District heating and cooling

EA10 | Possible point

Glossary

Intent

To encourage the development of energy-efficient neighborhoods by employing district heating and cooling strategies that reduce energy use and adverse energy-related environmental effects.

To encourage the development of energy-efficient neighborhoods by employing district heating and cooling strategies that reduce energy use and energy-related environmental harms.

Requirements

Incorporate a district heating and/or cooling system for space conditioning and/or water heating of new buildings (at least two buildings total) such that at least 80% of the project's annual heating and/or cooling consumption is provided by the district plant. Single-family residential buildings and existing buildings of any type may be excluded from the calculation.

Each system component that is addressed by ANSI/ASHRAE/IESNA Standard 90.1–2007 (or a USGBC approved equivalent standard for projects outside of the U.S.) must have an overall efficiency performance at least 10% better than that specified by the standard's prescriptive requirements. Additionally, annual district pumping energy consumption that exceeds 2.5% of the annual thermal energy output of the heating and cooling plant (with 1 kWh of electricity equal to 3,413 Btus) must be offset by increases in the component's efficiency beyond the specified 10% improvement. Combined heat and power (CHP) district systems can achieve this credit by demonstrating equivalent performance.

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Each system component that is addressed by ANSI/ASHRAE/IESNA Standard 90.1–2010 must have an overall efficiency performance at least 10% better than that specified by the standard's mandatory requirements. Additionally, annual district pumping energy consumption that exceeds 2.5% of the annual thermal energy output of the heating and cooling plant must be offset by increases in the component's efficiency beyond the 10% improvement. If a combined heat and power (CHP) system is used to comply with the credit requirements, show equivalence by demonstrating that energy consumption savings from the CHP plant at least equal the energy savings that would result from using a conventional district energy system with components that are 10% better than ANSI/ASHRAE/IESNA Standard 90.1–2010. When determining equivalency, take into account the pumping energy as described above.

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