

## Public Comment Collaboration on EC195 – November 13, 2009

The purpose of this document is to recap the status of EC195 submitted by DOE. The original proposal is shown below.

### Current 2009 IECC

There are currently no provisions in the IECC that regulate the minimum efficiency of these units.

### Original Code Change Proposal as Published in the Monograph

#### EC195–09/10

Table 503.2.3(2), Chapter 6

Proponent: Ronald Majette, representing US Department of Energy

1. Revise as follows:

TABLE 503.2.3(2)  
UNITARY AIR CONDITIONERS AND CONDENSING UNITS,  
ELECTRICALLY OPERATED, MINIMUM EFFICIENCY REQUIREMENTS

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency <sup>a</sup>	Test Procedure <sup>b</sup>
Water source water to water (cooling mode)	<135,000 Btu/h	All	86°F entering water	10.6 EER	ISO-13256-2
Groundwater source water to water (cooling mode)	<135,000 Btu/h	All	59°F entering water	16.3 EER	ISO-13256-2
Ground source Brine to water (cooling mode)	<135,000 Btu/h	All	77°F entering water	12.1 EER	ISO-13256-2
Water source water to water (heating mode)	<135,000 Btu/h (cooling capacity)	---	68°F entering water	3.7 COP	ISO-13256-2
Groundwater source water to water (heating mode)	<135,000 Btu/h (cooling capacity)	---	50°F entering water	3.1 COP	ISO-13256-2
Ground source brine to water (heating mode)	<135,000 Btu/h (cooling capacity)	---	32°F entering water	2.5 COP	ISO-13256-2

(No change to portions of table or footnotes not shown)

2. Add new standards to Chapter 6 as follows:

ISO            International Organization for Standardization  
1, rue de Varembe, Case postale 56,  
CH-1211  
Geneve, Switzerland

ISO 13256-2 (1998)    Water-Source Heat Pumps—Testing and Rating for Performance—  
Part 2: Water-to-Water and Brine-to-Water Heat Pumps

Reason: This proposal is based on ongoing analysis efforts within ASHRAE designed to create a Standard 90.1-2010 that is 30% better than Standard 90.1-2004 in response to Federal legislation. Paralleling those efforts and considering that the IECC Chapter 5 is intended to be technically compatible with that standard to facilitate adoption and implementation, DOE is interested in keeping Chapter 5 of the 2012 IECC aligned with ANSI/ASHRAE/IESNA Standard 90.1-2010. Due to the timing of the code development process and ASHRAE standards processes this proposal was submitted in anticipation that by the final action hearings the work to update the standard would be complete.

Water-to-water heat pumps are systems used in many buildings covered by the IECC and ASHRAE 90.1. These heat pumps use water to carry cooling and heating through the building. In recent years, the demand for water to water heat pumps has increased significantly. However, the IECC has no minimum energy efficiency requirements for this equipment. This proposal establishes for the first time a product class for water-to-water heat pumps. The intent is to recognize the technology by requiring minimum energy efficiency standards. Cooling EERs and heating COPs are proposed for products with cooling capacities below 135,000 Btu/h at standard rating conditions listed in ISO standard 13256-2.

Cost Impact: The code change proposal could increase the cost of construction to the degree that units of this nature previously having unregulated minimum efficiency will now have to satisfy these minimum requirements.

## Results of First Hearing

Approved 7-4.

## Additional Information

While this proposal was approved 7-4, DOE would still appreciate public comments on it and is looking to have widespread public support at the final action hearings.

## Public Comment Development

**Interested and affected parties are encouraged to provide comments.**