



Sustainability Strategies

Environmental Efforts & Innovation

Stockholm:

Busses run on biogas created from sewage

- Sewage treatment plants get biogas facilities
- Convert sewage to gas for heating and cars
- No CO₂ emissions
- Energy use down 5 GWh/year
- Petrol and diesel use down 6 million liters/yr
- CO₂ emissions down 14,000 tons
- Fewer particulates emitted
- Safe disposal of waste

Malmö:

Ecologically sustainable residential area in Western Harbor

- Västra hamnen
- Sustainable urban development
- 58 of 65 actions implemented
- 100% renewable, local energy
- No CO₂ emissions from homes
- Safe building materials
- Food waste converted to biogas

Kungälv:

Solar panels heat town

- Cooperation with Chalmers Technical University
- 800 panels, each 12.5m²
- Delivers 4 GWh of heat each year
- Oil consumption down 440m³/year
- CO₂ emissions down 1000 tons annually

Linköping:

Biogas from discarded food

- Organic food waste collected from schools, restaurants, hospital
- Technical Department facility for liquid foods
- Plans for disposal of leftover wholesale food
- Incineration down 3,422 tons
- Biogas production up 1.3 million m³/yr
- Bio-fertilizer
- Phosphorus back into eco-cycle

Västervik:

Energy Saving Initiatives at Sports Center

- LIP grant 1999
- New ventilation, dehumidifier, heat exchanger
- Heat-recovery plant
- Drop in heating costs
- Energy use dropped 803 MWh/year
- New circulation pumps for pool water

Tranås:

Tranås Energy AB Aims for Zero Emissions

- Woodchip-fired boiler
- All oil-fired boilers replaced by 2002
- CO₂ emissions nearly zero
- 95% of heating need met
- 9,300 MWh/year (8,000 renewable)

Lindesberg:

City heated by extra heat from cardboard plant

- Korsnäs Frövi cardboard mill
- 1998: cooperation between mill and Linde Energi
- Waste heat from mill heats district
- Reductions:
 - 100-150m³ of oil/yr
 - 400,000 KWh/yr
- 92% of need met
- LPG use down 3000 tons/yr
- Oil consumption down 2500m³/yr

Questions for reflection and discussion

- What traits do the examples from the lecture have in common?
- Are there any materials or tactics used by more than one of the companies spotlighted? What do these similarities suggest?
- Where can the most influential changes in energy or resource use be made?

Bibliography

- "Best Practice Examples." Swedish Environmental Protection Agency. <www.naturvardsverket.se>