



Fig. 4. The increase of fuel consumption as a function of CHP-extraction temperature

In other words, if supply temperatures can be lowered from 150 °C to 95 °C the additional fuel requirement for combined heat and power production will be reduced by approx. 40 %. It is assumed that the turbine is dimensioned for this temperature range.

To illustrate the advantage of using hot water instead of steam for district heating, the electrical and heating circuits have been kept separate. In illustrating the energy savings by district heating from a power station, it is important to compare the costs of construction at different temperature ranges in relation to the fuel consumption.

From an economic point of view and out of consideration for energy resources there can be no doubt that it is of the greatest importance to find the lowest possible temperature for the transportation of heat from a

power station to the consumers. Fig. 4 illustrates this.

Coal-fired stations

A range of Danish district heating stations have started building or planning the building of coal-fired stations. The latest statistical information shows as follows:

	%
1. Coal stoking has been established . . .	6
2. Coal stoking is under erection	6
3. Have applied for authorization for erection	18
4. Planning the erection of coal stoking	12

Thus today app. 40 % of the Danish district heating stations (in all app. 350) are