

POTENTIALS OF USEFUL UTILIZATION OF EXCESS HEAT IN SUBSTATION'S IT ROOM

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Abstract

Command building in larger substations typically have a telecommunication (IT) room where servers, computers, inverters and telecommunication equipment are installed. The equipment operates continuously, which creates the heat losses that need to be removed from the IT room. Cooling is carried out with air conditioners of a certain heat power. This excess heat could be used to heat rooms in the substations where staff are located, using a heat pump or ventilation system. The article will present several possible solutions for room heating/cooling. Each of the will be evaluated using cost efficiency. The solutions for non-heating season will also be shown. All of those solutions require a high degree of reliability for cooling of the rooms.

Keywords

IT room, substation, cooling, heating pumps, ventilation systems, air conditioning unit

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