[6450-01-P]

DEPARTMENT OF ENERGY

[Case No. CAC-050]

Notice of Petition for Waiver of Johnson Controls, Inc. from the Department of Energy Central Air Conditioners and Heat Pumps Test Procedure, and Notice of Grant of Interim Waiver

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notice of petition for waiver, grant of an interim waiver, and request for comments.

SUMMARY:

This notice announces receipt of and publishes a petition for waiver from Johnson Controls, Inc. (JCI) seeking an exemption from the U.S. Department of Energy (DOE) test procedure for determining the efficiency of central air conditioners and heat pumps. JCI seeks to use an alternate test procedure to address issues involved in testing certain basic models identified in its amended petition. According to JCI, testing the basic models of the central air conditioners listed in its amended petition as outdoor units with no match will overstate their energy usage as they will be rated using default indoor unit parameters that are representative of an old, inefficient indoor unit. JCI seeks to use an alternate test procedure to test and rate the basic models listed in its amended petition as matched systems. JCI proposes to waive the DOE test procedure requirement to test these basic models as outdoor units with no match and instead, test these basic models as matched systems. This notice also announces that DOE grants JCI an interim waiver from the DOE central air conditioners and heat pumps test procedure for its specified basic models, subject to use of the alternative test procedure as set forth in the Order.

DOE solicits comments, data, and information concerning JCI's amended petition and its suggested alternate test procedure.

DATES: DOE will accept comments, data, and information with respect to the JCI Petition until **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: You may submit comments, identified by case number "CAC-050" and Docket number "EERE-2017-BT-WAV-0039," by any of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov*. Follow the instructions for submitting comments.
- *E-mail*: *JCI2017WAV0042@*ee.doe.gov. Include the case number CAC-050 in the subject line of the message. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or ASCII file format, and avoid the use of special characters or any form of encryption.
- *Postal Mail:* U.S. Department of Energy, Building Technologies Office, Mailstop EE-5B, Petition for Waiver Case No CAC-050, 1000 Independence Avenue, SW., Washington, DC 20585-0121. If possible, please submit all items on a compact disc (CD), in which case it is not necessary to include printed copies.
- *Hand Delivery/Courier*: Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, 950 L'Enfant Plaza, SW., 6th Floor, Washington, DC, 20024. Telephone: (202) 287-1445. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

Docket: The docket, which includes Federal Register notices, comments, and other supporting documents/materials, is available for review at *http://www.regulations.gov*. All documents in the docket are listed in the *http://www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket Web page can be found at https://www.regulations.gov/docket?D=EERE-2017-BT-WAV-0039. The docket Web page will contain simple instruction on how to access all documents, including public comments, in the docket.

FOR FURTHER INFORMATION CONTACT: Mr. Pete Cochran, U.S. Department of Energy, Office of the General Counsel, Mail Stop GC-33, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0103. Telephone: (202) 586-9496. E-mail: *Peter.Cochran@hq.doe.gov*.

SUPPLEMENTARY INFORMATION:

I. Background and Authority

Title III, Part B[1] of the Energy Policy and Conservation Act of 1975 (EPCA), Public Law 94-163 (42 U.S.C. 6291-6309, as codified) established the Energy Conservation Program for Consumer Products Other Than Automobiles, which includes central air conditioners and heat pumps.[2] Part B includes definitions, test procedures, labeling provisions, energy conservation standards, and the authority to require information and reports from manufacturers. Further, Part

[1] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated as Part A.
[2] All references to EPCA in this document refer to the statute as amended through the EPS Improvement Act of 2017, Public Law 11-115 (January 12, 2018).

B requires the Secretary of Energy to prescribe test procedures that are reasonably designed to produce results that measure energy efficiency, energy use, or estimated operating costs during a representative average-use cycle, and that are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(3)) The test procedure for central air conditioners and heat pumps is contained in 10 CFR part 430, subpart B, appendix M (referred to in this notice as "appendix M").

DOE's regulations set forth at 10 CFR 430.27 contain provisions that allow a person to seek a waiver from the test procedure requirements for a particular basic model of a covered product when the petitioner's basic model for which the petition for waiver was submitted contains one or more design characteristics that either (1) prevent testing according to the prescribed test procedure, or (2) cause the prescribed test procedures to evaluate the basic model in a manner so unrepresentative of its true energy consumption characteristics as to provide materially inaccurate comparative data. 10 CFR 430.27(a)(1). A petitioner must include in its petition any alternate test procedures known to the petitioner to evaluate the basic model in a manner representative of its energy consumption. 10 CFR 430.27(b)(1)(iii).

DOE may grant a waiver subject to conditions, including adherence to alternate test procedures. 10 CFR 430.27(f)(2). As soon as practicable after the granting of any waiver, DOE will publish in the Federal Register a notice of proposed rulemaking to amend its regulations so as to eliminate any need for the continuation of such waiver. As soon thereafter as practicable, DOE will publish in the Federal Register a final rule. 10 CFR 430.27(l).

The regulations governing the waiver process also allow DOE to grant an interim waiver if it appears likely that the petition for waiver will be granted or if DOE determines that it would

be desirable for public policy reasons to grant immediate relief pending a determination on the petition for waiver. 10 CFR 430.27(e)(2). Within one year of issuance of an interim waiver, DOE will either: (i) publish in the Federal Register a determination on the petition for waiver; or (ii) publish in the Federal Register a new or amended test procedure that addresses the issues presented in the waiver. 10 CFR 430.27(h)(1). When DOE amends the test procedure to address the issues presented in a waiver, the waiver will automatically terminate on the date on which use of that test procedure is required to demonstrate compliance. 10 CFR 430.27(h)(2).

II. JCI's Petition for Waiver of Test Procedure and Application for Interim Waiver

On April 6, 2017, JCI filed a petition for waiver and an application for interim waiver from the CAC and HP test procedure set forth in 10 CFR part 430, subpart B, appendix M. JCI filed an amended petition for waiver and application for interim waiver on June 5, 2018. According to JCI, the basic models listed in its amended petition[3] are offered as new, matched systems and testing them as outdoor units with no match (as required by the DOE test procedure) will overstate their energy usage. Energy usage for these models will be overstated because these R-407C outdoor units will be rated using default indoor unit parameters that approximate the performance of an old, previously installed indoor unit. JCI seeks to use an alternate test procedure to test and rate the basic models listed in its amended petition. JCI proposes to waive the DOE test procedure requirement to test these basic models as outdoor units with no match and instead, test these basic models as matched systems in accordance with 10 CFR part 430, subpart B, as applicable.

[3] The specific basic models are listed in Attachment A to JCI's June 5, 2018 letter (attached at the end of this notice).

JCI also requests an interim waiver from the existing DOE test procedure. An interim waiver may be granted if it appears likely that the petition for waiver will be granted, and/or if DOE determines that it would be desirable for public policy reasons to grant immediate relief pending a determination of the petition for waiver. See 10 CFR 430.27(e)(2).

III. Requested Alternate Test Procedure

EPCA requires that manufacturers use DOE test procedures to make representations about the energy consumption and energy consumption costs of products covered by the statute. (42 U.S.C. 6293(c)) Consistent representations are important for manufacturers to use in making representations about the energy efficiency of their products and to demonstrate compliance with applicable DOE energy conservation standards. Pursuant to its regulations applicable to waivers and interim waivers from applicable test procedures at 10 CFR 430.27, and after consideration of public comments on the petition, DOE will consider setting an alternate test procedure for the equipment identified by JCI in a subsequent Decision and Order.

As an alternate test procedure, JCI proposes that the basic models listed in the amended petition be tested according to the test procedure for central air conditioners and heat pumps prescribed by DOE at 10 CFR part 430, subpart B, appendix M, as applicable, except for the provisions under 10 CFR 429.16(a)(3)(i) that require JCI's R-407C outdoor units to be tested, at a minimum, as outdoor units with no match. Under JCI's proposed alternative test procedure, the basic models listed in the amended petition would be tested as new, matched systems.

IV. Grant of an Interim Waiver

DOE conducted a review of JCI's public-facing materials, including websites, marketing materials, Air-conditioning, Heating, and Refrigeration Institute (AHRI) system matches, and technical guides for the 1,187 system combinations listed in JCI's amended petition that use GAW Series outdoor units and are certified in DOE's Compliance Certification Management System to confirm that these materials support JCI's assertions that these basic models are offered as new, matched systems. All materials reviewed by DOE can be found in the docket. Based on a review of the amended petition and JCI's public-facing materials, it is DOE's current understanding that these basic models, similar to central air conditioners that use other refrigerants, are offered as both matched, new systems and as replacement outdoor units for existing systems. JCI proposes to evaluate the basic models listed in its amended petition in a manner that is representative of the true energy consumption of these products when installed as new, matched systems, similar to how central air conditioners that use other refrigerants and are sold both as new, matched systems and as replacement outdoor units are treated under DOE's test procedures. Consequently, DOE has determined that JCI's amended petition for waiver will likely be granted. Furthermore, as central air conditioners that use other refrigerants and are sold both as new, matched systems and as replacement units are currently not subject to the outdoor unit with no match testing provisions, DOE has determined that it is also desirable for public policy reasons to grant JCI immediate interim relief pending a determination of the amended petition for waiver.

For the reasons stated, DOE has granted JCI's application for interim waiver for its specified basic models of central air conditioners. The substance of DOE's Interim Waiver Order is summarized below.

Therefore, DOE has issued an **Order**, stating:

(1) JCI must test and rate the CAC and HP basic models listed in paragraph (A) as new, matched systems with the alternate test procedure set forth in paragraph (2):

(A) GAW14L18C2*S, GAW14L24C2*S, GAW14L30C2*S, GAW14L36C2*S, GAW14L42C2*S, GAW14L48C2*S, GAW14L60C2*S

(2) The applicable method of test for the JCI basic models listed in paragraph (1)(A) is the test procedure for CACs and HPs prescribed by DOE at 10 CFR part 430, subpart B, appendix M, except that 10 CFR part 429.16(a)(3)(i) shall be as detailed below. All other requirements of 10 CFR part 429.16 remain applicable.

In 429.16(a), *Determination of Represented Value*:

(3) *Refrigerants.* (i) If a model of outdoor unit (used in a single-split, multi-split, multi-circuit, multi-head mini-split, and/or outdoor unit with no match system) is distributed in commerce and approved for use with multiple refrigerants, a manufacturer must determine all represented values for that model using each refrigerant that can be used in an individual combination of the basic model (including outdoor units with no match or "tested combinations"). This requirement may apply across the listed categories in the table in paragraph (a)(1) of this section. A refrigerant is considered approved for use if it is listed on the nameplate of the outdoor unit. If any of the refrigerants approved for use is HCFC-22 or if there are no refrigerants designated as approved for use, a manufacturer must determine represented values (including SEER, EER, HSPF, SEER2, EER2, HSPF2, $P_{W,OFF}$, cooling capacity, and heating capacity, as applicable) for, at a minimum, an outdoor unit with no match. If a model of outdoor unit is not charged with a specified refrigerant from the point of manufacture (unless either (a) the factory charge is equal to or greater than 70% of the outdoor unit internal volume times the liquid density of refrigerant at 95 °F or (b) an A2L refrigerant is approved for use and listed in the certification report), a manufacturer must determine represented values (including SEER, EER, HSPF, SEER2, EER2, HSPF2, $P_{W,OFF}$, cooling capacity, and heating capacity, as applicable) for, at a minimum, an outdoor unit with no match.

(3) *Representations*. JCI is permitted to make representations about the efficiency of basic models that meet the requirements of paragraph (1) for compliance, marketing, or other purposes only to the extent that the basic model has been tested in accordance with the provisions set forth above and such representations fairly disclose the results of such testing in accordance with 10 CFR 429.16 and 10 CFR part 430, subpart B, appendix M.

(4) This interim waiver shall remain in effect consistent with the provisions of 10 CFR 430.27(h) and (k).

(5) DOE may revoke or modify this waiver at any time if it determines the factual basis underlying the petition for waiver is incorrect, or the results from the alternate test procedure are unrepresentative of the basic model's true energy consumption characteristics.

(6) Granting of this interim waiver does not release JCI from the certification requirements set forth at 10 CFR part 429, other than those explicitly stated in paragraph (2).

DOE makes decisions on waivers and interim waivers for only those models specifically set out in the petition, not future models that may be manufactured by the petitioner. JCI may submit a new or amended petition for waiver and request for grant of interim waiver, as appropriate, for additional models of central air conditioners and heat pumps. Alternatively, if appropriate, JCI may request that this interim waiver (or subsequent waiver, if applicable) be extended to additional basic models employing the same technology as basic models specifically set out in this petition (see 10 CFR 430.27(g)).

V. Summary and Request for Comments

Through this notice, DOE announces receipt of JCI's petition for waiver from the DOE test procedure for certain basic models and announces DOE's decision to grant JCI an interim waiver from the test procedure for the basic models listed in JCI's amended petition. DOE is publishing JCI's amended petition for waiver in its entirety, pursuant to 10 CFR 430.27(b)(1)(iv). The amended petition contains no confidential information. The amended petition includes a suggested alternate test procedure, as specified in section III of this notice, to determine the energy consumption of JCI's specified CAC basic models. DOE may consider including the alternate procedure specified in the Order in a subsequent Decision and Order.

DOE invites all interested parties to submit in writing by [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***], comments and information on all aspects of the amended petition, including the suggested alternate test procedure and calculation and rating methodology. DOE also seeks comment and data on JCI's assertion that it offers R-407C outdoor units as matched systems. Pursuant to 10 CFR 430.27(d), any person submitting written comments to DOE must also send a copy of such comments to the petitioner. The contact information for the petitioner is Steve Tice, Johnson Controls, Inc., 3110 N. Mead St., Wichita, KS 67219.

Submitting comments via *http://www.regulations.gov*. The *http://www.regulations.gov* web page will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to *http://www.regulations.gov* information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (CBI)). Comments submitted through *http://www.regulations.gov* cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section.

DOE processes submissions made through *http://www.regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *http://www.regulations.gov* provides after you have successfully uploaded your comment.

Submitting comments via email, hand delivery, or mail. Comments and documents submitted via email, hand delivery, or mail also will be posted to *http://www.regulations.gov*. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information on a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via mail or hand delivery, please provide all items on a CD, if feasible. It is not necessary to submit printed copies. No facsimiles (faxes) will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, written in English and free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery two well-marked copies: one copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked "non-confidential" with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include (1) a description of the items, (2) whether and why such items are customarily treated as confidential within the industry, (3) whether the information is generally known by or available from other sources, (4) whether the information has previously been made available to others without obligation concerning its confidentiality, (5) an explanation of the

competitive injury to the submitting person which would result from public disclosure, (6) when such information might lose its confidential character due to the passage of time, and (7) why disclosure of the information would be contrary to the public interest.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

Signed in Washington, DC, on August 3, 2018

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Cathy Tripodi,
Acting Assistant Secretary for
Energy Efficiency and Renewable Energy.

Johnson Controls, Inc.
3110 N. Mead St. Wichita, KS 67219
Tel 316-239-2925 Fax 316-832-6598

June 5, 2018

VI. VIA E-MAIL: AS_Waiver_Requests@ee.doe.gov

Ashley Armstrong
Building Technologies Program
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy
Mailstop EE-5B
1000 Independence Avenue, SW
Washington, DC 20585-0121

Re: Amended Petition for Waiver and Interim Waiver of "Outdoor Unit with No Match" Test Procedure Provisions for JCI's GAW Series Central Air Conditioners

Dear Ms. Armstrong:

Pursuant to 10 C.F.R. § 430.27, Johnson Controls, Inc. (JCI) respectfully submits this amended petition for waiver and interim waiver[1] from certain provisions of the Department of Energy's (DOE) test procedure for central air conditioners (CAC).[2] Specifically, as explained herein, JCI seeks waiver of two requirements codified at 10 C.F.R. § 429.16(a)(3) with respect to its GAW Series of central air conditioners, which use R-407C as the refrigerant: (i) the requirement that represented values for a model of outdoor unit that is approved for use with any refrigerant that has a 95 °F midpoint saturation absolute pressure within 18% of the 95 °F midpoint saturation absolute pressure for HCFC-22, be determined under the "outdoor unit with no match" provisions of the CAC test procedure found at 10 C.F.R., Part 430, Subpart B, Appendix M, Sections 2.2e, 3.2.1, and 3.5.3 (No Match Provisions); and (ii) the requirement that represented values for a model of outdoor unit that is shipped requiring the addition of more than two pounds of refrigerant to meet the charge required for testing be determined under the same No Match Provisions (together, these requirements are referred to herein as the "R-407C No Match Requirements").[3] If applied to the GAW Series basic models, each of the R-407C No Match Requirements would result in evaluation of the products under the test procedure in a manner so

[1] JCI submitted a petition for test procedure waiver and interim waiver with respect to its GAW Series products on April 6, 2017. JCI, Petition for Waiver and Interim Waiver of "Outdoor Unit with No Match" Test Procedure Provisions for JCI's GAW Series Central Air Conditioners (Apr. 6, 2017) ("April 6, 2017 Petition"). DOE has not yet acted on the April 6, 2017 Petition. This amended petition updates and amends the April 6, 2017 Petition, seeking relief from the same test procedure provisions for the same basic models.
[2] 10 C.F.R. Part 430, Subpart B, Appendix M.
[3] *Id.* § 429.16(a)(3).

unrepresentative of the GAW Series' true energy consumption characteristics as to provide materially inaccurate comparative data.[4]

To evaluate the GAW Series products in a manner representative of their true energy characteristics, JCI asks for waiver of the R-407C No Match Requirements. Under JCI's proposed alternative test procedure, the GAW Series products would be subject to the full Appendix M test procedure except for the No Match Provisions, so that the GAW series basic models would be tested in the same manner as other matched CAC systems. This approach allows for rating of JCI's R-407C systems for purposes of determining compliance with efficiency standards based on an evaluation of the performance of a new matched system combination, which is consistent with the development of DOE's CAC efficiency standards themselves, which were based on consideration of the performance of matched combinations of new components. The basis for this test procedure waiver, and the corresponding interim test procedure waiver, are explained below.

I. Johnson Controls

JCI is a diversified equipment and technology company with its operational headquarters in Milwaukee, Wisconsin. Our employees provide intelligent buildings, energy efficient solutions and integrated infrastructure to optimize energy efficiency and to create the smart buildings and communities of the future. Through its Ducted Systems business, JCI manufactures and sells heating and air conditioning systems for residential uses.

JCI manufactures a line of environment-friendly central air conditioners known as its GAW Series that utilize R-407C as the refrigerant. R-407C is a non-ozone-depleting refrigerant that is readily available, less expensive than R-410A, the current industry standard refrigerant, and approved for use in CAC systems under the Environmental Protection Agency's (EPA) Significant New Alternatives Policy (SNAP) Program.[5] All of these products are manufactured in the United States, in Wichita, Kansas.

II. Background

A. Promulgation of the R-407C No Match Requirements

DOE's CAC test procedure found at 10 C.F.R. Part 430, Subpart B, Appendix M provides that the efficiency rating for an "outdoor unit with no match" must be determined using default parameters representative of an inefficient, old CAC system that would not meet today's standards.[6] "Outdoor unit with no match" is defined in Appendix M as an outdoor unit "that is not distributed in commerce with any indoor units."[7]

The No Match Provisions were adopted in a June 2016 final rule to specify how to test and rate outdoor units using the refrigerant R-22.[8] DOE found that EPA Clean Air Act regulations prohibited the

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[4] *Id.* § 430.27(f)(2) ("DOE will grant a waiver from the test procedure requirements if DOE determines . . . that the prescribed test procedures evaluate the basic model in a manner so unrepresentative of its true energy or water consumption characteristics as to provide materially inaccurate comparative data.").

[5] *See* Protection of Stratospheric Ozone: New Listings of Substitutes; Changes of Listing Status; and Reinterpretation of Unacceptability for Closed Cell Foam Products Under the Significant New Alternatives Policy Program; and Revision of Clean Air Act Section 608 Venting Prohibition for Propane, 81 Fed. Reg. 86,778, 86,806 (Dec. 1, 2016) (Table 4).

[6] 10 C.F.R. Part 430, Subpart B, Appendix M §§ 2.2(e), 3.2.1, and 3.5.3.

[7] *Id.*

[8] *See* Test Procedures for Central Air Conditioners and Heat Pumps, 81 Fed. Reg. 36,991 (June 8, 2016).

sale of matched CAC combinations using R-22 as the refrigerant.[9] Because the DOE test procedure required the testing of matched outdoor and indoor CAC components to calculate a CAC energy efficiency rating, DOE determined that the No Match Provisions were needed to specify how to test and rate R-22 outdoor units that could not, by law, be matched with an indoor unit for sale.

In a subsequent final rule promulgated in January 2017, DOE further amended the CAC test procedures to, *inter alia*, adopt the R-407C No Match Requirements, which require that R-407C products must be rated under the No Match Provisions, regardless of whether they are matched products.[10] For R-407C matched systems to be certified as compliant with applicable standards under Appendix M as revised by the 2017 Final Rule, the matched system must be rated compliant under the matched system test provisions of Appendix M, and the R-407C outdoor unit must be separately rated compliant under the No Match Provisions.[11]

The 2017 Final Rule required compliance with the R-407C No Match Requirements as of July 5, 2017.[12]

B. Requests for Relief from the R-407C No Match Requirements

After promulgation of the R-407C No Match Requirements in the 2017 Final Rule, JCI sought relief via several avenues. First, JCI filed a petition for review of the 2017 Final Rule in the United States Court of Appeals for the Seventh Circuit.[13] The parties to this case, including DOE, agreed to place the case in mediation on April 28, 2017, at which time the briefing schedule was suspended.[14] That case remains pending before the Court of Appeals.

Second, JCI sought, and DOE granted, a 180-day extension of the Final Rule's July 5, 2017 compliance deadline pursuant to Section 323(c)(3) of the Energy Policy and Conservation Act (EPCA), which permits DOE to authorize such an extension if it determines that the original compliance deadline "would impose an undue hardship" on the petitioner.[15] In granting that request, DOE found that "JCI has met the criteria for granting such a request," and delayed JCI's compliance date for testing in accordance with the R-407 No Match Requirements for the GAW Series models until January 1, 2018.[16]

Third, JCI sought,[17] and DOE granted,[18] an administrative stay of the R-407C No Match Requirements, pending judicial review in the Seventh Circuit, under Section 705 of the Administrative

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[9] *Id.* at 37,008.
[10] Test Procedures for Central Air Conditioners and Heat Pumps, 82 Fed. Reg. 1426 (Jan. 5, 2017) (2017 Final Rule).
[11] *Id.*
[12] *Id.*
[13] Petition for Review, *Johnson Controls, Inc. v. U.S. Dep't of Energy*, No. 17-1470 (7th Cir. Mar. 3, 2017).
[14] Notice of Mediation, *Johnson Controls, Inc. v. U.S. Dep't of Energy*, No. 17-1470 (7th Cir. Apr. 28, 2017); Circuit Rule 33 Order Suspending Briefing Schedule, *Johnson Controls, Inc. v. U.S. Dep't of Energy*, No. 17-1470 (7th Cir. Apr. 28, 2017).
[15] 42 U.S.C. § 6293(c)(3).
[16] Letter from Daniel R. Simmons, Acting Assistant Secretary, DOE Office of Energy Efficiency and Renewable Energy, to Elizabeth A. Haggerty, Vice-President & General Manager, JCI Unitary Products Group at 1 (June 2, 2017), *available at* https://www.energy.gov/sites/prod/files/2017/06/f34/jci-180-day-letter-2017-6-9.pdf (180-Day Hardship Extension).
[17] Request of Johnson Controls, Inc. for Administrative Stay Pending Judicial Review of Certain Elements of January 5, 2017 Final Rule on Test Procedures for Central Air Conditioners and Heat Pumps, and Request for Expedited Action (May 31, 2017).

Procedure Act.[19] In issuing the administrative stay, DOE "determined that, during the pendency of the lawsuit brought by JCI, it is in the interests of justice to postpone the effectiveness of the [R-407C No Match Requirements]."[20] Additionally, DOE explained that it "determined to postpone the effectiveness of these provisions based on JCI's submissions to DOE that raise concerns about significant potential impacts on JCI."[21]

Fourth, JCI submitted a petition for test procedure waiver, and interim test procedure waiver, of the R-407C No Match Requirements to DOE on April 6, 2017.[22] DOE has not yet taken action on the April 6, 2017 Petition. This amended petition for test procedure waiver and interim test procedure waiver updates the April 6, 2017 Petition.

III. Grounds for Test Procedure Waiver - Applying the No Match Provisions to the JCI GAW Series Combinations Results in Materially Inaccurate Comparative Data.

DOE's regulations explain that "DOE will grant a waiver from the test procedure requirements if DOE determines . . . that the prescribed test procedures evaluate the basic model in a manner so unrepresentative of its true energy or water consumption characteristics as to provide materially inaccurate comparative data." [23] JCI seeks a waiver from certain elements of the applicable CAC test procedure for its GAW Series products. Because JCI's GAW Series products use the refrigerant R-407C, the R-407C No Match Requirements require that such systems be tested under the No Match Provisions found in Appendix M. However, applying the No Match Provisions to the GAW Series products, as the R-407C No Match Requirements mandate, provides materially inaccurate comparative data.

Rating R-407C system combinations using the No Match Requirements provides materially inaccurate data for purposes of comparing basic model performance to the applicable efficiency standards. CAC test procedures are used to determine efficiency ratings of CAC basic models, as a basis for evaluating compliance of the basic models with mandatory efficiency standards. The R-407C No Match Requirements require that ratings for matched combinations of CAC products using R-407C be determined under the No Match Provisions, which evaluate the R-407C outdoor unit along with default indoor unit parameters that approximate the performance of an old, previously installed indoor unit. The CAC standards against which the products are judged, however, were developed based upon consideration of the efficiency of matched CAC combinations in which both the indoor and outdoor components are new. DOE did not consider, in developing its current standards, what standard level is technically feasible and economically justified for a CAC combination consisting of a new outdoor unit and an old, inefficient indoor unit. Because of this discrepancy, the R-407C No Match Requirements produce ratings for R-407C matched systems, such as the GAW Series basic models, that are materially inaccurate for purposes of judging compliance with the efficiency standards.

JCI's GAW Series products have many matched combinations – they are not "outdoor units with no match." Because the GAW Series products use the refrigerant R-407C, the CAC test procedure requires that the systems be tested and rated as outdoor units with no match. However, JCI certifies and offers its GAW Series products as matched systems. JCI has certified its GAW Series to DOE in more

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[18] Test Procedures for Central Air Conditioners and Heat Pumps, 82 Fed. Reg. 32,227 (July 13, 2017) (pending judicial review in *Natural Resources Defense Council v. U.S. Dep't of Energy*, No. 17-cv-6989 (S.D.N.Y.)) (Administrative Stay).
[19] 5 U.S.C. § 705.
[20] Administrative Stay, 82 Fed. Reg. at 32,227-28.
[21] *Id.* at 32,228.
[22] April 6, 2017 Petition.
[23] 10 C.F.R. § 430.27(f)(2).

than 1,100 unique matched CAC system combinations that represent a wide range of possible indoor and outdoor unit installation scenarios.[24] The certified ratings range from 14 to 16 SEER, based on the matched components. Requiring the GAW Series to be tested under the No Match Provisions would result in each of these ratings falling below 13 SEER, thus producing "materially inaccurate" representations of the performance of the matched offerings of the GAW Series products.

Unlike R-22 products, sales of matched R-407C systems are not barred by law. The rationale for establishing the outdoor unit with no match requirements for R-22 outdoor units does not apply to the GAW Series. DOE found that sale of matched R-22 systems was barred by EPA regulation under the Clean Air Act, and thus it needed to provide special test procedures, including specification of a default indoor unit, for purposes of testing R-22 outdoor units, because "the EPA prohibits distribution of new HCFC-22 condensing unit and coil combinations (i.e., complete systems)."[25] There is no such legal limitation on the distribution of matched systems using R-407C. Thus, while R-22 outdoor units can only be rated under the No Match Provisions, R-407C systems can be rated as matched systems, as reflected by the 1100+ combinations certified in DOE's Compliance Certification Management System by JCI.

Granting a waiver will ensure accurate comparative data for CAC components. Although CACs are rated as matched systems, many CAC components including outdoor units, regardless of refrigerant type, are also used to replace failed components of previously-installed systems. An R-410A outdoor unit used to replace a failed R-22 outdoor unit is rated based on testing with its certified matches; it is not rated based on an approximation of its efficiency performance when matched with outdated, already installed components. Thus, requiring JCI's R-407C outdoor units to be rated using default indoor unit parameters representative of an old, inefficient indoor unit results in materially inaccurate comparative data for consumers. For instance, under the R-407C No Match Requirements, although an R-407C outdoor unit and an R-410A outdoor unit might operate at the same efficiency when matched with the same new indoor coil, the R-407C unit will nonetheless be rated at a substantially lower efficiency because it is required to be rated under the No Match Provisions. This R-407C penalty will lead to distorted comparative ratings, and in this case would result in noncompliance determinations for the R-407C products and thus the unavailability to consumers of R-407C products.

Granting a test procedure waiver will give effect to the requirements of EPCA § 323(e). Section 323(e)(2) of EPCA provides that if a test procedure amendment "will alter the measured efficiency" of a covered product, DOE shall amend the efficiency standards so that minimally compliant products under the old test procedure will comply under the amended test procedure. Further, Section 323(e)(3) of EPCA provides that products that comply with the standards before a test procedure amendment "shall be deemed to comply" after the amendment takes effect.[26] The GAW Series products for which a test procedure waiver is sought were compliant with applicable efficiency standards under the applicable Appendix M test procedure prior to the effective date of the 2017 Final Rule. The 2017 Final Rule's R-407C No Match Requirements from which JCI seeks waiver, if applied to the GAW Series products, would render those products noncompliant with DOE efficiency standards. Thus the R-407C No Match

[24] The list of GAW Series outdoor unit/indoor coil combination matches certified by JCI is attached as Attachment A. JCI has certified to DOE individual combinations under each separate R-407C basic model in its GAW Series. For each basic model, there are a number of matched outdoor unit/indoor coil combinations, and for each such combination, JCI has certified a number of matched ducted air movers. For example, for Evcon outdoor unit basic model GAW14L18C22S, there are 18 indoor coil matches, which are certified with several different ducted air movers, in addition to 4 different air handler matches for a total of 219 matched combinations. GAW Series outdoor unit/indoor coil combinations are distributed under several brand names, including Guardian, Evcon and York; as a result, DOE's Compliance Certification Management System (CCMS) shows more than 2,700 certified combinations of GAW Series products.

[25] Test Procedures for Central Air Conditioners and Heat Pumps, 81 Fed. Reg. at 37,008.

[26] *See* 42 U.S.C. § 6293(e)(3).

Requirements alter the measured efficiency of the GAW Series, and pursuant to EPCA Section 323(e), the GAW Series should be deemed to comply under the revised test procedure that includes the R-407C No Match Requirements.[27] Granting this requested test procedure waiver would be an appropriate means of giving effect to these requirements of Section 323(e) of EPCA.

For the reasons discussed above, DOE should grant the requested test procedure waiver and allow JCI to test its GAW series products according to an appropriate alternative test procedure, i.e., the Appendix M test procedure except for the requirement to test under the No Match Provisions, consistent with the test procedure applicable to all other matched CAC systems.

IV. Test Procedures From Which Waiver Is Requested

JCI requests waiver with respect to its GAW Series from the provisions of 10 C.F.R. § 429.16(a)(3) requiring that: (i) represented values for a model of outdoor unit that is approved for use with any refrigerant that has a 95 °F midpoint saturation absolute pressure within 18% of the 95 °F midpoint saturation absolute pressure for HCFC-22, be determined under the outdoor unit with no match provision of the CAC test procedure found at Appendix M, Sections 2.2e, 3.2.1, and 3.5.3; and (ii) represented values for a model of outdoor unit that is shipped requiring the addition of more than two pounds of refrigerant to meet the charge required for testing be determined under the same outdoor unit with no match" provision. If DOE grants this limited waiver, the GAW Series products would remain subject to all of Appendix M's requirements applicable to matched systems.

V. Basic Models for Which Waiver Is Requested

JCI requests waiver for all individual combinations it has certified under the following basic model designations: GAW14L18C2*S, GAW14L24C2*S, GAW14L30C2*S, GAW14L36C2*S, GAW14L42C2*S, GAW14L48C2*S, and GAW14L60C2*S. These basic models include a large number of unique outdoor unit/indoor unit/ducted air mover combinations. As shown in Attachment A, JCI has certified more than 1,100+ unique combinations. These products are marketed under the Guardian, Evcon, and York brands, so CCMS shows a total of over 2,700 certified combinations under these basic models.

VI. Alternative Test Procedures

DOE's Appendix M test procedure, except for the requirement to test using the No Match Provisions, constitutes the appropriate alternate test procedure. This will evaluate the performance of JCI's GAW Series in a manner representative of its energy consumption characteristics. Therefore, JCI proposes to test its GAW Series basic models by applying Appendix M to 10 C.F.R. Part 430, Subpart B, as it would apply to matched systems that are not subject to the R-407C No Match Requirements. JCI would apply the entirety of Appendix M, with the revision to 10 C.F.R. § 429.16(a)(3)(i) shown below:

> If a model of outdoor unit (used in a single-split, multi-split, multi-circuit, multi-head mini-split, and/or outdoor unit with no match system) is distributed in commerce and approved for use with multiple refrigerants, a manufacturer must determine all

[27] EPCA § 323(e) is designed to ensure that test procedure amendments (as opposed to efficiency standard amendments) will not create hardship by interfering with continued sales of covered products. DOE has acknowledged that imposition of the R-407C No Match Requirements on the GAW Series would impose hardship on JCI. DOE granted JCI's request for a 180-day compliance deadline extension based on a finding of "undue hardship," and granted an administrative stay of the R-407C No Match Requirements because of "significant potential impacts on JCI." *See* 180-Day Hardship Extension at 1; Administrative Stay, 82 Fed. Reg. at 32,228.

represented values for that model using each refrigerant that can be used in an individual combination of the basic model (including outdoor units with no match or "tested combinations"). This requirement may apply across the listed categories in the table in paragraph (a)(1) of this section. A refrigerant is considered approved for use if it is listed on the nameplate of the outdoor unit. If any of the refrigerants approved for use is HCFC-22 ~~*or has a 95 °F midpoint saturation absolute pressure that is +/− 18 percent of the 95 °F saturation absolute pressure for HCFC-22*~~, or if there are no refrigerants designated as approved for use, a manufacturer must determine represented values (including SEER, EER, HSPF, SEER2, EER2, HSPF2, PW,OFF, cooling capacity, and heating capacity, as applicable) for, at a minimum, an outdoor unit with no match. If a model of outdoor unit is not charged with a specified refrigerant from the point of manufacture ~~*or if the unit is shipped requiring the addition of more than two pounds of refrigerant to meet the charge required for testing per section 2.2.5 of appendix M or appendix M1*~~ (unless either (a) the factory charge is equal to or greater than 70% of the outdoor unit internal volume times the liquid density of refrigerant at 95 °F or (b) an A2L refrigerant is approved for use and listed in the certification report), a manufacturer must determine represented values (including SEER, EER, HSPF, SEER2, EER2, HSPF2, PW,OFF, cooling capacity, and heating capacity, as applicable) for, at a minimum, an outdoor unit with no match.

Thus, the only change would be to eliminate application of the No Match Provisions for JCI's GAW Series. The resulting test procedure would be the same as that which applies, for instance, to R-410A products.

VII. Similar Products

Based on market information, it appears that two other manufacturers manufacture, or have manufactured, residential split-system central air conditioners designed to use R-407C: Broadair (Allstyle) and Thermal Zone (Rheem).

VIII. Petition for Interim Waiver

Pursuant to 10 C.F.R. § 430.27, JCI also requests an interim waiver of the R-407C No Match Requirements of the CAC test procedure for the GAW Series basic model families described in Section V. DOE's regulations provide that an interim waiver will be granted if it appears likely that the petition for waiver will be granted or if DOE determines that it would be desirable for public policy reasons to grant immediate relief pending a determination on the petition for waiver.[28]

An interim waiver is important in this case because compliance with the R-407C No Match Requirements in the 2017 Final Rule would be required for JCI but for DOE's administrative stay of those requirements. The Administrative Stay is currently the subject of litigation, and if the stay is dissolved, JCI's GAW Series would become subject to the R-407C No Match Requirements. Interim relief is important to ensure that JCI can continue to offer the GAW Series products in the event DOE's stay of the R-407C No Match Requirements is dissolved and DOE has not yet completed its consideration of JCI's petition for test procedure waiver.

Likely Success of the Petition for Waiver. For the reasons outlined above in Section III, JCI believes that there are strong arguments for granting the petition for waiver on the merits. Specifically:

[28] 10 C.F.R. § 430.27(e)(2).

- Rating R-407C system combinations using the No Match Provisions in the Appendix M test procedure provides materially inaccurate data for purposes of comparing basic model performance to the applicable efficiency standards, because the applicable efficiency standards were developed based upon consideration of the performance of new, matched systems, and not outdoor units with no match;

- JCI's GAW Series products have many matched combinations, and are not "outdoor units with no match," for which the No Match Provisions are intended;

- Unlike R-22 products, for which the No Match Provisions were originally developed, sales of matched R-407C systems are not barred by law;

- Granting a waiver will ensure accurate comparative data for CAC components, so that GAW Series products are not disadvantaged as compared to comparable R-410A products; and

- Given that the R-407C No Match Requirements would render the GAW Series products noncompliant with DOE standards, granting a test procedure waiver will give effect to the requirements of EPCA § 323(e), which requires that DOE deem products that are compliant with applicable standards prior to a test procedure amendment compliant with the standards after the test procedure amendment.

Economic Hardship. DOE has found, in acting on JCI's applications for administrative stay and compliance deadline extension, that requiring JCI to rerate the GAW Series products under the R-407C No Match Requirements would result in economic hardship.[29] If JCI is required to comply with the R-407C No Match Requirements with respect to the GAW Series basic model families, these products will no longer be able to be manufactured in compliance with applicable efficiency standards. JCI would be forced to cease production of the GAW Series, which will cause significant economic harm to JCI, and will eliminate an economic and innovative option currently available to consumers.

Public Policy Reasons to Grant Interim Waiver. The imposition of the R-407C No Match Requirements on JCI's GAW Series products while DOE considers the petition for test procedure waiver will require JCI to stop manufacturing such products and make the products unavailable to consumers. As a practical matter, if these products were taken off the market in the absence of an interim waiver, it is very unlikely that JCI would begin manufacturing them again at a later date in the event that the petition for test procedure waiver was eventually granted. Thus, an interim waiver will allow the GAW Series to continue to be manufactured until the Department has an opportunity to fully consider and act on the petition for waiver set out above. Denial of an interim waiver threatens to take this product line out of the market before DOE considers the issues raised in the petition.

The scope of JCI's request for interim test procedure waiver, and the alternative test procedure that JCI proposes to apply during the effectiveness of an interim test procedure waiver, are identical to JCI's request for waiver and alternative test procedure set forth above.

VII. IX. Conclusion

For the reasons stated above, JCI respectfully requests that DOE grant this request for waiver of the R-407C No Match Requirements for its GAW Series of R-407C central air conditioners. JCI further

[29] *See* 180-Day Hardship Extension at 1; Administrative Stay, 82 Fed. Reg. at 32,228.

requests DOE to grant its request for an interim waiver while its petition for waiver is pending. JCI requests prompt action on the request for interim waiver.

If you have any questions or would like to discuss this request, please contact Steve Tice at (316) 832-6393, Chris Forth at (405) 826-5802, or Doug Smith of Van Ness Feldman, LLP at (202) 298-1902. We greatly appreciate your attention to this matter.

Sincerely,

Steve Tice,
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Cc: John Cymbalsky, Office of Energy Efficiency and Renewable Energy
Daniel Cohen, Office of the General Counsel

VIII. Attachment A

Certified GAW Series Product Combinations

Outdoor Unit Models	Indoor Models	Number of Unique Ducted Air Mover Combinations
GAW14L18C2*S	CF/CM/CU42C+TXV	22
	CF/CM/CU42D+TXV	14
	CF/CM/CU48C+TXV	22
	CF/CM/CU48D+TXV	22
	CF/CM42D+ME14DN21+TXV	1
	CF/CM48D+ME14DN21+TXV	1
	CF42B+ME12BN21+TXV	1
	CF42B+TXV	15
	FC/MC/PC37A+TXV	10
	FC/MC/PC43B+TXV	14
	FC/MC/PC43C+TXV	22
	FC/MC/PC48C+TXV	22
	FC/MC/PC48D+TXV	26
	FC/MC43B+MV12BN21+TXV	1
	FC/MC43B+MX12BN21+TXV	1
	FC/MC48D+MX12DN21+TXV	1
	FC/PC60C+TXV	1
	FC1CXT1+TXV	23
GAW14L24C2*S	CF/CM64D+ME14DN21+TXV	1
	CF/CM64D+TXV	38
	FC/MC62D+MX12DN21+TXV	1
	FC/MC62D+TXV	36
	FC3DXT1+MX12DN21+TXV	1
	FC3DXT1+TXV	37
	FC5DXT1+MX12DN21+TXV	1
	FC5DXT1+TXV	36
	FC64D+MX12DN21+TXV	1
	FC64D+TXV	36
GAW14L30C2*S	CF/CM64D+ME14DN21+TXV	1
	CF/CM64D+ME20DN21+TXV	1
	CF/CM64D+TXV	39
	FC/MC62D+MX12DN21+TXV	1
	FC/MC62D+MX20DN21+TXV	1
	FC/MC62D+TXV	37
	FC3DXT1+MX12DN21+TXV	1
	FC3DXT1+MX20DN21+TXV	1
	FC3DXT1+TXV	38
	FC5DXT1+MX12DN21+TXV	1

Outdoor Unit Models	Indoor Models	Number of Unique Ducted Air Mover Combinations
	FC5DXT1+MX20DN21+TXV	1
	FC5DXT1+TXV	37
	FC64D+MX12DN21+TXV	1
	FC64D+MX20DN21+TXV	1
	FC64D+TXV	37
GAW14L36C2*S	CF/CM64D+ME14DN21+TXV	1
	CF/CM64D+ME20DN21+TXV	1
	CF/CM64D+TXV	41
	FC/MC62D+MV12DN21+TXV	1
	FC/MC62D+MV20DN21+TXV	1
	FC/MC62D+MX12DN21+TXV	1
	FC/MC62D+MX20DN21+TXV	1
	FC/MC62D+TXV	37
	FC3DXT1+MV12DN21+TXV	1
	FC3DXT1+MV20DN21+TXV	1
	FC3DXT1+MX12DN21+TXV	1
	FC3DXT1+MX20DN21+TXV	1
	FC3DXT1+TXV	37
	FC5DXT1+MV12DN21+TXV	1
	FC5DXT1+MV20DN21+TXV	1
	FC5DXT1+MX12DN21+TXV	1
	FC5DXT1+MX20DN21+TXV	1
	FC5DXT1+TXV	37
	FC64D+MV12DN21+TXV	1
	FC64D+MV20DN21+TXV	1
	FC64D+MX12DN21+TXV	1
	FC64D+MX20DN21+TXV	1
	FC64D+TXV	37
	AE60DX21+TXV	1
	AHE60D3X(H,T)21+TXV	1
	RFCX60DE20MP21+TXV	1
	RFCX60DE20MP22+TXV	1
GAW14L42C2*S	CF/CM64D+ME14DN21+TXV	1
	CF/CM64D+ME20DN21+TXV	1
	CF/CM64D+TXV	40
	FC/MC62D+MV20DN21+TXV	1
	FC/MC62D+MX20DN21+TXV	1
	FC/MC62D+TXV	41
	FC3DXT1+MV20DN21+TXV	1
	FC3DXT1+MX20DN21+TXV	1
	FC3DXT1+TXV	42
	FC5DXT1+MV20DN21+TXV	1

Outdoor Unit Models	Indoor Models	Number of Unique Ducted Air Mover Combinations

	FC5DXT1+MX20DN21+TXV	1
	FC5DXT1+TXV	32
	FC64D+MV20DN21+TXV	1
	FC64D+MX20DN21+TXV	1
	FC64D+TXV	32
	AE60DX21+TXV	1
	AHE60D3X(H,T)21+TXV	1
	RFCX60DE20MP21+TXV	1
	RFCX60DE20MP22+TXV	1
GAW14L48C2*S	CF/CM64D+ME20DN21+TXV	1
	CF/CM64D+TXV	20
	FC5DXT1+MV20DN21+TXV	1
	FC5DXT1+TXV	34
	FC64D+MV20DN21+TXV	1
	FC64D+TXV	33
	AE60DX21+TXV	1
	RFCX60DE20MP22+TXV	1
GAW14L60C2*S	CF/CM64D+ME20DN21+TXV	1
	CF/CM64D+TXV	19
	FC5DXT1+MV20DN21+TXV	1
	FC5DXT1+MX20DN21+TXV	1
	FC5DXT1+TXV	22
	FC64D+MV20DN21+TXV	1
	FC64D+MX20DN21+TXV	1
	FC64D+TXV	21
	AE60DX21+TXV	1
	RFCX60DE20MP22+TXV	1
Total Number of Unique Certified Product Combinations		1,178

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