

Heating & Cooling

All around the world, irrespective of climate zones, there is a need for heating or cooling of residential and commercial buildings. While many countries have opted for individual, on-site heating and cooling solutions, Denmark decided to centralise heating and power systems decades ago in order to lower costs and reduce emissions. Since then, Denmark has developed unique solutions to enable sustainable district heating. Today, 98 per cent of the Danish capital of Copenhagen is thus supplied by district heating.

Combining heat and power

Utilising excess heat from electricity production is a Danish core competence. Today Denmark hosts some of the most efficient combined heat and power plants in the world. These reach efficiency levels of more than 90 per cent, and several of them even operate partially on biomass.



In addition to these plants, Denmark has several waste-to-energy plants. Waste incineration solves two problems at the same time. First, since most types of waste can be either burned or recycled, less than three per cent of waste in Denmark ends up in landfills. And secondly, waste incineration plants produce both heat and electricity. In this way, waste becomes a resource to secure both the heat and energy supply - in fact, four kilos of waste is equal to the energy in one litre of oil.

Innovative district cooling

With the expected effects of climate changes, energy-efficient district cooling has now become an equally important focus point on the energy agenda. As is the case with district heating, district cooling possesses an immense potential for reducing costs and CO2 emissions. District cooling systems in Copenhagen use seawater from the harbour in cold periods as well as excess heat from power plants to produce cooling for offices and department stores.

With almost 40 years' experience in district heating, Denmark hosts some of the world's leading suppliers in the fields of district heating and cooling, as well as waste incineration. Their technologies, solutions and know-how can serve as inspiration for other countries looking for centralised heating and power systems.

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