

**INTERPRETATION IC 90.1-2010-30 OF  
ANSI/ASHRAE/IES STANDARD 90.1-2010  
Energy Standard for Buildings Except Low-Rise Residential Buildings**

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**Request from:** Junaid Bin Naseer, KEO Office, Mezzanine Floor, Jazeera Tower, P.O. Box 27594, Abu Dhabi.

**Reference:** This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IES Standard 90.1-2010, Section G3.1.1.3.2, regarding district cooling systems.

**Background:** I am currently working on mixed used development located in climate zone 1b which have different buildings and for cooling is served through district cooling plant outside the plot boundary which is purchased. Electric resistance by default is the heating system, as climate zone 1B does not require any heating.

As per Section G3.1.1.3.2 Purchased Chilled Water Only and its Clause “a”, all cooling types for baseline are changed to district cooling and Clause b, System 1 & 2 are changed to constant volume fan coil units with fossil fuel boilers. Clause “c”, System 3 & 4 shall be constant volume single zone air handlers with fossil fuel furnaces.

It is not clear from Appendix G and upper sections regarding changes to proposed electric system selection when purchased cooling.

**Interpretation:** Heating system is not present in proposed design therefore proposed design electric system will be changed from electric resistance to fossil fuel boilers and this shall only apply to residential building type whereas for thermal blocks where System 4 is changed for baseline, the proposed system will also have fossil fuel furnaces for heating similar to baseline system.

**Question:** Is this interpretation correct?

**Answer:** Yes.

**Comments:** When no heating system is included in the Proposed Design, the Baseline and Proposed heating systems shall be electric resistance as described in Table G3.1-10. However, in the specific case where the Proposed Building design uses Purchased Chilled Water Only, the heating source in the Baseline and Proposed Building design shall be fossil fuel as described in Section G3.1.1.3.2.