

Appliance Standards Awareness Project  
Earthjustice  
Natural Resources Defense Council  
Alliance to Save Energy  
American Council for an Energy-Efficient Economy  
Northwest Energy Efficiency Alliance  
Northwest Power and Conservation Council

March 24, 2014

Ms. Brenda Edwards  
U.S. Department of Energy  
Building Technologies Program  
1000 Independence Avenue, SW  
Mailstop EE-2J  
Washington, DC 20585

**RE: Docket Number EERE–2011–BT–TP–0024/ RIN 1904–AC46: Supplemental Notice of Proposed Rulemaking for Alternative Efficiency Determination Methods and Test Procedures for Walk-In Coolers and Walk-In Freezers**

Dear Ms. Edwards:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP), Earthjustice (EJ), Natural Resources Defense Council (NRDC), Alliance to Save Energy (ASE), American Council for an Energy-Efficient Economy (ACEEE), Northwest Energy Efficiency Alliance (NEEA), and Northwest Power and Conservation Council (NPCC) on the supplemental notice of proposed rulemaking (SNOPR) for alternative efficiency determination methods and test procedures for walk-in coolers and walk-in freezers. 79 Fed. Reg. 9818 (February 20, 2014). We appreciate the opportunity to provide input to the Department.

These comments address two potential loopholes in the Department’s proposed approach for walk-ins: (1) the sale of individual refrigeration system components certified only as part of a “matched pair” system and (2) the sale of uncertified components for use in walk-ins. We also address DOE’s proposal to remove the portion of the test procedures that provides a method for calculating U-value for walk-in panels.

**If DOE adopts the certification approach for refrigeration systems proposed in the SNOPR, we encourage the Department to take steps to ensure that unit coolers and condensing units that are rated as “matched pairs” are only sold as “matched pairs” (unless the components are also rated separately).** In the notice of proposed rulemaking (NOPR) for energy conservation standards for walk-ins, DOE proposed to treat refrigeration systems as a “component.”<sup>1</sup> In our comments on the NOPR, we urged DOE to instead adopt separate standards for unit coolers and condensing units since in many cases a contractor will purchase a unit cooler from one manufacturer and a condensing unit from a different

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<sup>1</sup> 78 Fed. Reg. 55782.

manufacturer to match up in the field.<sup>2</sup> In the SNOPR, DOE has proposed a certification scheme that would provide a way for manufacturers who produce only unit coolers or condensing units, but not both, to certify their equipment. The proposed approach would also allow manufacturers who are selling unit coolers and condensing units as “matched pairs” to rate their equipment as “matched pairs.”

The proposed certification scheme is a significant improvement over the approach in the NOPR because it makes it clear who is responsible for certification. Manufacturers who sell either individual components or “matched pairs” would be responsible for testing and certifying their equipment. We understand DOE’s proposed certification approach to require that any unit cooler or condensing unit sold individually must be certified under the standards for individual components, not the standards for “matched pairs.” But, DOE should make this requirement explicit and develop systems to ensure that unit coolers and condensing units that are rated as “matched” pairs are only sold as “matched” pairs (unless the components are also rated separately). The situation that DOE must prevent could arise if a manufacturer of “matched pairs” develops a super-efficient condensing unit, for example, and rates that condensing unit with a fairly inefficient unit cooler as a way to meet the standard. This scenario would not be problematic as long as the manufacturer only sells the inefficient unit cooler as part of the rated “matched pair.” However, if the manufacturer were to manufacture extra inefficient unit coolers and sell them separately this would clearly violate the intent of the standards and result in lost energy savings.

The regulatory language DOE has proposed for 10 C.F.R. § 431.304(c)(12) appears to prohibit manufacturers from selling individual refrigeration system components separately if they are not rated for sale separately.<sup>3</sup> However, we encourage DOE to make it clear that it is not legal to sell components separately that are rated as part of a “matched pair” unless the components are also rated separately. It is also important for DOE to ensure that the labeling requirements reinforce this requirement. DOE should require that manufacturers label both unit coolers and condensing units that are rated as part of “matched pairs,” with the labels saying something to the effect of “only for sale with Model XXXX condensing unit/unit cooler.” We also encourage DOE to explore other ways to attempt to ensure that unit coolers and condensing units that are rated as part of “matched pairs” are only sold as “matched pairs” (unless the components are also rated separately).

**We urge DOE to use labeling requirements and revised compliance guidance to ensure the enforceability of the proposed walk-in standards.** The existence of overlapping markets for the components used in walk-ins creates a second potential loophole in the walk-in standards. There may be no significant difference between refrigeration system components and panels sold for use in walk-ins and those sold for use in other applications, such as refrigerated display cases, refrigerated warehouses, and process cooling equipment. This overlap means that a refrigeration system component manufacturer, for example, could avoid having to meet DOE’s walk-in standards by either claiming that their condensing unit or unit cooler is not designed to be used with walk-ins, or just by not specifying an application for the equipment. Indeed, this type of open-ended marketing is already happening today, as many manufacturers just produce

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<sup>2</sup> Comment ID: EERE-2008-BT-STD-0015-0113.

<sup>3</sup> See 79 Fed. Reg. at 9846 (proposed 10 C.F.R. § 431.304(c)(12)(i) & (ii)).

“condensing units,” not condensing units specifically designed for walk-ins, even if they may often be used with walk-ins. The application of energy conservation standards to walk-ins will also create new incentives for contractors to seek out components not certified as meeting DOE’s walk-in requirements as a low first cost alternative. While installers are themselves potentially liable for installing non-compliant components, the practical enforcement challenges make it important to design the system to prevent abuse as much as possible.

DOE’s existing regulations do not appear to adequately defend against such abuses. For example, a walk-in “refrigeration system” is defined as “the mechanism . . . used to create the refrigerated environment in the interior of a [walk-in].”<sup>4</sup> Similarly, a walk-in “panel” is defined as a component “used to construct the envelope of the walk-in.”<sup>5</sup> For these products, the need to comply may not be clear until final installation – the point at which the components are “used” in a walk-in.

The Department’s existing guidance only reinforces that the end-use of a component determines whether compliance is required. In January 2012, DOE issued draft guidance to assist walk-in manufacturers in implementing the requirements codified in the Energy Independence and Security Act (EISA). The draft guidance states that components covered under EISA and manufactured on or after January 1, 2009, must comply with the relevant EISA requirements if they “are used in [walk-ins].”<sup>6</sup> The draft guidance provides an example of a display door manufactured after January 1, 2009. If used in a walk-in cooler, the door must comply with the relevant EISA requirements for a walk-in cooler display door, but if “the same or similar display door is used in an application other than a [walk-in], it does not have to meet the EISA requirements.”<sup>7</sup> It is not clear how an approach that delays a determination of whether compliance is required until a component is installed will allow DOE to hold component manufacturers accountable.

To prevent the overlapping markets for walk-in components from eroding the energy savings that can be achieved through the proposed standards, a two-part strategy is needed. Over the long-term, where there is significant overlap in the markets for components used in walk-ins, DOE should cover and develop energy conservation standards for these components.<sup>8</sup> For example, instead of an energy conservation standard for walk-in condensing units, there would be a standard for condensing units that applies across multiple end-use applications.

However, as a short-term measure, we recommend that DOE use labeling requirements and revised compliance guidance to ensure the enforceability of the proposed walk-in standards. A rule to prescribe labeling rules for walk-ins under section 344(e) of the Energy Policy and Conservation Act is now overdue, and we urge DOE to complete this rulemaking without further delay. Requiring all components sold for use in a walk-in to bear a label or mark indicating that they are certified for walk-in use will enable code officials, installers, purchasers, and building

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<sup>4</sup> 10 C.F.R. § 431.302.

<sup>5</sup> *Id.*

<sup>6</sup> DOE, *Response to Walk-in Cooler and Walk-in Freezer Question 2* (Jan. 20, 2012), at [http://www1.eere.energy.gov/buildings/appliance\\_standards/pdfs/wicf\\_faq\\_2012-01-20.pdf](http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/wicf_faq_2012-01-20.pdf).

<sup>7</sup> *Id.*

<sup>8</sup> 42 U.S.C. § 6311 gives DOE the authority to classify “refrigeration equipment” as “covered equipment” under § 6312(b).

owners and tenants to make sure that equipment used in walk-ins complies with DOE's standards. In addition to communicating energy efficiency information both on the product and in catalogs, section 344(e) authorizes DOE to require such markings "as the Secretary determines necessary solely to facilitate enforcement" of the applicable standards.<sup>9</sup>

DOE should also withdraw its 2012 draft guidance and issue revised guidance clarifying that walk-in component standards apply to equipment that has the attributes associated with typical walk-in components in the absence of the manufacturer's instruction that the equipment is not for use in walk-ins. To use the example of a unit cooler, if a manufacturer sells a unit cooler without explicitly stating that the unit cooler is not for use in walk-ins, the unit cooler should be subject to the energy conservation standards if it has the capacity and other features common to walk-in unit coolers, such that it would be reasonable for a contractor to install it in a walk-in. This approach would be similar to what the Department recently proposed for small electric motors. DOE's draft guidance addressing compliance with the 2015 standards for those products treats all motors meeting certain basic criteria as covered by the 2015 standards, unless there is some non-standard attribute of the motor that limits its use to "a unique application and prevent[s] its use in applications for which other motor models could be used."<sup>10</sup>

**DOE should not remove the portion of the test procedures that provides a method for calculating U-value for walk-in panels.** In the SNO PR, DOE proposes to remove the test procedures that reference ASTM C1363-05 and DIN EN 13164/13165, leaving only ASTM C518-04 for measuring the thermal resistance of walk-in panels.<sup>11</sup> This change would mean that DOE would not be able to adopt standards for walk-in panels based on U-value as the Department proposed to do in the NOPR.<sup>12</sup> Instead, standards for panels would have to be based on R-value. Unlike U-value, R-value does not capture effects of framing material or framing factor on the insulating performance of a panel.

In the analysis for the NOPR, DOE found that significant energy savings could be achieved by using high density polyurethane framing members in place of wood framing members or completely eliminating the framing members. For example, for medium-temperature structural panels (SP.M), DOE estimated that the proposed standards in the NOPR (TSL 4), which are based on the same panel thickness as the baseline panels but assume urethane framing in place of wood framing, would save 0.22 quads.<sup>13</sup> Standards based on R-value will fail to capture energy savings that could be achieved from standards using U-value as the efficiency metric. Because it provides an integrated measurement of panel performance, we believe using the U-value metric fulfills DOE's mandate to establish "performance-based standards" for walk-ins. In comments on the NOPR, NEEA and NPCC explained how test burden to determine U-value could be

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<sup>9</sup> 42 U.S.C. § 6315(e).

<sup>10</sup> DOE, *Response to Small Electric Motors Question 3* (Jan. 27, 2014), at [http://www1.eere.energy.gov/buildings/appliance\\_standards/pdfs/sem\\_scope\\_faq\\_2014-01-27.pdf](http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/sem_scope_faq_2014-01-27.pdf).

<sup>11</sup> 79 Fed. Reg. 9837.

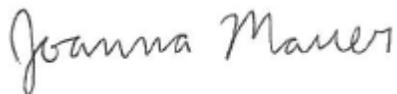
<sup>12</sup> 78 Fed. Reg. 55782.

<sup>13</sup> P. 10-17 of the NOPR Technical Support Document (TSD) shows national energy savings of 0.22 quads for medium-temperature structural panels (SP-M) at TSL 4. Table 10D.2.5 of the NOPR TSD shows the panel design options at the baseline and each TSL.

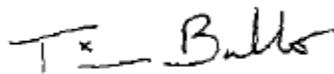
significantly reduced by developing an AEDM that could accurately predict U-value for any combination of foam thickness, framing and configuration, and panel size.<sup>14</sup>

Thank you for considering these comments.

Sincerely,



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<sup>14</sup> Comment ID: EERE-2008-BT-STD-0015-0101.