

Public Comment Collaboration on EC119 – November 13, 2009

The purpose of this document is to recap the status of EC119 submitted by DOE with the intent of improving energy efficiency in residential buildings by requiring waste heat reclamation for domestic hot water purposes. The original submittal and reason statement, a suggested public comment and then questions for consideration in preparing a public comment.

Current 2009 IECC

There is currently no text in the IECC requiring the application of waste heat reclamation technology for domestic hot water purposes.

Original Code Change Proposal as Published in the Monograph

Add new text as follows:

DESUPERHEATER/WATER HEATER. A factory-made assembly of elements by which the flows of refrigerant vapor and water are maintained in such heat transfer relationship that the refrigerant vapor is desuper-heated and the water is heated. A water circulating pump may be included as part of the assembly.

403.5 Desuperheater (Prescriptive). A desuperheater water heater tested and listed in accordance with ARI 470 and connected to the hot water storage tank shall be provided for a vapor compression air conditioner or heat pump with a cooling capacity of 3 tons or more installed in climate zones 1 and 2. Where multiple air conditioners or heat pumps and hot water storage tanks are installed only one of each shall be required to have a desuperheater.

Exceptions:

1. Heat pump water heaters
2. Water heaters provided with solar heating systems having a minimum Solar Fraction of 0.30 when tested in accordance with OG-300

2. Add new standards to Chapter 6 as follows:

AHRI
470-06 Performance Rating of Desuperheater/Water Heaters

SRCC
OG-300 Operating Guidelines and Minimum Standards for Certifying Solar Water Heating Systems

(Note the same text was proposed to the IRC)

Results of First Hearing

Committee vote for disapproval 11-0 (IECC) and no floor challenge. DOE asked for disapproval so it could work with industry to develop a public comment.

Suggested Public Comment

Revise the code change to read as follows:

DESUPERHEATER/WATER HEATER. A factory-made assembly of elements by which the flows of refrigerant vapor and water are maintained in such heat transfer relationship that the refrigerant vapor is desuper-heated and the water is heated. A water circulating pump may be included as part of the assembly.

403.5 Desuperheater Water Heating Systems (Prescriptive). ~~A desuperheater water heater tested and listed in accordance with ARI 470 and connected to the hot water storage tank shall be provided for a vapor compression air conditioner or heat pump with a cooling capacity of 3 tons or more installed in climate zones 1 and 2. Where multiple air conditioners or heat pumps and hot water storage tanks are installed only one of each shall be required to have a desuperheater.~~

Exceptions:

- ~~1. Heat pump water heaters~~
- ~~2. Water heaters provided with solar heating systems having a minimum Solar Fraction of 0.30 when tested in accordance with OG-300~~

In climate zones 1 and 2 each dwelling unit shall provided with one or a combination of the following with the capability to provide hot water to meet the anticipated needs of the dwelling unit:

1. a desuperheater water heater tested and listed in accordance with ARI 470
2. a heat pump water heater
3. a solar water heating system
4. an instantaneous water heater

2. Add new standards to Chapter 6 as follows:

AHRI

470-06 Performance Rating of Desuperheater/Water Heaters

SRCC

~~OG-300 Operating Guidelines and Minimum Standards for Certifying Solar Water Heating Systems~~

Public Comment Development

There are three readily apparent actions that can be taken regarding.

1. Do not file a public comment thereby allowing the 2009 IECC to remain moot on this issue.
2. File a public comment to have the proposed change considered as submitted.
3. File a public comment that would improve the proposed language as suggested above.

Interested and affected parties are encouraged to provide comments on the above public comment which is proposed as a starting point development of a public comment that could address this issue in the code.