based on self-certification before distribution (including importation)
 - Submit annually
 - Also submit before distributing any new basic model in commerce
 - Update to reflect discontinuance
- **Manufacturers** must submit a certification report
 - Report states that covered product has been tested in accordance with the DOE test procedure and that the product complies with the federal energy and water conservation standards
- Remember: Importers are considered manufacturers!
- Private labelers need not certify unless they are importers, but each brand must be certified. The manufacturer must certify the private labeled brands.

Certification Requirements: Basics (cont.)

- Reporting to the ENERGY STAR® program or the California Energy Commission does **NOT** satisfy the DOE certification requirement.
- Reporting using the DOE templates and CCMS fulfills the certification requirements for DOE **and** FTC.
- Energy and/or water consumption rating reported to DOE must be the same energy and/or water consumption that is reported to other agencies and placed on product packaging and marketing literature. Each product should have ONE rating using the DOE metric.
- No additional certification testing required for annual submission.
- During the year, retest and recertify if an existing model increases energy and/or water consumption resulting in re-rating.

Certification Requirements: Basics (cont.)

- Product specific information within report
 - DOE provides template
 - Must report rated value as previously described
 - Must report specific product characteristics
 - Must certify in legally binding statement that products have been tested and meet standard
- Must register for access to Compliance Certification Management System (CCMS) using form available online
 - Follow instructions on form to obtain username and password.
- Only electronic submissions accepted.
- Once registered, submit completed templates through CCMS.
- Models added to DOE public certification database within two weeks:
<http://www.regulations.doe.gov/certification-data>

- **Annual certification requirement**
 - Refrigerators, Refrigerator-Freezers, and Freezers: August 1
 - Dishwashers: June 1
 - Room Air Conditioners: July 1
 - Clothes Washers: October 1
 - Clothes Dryers: October 1
 - Dehumidifiers: September 1
- **The annual reporting requirement covers:**
 - All discontinued basic models previously certified that have not previously been reported as discontinued (mark “D”);
 - All previously certified basic models that are still in distribution in commerce that are unchanged (mark “E”);
 - All previously certified basic models that are still in distribution in commerce but for which the manufacturer needs to report new or changed information (mark “C”) (e.g., new individual model numbers, modified rating); and
 - Any new models a manufacturer anticipates offering for distribution in commerce (mark “N”).

- Manufacturers are required to certify each individual model with each brand name under which it is sold.
- DOE does not publish manufacturer/brand name relationship.
- Public database lists models by brand name, **not** manufacturer.

- Ton-o-Brands makes room air conditioners abroad under various brand names and imports them into the United States. Some individual room air conditioner models have multiple brand names. How should Ton-o-Brands certify these models?

- Ton-o-Brands makes room air conditioners abroad under various brand names and imports them to the United States. Some individual room air conditioner models have multiple brand names. How should Ton-o-Brands certify these models?

Ton-o-Brands must list each brand name for each individual model.

Manufacturer	Brand	Basic Model	Indiv. Model	Sample Size	Combined Energy Efficiency Ratio
Ton-o-Brands	ABrand	GP	XA	2	11.0
Ton-o-Brands	BBrand	GP	XB	2	11.0
Ton-o-Brands	CBrand	GP	XC	2	11.0

A basic model should be reported as discontinued only

- when production has ceased *and*
- it is no longer being sold or offered for sale by the manufacturer or private labeler

Manufacturers ***must*** report this discontinued status to DOE no later than the next annual certification report following such cessation.

Manufacturers ***may*** report this discontinued status to DOE before the next annual certification report following such cessation.

A manufacturer may authorize a third-party to submit certification reports on the manufacturer's behalf. The manufacturer remains responsible for the accuracy of the reports and compliance with the energy and/or water conservation standards.

Common examples of third-party submitters include test labs or companies that assemble products abroad but do not import them.

To complete a third-party certification report properly,

- A manufacturer must complete a third-party authorization form and provide it to the third-party to submit to DOE.
- The third-party representative must have a CCMS account.
- The third-party's certification on behalf of the manufacturer must indicate the third-party is a third-party representative and must identify the party(ies) on whose behalf the report is being submitted. It must also indicate whether that party is a domestic manufacturer, importer or private labeler.

- Requirements located in 10 C.F.R. § 429.71
- Manufacturers must retain the records which underlie *each* certification of a basic model.
 - This includes test reports!
- Records must be organized and indexed in a fashion that makes them readily accessible for review by DOE upon request.
- Records must be retained for two years from the date that the manufacturer or third party submitter has notified DOE that the model has been *discontinued*.

- Remember to complete both the “Input” and the “Certification” tabs on the spreadsheet
 - If the template status is “ERROR” you have missed a required field or entered data incorrectly. DO NOT submit if the status is ERROR.
- Include model number for both basic model and individual model
 - Do not use “all finishes”
 - Do not use “N/A”
- Can use wildcards:
 - E.g.: ABC1, ABC2, and ABC3 can be on a single line as “ABC*” as long as the last value represents a characteristic that has no effect on energy and/or water consumption (e.g., color or finish)
 - Note that CCMS treats the wildcard as a unique value, so it will not see “ABC1” and “ABC*” as the same model. If you certify both ways, both will appear in the database.
- Be sure to list all individual models within basic model
- Refer to “Product Description” tab to ensure correct product class

- Freeze-A-Lot sells freezer A345 with three finishes. The individual model numbers are A345-S, A345-B, and A345-BN. How should it certify all of these finishes?

Basic Model	Indiv. Model	Total Adjusted Volume	Annual Energy Use
A345	A345-**	31.45	562

Basic Model	Indiv. Model	Total Adjusted Volume	Annual Energy Use
A345	N/A	31.45	562

Basic Model	Indiv. Model	Total Adjusted Volume	Annual Energy Use
A345		31.45	562

Basic Model	Indiv. Model	Total Adjusted Volume	Annual Energy Use
A345	All	31.45	562

- Freeze-A-Lot sells freezer A345 with three finishes. The individual model numbers are A345-S, A345-B, and A345-BN. How should it certify all of these finishes?



Basic Model	Indiv. Model	Total Adjusted Volume	Annual Energy Use
A345	A345-**	31.45	562

Basic Model	Indiv. Model	Total Adjusted Volume	Annual Energy Use
A345	N/A	31.45	562
A345		31.45	562
A345	All Finishes	31.45	562

- Test Procedure Waivers
 - Only enter “yes” if actually have a waiver; this is uncommon.
 - List the exact same model number in the certification report (including wildcards, spacing, & hyphens) as in the waiver
- OHA Exception Relief
 - Only enter “yes” if actually have received relief; this is rare.
- Read the column headings carefully
 - You may have to consult DOE’s definitions or test procedures to understand what to enter
- Make sure you report in the correct units (e.g., cubic feet vs. liters)
- Correctly indicate number of units tested in sample size column

1

Authority, Coverage, and Definitions

2

Importation

3

Basic Models

4

Certified Ratings

5

Certification Requirements

6

Enforcement Overview

7

Pertinent Regulations & Internet Resources

DOE Office of the General Counsel, Office of Enforcement	Enforces the energy conservation, water conservation, and design standards
Certification	• Civil penalties for failure to certify and improper certification • Certification must be based on testing in accordance with the applicable test procedure and sampling plan.
Standards	• Civil penalties for distribution of products that do not meet Federal standards • Testing products to verify compliance with Federal standards

Warning	• Not punitive. • Communicates potential issue(s) to manufacturers and, if necessary, allows the company time to resolve the issue(s). • Rarely results in a civil penalty. • May result in a civil penalty if the manufacturer fails to take the appropriate actions to resolve the issue(s) raised.
Request for Data	To obtain test data or information regarding distribution of regulated products.
Subpoena	

Civil Penalty	• Failure to meet applicable conservation standards and certification violations. • Penalties for violations of standards calculated per unit offered for distribution in commerce. • Penalties for certification violations calculated per day for each basic model improperly certified or not certified. • DOE has issued guidance on the imposition of civil penalties.
Noncompliance Determination	DOE may make a determination of noncompliance based on certification information, on test data provided by a manufacturer, or on test data obtained through DOE testing.

1

Authority, Coverage, and Definitions

2

Importation

3

Basic Models

4

Certified Ratings

5

Certification Requirements

6

Enforcement Overview

7

Pertinent Regulations & Internet Resources

- **General certification of compliance requirements**
 - 10 C.F.R. § 429.12
- **Specific certification requirements**
 - 10 C.F.R. § 429.14 (refrigerators, refrigerator-freezers and freezers)
 - 10 C.F.R. § 429.15 (room air conditioners)
 - 10 C.F.R. § 429.19 (dishwashers)
 - 10 C.F.R. § 429.20 (clothes washers)
 - 10 C.F.R. § 429.36 (dehumidifiers)
- **Enforcement provisions**
 - 10 C.F.R. Part 429, Subpart C

- **10 C.F.R. Part 430, Subpart B – Test Procedures**
 - Appendix A: Refrigerators and refrigerator-freezers
 - Appendix B: Freezers
 - Appendix C1: Dishwashers
 - Appendix D1 or D2: Clothes dryers (beginning January 1, 2015)
 - Appendix F: Room air conditioners
 - Appendix J1 and J2: Clothes washers (beginning March 7, 2015, must use Appendix J2)
 - Appendix X: Dehumidifiers

- **10 C.F.R. § 430.32 - Standards**
 - § 430.32(a): Refrigerators, refrigerator-freezers, freezers
 - § 430.32(b): Room air conditioners
 - § 430.32(g): Clothes washers
 - § 430.32(f): Dishwashers
 - § 430.32(v): Dehumidifiers
- **19 C.F.R. § 12.50**
 - CBP rules re: importation of DOE covered products and equipment

Submit a Question and Find DOE Guidance:	DOE Guidance Website: http://www1.eere.energy.gov/guidance/default.aspx?pid=2&spid=1
Request a Test Procedure Waiver:	- DOE's regulations allow manufacturers to apply for a waiver when a manufacturer determines that a given basic model contains one or more design features that prevent testing in accordance with DOE's test procedure. - Email: AS_Waiver_Requests@ee.doe.gov
File a Complaint:	Email energyefficiencyenforcement@hq.doe.gov. The Office of Enforcement will protect the identity of complainants to the maximum extent permitted by law.
Find Certified Models:	http://www.regulations.doe.gov/certification-data/
DOE's Online Certification System:	https://www.regulations.doe.gov/ccms/
Regulations:	http://www.ecfr.gov/
Enforcement Information:	http://energy.gov/gc/enforcement Email: laura.barhydt@hq.doe.gov
Sign up for Updates:	https://public.govdelivery.com/accounts/USEERE/subscriber/new