

Walk-in Coolers and Walk-in Freezers

Compliance Certification & Enforcement



AGENDA

- 1 INTRODUCTION, AUTHORITY, RULEMAKING
- 2 DEFINITION, WICF COMPONENTS
 - 2A WICF PANELS
 - 2B WICF DOORS
- 3 RESPONSIBLE PARTIES
- 4 TESTING AND RATING BASIC MODELS
- 5 CERTIFICATION
- 6 ENFORCEMENT

INTRODUCTION

DOE's Appliance and Equipment Standards Program conserves energy and water resources by improving the efficiency of consumer products and industrial equipment.

- Establishes the mandatory standards for the energy efficiency of covered products and equipment.
- Establishes test procedures for measuring the energy efficiency or energy use of covered products and equipment.
- Establishes labeling requirements for certain covered equipment, including walk-in coolers and freezers.

INTRODUCTION (CONTINUED)

DOE's Office of the General Counsel, Office of Enforcement enforces the energy conservation, water conservation, and design standards, as well as labeling requirements.

- DOE may impose civil penalties if products do not meet the standards, are not labeled in accordance with DOE regulations, or are not properly certified to the Department.
- Corrective action may be required.

STATUTORY AUTHORITY

- The Energy Policy and Conservation Act (EPCA) of 1975, as amended, established the Energy Conservation Program for Certain Industrial Equipment (42 U.S.C. 6311-6317), including components of walk-in coolers and walk-in freezers (WICFs). (42 U.S.C. 6311(1)(G)).
- Under EPCA, DOE's energy conservation program consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures.
- Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6311), energy conservation standards (42 U.S.C. 6313), test procedures (42 U.S.C. 6314), labeling provisions (42 U.S.C. 6315), and the authority to require information and reports from manufacturers (42 U.S.C. 6316).

STATUTORY AUTHORITY (CONT'D)

EPCA, as amended by Section 312 of the Energy Independence and Security Act of 2007 (EISA 2007):

- Established certain prescriptive standards for WICFs; and
- Directed DOE to establish:
 - test procedures to measure the energy use of WICFs; and
 - performance-based energy conservation standards for WICFs.

RULEMAKING HISTORY

- On April 15, 2011, DOE published a final rule that established test procedures for the principal components of walk-ins (panels, doors, and refrigeration systems). ([76 FR 21579](#); 76 FR 31795 (June 2, 2011) (technical correction notice) and 76 FR 33631 (June 9, 2011) (final technical correction notice).
- On May 13, 2014, DOE amended the test procedures affecting certain walk-in components and established provisions permitting the use of alternative efficiency determination methods for rating walk-in refrigeration systems. [79 FR 27388](#).
- On June 3, 2014, DOE published a final rule adopting performance-based energy conservation standards for walk-ins. [79 FR 32050](#).
- On December 28, 2016, DOE published a final rule amending the test procedure and adding WICF labeling requirements. [81 FR 95758](#); 82 FR 14426 (March 21, 2017) (postposing the effective date of the final rule until June 26, 2017).
- On July 10, 2017, DOE issued a final rule establishing energy conservation standards for certain equipment classes of walk-in refrigeration systems. [82 FR 31808](#).

10 CFR - REGULATIONS

10 CFR 431 Subpart R provides test procedures, identifies energy conservation standards, and provides labeling requirements for WICFs.

- 10 CFR 431.306 (energy conservation standards)
- 10 CFR 431.304 (test procedures)
- Appendices A, B, and C to Subpart R of Part 431 (test procedures)
- 10 CFR 431.305 (labeling)
- 10 CFR 431.302 (definitions)

10 CFR Part 429, Subpart B provides regulations regarding WICF certification requirements.

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WICF DEFINITION

Walk-in cooler and walk-in freezer (WICF)

- means an enclosed storage space refrigerated to temperatures, respectively, above, and at or below 32 degrees Fahrenheit that can be walked into, and has a total chilled storage area of less than 3,000 square feet.
10 CFR 431.302

WICFs do not include products designed and marketed exclusively for medical, scientific, or research purposes. 10 CFR 431.302. (See also 42 USC 6311(20))

WICF COMPONENTS

- Components of WICFs are subject to federal energy conservation standards set forth in 10 CFR 431.306. 42 U.S.C. 6311(1)(G), 6313(f).
- WICF Components
 - Panels
 - Doors

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WICF PANELS - DEFINITIONS

- A panel is a construction component that is not a door and is used to construct the envelope of the walk-in, i.e., elements that separate the interior refrigerated environment of the walk-in from the exterior.
- A display panel is a panel that is entirely or partially comprised of glass, a transparent material, or both and is used for display purposes.
- See also definitions at 10 CFR 431.302.

WICF PANELS – STANDARDS

- 10 CFR 431.306(a)(3)
 - WICFs manufactured on or after January 1, 2009 must have wall and ceiling insulation of at least R-25 for coolers and R-32 for freezers (with certain exceptions).
- 10 CFR 431.306(a)(4)
 - WICFs manufactured on or after January 1, 2009 must contain floor insulation of at least R-28 for freezers.

WICF PANELS – TEST PROCEDURE

- 10 CFR part 431, subpart R, appendix A covers the test requirements used to determine the U-factor, conduction load, and energy use of display panels.
- 10 CFR part 431, subpart R, appendix B covers the test requirements used to determine the R-value of non-display panels.
- Relevant test procedures incorporated by reference in 10 CFR 431.303.
 - ASTM C518-2004
 - NFRC 100-2010[E0A1]

TEST PROCEDURE – NON-DISPLAY PANELS

- 10 CFR part 431, subpart R, appendix B
- The R-value, or thermal resistance, is the metric for establishing performance standards for non-display WICF panels.
- To determine the R-value of a non-display panel:
 - 1/k factor multiplied by the thickness of the foam**
 - Do not use a nominal value for the foam thickness.
 - K factor is determined using ASTM C518
 - Freezers
 - The K factor of the foam at 20 degrees Fahrenheit +/- 1 degree (average foam temperature) shall be used.
 - Coolers
 - The K factor of the foam at 55 degrees Fahrenheit +/- 1 degree (average foam temperature) shall be used.

TEST PROCEDURE – NON-DISPLAY PANELS

- Test a test sample 1 ± 0.1 -inches in thickness.
 - Sample must be taken from the center of the panel
 - May use same sample to determine the R value of panels with various foam thicknesses if the foam is of the same final chemical form
 - Recommended cutting tools
 - High speed band saw
 - Meat slicer
 - Do NOT use hot wire cutters or other heated tools to cut foam test samples
- Remove any protective skins or facers (e.g., metal facers).
- Don't include any internal non-foam member and/or edge regions.

TEST PROCEDURE – NON-DISPLAY PANELS

- Foam must be tested after it is produced, in its **final chemical form**.
 - Foam-in-place (foam produced inside of a panel):
 - Final chemical form means the foam is cured as intended and ready for use as a finished panel.
 - Foam must not include any structural members or non-foam materials.
 - Panel manufacturers must have test data for their own final product.
 - Foam produced as board stock
 - Final chemical form means after extrusion and ready for assembly into a panel or after assembly into a panel.
 - Foam may be tested prior to its incorporation into a final panel.
 - Panel manufacturers must have test data for the board stock.

TEST PROCEDURE – NON-DISPLAY PANELS

- The two surfaces of the test sample that will contact the hot plate assemblies must both maintain ± 0.03 inches flatness tolerance and also maintain parallelism with respect to one another within ± 0.03 inches.
- Testing must be completed within 24 hours of samples being cut for testing.

WICF PANELS – LABELING REQUIREMENTS

- Labeling requirements for WICF non-display panels are found at 10 CFR §431.305.
- Required Information: The permanent nameplate of the walk-in cooler or walk-in freezer panel must be marked clearly with:
 1. The panel brand or manufacturer, and
 2. One of the following statements, as appropriate:
 - “This panel is designed and certified for use in walk-in cooler applications.”;
 - “This panel is designed and certified for use in walk-in freezer applications.”; or
 - “This panel is designed and certified for use in walk-in cooler and walk-in freezer applications.”

WICF PANELS – LABELING REQUIREMENTS

- Display of required information
 - All orientation, spacing, type sizes, typefaces, and line widths to display this required information must be the same as or similar to the display of the other performance data included on the panel's permanent nameplate.
 - The permanent nameplate must be visible unless the panel is assembled into a completed walk-in.
- A manufacturer may not mark the nameplate of a component with the required information until the manufacturer submits a certification of compliance for the relevant model.
- Each catalog that lists the component and all materials used to market the component must include:
 - The R-value in the form “R-value__.”
- The information that must appear on a walk-in cooler or walk-in freezer component's permanent nameplate pursuant to 431.305 (a)-(c) must also be prominently displayed in each catalog that lists the component and all materials used to market the component.

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WICF DOORS

- The definitions, test procedure, standards, and labeling requirements for walk-in doors are located at 10 CFR Part 431, Subpart R.
 - Definitions (10 CFR 431.302)
 - Test Procedures (10 CFR 431.304)
 - Standards (10 CFR 431.306)
 - Labeling Requirements (10 CFR 431.305)

WICF DOORS - DEFINITIONS

- Door means an assembly installed in an opening on an interior or exterior wall that is used to allow access or close off the opening and that is movable in a sliding, pivoting, hinged, or revolving manner of movement. For walk-in coolers and walk-in freezers, a door includes the door panel, glass, framing materials, door plug, mullion, and any other elements that form the door or part of its connection to the wall.
- Display door means a door that:
 - (1) Is designed for product display; or
 - (2) Has 75 percent or more of its surface area composed of glass or another transparent material.

*See 10 CFR 431.302 for definitions.

WICF DOORS – STANDARDS

- 10 CFR 431.306(a).
 - WICFs manufactured on or after January 1, 2009
 - Requirements include:
 - auto door closers that firmly close all walk-in doors that have been closed to within 1 inch of full closure (with some exceptions for certain door sizes);
 - strip doors, spring hinged doors, or other method of minimizing infiltration when doors are open; and
 - door insulation of at least R-25 for coolers and R-32 for freezers (with certain exceptions).

WICF DOORS – STANDARDS (CONT'D)

- 10 CFR 431.306(b).
 - WICFs manufactured on or after January 1, 2009
 - Requirements related to transparent reach-in WICF doors manufactured on or after January 1, 2009:
 - Transparent reach-in doors for walk-in freezers and windows in walk-in freezer doors must have:
 - triple-pane glass with either heat-reflective treated glass or gas fill.
 - Transparent reach-in doors for walk-in coolers and windows in walk-in cooler doors must have:
 - Double-pane glass with heat-reflective treated glass and gas fill; or
 - Triple-pane glass with either heat-reflective treated glass or gas fill.
 - There are also requirements regarding WICFs with anti-sweat heaters and the use of anti-sweat heat controllers.

WICF DISPLAY DOORS – MAXIMUM ENERGY CONSUMPTION STANDARDS

- 10 CFR 431.306(c).

All walk-in cooler and walk-in freezer display doors manufactured starting June 5, 2017, must satisfy the following standards:

Class descriptor	Class	Equations for maximum energy consumption (kWh/day)*
Display Door, Medium Temperature	DD.M	$0.04 \times A_{dd} + 0.41.$
Display Door, Low Temperature	DD.L	$0.15 \times A_{dd} + 0.29.$

* A_{dd} represents the surface area of the display door.

WICF NON-DISPLAY DOORS – MAXIMUM ENERGY CONSUMPTION STANDARDS

- 10 CFR 431.306(d).

All walk-in cooler and walk-in freezer non-display doors manufactured starting on June 5, 2017, must satisfy the following standards:

Class descriptor	Class	Equations for maximum energy consumption (kWh/day)*
Passage door, Medium Temperature	PD.M	$0.05 \times A_{nd} + 1.7.$
Passage Door, Low Temperature	PD.L	$0.14 \times A_{nd} + 4.8.$
Freight Door, Medium Temperature	FD.M	$0.04 \times A_{nd} + 1.9.$
Freight Door, Low Temperature	FD.L	$0.12 \times A_{nd} + 5.6.$

* A_{nd} represents the surface area of the non-display door.

WICF DOORS - TEST PROCEDURE

- 10 CFR 431.304
- 10 CFR part 431, subpart R, appendix A
 - Energy consumption of WICF display doors and non-display doors (includes calculation of U-factor)
- 10 CFR part 431, subpart R, appendix B
 - R-value of foam
- Relevant test procedures incorporated by reference in 10 CFR 431.303
 - ASTM C518-2004
 - NFRC 100-2010[E0A1]

APPENDIX A – WICF DISPLAY DOORS

- 1.0 - 3.0 Scope, Definitions, Instructions
- 4.4 Display Doors
 - Conduction Through Display Doors (4.4.1)
 - Step 1. Calculate U-Factor (5.3)
 - Step 2. Measure Surface Area
 - Step 3. Calculate Temperature Differential

Table A.1—Temperature Conditions

Internal Temperatures (cooled space within the envelope)

Cooler Dry Bulb Temperature	35 °F
Freezer Dry Bulb Temperature	–10 °F

External Temperatures (space external to the envelope)

Freezer and Cooler Dry Bulb Temperatures	75 °F.
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- Step 4. Calculate Conduction Load.

APPENDIX A – WICF DISPLAY DOORS (CONT'D)

- Direct Energy Consumption of Electrical Components (4.4.2)
 - Determine PTO for each electricity consuming device
 - Calculate power usage for each
 - Calculate total electrical energy consumption for interior and exterior power
 - Calculate the total electrical energy consumption
- Total Indirect Electricity Consumption Due to Electrical Devices (4.4.3)
 - Determine EER (plug-in; see EERs in 4.4.3(a))
 - Calculate additional refrigeration energy consumption due to thermal output from electrical components sited inside the display door
- Total Display Door Energy Consumption (4.4.4)
 - Determine EER (plug-in; see EERs in 4.4.4(a))
 - Calculate total kWh/day due to conduction thermal load
 - Calculate Total Energy Consumption

APPENDIX A – WICF DISPLAY DOORS (CONT'D)

- Total Display Door Energy Consumption (4.4.4)
 - Determine EER (plug-in; see EERs in 4.4.4(a))
 - Calculate total kWh/day due to conduction thermal load
 - Calculate Total Energy Consumption

APPENDIX A – WICF NON-DISPLAY DOORS

- 1.0 - 3.0 Scope, Definitions, Instructions.
- 4.5 Non-Display Doors.
 - Conduction Through Non-Display Doors (4.5.1)
 - Calculate Surface Area
 - Calculate Temperature Differential
 - Calculate Conduction Load
 - Calculate U-Factor (5.3)
 - Direct Energy Consumption of Electrical Components (4.5.2)
 - Determine PTO for each electricity consuming device
 - Calculate power usage for each
 - Calculate total electrical energy consumption for interior and exterior power
 - Calculate the total electrical energy consumption

APPENDIX A – WICF NON-DISPLAY DOORS

- Total Indirect Electricity Consumption Due to Electrical Devices (4.5.3)
 - Determine EER (plug-in; see EERs in 4.4.3(a))
 - Calculate additional refrigeration energy consumption due to thermal output from electrical components associated with the non-display door
- Total Non-Display Door Energy Consumption (4.5.4)
 - Determine EER (plug-in; see EERs in 4.5.4(a))
 - Calculate total kWh/day due to thermal load
 - Calculate Total Energy Consumption

U-FACTOR

- Calculate U-factor in accordance with 5.3.
 - Simulation
 - Follow NFRC 100 (with exceptions)
 - Modeling methodology
 - NFRC Simulation Manual directs you to Window and Therm
 - » Therm: Design frame, sash, the components that make up the frame of the door
 - » Window: Plug in Therm frame, then design door
 - » Caution against Window and Therm for any doors that are not fully transparent!
 - Some testing is required for validation
 - Testing
 - NFRC 100 → NFRC 102.2 → ASTM C1199-09 → others (e.g., C1363)
 - Note the exceptions in CFR Appendix A, 5.3 and NFRC 102 caveats to 1199
 - Hot box method

APPENDIX B – R-VALUE OF WICF NON-DISPLAY DOORS

- 10 CFR part 431, subpart R, appendix B.
 - R-value
 - Calculation for the R value
 - thickness of the panel multiplied by 1/K.
 - do not use a nominal value for the thickness.
 - K factor is based on ASTM C518
 - But follow the entire DOE test procedure!
 - Consider the temperature requirements
 - for freezers, the K factor of the foam at 20 ± 1 degrees Fahrenheit (average foam temperature) shall be used.
 - for coolers, the K factor of the foam at 55 ± 1 degrees Fahrenheit (average foam temperature) shall be used.
- Remember:
 - Must determine R value for doors with partial foam

Appendix B – R VALUE OF WICF NON-DISPLAY DOORS

- Test a test sample 1 ± 0.1 -inches in thickness.
 - Sample must be taken from the center
 - May use same sample to determine the R value with various foam thicknesses if the foam is of the same final chemical form
 - Recommended cutting tools
 - High speed band saw
 - Meat slicer
 - Do NOT use hot wire cutters or other heated tools to cut foam test samples
- Remove any protective skins or facers (e.g., metal facers).
- Don't include any internal non-foam member and/or edge regions.

Appendix B – R VALUE OF WICF NON-DISPLAY DOORS

- Foam must be tested after it is produced, in its **final chemical form**.
 - Foam-in-place (foam produced inside of a door):
 - Final chemical form means the foam is cured as intended and ready for use as a finished door.
 - Foam must not include any structural members or non-foam materials.
 - Manufacturers must have test data for their own final product.
 - Foam produced as board stock
 - Final chemical form means after extrusion and ready for assembly into a door or after assembly into a door.
 - Foam may be tested prior to its incorporation into a final door.
 - Manufacturers must have test data for the board stock.

Appendix B – R VALUE OF WICF NON-DISPLAY DOORS

- The two surfaces of the test sample that will contact the hot plate assemblies (as defined in ASTM C518) must both maintain ± 0.03 inches flatness tolerance and also maintain parallelism with respect to one another within ± 0.03 inches.
- Testing must be completed within 24 hours of samples being cut for testing.

WICF DOORS – LABELING REQUIREMENTS

- Labeling requirements for WICF doors are found at 10 CFR §431.305.
- The permanent nameplate of a WICF door must be marked clearly with the door brand or manufacturer, as well as the one of the following statements, as appropriate:
 - "This door is designed and certified for use in walk-in cooler applications.";
 - "This door is designed and certified for use in walk-in freezer applications."; or
 - "This door is designed and certified for use in walk-in cooler and walk-in freezer applications."
- Required since June 26, 2017.

WICF DOORS – LABELING REQUIREMENTS (CONT'D)

- A manufacturer may not mark the nameplate of a component with the required information if the manufacturer has not submitted a certification of compliance for the relevant model.
- Marketing materials.
 - Each catalog that lists the door and all materials used to market the door must include:
 - The energy consumption in the form “EC__kWh/day.”
 - The statements that must be on the nameplate must also be prominently displayed in each catalog that lists the component and all materials used to market the component.

- **WICF DOORS & CRE DOORS.**
 - CRE doors not subject to standards.
 - Cannot use to circumvent the WICF standard
 - If you are offering a door model for WICF applications (e.g., through online advertising, through communications with the customer), the WICF door requirements apply.

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Q: WHO IS RESPONSIBLE FOR COMPLIANCE?

A: Parties subject to DOE regulations.

Manufacturers

- Includes component manufacturers & manufacturers of complete walk-ins (includes installers)
- Manufacture means to manufacture, assemble, produce, or import

Private Labelers

- Private Labelers are companies that
 - Own a brand or trademark that is not the manufacturer's brand or trademark, and
 - Authorize a manufacturer to label products with that brand
- A private labeler is liable if the products it private labels are not compliant with applicable standards.

MANUFACTURERS – COMPONENT

A WICF component manufacturer (WICF panel or WICF door manufacturer) must:

- certify to DOE the compliance of the component with all applicable standards;
- determine certified ratings through testing (AEDM permissible for refrigeration systems only);
- maintain test data; and
- ensure the component is labeled in accordance with all applicable labeling requirements.

MANUFACTURERS – WHOLE WICF

- If *only* assembling the complete walk-in (and not making a component), you may use previously certified WICF components.
 - In this scenario the manufacturer is permitted to rely upon the representations of the WICF component manufacturer to ensure compliance.
 - If those representations turn out to be false, the component manufacturer is responsible.
 - DOE's labeling requirements help to identify certified components.
- Prescriptive requirements at 10 CFR 431.306(a) apply to complete walk-ins.
 - Manufacturers of complete walk-ins must ensure that the complete box complies with these standards.

MANUFACTURERS – COMPONENT + WHOLE WICF

- If manufacturing one or more WICF components *and* assembling the complete walk-in (e.g., factory-built):
 - Must test, certify, and represent as the component manufacturer.
 - Responsible for compliance.
- Prescriptive requirements at 10 CFR 431.306(a) apply to complete walk-ins.
 - Manufacturers of complete walk-ins must ensure that the complete box complies with these standards.

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WHO TESTS?

- Component manufacturers can either:
 - perform testing themselves, or
 - ask a third-party to complete testing for them.
- For WICF 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. However, the manufacturer is ultimately responsible for ensuring that the testing was conducted in complete accordance with the applicable DOE test procedure.
- Note that non-DOE test procedures may generate different results.

HOW MUCH TO TEST: OVERVIEW

- TESTING.
 - For each basic model, test a randomly selected sample of at least two units of each basic model to ensure the compliance of the basic model with the energy conservation standards in accordance with 10 CFR 429.11, 429.12, 429.53, 431.304, 431.306
 - No limit on the maximum number of sample units
 - Test each sample unit in accordance with appropriate walk-in test procedure
 - Must use DOE test procedure

* For fully transparent doors rated by simulation and verification testing, see NFRC 100 . But remember, will still need to certify on basis of basic model.

BASIC MODEL & INDIVIDUAL MODEL

- A Basic Model is made up of models that have essentially identical electrical, physical and functional characteristics that affect energy consumption and/or efficiency.
 - See 10 CFR 431.302 for full definition
- An individual, or manufacturer's, model number is the identifier a manufacturer uses to identify uniquely the group of identical or essentially identical covered products or covered equipment to which a particular unit belongs. This model number typically appears on the product nameplates, in product catalogs and in other product advertising literature.
 - See 10 CFR 429.2

BASIC MODEL

- **May** contain multiple individual models/model numbers/SKUs.
- **May** be made up of only one individual model.
- **May** be distributed under different brand names.
- **May not** contain models from multiple equipment classes.
- **Must** be manufactured by a single manufacturer.
- **Must** have the same certified rating.
- **Must** have a unique set of supporting test data (for non-simulated ratings).
 - One set of data cannot demonstrate the compliance of multiple basic models

BASIC MODEL

- Enforcement Policy Statement for Certification of WICF Door Models and Enforcement Policy Statement for Engineered to Order WICF Doors
 - www.energy.gov/gc/articles/walk-cooler-freezer-enforcement-policies
- Also see:
 - [76 FR 12422](#) - the March 2011 Final Rule regarding Certification, Compliance, and Enforcement for Consumer Products and Commercial and Industrial Equipment, where DOE established the basic model concept for walk-in coolers and freezers.
 - [81 FR 95758](#) - the December 2016 WICF Test Procedure Final Rule, which contains discussion about model grouping and the provisions at 10 CFR 429.134(q).

RATING A TESTED BASIC MODEL

- Once testing of the sample (i.e., at least two randomly selected units of the basic model) is complete, calculate the energy efficiency rating based upon DOE statistical sampling provisions in 10 CFR Part 429, Subpart B.
 - To account for variations in materials, the manufacturing process, and tolerances in testing, manufacturers must use statistics to determine an appropriate sample size and rating range.
 - The sampling plans are designed to create conservative ratings, which helps ensure that most consumers get the efficiency indicated by the certified rating.

RATING A TESTED BASIC MODEL (CONT'D)

- Manufacturers may rate models conservatively. For example, if you have a WICF cooler panel, which has an R-value standard of 25, but testing two samples and applying the certification statistics leads you to a maximum represented efficiency of R-30, you may rate the model anywhere from 25 to 30.
- A conservative rating is not a misrepresentation.

RECORDS RETENTION REQUIREMENTS

- Requirements located in 10 CFR 429.71
- Component manufacturers must retain the records which underlie the certification of each basic model.
 - Must retain complete test reports
 - Includes importers
- 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.

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CERTIFICATION: BASICS

- Component Manufacturers must certify each basic model subject to an energy conservation standard.
 - Submit before distributing any new basic model in commerce
 - Submit annually (August 1st) (10 CFR 429.12(d))
 - Also, must update to reflect discontinuance
- Certification Report
 - Report states that the basic models reported therein have been tested in accordance with the DOE test procedure and that the basic model complies with the standards
 - DOE requires both general and equipment-specific information about each basic model, including a certified rating.
- Private labelers need not certify unless they are importers

CERTIFICATION: BASICS (cont'd)

- Reports are submitted electronically to the Compliance Certification Management System (CCMS). www.regulations.doe.gov/ccms
- After the initial certification, manufacturers are required to certify annually to maintain up-to-date and comprehensive efficiency information
 - No additional testing is required for annual certification unless there has been a change to the DOE test procedure or a change to the model
 - Remember – think about whether you have done your due diligence and feel comfortable representing the efficiency of a basic model based on infrequent or minimally required testing

WHERE DO I SUBMIT?

- Compliance Certification Management System (CCMS).
 - Only electronic submissions accepted.
 - Go to the CCMS website to:
 - Register for access to the system
 - Obtain registration and authorization forms for manufacturers and third party submitters
 - Download product and equipment specific certification templates (<https://www.regulations.doe.gov/ccms/templates>)
 - Submit certification reports

WHAT DO I SUBMIT?

- Download component specific certification templates
- Input component specific information and upload
 - Must report rated values as previously described
 - Manufacturers are required to certify each individual model with each brand name that it is sold under.
 - Must report component specific characteristics
 - Must certify in legally binding statement that components have been tested in accordance with DOE requirements and that they meet applicable standards
- Test reports should not be uploaded

CERTIFICATION –TEMPLATE EXAMPLE

A	B	C	D	E	F	G	H	I	J	K	L																														
<div style="display: flex; justify-content: space-between;"> <div> OMB Control Number: 1910-1400 (Expiration Date: February 28, 2021) DOE F 220.58 </div> <div>Version 5.1</div> </div>																																									
Product Type: Panels for Walk-In Coolers and Freezers								Status of This Certification Sheet																																	
								No Data																																	
								Overall Status of Template																																	
								No Data																																	
Click here for instructions for completing this form																																									
<p>Each Importer and U.S. Manufacturer is legally required to certify the compliance of the products it imports, produces, assembles or manufactures. This party is the "Certifier" on this form. This certification may be submitted by the Importer or U.S. manufacturer or by a Third Party Representative. This party is the "Submitter" on this form.</p>																																									
Certifier - Party Legally Obligated to Certify Compliance The party responsible for certification is (select one only):						Submitter - Party Submitting This Report The party submitting this report is (select one only):																																			
<input checked="" type="radio"/> a U.S. Manufacturer <input type="radio"/> an Importer						<input type="radio"/> the Certifier (do not complete the Third Party Representative Contact Information below) <input type="radio"/> a Third Party Representative (you must have valid Third Party Authorization forms on file with the Department of Energy)																																			
Please enter required data						Please enter required data																																			
<div style="display: flex;"> <div style="flex: 1;"> Certifier Contact Information <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Full Legal Name of Individual</td> <td style="width: 30%;"></td> <td style="width: 40%; background-color: yellow;">Please enter required data</td> </tr> <tr> <td>Full Legal Name of Company</td> <td></td> <td style="background-color: yellow;">Please enter required data</td> </tr> <tr> <td>Complete Company Mailing Address</td> <td></td> <td style="background-color: yellow;">Please enter required data</td> </tr> <tr> <td>Phone Number</td> <td></td> <td style="background-color: yellow;">Please enter required data</td> </tr> <tr> <td>Email Address</td> <td></td> <td style="background-color: yellow;">Please enter required data</td> </tr> </table> </div> <div style="flex: 1;"> Third Party Representative Contact Information, if Applicable <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Full Legal Name of Individual</td> <td style="width: 30%;"></td> <td style="width: 40%; background-color: yellow;">Please enter required data</td> </tr> <tr> <td>Full Legal Name of Company</td> <td></td> <td style="background-color: yellow;">Please enter required data</td> </tr> <tr> <td>Complete Company Mailing Address</td> <td></td> <td style="background-color: yellow;">Please enter required data</td> </tr> <tr> <td>Phone Number</td> <td></td> <td style="background-color: yellow;">Please enter required data</td> </tr> <tr> <td>Email Address</td> <td></td> <td style="background-color: yellow;">Please enter required data</td> </tr> </table> </div> </div>												Full Legal Name of Individual		Please enter required data	Full Legal Name of Company		Please enter required data	Complete Company Mailing Address		Please enter required data	Phone Number		Please enter required data	Email Address		Please enter required data	Full Legal Name of Individual		Please enter required data	Full Legal Name of Company		Please enter required data	Complete Company Mailing Address		Please enter required data	Phone Number		Please enter required data	Email Address		Please enter required data
Full Legal Name of Individual		Please enter required data																																							
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Complete Company Mailing Address		Please enter required data																																							
Phone Number		Please enter required data																																							
Email Address		Please enter required data																																							
Compliance Statement Select one of the options for 'Submitter - Party Submitting This Report' above																																									
Submitter Signature (Type your Full Legal Name)						Date (MM/DD/YYYY)																																			
Please enter required data						Please enter required data																																			

CERTIFICATION –TEMPLATE EXAMPLE

	B	C	D	E	F	G	H	I	J	K	L	
10	The party responsible for certification is (select one only):						The party submitting this report is (select one only):					
11	<input checked="" type="radio"/> a U.S. Manufacturer						<input checked="" type="radio"/> the Certifier (do not complete the Third Party Representative Contact Information below)					
12	<input type="radio"/> an Importer											
13												
14	Certifier Contact Information						Third Party Representative Contact Information, if Applicable					
15												
16	Full Legal Name of Individual				Please enter required data		Full Legal Name of Individual					
17	Full Legal Name of Company				Please enter required data		Full Legal Name of Company					
18	Complete Company Mailing Address				Please enter required data		Complete Company Mailing Address					
19	Phone Number				Please enter required data		Phone Number					
20	Email Address				Please enter required data		Email Address					
21												
22												
23	<u>Compliance Statement - U.S. Manufacturer</u>											
24	I certify that:											
25	(1) This certification report is submitted in accordance with 10 CFR Parts 429, 430, and 431 and the Energy Policy and Conservation Act, as amended.											
	(2) The basic models listed in this certification report comply with the applicable conservation standard(s);											
	(3) All required testing has been conducted in conformance with the applicable test requirements prescribed in parts 10 CFR Parts 429, 430 and 431, as appropriate, or in accordance with the terms of an applicable test procedure waiver;											
	(4) All information reported in this certification report is true, accurate, and complete; and											
	(5) I am aware of the penalties associated with violations of the Energy Policy and Conservation Act (Pub. L. 94-163), as amended by Pub. L. 95-619, Pub. L. 100-12, Pub. L. 100-357, and Pub. L. 102-486 (the Act), the regulations thereunder, and 18 U.S.C. 1001 which prohibits knowingly making false statements to the Federal Government.											
	Submitter Signature (Type or Print Name)				Please enter						Please enter	

CERTIFICATION –TEMPLATE EXAMPLE (Panels)

	A	B	C	E	F	G	H	I	K	L	M	N	O	P	Q	S	T	V
1	Panels for Walk-In Coolers and Freezers								Version 5.1									
2																		
3	Status of This Input Sheet			No Data		Overall Status of Template			No Data		Click here for instructions for completing this form							
4																		
5	Certification Report																	
6	<ul style="list-style-type: none"> Please enter your data in the columns shaded in gray below, using a separate line for each model. Click on the column heading for instructions on how to complete cells in that column. Cells highlighted in yellow indicate an "Error." "Error" means that information is missing or there is an issue with the entry. If the "Status" for a row is "Error," you can see an explanation in the columns to the right of the Status column. Reports submitted with errors cannot be processed and will be returned for resubmission. 																	
8																		
9	Line No.	Status	Manufacturer	Brand Name(s)	Basic Model Number	Individual Model Number Covered by Basic Model	Action	Product Group Code	Sample Size (Number of Units Tested)	Is the Certification for this Basic Model Based on a Waiver of DOE's Test Procedure Requirements?	Date of Test Procedure Waiver, if Applicable	Is the Certification based upon any Exception Relief from an Applicable Standard by DOE's Office of Hearing and Appeals?	Date of Exception Relief, if Applicable	Is the Certification for this Basic Model based on Section 342(f) Relief (42 USC 6313(f)(6))?	Date of DOE Letter Granting Request, if Applicable	R-Value of the Wall or Ceiling Insulation (If Applicable)	R-Value of the Floor Insulation (If Applicable)	
10	1																	
11	2																	
12	3																	
13	4																	
14	5																	
15	6																	

CERTIFICATION –TEMPLATE EXAMPLE (Doors)

A	B	C	E	F	G	H	I	K	L	M	N	O	P	Q
Doors for Walk-In Coolers and Freezers														
Version 5.2														
Status of This Input Sheet		No Data			Overall Status of Template			No Data			Click here for instructions for completing this form			
Certification Report														
<ul style="list-style-type: none"> Please enter your data in the columns shaded in gray below, <u>using a separate line for each model</u>. Click on the column heading for instructions on how to complete cells in that column. Cells highlighted in yellow indicate an "Error." "Error" means that information is missing or there is an issue with the entry. If the "Status" for a row is "Error," you can see an explanation in the columns to the right of the Status column. Reports submitted with errors cannot be processed and will be returned for resubmission. 														
Line No.	Status	Manufacturer	Brand Name(s)	Basic Model Number	Individual Model Number Covered by Basic Model	Action	Product Group Code	Sample Size (Number of Units Tested)	Is the Certification for this Basic Model Based on a Waiver of DOE's Test Procedure Requirements?	Date of Test Procedure Waiver, if Applicable	Is the Certification based upon any Exception Relief from an Applicable Standard by DOE's Office of Hearing and Appeals?	Date of Exception Relief, if Applicable	Is the Certification for this Basic Model based on Section 342(f) Relief (42 USC 6313(f)(8))?	Date of DOE Letter Granting Request, if Applicable
1														
2														
3														
Glass Type of Doors and Door Windows, if Applicable	Antisweat Heater Power Draw(Watts per Square Foot of Door Opening), if Applicable	R-Value of the Door Insulation, if Applicable	Does the Model Incorporate All Applicable Design Requirements?	Energy Consumption (kWh/day)	Door Surface Area (sq ft)	Total Rated Power of Lighting (W) with a Timer, Control System, or Other Demand-Based Control Reducing the Lighting Power Consumption	Total Rated Power of Lighting (W) without a Timer, Control System, or Other Demand-Based Control Reducing the Lighting Power Consumption	Total Rated Power of Heater Wire (W) with a Timer, Control System, or Other Demand-Based Control Reducing the Heater Wire's Power Consumption	Total Rated Power of Heater Wire (W) without a Timer, Control System, or Other Demand-Based Control Reducing the Heater Wire's Power Consumption	Total Rated Power of Electricity Consuming Device (W) with a Timer, Control System, or Other Demand-Based Control Reducing the Device's Power Consumption				

CERTIFICATION – TEMPLATE EXAMPLE

	A	B	C	E	F	G	H	I	K	L	M	N	O	P	Q
1	Panels for Walk-In Coolers and Freezers								Version 5.1						
2															
3	Status of This Input Sheet		No Data		Overall Status of Template		No Data		Click here for instructions for completing this form						
4															
5	Certification Report														
6	<ul style="list-style-type: none"> • Please enter your data in the columns shaded in gray below. using a separate line for each model. • Click on the column heading for instructions on how to complete cells in that column. • Cells highlighted in yellow indicate an "Error." "Error" means that information is missing or there is an issue with the entry. • If the "Status" for a row is "Error," you can see an explanation in the columns to the right of the Status column. • Reports submitted with errors cannot be processed and will be returned for resubmission. 														
7															
8															
9	Line No.	Status	Manufacturer	Brand Name(s)	Basic Model Number	Individual Model Number Covered by Basic Model	Action	Product Group Code	Sample Size (Number of Units Tested)	Is the Certification for this Basic Model Based on a Waiver of DOE's Test Procedure Requirements?	Date of Test Procedure Waiver, if Applicable	Is the Certification based upon any Exception Relief from an Applicable Standard by DOE's Office of Hearing and Appeals?	Date of Exception Relief, if Applicable	Is the Certification for this Basic Model based on Section 342(f) Relief (42 USC 6313(f)(6))?	Date of Letter Gr Reque Applic
10	1														
11	2														
12	3														
13	4														
14	5														
15	6														
16	7														
17	8														
18	9														

Certification Based on Waiver?

Answer whether the certification for the basic model was based on a waiver of DOE's test procedure requirements in the cells below.

An affirmative answer can be either 'yes' or 'y' and a negative answer can be either 'no' or 'n'.

CCMS - Links

- Getting Started in CCMS and Helpful CCMS Information
 - <https://www.regulations.doe.gov/ccms/help>
 - [https://www.regulations.doe.gov/ccms/help/CCMS User Guide](https://www.regulations.doe.gov/ccms/help/CCMS%20User%20Guide)
- CCMS Technical Support
 - (505) 663-1302
 - ccms.support@ee.doe.gov or <https://www.regulations.doe.gov/ccms/help/contact-us>

CERTIFICATION – POINTS TO REMEMBER

- Test Procedure Waivers
 - Only enter “yes” if you actually have a waiver; this is rare.
 - List the exact same model number in the certification report as in the waiver. This includes wildcards, spacing, & hyphens.
- OHA Exception Relief & 342(f) 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
- Correctly indicate number of units tested in sample size column.

CERTIFICATION – USE OF WILD CARDS

- May not use wildcards (e.g., asterisks (*)) in Basic Model Numbers
- May use wild cards such as asterisks (*) in the Individual Model Number when multiple individual models share similar portions of their model numbers but vary in other portions due to differences that:
 - do not impact energy consumption (e.g., color, decals)), or
 - do impact energy consumption (e.g., heat controller), but where the different versions are certified as belonging to the same basic model and the models are rated based on the most consumptive version.

DISCONTINUED MODELS

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 certifier

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.

THIRD-PARTY SUBMITTERS

- A manufacturer may elect to use a third party to submit the certification report to DOE (e.g., an independent test lab, or companies that assemble products abroad but do not import them)
- Manufacturer is still responsible for submission of the certification report to DOE
 - The manufacturer remains responsible for the accuracy of the reports and compliance with the standards.
 - Manufacturers using a third party submitter must complete an authorization form
- 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 on whose behalf the report is being submitted. It must also indicate whether that party is a US manufacturer or importer.

OTHER REPORTS

- Reporting to other regulatory or voluntary programs (e.g., ENERGY STAR®) does **NOT** satisfy the DOE certification requirement.
- Even if you have reported models to another program or agency, you still must certify to DOE that the products you distribute in commerce meet the applicable standard.
- Ratings reported to DOE must be the same as those reported to other agencies and placed on product packaging and marketing literature.

PUBLIC CCMS DATABASE

Models are typically added to DOE public certification database within two weeks: <http://www.regulations.doe.gov/certification-data>

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

APPLIANCE & EQUIPMENT STANDARDS PROGRAM | CCMS

All Product Groups

Search by Model Number

Regulations & Compliance » Compliance Certification Database

U. S. Department of Energy's Compliance Certification Database

Regulations & Compliance

eeCompass

Compliance Certification Management System (CCMS)

Compliance Certification Database Home

FTC Appliance Energy Data Archives

Test Procedure Guidance for Appliances and Commercial Equipment

Appliances and Commercial Equipment Standards

Certification and Enforcement

Contacts

News

Help

The Compliance Certification Database houses certification reports and compliance statements submitted by manufacturers for covered products and equipment subject to Federal conservation standards. The database offers consumers an easy-to-use search function for existing records in a readily downloadable format. There is also a consumer-friendly selection tool as well as a search-by-model function. The public certification database houses only certification records of current basic models that have been submitted within the past year. While manufacturers may submit new information daily, the certification database will be updated approximately every two weeks to allow DOE time to actively review all submissions.

The data provided are the representations certified to DOE by manufacturers and their third party representatives. DOE makes no representations or warranties regarding the accuracy of the data. A note for parties that have submitted certification data: The public certification database has no legal significance. When a certification report is submitted in CCMS, the system automatically sends out an email confirmation of the submittal, which is the submitter's proof of having submitted the certification report to the Department. The regulatory requirement is fulfilled upon submission of a certification report that complies with the requirements of 10 CFR Part 429 - not upon posting on this site.

Please choose a Product Group:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Click a letter to jump to that section of the alphabetized list.

A

All Product Groups

Air Conditioners and Heat Pumps - Central

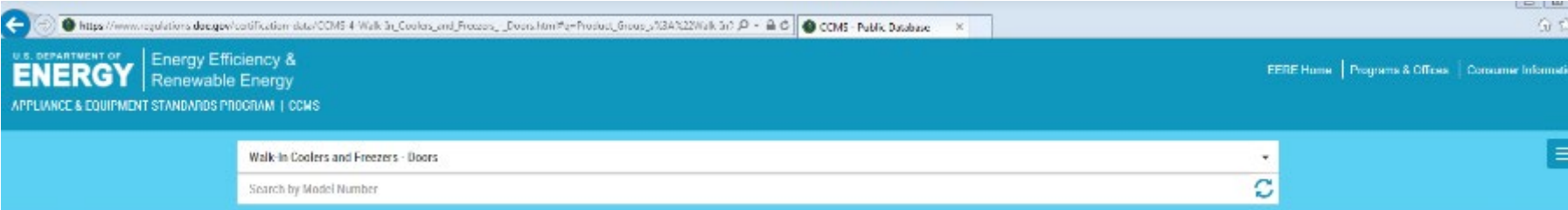
Air Conditioners and Heat Pumps - Central Multi-Split

Air Conditioners and Heat Pumps - Commercial Package

2

PUBLIC CCMS DATABASE (cont'd)

- DOE does not publish manufacturer/brand name relationship.
- Public database lists models by brand name, **not** manufacturer
- Database houses only certification records of current basic models that have been submitted within the past year or so.
- The posting of a model on the public certification database has no legal significance.



The screenshot shows the DOE Public CCMS Database interface. The header includes the U.S. Department of Energy logo and navigation links. A search bar is set to 'Walk-In Coolers and Freezers - Doors'. Below the search bar, the results are displayed in a table format. The table has columns for Brand Name, Product Group Code, Basic Model Number, Individual Model Number Covered by Basic Model, Does the Model Have a Transparent Reach-In Door or Window?, Glass Type of Doors and Door Windows, if Applicable, Door Surface Area (sq ft), Antisweat Heater Power Draw (Watts per Square Foot of Door Opening), if Applicable, R Value of the Door Insulation, and Energy Consumption (kWh/day).

Brand Name (a)	Product Group Code Description	Basic Model Number	Individual Model Number Covered by Basic Model	Does the Model Have a Transparent Reach-In Door or Window?	Glass Type of Doors and Door Windows, if Applicable	Door Surface Area (sq ft)	Antisweat Heater Power Draw (Watts per Square Foot of Door Opening), if Applicable	R Value of the Door Insulation	Energy Consumption (kWh/day)
Styleline RM	Display Door, Low Temperature	01111 RLAA S3X	01111 RLAA S3X*	Yes	3 Pane, Low E	17.759	3.374		2.65
Styleline RM	Display Door, Low Temperature	01111 RLAA S3X	01111 RLAA S3X*	Yes	3 Pane, Low E	16.762	3.575		2.8

PUBLIC CCMS DATABASE (cont'd)

- The posting of a model on the public certification database has no legal significance.
 - Simply because the model is listed on the DOE site does not mean that it is compliant with standards or that the certification provided was accurate.
 - The data on the web site reflects representations made in the CCMS submission and are not verified or confirmed by DOE.
 - Although the public database is good tool to catch potential issues with your certification, ultimately the responsibility to submit accurate and comprehensive reports that comply fully with the regulatory requirements rests with you.

AGENDA

- 1 INTRODUCTION, AUTHORITY, RULEMAKING
- 2 DEFINITION, WICF COMPONENTS
 - 2A WICF PANELS
 - 2B WICF DOORS
- 3 RESPONSIBLE PARTIES
- 4 TESTING AND RATING BASIC MODELS
- 5 CERTIFICATION
- 6 ENFORCEMENT

ENFORCEMENT OVERVIEW

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

Labeling

- Civil penalties for distribution of products that do not comply with applicable labeling requirements

ENFORCEMENT TOOLS

Request for Data	DOE may request that the manufacturer provide DOE with complete test data underlying its certifications.
Warning	DOE <i>may</i> notify the manufacturer regarding various issues related to its certifications of compliance. To avoid penalties, manufacturers should correct the identified issues promptly.
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.
Civil Penalty	<ul style="list-style-type: none">• Failure to meet applicable conservation standards and certification violations.• Penalties for violations of standards calculated per unit sold.• 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. (https://www.energy.gov/gc/downloads/civil-penalties-energy-conservation-standards-program-violations-policy-statement)

INTERNET RESOURCES

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/
Federal Register:	https://www.federalregister.gov/
Enforcement Information:	http://energy.gov/gc/enforcement
THERM/WINDOW software:	THERM: https://windows.lbl.gov/software/therm WINDOW: https://windows.lbl.gov/software/window
Sign up for Updates:	https://www.energy.gov/eere/buildings/appliance-and-equipment-standards-program

GETTING HELP FROM DOE

Request a Test Procedure Interpretation 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
Report a Potential Violation:	Email energyefficiencyenforcement@hq.doe.gov . The Office of Enforcement will protect the identity of complainants to the maximum extent permitted by law.
Enforcement questions:	For questions related to the enforcement of DOE energy efficiency regulations, email doegc32@hq.doe.gov .
Appliance Standards:	For more information related to Appliance and Equipment Standards Program, email ApplianceStandardsQuestions@EE.DOE.Gov .