

## Regional Standards Enforcement Framework Document

### **I. Background**

The Energy Independence and Security Act (EISA) of 2007 modified the Energy Policy and Conservation Act (EPCA) to authorize the Department of Energy (DOE or the Department) to consider regional standards for certain products if such standards can save significantly more energy and are economically justified. Specifically, in addition to a base national standard, DOE was authorized to establish up to two additional regional standards for central air conditioners and heat pumps (CACHP) and one additional regional standard for furnaces. 42 U.S.C. § 6295(o)(6)(B)(ii).

The Department recognizes that regional standards present new certification, compliance, and enforcement issues. Congress ostensibly anticipated these issues and explicitly required DOE to initiate rulemaking for enforcement of regional standards no later than 90 days after issuance of the final rule establishing regional standards. DOE is required to complete this enforcement rulemaking no later than 15 months from issuance of the final rule. (42 U.S.C. § 6295(o)(6)(G)(ii)(I), (III))

Adoption of regional standards by DOE also triggers requirements for the Federal Trade Commission (FTC). EPCA directs the FTC to initiate rulemaking within 90 days after the publication of a final rule establishing regional standards in order to determine the “appropriate 1 or more methods for disclosing information so that consumers, distributors, contractors, and installers can easily determine whether a specific piece of equipment that is installed in a specific building is in conformance with the regional standard that applies to the building.” The FTC is required to complete this rulemaking no later than 15 months of publication of the final rule establishing regional standards. (42 U.S.C. § 6295(o)(6)(H)(i), (iii))

On June 27, 2011, DOE promulgated a direct final rule establishing regional standards for residential furnaces and residential air conditioners and heat pumps. 76 Fed. Reg. 37408. In addition to a base national standard for each product, DOE established one regional standard for furnaces and two regional standards for central air conditioners and heat pumps. Compliance dates for these standards are May 1, 2013, for non-weatherized furnaces and January 1, 2015, for weatherized furnaces and central air conditioners and heat pumps.

The tables below provide the amended regional energy conservation standards, as set forth in the June 2011 direct final rule. Table 1 displays the amended standards for furnaces; Table 2 displays the amended standards for central air conditioners and heat pumps.

**Table 1 Amended Energy Conservation Standards for Furnaces**

<b>Residential Furnaces</b>		
<b>Product Class</b>	<b>National Standard Levels</b>	<b>Northern Region** Standard Levels</b>
Non-weatherized gas	AFUE* = 80%	AFUE = 90%
Mobile home gas	AFUE = 80%	AFUE = 90%
Non-weatherized oil-fired	AFUE = 83%	AFUE = 83%
Weatherized gas	AFUE = 81%	AFUE = 81%
Mobile home oil-fired <sup>††</sup>	AFUE = 75%	AFUE = 75%
Weatherized oil-fired <sup>††</sup>	AFUE = 78%	AFUE = 78%
Electric <sup>††</sup>	AFUE = 78%	AFUE = 78%

\* AFUE is annual fuel utilization efficiency.

\*\* The following States comprise the Northern region for furnaces: Alaska, Colorado, Connecticut, Idaho, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Washington, West Virginia, Wisconsin, and Wyoming.

†† The direct final rule does not amend energy conservation standards for this product class.

**Table 2 Amended Energy Conservation Standards for Central Air Conditioners and Heat Pumps**

<b>Central Air Conditioners and Heat Pumps</b>			
<b>Product Class</b>	<b>National Standard Levels</b>	<b>Southeastern Region<sup>††</sup> Standard Levels</b>	<b>Southwestern Region<sup>‡</sup> Standard Levels</b>
Split-system air conditioners	SEER <sup>†</sup> = 13	SEER = 14	SEER = 14 EER <sup>†</sup> = 12.2 (for units with a rated cooling capacity less than 45,000 Btu/h) EER = 11.7 (for units with a rated cooling capacity equal to or greater than 45,000 Btu/h <sup>†</sup> )
Split-system heat pumps	SEER = 14 HSPF <sup>†</sup> = 8.2	SEER = 14 HSPF = 8.2	SEER = 14 HSPF = 8.2
Single-package air conditioners	SEER = 14	SEER = 14	SEER = 14 EER = 11.0
Single-package heat pumps	SEER = 14 HSPF = 8.0	SEER = 14 HSPF = 8.0	SEER = 14 HSPF = 8.0
Small-duct, high-velocity systems	SEER = 13 HSPF = 7.7	SEER = 13 HSPF = 7.7	SEER = 13 HSPF = 7.7
Space-constrained products – air conditioners <sup>††</sup>	SEER = 12	SEER = 12	SEER = 12
Space-constrained products – heat pumps <sup>††</sup>	SEER = 12 HSPF = 7.4	SEER = 12 HSPF = 7.4	SEER = 12 HSPF = 7.4

<sup>†</sup> SEER is Seasonal Energy Efficiency Ratio; EER is Energy Efficiency Ratio; HSPF is Heating Seasonal Performance Factor; and Btu/h is British thermal units per hour.

<sup>††</sup> The following States comprise the Southeastern region for central air conditioners and heat pumps: Alabama, Arkansas, Delaware, Florida, Georgia, Hawaii, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia, and the District of Columbia.

<sup>‡</sup> The States of Arizona, California, Nevada, and New Mexico comprise the Southwestern region for central air conditioners and heat pumps.

<sup>\*\*</sup> The direct final rule does not amend energy conservation standards for this product class.

## **II. Base and Regional Standards**

In adopting amendments to EISA authorizing establishment of regional standards, Congress recognized that an entirely new enforcement framework would be needed. Under the amended energy conservation standards framework, the base national standard applies to the manufacturer (including importers). Compliance with the base national standard is entirely determined by whether the covered product complies with the standard for that covered product applicable at the time of manufacture (or importation). Under regional standards, the applicable standard is determined by the installation location of the covered product.

Regional standards also differ from a base national standard with respect to the compliance date of the standard for a particular product. The current base national standard applies to products “manufactured or imported” on or after the effective date of the standard. (42 U.S.C. § 6295(o)(6)(E)(i)(II)) Regional standards apply to products “installed” on or after the compliance date of the standard. (42 U.S.C. § 6295(o)(6)(E)(ii)) This requirement places a burden for compliance with a regional standard at the point of installation.<sup>1</sup>

As part of its regional standards enforcement rulemaking, the Department is considering three potential approaches to enforcement of regional standards for base national and regional standards. In the three approaches, outlined below, DOE attempted to recognize and consider the fundamental differences inherent in moving from a base national standard system to a regional standards system. DOE attempted to incorporate these differences into each approach to begin the discussions of a potential regional standards enforcement scheme.

## **III. Impacted Parties**

When promulgating rules regarding enforcement of a regional standard, DOE must clearly specify which entities are responsible for ensuring compliance with applicable energy conservation standards. (42 U.S.C. § 6295(o)(6)(G)(ii)(II)) All three potential approaches for enforcing regional standards for residential furnace and residential central air conditioner and heat pump products presented by DOE impose compliance burdens on the manufacturers that

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<sup>1</sup> The Department notes that the current regulations, as amended by the direct final rule, inadvertently states that regional standards are applied to the products based on “manufactured” date rather than the “installed” date.

have been regulated by DOE historically. DOE is considering how a regional standards enforcement program should address different types of manufacturers, such as independent coil manufacturers. DOE is also considering the appropriate roles and responsibilities of other parties, such as distributors and contractors, that might be involved in compliance with regional standards.

#### **IV. Alternative Enforcement Approaches**

An effective regional standards enforcement program will include participation by manufacturers, distributors, and contractors. The program should not overburden any one participant, nor should it overtax DOE with an impractical enforcement mandate.

DOE has developed three potential approaches to enforcement of regional energy conservation standards for central air conditioners, heat pumps, and furnaces to facilitate discussion regarding the elements of an effective enforcement program. The three potential approaches are intended to present a variety of enforcement mechanisms with different possible distributions of burdens. The Department seeks stakeholder comment on the various aspects of each approach, as well as whether, in the commenter's view, aspects of the different approaches can be combined to form a more efficient and effective enforcement program. DOE welcomes other ideas and suggestions for elements of an enforcement program, and commenters should not limit their comments to discussion of these three approaches.

Each of these three possible approaches builds upon the current compliance requirements, including the requirement for manufacturers to certify the efficiency of each basic model of a covered product to the Department. In the following discussion, the tracking and recordkeeping requirements would only apply to units that are required to meet the regional standard; no tracking or recordkeeping would be required of units that could be sold legally in any region of the United States. These approaches also assume various notification and information requirements would be imposed by the FTC as part of a coordinated enforcement program.

Approach 1 would require only that manufacturers track the serial numbers of units shipped to each distributor location and that distributors maintain records demonstrating that purchasers acknowledged the regional limits applicable to each unit.

Another possibility (Approach 2) would provide stronger enforcement capabilities to DOE and would divide the burden for tracking shipments. Under Approach 2, DOE would require manufacturers and distributors to maintain records of the distributor/contractor to whom each unit of a covered product was distributed. Contractors would be required to maintain a record for each unit installed, including the unit's serial number and installation address. This approach would allow for a record keeping system that the Department could track by requesting the information from each party in the distribution chain. The only information reported to the Department would be the certification reports filed by the manufacturer; however, the

Department could request the records that were required to be maintained under this scheme if it became necessary to do so. No information would be reported to another party.

A different approach (Approach 3) would be to develop a complete tracking system for each individual unit by serial number starting with the manufacturer all the way through the distribution chain until the actual installation. This approach would place a heavier burden on manufacturers, distributors, and contractors but would provide a very comprehensive and effective enforcement program. . This approach would require contractors to maintain records of each serial number and installation address for installed units and to provide that information to the distributor. The distributor would be required to compile the information from multiple contractors and submit basic model number, efficiency, serial number of the unit, and zip code of the installation to DOE for review. Distributors would be responsible for ensuring the distributors or contractors to whom it provides units are installing the units in appropriate regions and that all units are properly reported to the Department.

### Summary of 3 Possible Approaches

	Approach 1	Approach 2	Approach 3
Manufacturer	<p>Required to certify product efficiencies to DOE (including applicable region)</p> <p>Required to inform distributors about appropriate regions</p> <p>Required to track shipments to distributors by serial number and be able to lookup distributor by serial number of installed units</p>	<p>Required to certify product efficiencies to DOE (including applicable region)</p> <p>Required to inform distributors about appropriate regions</p> <p>Required to track shipments to distributors by serial number and be able to lookup distributor by serial number of installed units</p>	<p>Required to certify product efficiencies to DOE (including applicable region)</p> <p>Required to inform distributors about appropriate regions</p> <p>Required to track shipments to distributors by serial number and be able to lookup distributor by serial number of installed units</p>
Distributor	<p>Required to inform installers about appropriate regions</p> <p>Required to maintain record of purchasers' signed acknowledgements of regional standard requirements</p>	<p>Required to inform installers about appropriate regions</p> <p>Required to track unit sales to contractor</p>	<p>Required to inform installers about appropriate regions</p> <p>Required to track unit sales to contractor</p> <p>Required to collect from installers and then submit compiled list of basic model number, efficiency, serial number of unit, and zip code of installation to DOE</p>
Contractor	<p>Required to install units in the appropriate region</p>	<p>Required to install units in the appropriate region</p> <p>Required to maintain records and paperwork about installation location, including serial numbers and address of installation</p>	<p>Required to install units in the appropriate region</p> <p>Required to maintain records and paperwork about installation location</p> <p>Required to provide distributor with serial numbers and installation address for installed units</p>

**1. Approach 1:**

<b>Manufacturer</b>	<ul style="list-style-type: none"> <li>• <b>Certify products to DOE</b></li> <li>• <b>Required to inform distributors about appropriate regions</b></li> <li>• <b>Required to track shipments to distributors by serial number and be able to lookup distributor by serial number of installed units</b></li> </ul>
<b>Distributor</b>	<ul style="list-style-type: none"> <li>• <b>Required to inform installers about appropriate regions and collect and maintain a record of signatures from customers acknowledging regional standard requirements.</b></li> </ul>
<b>Contractor</b>	<ul style="list-style-type: none"> <li>• <b>Required to install units in the appropriate region</b></li> </ul>

DOE envisions this approach focusing on ensuring all parties along the distribution chain are informed about regional standards requirements and relying on self-policing to ensure regional compliance. Approach 1 would impose a very low burden on all parties involved but may not provide for effective enforcement of a regional standards enforcement program.

Under this approach, manufacturers would inform distributors about regional restrictions when selling and/or shipping units to the distributor. Manufacturers would track serial numbers of units shipped to distributors and maintain records of this information.

Distributors would maintain a record of signatures acknowledging regional standard requirements from customers (i.e., distributors or contractors). Distributors would inform customers (contractors or other distributors) about regional restrictions when selling and/or delivering units to customers.

Contractors would be required to ensure that products are installed in the appropriate region.

**2. Approach 2:**

<b>Manufacturer</b>	<ul style="list-style-type: none"> <li>• <b>Certify products to DOE</b></li> <li>• <b>Required to inform distributors about appropriate regions</b></li> <li>• <b>Required to track shipments to distributors by serial number and be able to lookup distributor by serial number of installed units</b></li> </ul>
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<b>Distributor</b>	<ul style="list-style-type: none"> <li>• <b>Required to inform installers about appropriate regions</b></li> <li>• <b>Required to track unit (serial number) sales by distributor/contractor. This information is not required to be submitted to the Department on a regular basis, but must be provided to DOE if requested.</b></li> </ul>
<b>Contractor</b>	<ul style="list-style-type: none"> <li>• <b>Required to install units in the appropriate region</b></li> <li>• <b>Required to maintain records and paperwork about installation</b></li> </ul>

Approach 2 presents a potential “middle ground,” balancing obligations amongst various parties. This approach would impose additional tracking mechanisms on distributors and contractors. Distributors would be required to track which models are sold to which distributor or contractor. Contractors would be required to track serial numbers and installation location information for every unit installed. DOE believes contractors may already retain this information for warranty and repair purposes. Though this information is not regularly submitted to DOE, it would enable DOE to audit distributors and contractors for compliance if DOE requests the records. This approach would not require a unit-specific certification requirement regarding the installation location, but it would allow DOE to obtain this information if needed. This approach attempts to provide DOE with a systematic way to enforce its regional standards, but limit the burden on affected parties.

### 3. Approach 3:

<b>Manufacturer</b>	<ul style="list-style-type: none"> <li>• <b>Certify products to DOE</b></li> <li>• <b>Required to inform distributors about appropriate regions</b></li> <li>• <b>Required to track shipments to distributors by serial number and be able to lookup distributor by serial number of installed units</b></li> </ul>
<b>Distributor</b>	<ul style="list-style-type: none"> <li>• <b>Required to inform installers about appropriate regions</b></li> <li>• <b>Required to track serial number, installer, and installation location information for units sold and to submit the information to DOE on a regular basis</b></li> </ul>
<b>Contractor</b>	<ul style="list-style-type: none"> <li>• <b>Required to install units in the appropriate region</b></li> <li>• <b>Required to maintain records and paperwork about installation</b></li> <li>• <b>Required to provide distributor with serial numbers and</b></li> </ul>

	<b>installation location information (i.e., address) for installed units.</b>
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Approach 3 represents a potential enforcement program with robust verification mechanisms. This approach would provide for a full tracking system of each individual unit by serial number from the point of manufacturer (or importation) to the point of installation. All of this information would be submitted to the Department on a regular basis. This approach would provide for a comprehensive enforcement scheme, but it would also be very burdensome for affected parties and the Department.

Approach 3 would require distributors to track the serial number of distributed products, the customer (contractor or distributor) receiving the unit, and the installation location information for the unit (obtained from the contractor). DOE believes that approach 3 could represent a significant deviation from current practices for a subset of distributors. Currently, distributors typically do not receive information regarding where units it distributes will be installed. One issue with this approach might be that contractors may not have a specific client in mind when purchasing units—contractors may hold small inventories of their most popular units. This approach would require distributors either to limit sales to only installers that can provide information at the time of the sale regarding where the unit will be installed or to follow-up with contractors after the sale to obtain this information.

Additionally, contractors would maintain their own records on serial numbers and installation location information. This information would allow a unit that is installed in a non-compliant region to be traced back through the distribution chain. Additionally, manufacturers would maintain their own records on the serial numbers, tracking the sales to the distributors. Under this approach, DOE would be able to obtain the identity of the distributor of a unit from a manufacturer based on the serial number of a non-compliant installation. Likewise, the distributor could verify the contractor that took ownership of the unit and presumably performed the improper installation. This would allow the Department to track and receive at any point in the distribution chain information on a specific serial number.

## **V. Waivers**

The Department is aware of concerns by several interested parties regarding the implementation of regional standards for residential furnaces and the potential for select customers to have “stranded” appliances that share venting with a furnace and possibly higher installation costs. For example, there could be an instance where the furnace installation is concentrically vented in the middle of the residence and alteration of the flue to accommodate a condensing furnace could require significantly altering the location of the existing vent pipe and modifications to the residence.

The Department is sensitive to these types of situations and is open to considering alternatives to mitigate the unintended consequences of a condensing standard for residential furnaces in the Northern region for a select subset of installations that may be severely impacted. One possible approach to prevent any unintended result would be to allow a waiver process, in which a party would request a waiver of the regional standard. This approach could function as a new waiver process or could build upon DOE's existing waiver process, which is administered through DOE's Office of Hearing and Appeals. In this case, a party, such as a contractor, could apply for a waiver on an installation-specific basis, providing detailed information demonstrating the need for a furnace that does not meet the applicable regional standard. Information would likely include details about the existing appliances that may be affected by the new venting requirements, the existing venting location, the new venting requirements, the installation costs, the product(s) being purchased, and about the need for such a waiver for each installation that seeks to install a less-efficient furnace. DOE would review the information and either grant or deny the waiver application to the contractor for a given installation. If DOE approved the waiver, DOE would publish the specific installation information with a waiver number. DOE specifically requests comment on the need for a waiver process and, if necessary, the types of information it should consider collecting, what, if any, of this information should be withheld from public access and whether a waiver should be a "post installation approval" or available for all installation scenarios identical to one for which DOE had previously granted a waiver.

## **VI. Request for Information**

The Department solicits public comment from industry, manufacturers, academia, consumer groups, efficiency advocates, government agencies, and other stakeholders generally on the regional standard enforcement approaches for residential furnaces and residential central air conditioners and heat pumps. In submitting information, DOE specifically welcomes comment on:

1. the appropriateness of the three potential approaches, other approaches and on variations that would improve the effectiveness of enforcement of regional standards;
2. the periodicity/timing of data submissions for regional standard enforcement including how the existing certification requirements on manufacturers may need to be altered to accommodate the regional standards approach;
3. the information that would be necessary (either maintained or submitted) to help the Department determine a basic model is compliant with the Department's standards and whether a given unit has been installed in a proper geographic location;
4. the appropriate level of detail when tracking installation location both for internal records and for the Department to ensure DOE can systematically enforce its regional standards.
5. the benefits and burdens of the three potential enforcement schemes the Department is considering;
6. the existing record keeping schemes currently utilized by manufacturers, distributors, and

- installers that the Department could leverage to reduce burden;
7. the consideration of a waiver process to mitigate any unintended consequences of regional standards adopted in the June 2011 direct final rule; and
  8. any changes that would need to be made to the existing certification requirements to accommodate regional standards.
  9. how the certification requirements may need to be modified to accommodate the new regional standards scheme, particularly with a view towards which parties should certify, and what, if any, additional information should be provided.

Respondents are advised that DOE is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted.