

This is Norsk Energi

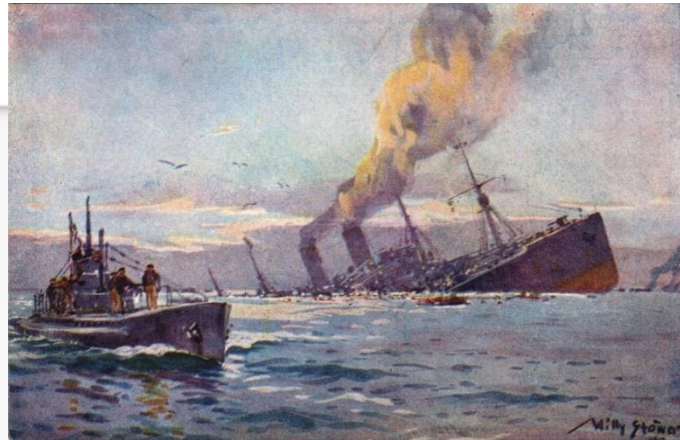
Short presentation of the company



- **65 energy and environment experts with BSc, MSc and PhD degrees**
- **Consultancy, engineering services, analysis and training**
- **Independent from equipment suppliers and manufactures**



Established in 1916



The first world war (1914-1918) was Norway's first energy crisis. British embargo on import of coal caused a crisis in Norwegian industry. The industry applied two strategies to meet the crisis:

1. Energy efficiency
2. Fuel switch from coal to local energy sources (wood fuel and hydropower).

Therefore, Norsk Energi was established in 1916 as a centre of competence on steam boilers and industrial energy efficiency.

500 projects for 300 customers every year



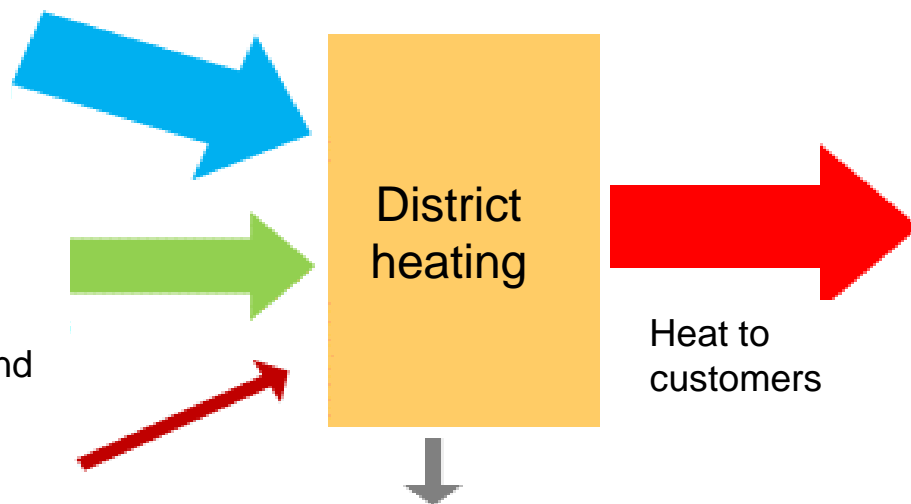
- Feasibility studies
- Detail engineering
- Project implementation
- Comissioning
- Operation
- Tecnical advisory assistanse
- Environmental advisory assistance
- Training of operators
- International capacity building programs

Example: What we do in the district heating sector

Waste heat recovery
from power plants,
from waste combustion,
waste heat from industry

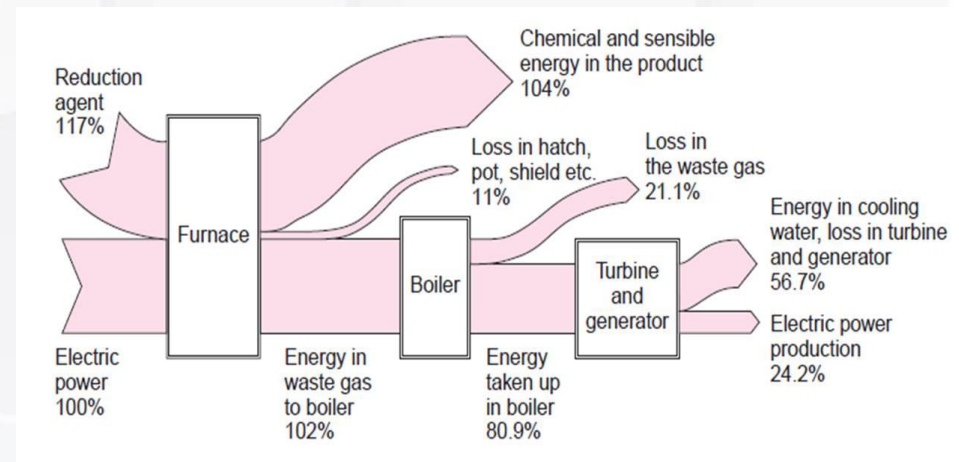
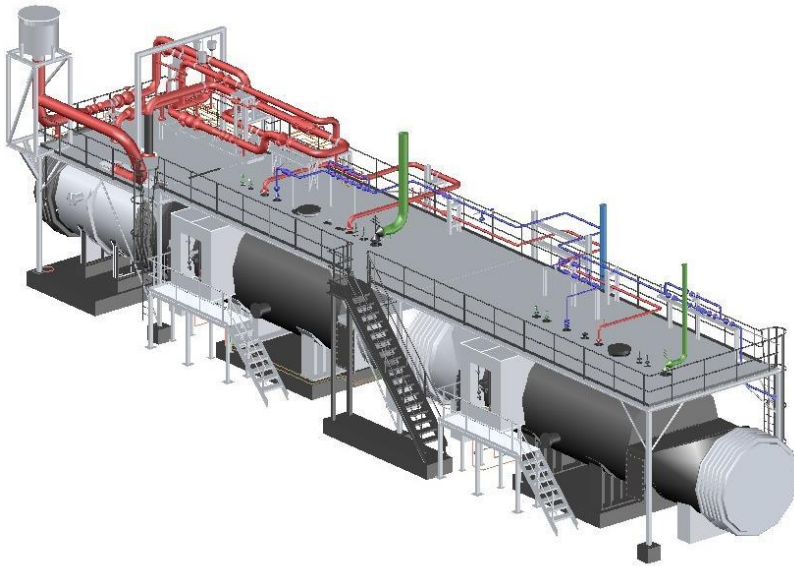
Renewable energy
biofuels
heat-pumps based on waste
water treatment, seawater and
groundwater

Fossil fuels
Only to cover peak
demand and reserve of
capacity



Example: What we do in energy intensive industry

Design of waste heat recovery units



Organised as an industry association



- 65 industry members
- 300 costumers
- 500 projects yearly

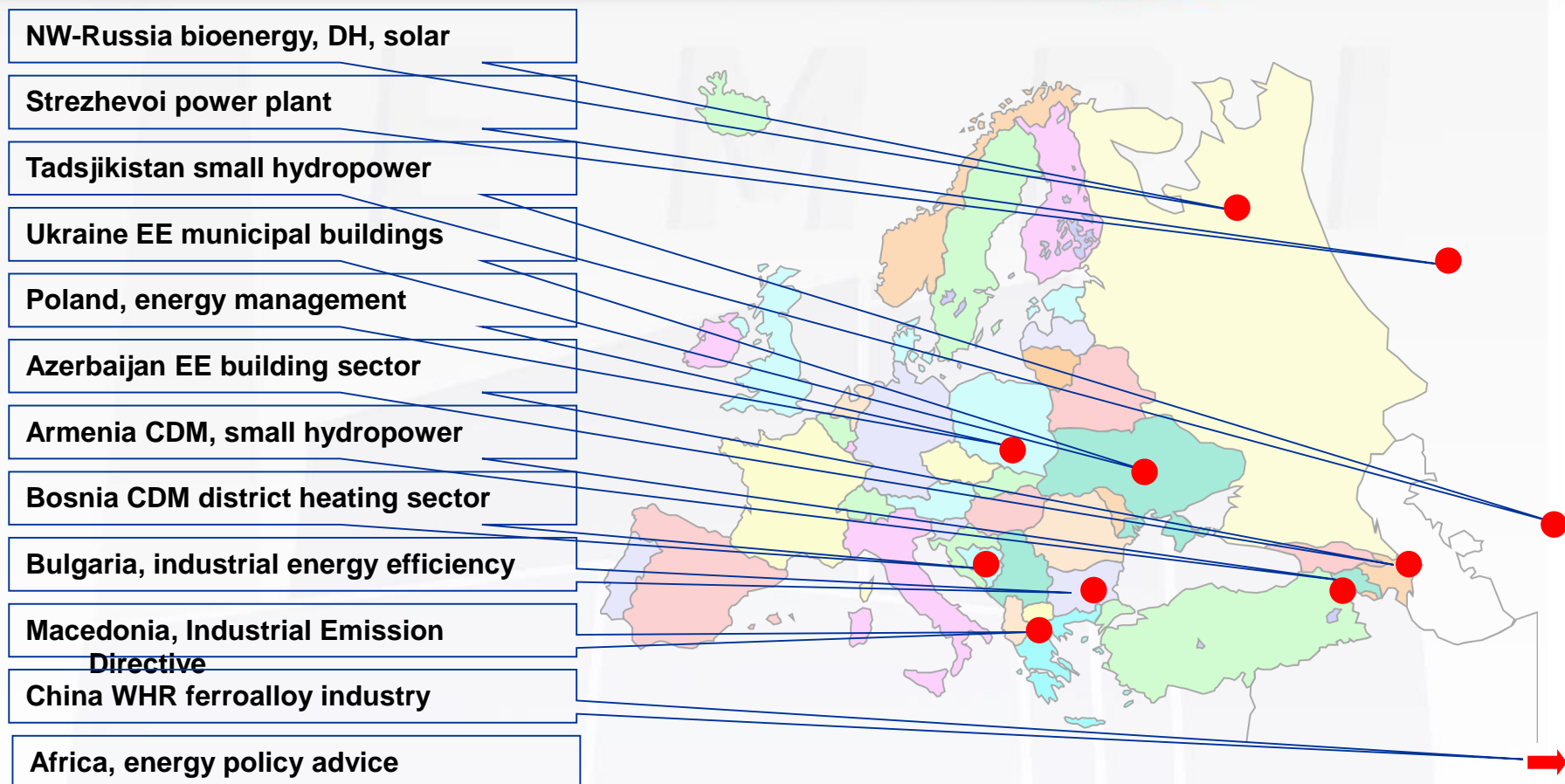


The Board of Norsk Energi 2016-2017

- Head office in Oslo
- Local offices and representation in 5 other Norwegian cities



Norsk Energi's International Projects



Why Norwegian companies establish energy management?



Many Norwegian companies implement energy management because:

1) Establishment of energy management systems according to ISO-50001 is a requirement in the emission permits for large companies.





2) Industry may get state support for energy management:

- Simplified energy management 1-10 GWh/year < 200.000 NOK
- Ambitious energy management > 10 GWh/year < 1 mill NOK

- Grants from Enova < 50 % of approved costs
- Ambition to save more than 10 %
- Several other requirements

Energy management project portfolio 100 projects since 2013



Industry	District	Oil and gas	Other companies
Elkem Yara Orkla Ewos Hunton Hydro Findus Jotun Diplom IS +++	Statkraft Varme Hafslund Varme BKK Varme Eidsiva Bioenergi Lyse Neo +++  	Oseberg B  	Kongsberg Haukeland Hospital BIR waste incineration EGE waste incineration 