Power and heat cogeneration (CHP)

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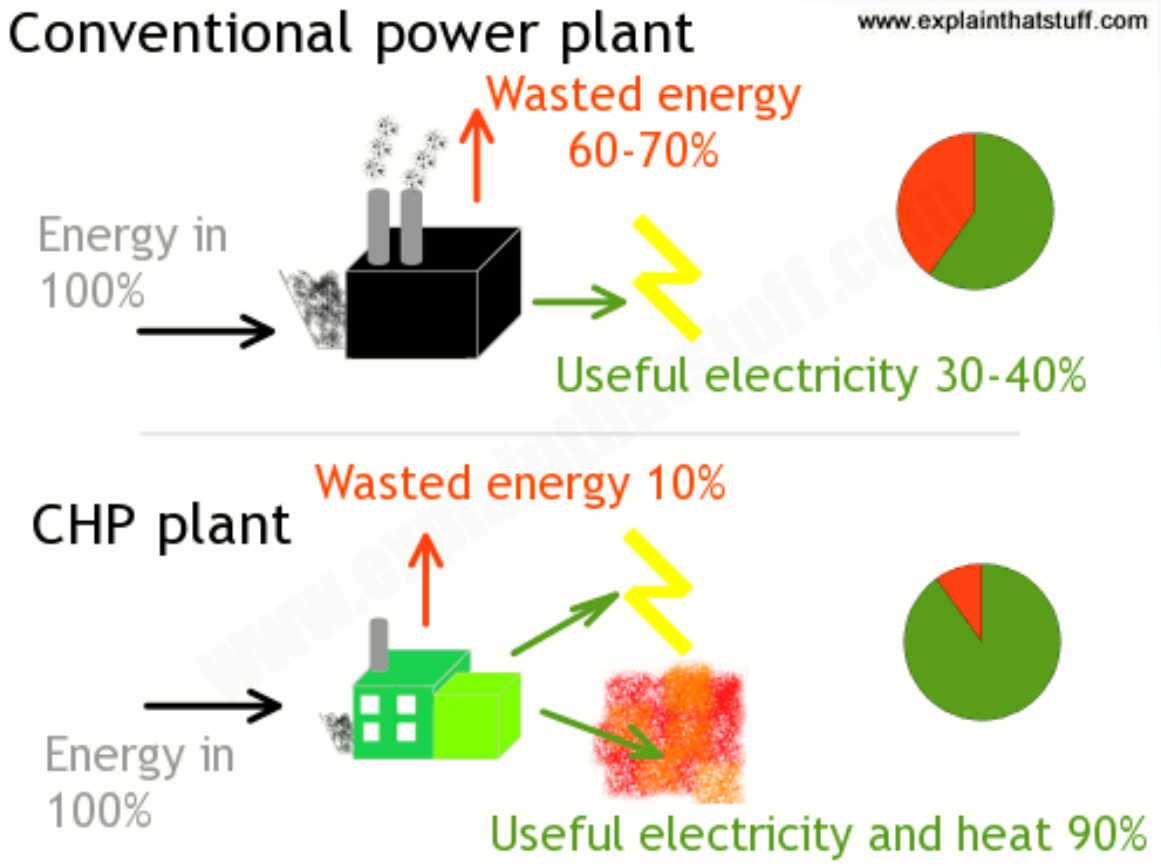
Directive 2012/27/EU on energy efficiency

- **Cogeneration** - the simultaneous generation in one process of thermal energy and electric mechanical energy;
- **High-efficiency cogeneration** has significant potential for saving primary energy;
- Cogeneration enables to **recover waste heat** stemming from the production of electricity;
- High-efficiency cogeneration should be defined by the **energy savings obtained** by combined production instead of separate production of heat and electricity.
- To maximize energy savings and avoid energy saving opportunities being missed, the greatest attention should be paid to the **operating conditions** of cogeneration units.

Energy savings



Rules for high efficiency cogeneration

Directive 2012/27/EU on energy efficiency sets:

- General principles for the calculation of electricity from cogeneration;
- Methodology for determining the efficiency of the cogeneration process.

- The rules are necessary because if cogeneration unit is used for electricity production only, without using the generated heat, it is not high efficiency cogeneration.

- Countries have different mechanisms for supporting high efficiency cogeneration.

CHP-s in Estonia

Cogeneration units are installed to the big district heating networks:

- In total 15 CHP units that use wood, peat, municipal waste, gas, oil-shale and shale gas as fuels.
- Electricity production capacities from 0,2 MW up to 380 MW.
- Heat production capacities from 0,46 MW up to 190 MW.

The cogeneration is regulated mainly by the Electricity Market Act:

- Support is paid according to the amount of electricity that has been produced with CHP in the high efficiency regime.

Tallinn CHP (Väo)

Picture source: Postimees/scanpix

Thank you for the attention!