

**Agreement on Legislative and Regulatory Strategy for Amending
Federal Energy Efficiency Standards, Test Procedures, Metrics and Building Code Provisions for
Residential Central Air Conditioners, Heat Pumps, Weatherized and Non-Weatherized Furnaces
And Related Matters**

October 13, 2009

This Agreement records the commitments made by the undersigned representatives of the organizations (collectively, the "Stakeholders") regarding energy efficiency standards, test procedures, metrics and building code provisions for residential central air conditioners, heat pumps, and weatherized and non-weatherized furnaces as well as other issues involving standards addressing preemption of building codes and multiple metrics. The Stakeholders agree to pursue a multipronged approach designed to achieve Congressional and/or regulatory implementation of all the elements contained in the Agreement.

1. The Stakeholders will jointly submit to the United States Congress and, in good faith, advocate that Congress enact the attached proposal (Attachment A) amending the Energy Policy and Conservation Act as it relates to energy conservation standards for residential furnaces (weatherized and non-weatherized), and residential central air conditioners and heat pumps, as well as the federal preemption provisions of section 327 (f) and the definition of an energy conservation standard (i.e. multiple metrics).
2. Concurrently, the Stakeholders will submit to the United States Department of Energy (DOE) a joint proposal that DOE issue a final rule adopting the energy efficiency standards in Table 1 of Attachment A, and will advocate DOE adoption of these standards. The Stakeholders agree that the standards contained in Table 1 of Attachment A address all of the statutory criteria that the Department is required to take into account in promulgating new energy efficiency standards for covered residential air conditioners, heat pumps, and furnaces.
3. Consistent with their goal of implementing the energy efficiency standards described in Table 1 of Attachment A, those Stakeholders that are not entities of a state government (collectively, the "non-government Stakeholders") will not advocate or pursue on their own or through other parties, and will not encourage or support, the development, enforcement, or adoption of state or local energy efficiency standards for split air conditioning, split heat pumps, package air conditioning, package heat pumps, gas packs, gas furnaces, or oil furnaces that are inconsistent with the proposed legislation and regulations including the definitions, standard levels, test procedures, metrics and effective dates.
4. The non-government Stakeholders agree not to attempt to overturn or revise, or to file or support any legal or legislative challenge to, the proposal described in Attachment A. The non-government Stakeholders agree to support DOE in a manner as each one deems to be reasonable and appropriate in defending any legal, legislative, or administrative challenge to a final rule that adopts the proposed standards. This provision will still apply if DOE, on its own volition, adopts a rule that deviates in any particulars, however small, from Attachment A.
5. The Stakeholders commit to work together, in good faith, to advance the legislative and regulatory objectives of this Agreement. Each Stakeholder will respond in good faith to reasonable requests by other Stakeholders for joint action to advance these legislative and regulatory objectives.
6. The Stakeholders will cooperate with each other in the preparation of the press releases and public statements in support of the legislative and regulatory objectives set forth in this Agreement.

7. Nothing in this Agreement is intended to inhibit in any way efforts by individual Stakeholders to research, develop, or market products to standards that differ from those contemplated by this Agreement, provided such products are in compliance with applicable laws and regulations. Nothing in this Agreement is intended to direct any technical or product design approach to achieving efficiency standards and the parties shall not take any actions to establish any such common approach.

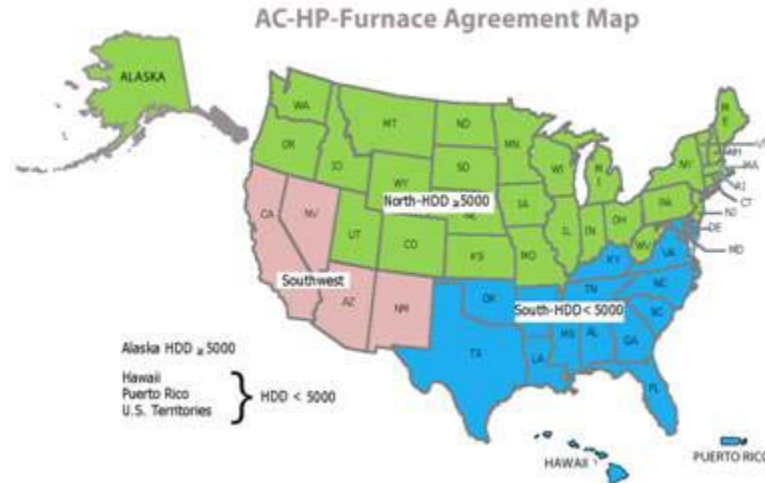
8. This Agreement is hereby agreed to, in counterparts, by the undersigned Stakeholders. To the fullest extent permitted by applicable law, this Agreement binds the undersigned non-government Stakeholders, their employees, their agents, and any successors, and will take effect when all signatures are affixed.

9. The term of this Agreement is from the date of signing until December 31, 2012. One month prior to the expiration of this Agreement, the Stakeholders agree to meet to discuss whether some or all of the provisions should be extended. Notwithstanding the above, if Congress enacts legislation in accordance with this Agreement, the Stakeholders agree that they will not seek to overturn or revise the specific provisions of said legislation covered by this Agreement without the mutual agreement of the other Stakeholders, unless legally required to do so by state statute or state executive order. This last provision shall expire Dec. 31, 2014.

Attachment A

1. Federal Minimum Efficiencies

The U.S. has been divided into 3 regions: (1) the north, comprised of states with a population weighted heating degree days (HDD) equal to or greater than 5000; (2) the south, comprised of states with a population weighted HDD less than 5000; and the southwest, comprised of Arizona, California, Nevada, and New Mexico. The regions are shown on the map below.



The federal minimum energy efficiency standards are shown in Table 1 below. The standards apply to residential single-phase air conditioners and heat pumps less than 65,000 Btu/h of cooling capacity (except through-the-wall and small duct high velocity products), and single-phase weatherized and non-weatherized forced-air furnaces (including mobile home furnaces) below 225,000 Btu/h heat input. For split air conditioners, the minimum EER values also are specified for the states of Arizona, California, Nevada and New Mexico based on a cooling capacity breakpoint of 45,000 Btu/h. DOE shall publish a final rule not later than June 30, 2011, to determine whether standards for through-the-wall and small duct high velocity air conditioners and heat pumps should be adopted and/or amended. Such rule shall provide that any amended standard apply to products manufactured on or after June 30, 2016.

Table 1: Minimum Federal Standards

System Type	≥ 5000 HDD	< 5000 HDD	CA/AZ/NM/NV
Split A/C	13 SEER	14 SEER	14 SEER /12.2 EER <45,000 Btu/h 14 SEER /11.7 EER ≥45,000 Btu/h
Split HP	14 SEER /8.2 HSPF	14 SEER /8.2 HSPF	14 SEER /8.2 HSPF
Package A/C	14 SEER	14 SEER	14 SEER/11.0 EER
Package HP	14 SEER/8.0 HSPF	14 SEER/8.0 HSPF	14 SEER/8.0 HSPF
Gas-Pack (weatherized)	14 SEER/81% AFUE	14 SEER/81% AFUE	14 SEER/81% AFUE
Gas Furnaces (non-weatherized)	90% AFUE	80% AFUE	80% AFUE
Oil Furnaces (non-weatherized)	83% AFUE	83% AFUE	83% AFUE

Effective dates:

- May 1, 2013 for non-weatherized furnaces
- January 1, 2015 for air conditioners & heat pumps, including weatherized furnaces (gas packs)

Effective dates of subsequent standards:

January 1, 2019 for non-weatherized furnaces and January 1, 2022 for air conditioners/heat pumps and weatherized furnaces (gas-packs). DOE shall complete these rulemakings by January 1, 2014 for non-weatherized furnaces and January 1, 2017 for air conditioners/heat pumps and weatherized furnaces.

Specific legislative language is included in Attachment B.

2. Building Codes

Federal preemption rules under the Energy Policy and Conservation Act (EPCA) will be amended to allow building codes to provide for building energy budgets and baseline building designs that include covered equipment having an efficiency greater than the federal minimum efficiency standard, up to specified levels, as long as there is at least one option to meet the code instead through the use of covered equipment at the federal minimum efficiency level. These efficiency levels are listed in Table 2 and described below. The levels could be used as the basis for formulating a baseline building design for use in the performance path of the code. If the building code also offers multiple combinations of items that meet the energy consumption objective, and have covered equipment at levels above the federal standard, there must be a least one combination which includes covered equipment at the level of minimum federal energy efficiency standards and one other combination that includes covered equipment at the levels listed in Table 2. Specific legislative language is included in Attachment B.

These requirements will not apply to simple one-for-one replacement of products in existing buildings that does not result in an increase in capacity of more than 12,000 Btu/h for central air conditioners/heat pumps or more than 20% for other covered products.

Levels for residential furnaces, air conditioners and heat pumps will be specified as listed in Table 2 and will be effective on January 1, 2013. These levels shall be updated in the future through a rulemaking conducted by the Department of Energy (DOE), but any new or amended levels shall not take effect before January 1, 2018. Any new or amended levels must be designed so as to achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified when applied to new construction.

Table 2: Energy Efficiency Standards for Performance-Based Building Codes (for new construction and significant-up sizing only)

System Type	≥ 5000 HDD	< 5000 HDD	CA/AZ/NM/NV
A/C	14 SEER	15 SEER	15 SEER /12.5 EER <45,000 Btu/h 15 SEER /12.0 EER ≥45,000 Btu/h
HP	15 SEER /8.5 HSPF	15 SEER /8.5 HSPF	15 SEER /8.5 HSPF
Gas Furnaces	92% AFUE	90% AFUE	92% AFUE
Oil Furnaces (non-weatherized)	85% AFUE	85% AFUE	85% AFUE

Performance-based codes will allow 14 SEER/8.0 HSPF packaged systems and 81% AFUE weatherized gas furnaces, provided additional efficiency measures are installed to compensate for the difference in energy use between these systems and the corresponding values for the region in Table 2.

3. Test Procedure for Central Air Conditioners and Heat Pumps

The DOE test procedure for residential central air conditioners and heat pumps will be amended to calculate the SEER and HSPF based on temperature bin data for single-speed, two-capacity and variable-speed compressor systems. The temperature bins will range from 67°F to 117°F. The fraction of the cooling season in each bin shall be based on a population-weighted calculation with the most recently available temperature bin-hour data for the continental U.S. AHRI will establish a technical committee to define the amended test procedure. Efficiency advocates will be provided a seat on the technical committee. However, for purposes of the 2015 standards, there should be no multiple ratings of the same equipment for different climate zones. A joint proposal will be submitted to DOE and Congress calling on DOE to publish by July 1, 2011, the new test procedure. Except as provided in item #4, the test procedure will be effective January 1, 2015.

4. Grandfather Existing Equipment

Models of residential air conditioners and heat pumps tested prior to January 1, 2015 and complying with the efficiency requirements of Table 1 or 2 based on testing to the current DOE test procedure may continue to use those efficiency ratings up to a maximum of 3 years from the effective date of the new federal minimum standards (i.e., grandfathering until January 1, 2018). Manufacturers will have the right to use either the old or the new ratings for these “old models” at any time within this three-year window. After January 1, 2015, units using the “old ratings” will be explicitly identified as such.

5. Sensible Heat Ratio and Product Performance Data by Bin

Manufacturers agree to make the sensible heat ratio (SHR) at 82°F (at the rated airflow) available in their technical literature and websites so as to make these data more accessible to contractors and consumers. However, the SHR will not be verified or certified by AHRI. Manufacturers also agree to make available to contractors, program operators and software vendors estimated equipment performance data as a function of temperature bin, so that equipment performance can be modeled using local weather data.

6. Multiple Metrics

As part of the next rulemakings, DOE will be directed to convene meetings of interested stakeholders to develop consensus on adding additional energy efficiency metrics for central air conditioners, heat pumps and furnaces. In the event that consensus is not reached within one year, DOE will have the authority to consider additional efficiency metrics, provided that DOE can justify that the benefits of adding one or multiple metrics substantially exceed the burdens. Specific legislative language is included in Attachment B.

Attachment B

CONSENSUS AMENDMENTS TO THE ENERGY POLICY AND CONSERVATION ACT

(a) DEFINITION OF ENERGY CONSERVATION STANDARD.—Section 321(6) of the Energy Policy and Conservation Act (42 U.S.C. 6291(6)) is amended to read as follows:

“(6) ENERGY CONSERVATION STANDARD.—

“(A) IN GENERAL.—The term ‘energy conservation standard’ means 1 or more performance standards that—

“(i) for covered products (excluding clothes washers, dishwashers, showerheads, faucets, water closets, and urinals), prescribe a minimum level of energy efficiency or a maximum quantity of energy use, determined in accordance with test procedures prescribed under section 323;

“(ii) for showerheads, faucets, water closets, and urinals, prescribe a minimum level of water efficiency or a maximum quantity of water use, determined in accordance with test procedures prescribed under section 323; and

“(iii) for clothes washers and dishwashers—

“(I) prescribe a minimum level of energy efficiency or a maximum quantity of energy use, determined in accordance with test procedures prescribed under section 323; and

“(II) may include a minimum level of water efficiency or a maximum quantity of water use, determined in accordance with those test procedures.

“(B) INCLUSIONS.—The term ‘energy conservation standard’ includes—

“(i) 1 or more design requirements, if the requirements were established—

“(I) on or before the date of enactment of this subclause;

“(II) as part of a direct final rule under section 325(p)(4); or

“(III) as part of a final rule published on or after January 1, 2012, and

“(ii) any other requirements that the Secretary may prescribe under section 325(r).

“(C) EXCLUSION.—The term ‘energy conservation standard’ does not include a performance standard for a component of a finished covered product, unless regulation of the component is specifically authorized or established pursuant to this title.”

(b) Insert new paragraph 325(d)(4) to read as follows:

“(4) Central air conditioners and heat pumps (except through-the-wall central air conditioners, through-the-wall central air conditioning heat pumps, and small duct, high velocity systems) manufactured on or after January 1, 2015

(A) Base national standards

(i) The seasonal energy efficiency ratio of central air conditioners and central air conditioning heat pumps manufactured on or after January 1, 2015, shall not be less than the following:

(I) Split Systems: 13 for central air conditioners and 14 for heat pumps

(II) Single Package Systems: 14

(ii) The heating seasonal performance factor of central air conditioning heat pumps manufactured on or after January 1, 2015, shall not be less than the following:

- (I) Split Systems: 8.2
- (II) Single Package Systems: 8.0

(B) Regional standards

(i) The seasonal energy efficiency ratio of central air conditioners and central air conditioning heat pumps manufactured on or after January 1, 2015, and installed in states having historical average annual, population weighted, heating degree days less than 5000, specifically the States of Alabama, Arizona, Arkansas, California, Delaware, Florida, Georgia, Hawaii, Kentucky, Louisiana, Maryland, Mississippi, Nevada, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia, or in the District of Columbia, Puerto Rico, or the U.S. Territories shall not be less than the following:

- (I) Split Systems: 14 for central air conditioners and 14 for heat pumps
- (II) Single Package Systems: 14

(ii) The energy efficiency ratio of central air conditioners (not including heat pumps) manufactured on or after January 1, 2015 and installed in the States of California, Arizona, New Mexico or Nevada shall be not less than the following:

- (I) Split Systems: 12.2 for split systems having a rated cooling capacity less than 45,000 BTU per hour and 11.7 for products having a rated cooling capacity equal to or greater than 45,000 BTU per hour
- (II) Single Package Systems: 11.0

(iii) The provisions of paragraph (6) of subsection 325(o) shall apply to the regional standards set forth in this subparagraph.

(C) Amendment of standards

The Secretary shall publish a final rule no later than January 1, 2017, to determine whether the standards in effect for central air conditioners and central air conditioning heat pumps should be amended. Such rule shall provide that any amendments shall apply to products manufactured on or after January 1, 2022.

(D) Consideration of additional performance standards or efficiency criteria

Not later than four years in advance of the expected publication date of a final rule for central air conditioners and heat pumps under subparagraph (C), the Secretary shall convene and facilitate a forum for interested persons that are fairly representative of relevant points of view (including representatives of manufacturers of the covered product, States, and efficiency advocates), as determined by the Secretary, to consider adding additional performance standards or efficiency criteria in the forthcoming rule. If, within one year of the initial convening of such a forum, the Secretary receives a recommendation submitted jointly by such representative interested persons to add one or more performance standards or efficiency criteria, the Secretary shall incorporate such performance standards or efficiency criteria in the rulemaking process, and, if justified under the criteria established in this Section, incorporate such performance standards or efficiency criteria in the revised standard. If no such joint recommendation is made within one year, the Secretary may add additional performance standards or efficiency criteria provided that the Secretary finds that the benefits substantially exceed the burdens of such action.

(E) New construction levels for application to subsection 327(f)

As part of any final rule concerning central air conditioner and heat pump standards published after June 1, 2013, the Secretary shall determine if the building code levels specified in subparagraph 327(f)(3)(C) should be amended subject to meeting the criteria of subsection 325(o) when applied specifically to new construction. Any such amended levels shall not take effect before January 1, 2018. Such final rule shall contain the amended levels, if any.”

(c) Insert new paragraph 325(d)(5) to read as follows:

“(5) Standards for through-the-wall central air conditioners, through-the-wall central air conditioning heat pumps and small duct, high velocity systems

(A) Rulemaking

The Secretary shall publish a final rule not later than June 30, 2011, to determine whether standards for through-the-wall central air conditioners, through-the-wall central air conditioning heat pumps and small duct, high velocity systems should be established or amended. Such rule shall provide that any new or amended standard shall apply to products manufactured on or after June 30, 2016.

(B) Definitions

(i) For the purposes of this paragraph, the terms “through-the-wall central air conditioner” and “through-the-wall central air conditioning heat pump” mean a central air conditioner or heat pump that is designed to be installed totally or partially within a fixed-size opening in an exterior wall, and

- (I) is not weatherized;
- (II) is clearly and permanently marked for installation only through an exterior wall;
- (III) has a rated cooling capacity no greater than 30,000 Btu/hr;
- (IV) exchanges all of its outdoor air across a single surface of the equipment cabinet; and
- (V) has a combined outdoor air exchange area of less than 800 square inches (split systems) or less than 1,210 square inches (single packaged systems) as measured on the surface area described in clause (IV) of this definition.

(ii) For the purposes of this paragraph the term “small duct, high velocity system” means a heating and cooling product that contains a blower and indoor coil combination that:

- (I) is designed for, and produces, at least 1.2 inches of external static pressure when operated at the certified air volume rate of 220-350 CFM per rated ton of cooling, and
- (II) when applied in the field, uses high velocity room outlets generally greater than 1000 fpm which have less than 6.0 square inches of free area.

(iii) The Secretary may revise the definitions contained in this subparagraph through publication of a final rule.”

(d) Insert new paragraph 325(f)(5) to read as follows:

“(5) Non-weatherized furnaces (including mobile home furnaces, but not boilers) manufactured on or after May 1, 2013, and weatherized furnaces manufactured on or after January 1, 2015

(A) Base national standards

(i) The annual fuel utilization efficiency of non-weatherized furnaces manufactured on or after May 1, 2013, shall be not less than the following:

- (I) gas furnaces: 80 percent
- (II) oil furnaces: 83 percent

(ii) The annual fuel utilization efficiency of weatherized gas furnaces manufactured on or after January 1, 2015 shall be not less than 81 percent.

(B) Regional standard

(i) The annual fuel utilization efficiency of non-weatherized gas furnaces manufactured on or after May 1, 2013, and installed in states having historical average annual, population weighted, heating degree days equal to or greater than 5000, specifically the States of 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, shall be not less than 90 percent.

(ii) The provisions of paragraph (6) of subsection 325(o) shall apply to the regional standard set forth in this subparagraph.

(C) Amendment of standards

(i) The Secretary shall publish a final rule no later than January 1, 2014, to determine whether the standards in effect for non-weatherized furnaces should be amended. Such rule shall provide that any amendments shall apply to products manufactured on or after January 1, 2019.

(ii) The Secretary shall publish a final rule no later than January 1, 2017, to determine whether the standard in effect for weatherized furnaces should be amended. Such rule shall provide that any amendments shall apply to products manufactured on or after January 1, 2022.

(D) New construction levels for application to subsection 327(f)

As part of any final rule concerning furnace standards published after June 1, 2013, the Secretary shall determine if the building code levels specified in subparagraph 327(f)(3)(C) should be amended subject to meeting the criteria of subsection 325(o) when applied specifically to new construction. Any such amended levels shall not take effect before January 1, 2018. Such final rule shall contain the amended levels, if any. ”

(e) Amend paragraph 327(f)(3) as follows:

Replace existing subparagraphs (B) through (F) with the following:

“(B) The code does not contain a mandatory requirement that, under all code compliance paths, requires that the covered product have an energy efficiency exceeding one of the following levels--

- (i) the applicable energy conservation standard established in or prescribed under section 325;
- (ii) the level required by a regulation of that State for which the Secretary has issued a rule granting a waiver under subsection (d).

(C) If the energy consumption or conservation objective in the code is determined using covered products, including any baseline building designs against which all submitted building

designs are to be evaluated, such objective is based on the use of such covered products having efficiencies not exceeding --

(i) for residential furnaces, central air conditioners and heat pumps, effective not earlier than January 1, 2013 and until such time as a level takes effect for such product under subparagraph (C) (ii) --

(I) for the states identified in clause(i) of subparagraph 325(d)(5)(B), 92% AFUE for gas furnaces and 14 SEER for central air conditioners (not including heat pumps);

(II) for the states and other localities identified in clause (i) of subparagraph 325(d)(4)(B), except for the States of California, Nevada, Arizona and New Mexico, 90% AFUE for gas furnaces and 15 SEER for central air conditioners;

(III) for California, Nevada, Arizona and New Mexico, 92% AFUE for gas furnaces, 15 SEER for central air conditioners, an EER of 12.5 for air conditioners (not including heat pumps) with cooling capacity less than 45,000 Btu per hour, and an EER of 12.0 for air conditioners (not including heat pumps) with cooling capacity of 45,000 Btu per hour or more; and

(IV) for all states, 85% AFUE for oil furnaces, and 15 SEER and 8.5 HSPF for heat pumps;

(ii) the building code levels established pursuant to section 325; or

(iii) the applicable standards or levels specified in subparagraph (B).

(D) The credit to the energy consumption or conservation objective allowed by the code for installing a covered product having an energy efficiency exceeding the applicable standard or level specified in subparagraph (C) is on a one-for-one equivalent energy use or equivalent energy cost basis, which may take into account the typical lifetimes of the products and building features, using lifetimes for covered products based on information published by the Department of Energy or the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

(E) If the code sets forth one or more combinations of items that meet the energy consumption or conservation objective, and if one or more combinations specify an efficiency level for a covered product that exceeds the applicable standards and levels specified in subparagraph (B),

(i) there is at least one combination that includes such covered products having efficiencies not exceeding one of the standards or levels specified in subparagraph (B), and

(ii) if one or more combinations of items specify an efficiency level for a furnace, central air conditioner or heat pump that exceeds the applicable standards and levels specified in subparagraph (B), there is at least one combination that the State has found to be reasonably achievable using commercially available technologies that includes such products having efficiencies at the applicable levels specified in subparagraph (C), except that no combination need include a product having an efficiency less than the level specified in subparagraph (B)(ii).

(F) The energy consumption or conservation objective is specified in terms of an estimated total consumption of energy (which may be specified in units of energy or its equivalent cost)."

(f) In subparagraph (B) of paragraph 327(f)(4), after the words "building code" insert the following: "contains a mandatory requirement that, under all code compliance paths,".

(g) In subparagraph (B) of paragraph 327(f)(4), place a period after the word “applicable” the third time it appears and delete the remainder of the subparagraph.

(h) Add new paragraph 327(f)(5) to read as follows:

“(5) Paragraph (3) shall not apply to the replacement of a covered product serving an existing building unless the replacement results in an increase in capacity greater than 12,000 Btu per hour for residential air conditioners and heat pumps, or greater than 20 percent for other covered products.”