

# POWER FROM BIO- MASS AND WASTE COMBUSTION

APPLICATIONS

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## Warm water combustion systems

Whenever the heat from the combustion is used to produce warm water, often times more heat is produced than can be used for heating purposes. In this case our low temperature ORC-systems can simply be connected to the warm water interface and produce 6-10% of extra electricity out of the warm water when condensing against the ambient air.

## Existing combustion systems

Many combustion systems were built with the aim to supply district heat. In order to prevent the forming of sulfuric acid pressurized water systems were built. However the pressurized water systems supply much higher temperatures than needed in the district heat grid. For such installations it is very easy to re-fit ORC-systems. On the heat input side they use the high temperature from the cooling cycle and on the low temperature side the heat is passed to the district heating cycle. The advantage of such a setup is that no change has to be made in regards to the supply of district heat but at the same time electricity can be used for the own demand and even for supply to the grid.

## Thermal oil system

Thermal oil as heat carrier medium offers the ideal solution when a simple and reliable system for the production of heat and electricity is needed. Thermal oil offers a solution to produce electricity with an efficiency as high as 20% and maintaining high hot water temperatures on the ORC-condenser side.

## Pressurized water combustion systems

Pressurized water offers the ideal solution as heat carrier medium when a cost effective solution for the combined production of heat and power is needed. By controlling the pressurized water return temperature forming of sulfuric acid in the exhaust gas flow can be prohibited. The water circuit can be designed in order to cover all electrical own consumption of the plant. At the same time hot water with temperatures exceeding 100°C on the cooling side of the ORC can be supplied.