# GEW90-14
## 606.5.1

**Proponent:** John Williams, CBO, Chair, representing ICC Adhoc Health Care Committee (AHC@iccsafe.org); Brenda Thompson, Chair, representing Sustainability, Energy, High Performance, Code Action Committee (SEHPCAC@iccsafe.org)

**Revise as follows:**

**606.5.1 Economizer systems.** Each cooling system that has a fan shall include either an air economizer complying with Section 606.5.1.1 or a water economizer complying with Section 606.5.1.2.

**Exception:** Economizers are not required for the following:

1. Individual fan-cooling units with a supply capacity less than the minimum listed in Table 606.5.1(1).
2. In Group I-2, Condition 2 occupancies~~, hospitals~~, and ~~Group B occupancies,~~ ambulatory care facilities, where more than 75 percent of the air designed to be supplied by the system is to spaces that are required to be humidified above a 35°F (1.7°C) dew-point temperature to comply with applicable codes or accreditation standards. In other occupancies, where more than 25 percent of the air designed to be supplied by the system is to spaces that are designed to be humidified above a 35°F (1.7°C) dew-point temperature to satisfy process needs.
3. Systems that include a condenser heat recovery system that is designed to utilize 60 percent of the peak heat rejection load at design conditions and there is a documented need for that rejected heat for either service hot water or space heating during peak heat rejection design conditions.
4. Systems that serve spaces estimated as having a sensible cooling load at design conditions, excluding transmission and infiltration loads, of less than or equal to transmission and infiltration losses at the temperature and relative humidity design conditions in accordance with Section 6.1 of ASHRAE 55.
5. Where the use of outdoor air for cooling will affect supermarket open refrigerated casework systems.
6. Where the cooling efficiency is equal to, or greater than, the efficiency improvement requirements in Table 606.5.1(2).

**TABLE 606.5.1(1)**
**ECONOMIZER REQUIREMENTS**

| CLIMATE ZONES | ECONOMIZER REQUIREMENT |
|---|---|
| 1A, 1B | No requirement |
| 2A, 2B, 3A, 3B, 3C, 4A, 4B, 4C, 5A, 5B, 5C, 6A, 6B, 7, 8 | Economizers on all cooling systems having a capacity ≥ 33,000 Btu/ha |

For SI: 1 British thermal unit per hour = 0.293 W.

a. The total capacity of all systems without economizers shall not exceed 480,000 Btu/h per building or 20 percent of the building's air economizer capacity, whichever is greater.

**TABLE 606.5.1(2)**
**EQUIPMENT EFFICIENCY PERFORMANCE EXCEPTION FOR ECONOMIZERS**

| CCLIMATE ZONES | COOLING EQUIPMENT EFFICIENCY IMPROVEMENT (%)a |
|---|---|
| 2A | 17 |
| 2B | 21 |
| 3A | 27 |
| 3B | 32 |
| 4A | 42 |
| 4B | 49 |

IPLV = Integrated part load value, IEER = Integrated energy-efficiency ratio, SEER = Seasonal energy-efficiency rating, EER = Energy-efficiency ratio, COP = Coefficient of performance

a. Where a unit is rated with an IPLV, IEER or SEER, the minimum values for these metrics shall be increased by the percentage listed in the table in order to eliminate the required air or water economizer. Where a unit is rated only with a full load metric such as EER or COP cooling, these metrics shall be increased by the percentage shown.

**Reason:** This code change coordinates this section with terminology within the current 2015 versions of the I-codes. Based on the results of the Group A ICC hearing cycle, Group I-2 has been split into two separate conditions: Condition 1 includes nursing homes, Condition 2 includes hospitals. Note that the original code change, G257-12, received a floor modification that switched the conditions. The description above represents the final outcome.

Ambulatory care facilities are defined as Group B occupancies, therefore the "Group B occupancies" can be deleted. If it is not deleted, this section could be misinterpreted to mean all Group B.

This proposal is cosponsored by the ICC Ad Hoc Committee for Healthcare (AHC) and the ICC Sustainability Energy and High Performance Code Action Committee (SEHPCAC).

The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has
held 11 open meetings and over 162 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC websitē at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

The SEHPCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance International Codes with regard to sustainability, energy and high performance as it relates to the built environment included, but not limited to, how these criteria relate to the International Green Construction Code (IgCC) and the International Energy Conservation Code (IECC). This includes both thetechnical aspects of the codes as well as the code content in terms of scope and application of referenced standards. In 2012 and 2013, the SEHPCAC has held six two-day open meetings and 50 workgroup calls, which included members of the SEHPCAC as well as any interested parties, to discuss and debate proposed changes and public comments. Related documentation and reports are posted on the SEHPCAC website at: http://www.iccsafe.org/cs/SEHPCAC/Pages/default.aspx.

**Cost Impact:** Will not increase the cost of construction

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