

State of the Art Seminar - Group 3

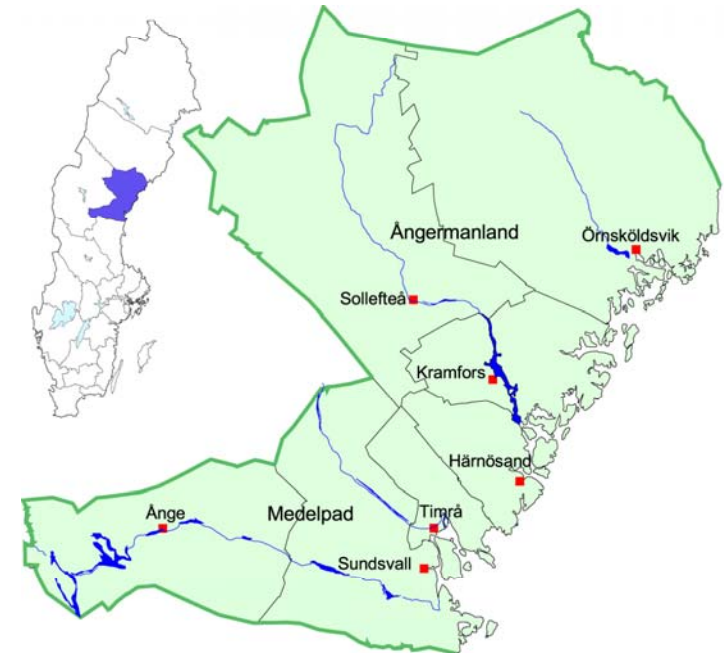
Sundsvall, Västernorrland

6-7 April 2009



County of Västernorrland

- **Focus on:**
 - Energy efficiency in public buildings
 - Energy efficiency in transports
 - Biomass
 - 2nd generation biofuels
 - Wind and solar (underway)
- **Best practices**
 - Hydro-power 10% of Swedish need
 - District Heating (eg. from waste)
 - Innovative cooling (Snow-cooling)
 - Energy Efficiency in Public Buildings



- 240 000 inh.
- 22.000 km²
- 11 inh./km²

Gabrovo

- **Focus on:**
 - Gasification
 - Improving electricity supply system
 - Energy efficiency
 - RES (water, wind, solar, geothermal, biomass)
- **Best practices**
 - Street lightning
 - Savings in mazut and gas heating
 - Photovoltaic



- 142,850 inh
- 2,023 km²
- 70.6 inh./km²

Western Greece

- **Focus on:**
 - Wind, Greece has the best wind potential in Europe, second only to UK
 - Solar, still represents only 2% of electrical production..
- **Best practices**
 - Hydro-power
 - Wind energy



- 741,282 inh.
- 11,350 km²
- 66 inh./km²

Norrbotten Region

- **Focus on:**
 - Energy efficiency and saving
 - Energy for heating
 - Energy for transport
 - Hydro- and wind power
- **Best practices**
 - Hydropower (11% of Swedish need)
 - Biomass – “the forest is growing as hell”
 - Bio-fuel – black liquor gasification



- 249,677 inh.
- 98,911km²
- 2,5 inh./km²





Some conclusions

- In northern regions:
 - hydropower and biomass
 - energy efficiency
 - district heating (waste and biomass)
 - planning for large scale wind energy
 - strategies (regional → national) ?
- In southern regions:
 - wind energy more implemented
 - great (un-exploited) potential for solar energy
 - strategies (national→regional) ?

Some more issues

- How to boost investments in RES?
 - In Greece a huge potential for solar energy
 - In Sweden great potential for wind energy – but some obstacles
 - Financing and incentives
- Awareness for energy efficiency
 - Public buildings – schools, hospitals, administrations
 - Industry
 - Citizens homes
- Research and technical development
 - Biofuels
 - Improving Solar and Wind technology
 - Lightning



Regional Energy Efficiency – solutions for the future

More4NRG Dissemination seminar
and
AER Committee 1 Plenary meeting

Welcome to
Sundsvall, Västernorrland, Sweden
22-24 September 2009