Swedish – Polish
Sustainable Energy Platform

Vattenfall supports sustainable development of Warsaw city

Andrzej Rubczyński
Vattenfall Heat Poland

Lund University
14 April 2010
Vattenfall AB – leading energy company

Heat sales – 37.9 TWh (10.8)*
Electricity generation – 158.9 TWh (3.6)*

* (Vattenfall Poland)
Reduction of CO₂ emission by Vattenfalls’ plants

Vattenfall ambition is to achieve CO₂ neutrality till 2050
Environmental regulations in Poland…

… key investment driver and business opportunity.

Not much time is left for the reconstruction of the aged Polish energy sector.
Cogeneration support scheme in Poland…

… hopefully, will increase the share of CHP Plants.

Quota obligation, certificate system should stimulate development of CHP Plants especially based on renewable energy sources (biomass, biogas, waste)
Vattenfall in Warsaw – cogeneration based on the fuel mix

Target for the year 2020

35%

Reduction of the share of coal
Vattenfall biomass portfolio strategy in Poland

Target for the year 2020
1 million ton of biomass used in Warsaw
Setting plantation is not an easy business…

… due to the lack of an adequate support scheme and strong competition of imported biomass.

Lost opportunity for additional occupation and work places in rural areas
Forests protection by law in Poland…

… justified, however creating substantial technical problems for boiler manufactures.
Biomass combustion brings new operational problems

Slagging & fouling

Corrosion
Vattenfall has learned how to deal with this fuel

• Around 1.5 million ton of biomass used today

• Around 90 plants utilizing biomass and waste in the whole Vattenfall Group
Waste to energy plants in Vattenfall Group

Each year, 2 million tons of waste is converted by Vattenfall into useful energy
Waste to Energy (WtE) Plant in Warsaw

Vattenfall is interested in the construction of WtE Plants in Warsaw.
Additional activities performed by Vattenfall in Warsaw

... improving effectiveness of the district heating system.

**Generation**
- max. cogeneration
- sustainability

**Distribution**
- min. losses

**Consumers**
- energy services
  - thermo-effectiveness
  - proper source of heat
Optimisation of the energy production in Warsaw…

… through the heat accumulator

**CHP Siekierki accumulator:**
- volume – 30 000 m³
- thermal capacity – 1500 MW
- elimination of 1 heat-only boiler
- less emission of CO₂
- more electricity in cogeneration
Optimisation of the energy production in Warsaw…

… by district cooling

District cooling:
- less energy for cooling
- more electricity from cogeneration
- less CO₂
Conclusions – Vattenfall Your business partner

Vattenfall offers cooperation in the following areas:

• Development of biomass portfolio

• Modernization of district heating system including construction of Bio CHP Plants

• Solving waste problems by e.g. construction of the waste to energy plants
Thank you for attention