



Polish-Norwegian cooperation platform for climate and energy conservation

– project implemented by The Association of Polish Cities in cooperation with KS – the Norwegian Association of Local and Regional Authorities

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KOMMUNESEKTORENS ORGANISASJON

The Norwegian Association of Local and Regional Authorities

International framework

- Importance of municipalities more recognised in COP21 Paris
- Norway and the EU have common policy on climate; 40 per cent emission reduction by 2030, including
 - 50 per cent outside emission trade. Greatest reduction potential in transport sector, but also within agriculture, waste treatment and energy use in buildings
 - 67 per cent of used energy from renewable sources
- International cooperation between local governments, i.e. in [ICLEI](#) - Local Governments for Sustainability and the [Covenant of Mayors](#) for Climate & Energy



Diagnosis of the situation in Norway



Sustainable energy planning and energy management on local level

Legal, economic and social framework

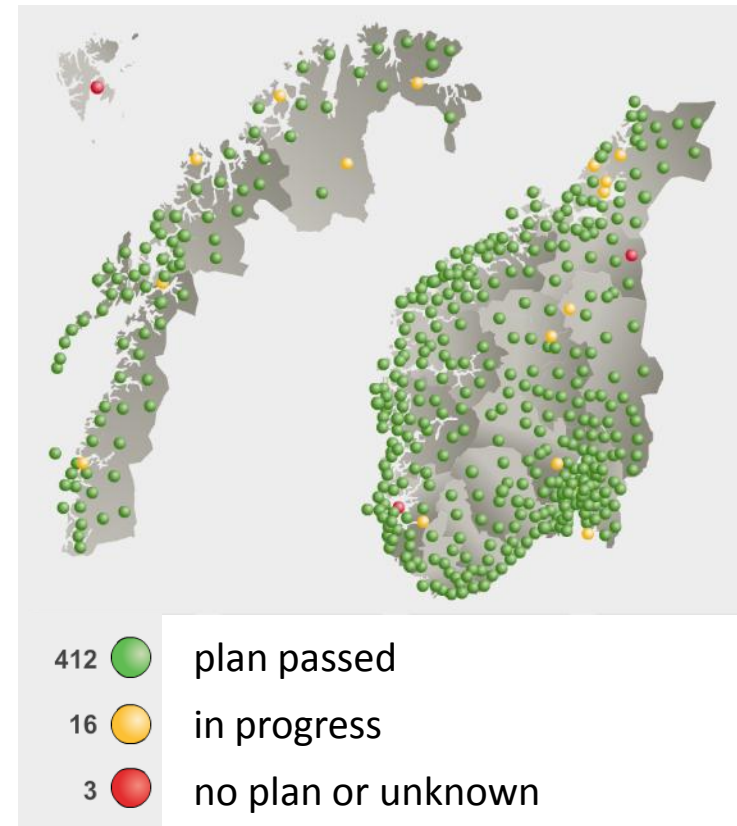
- Planning and building act including
 - detailed requirements for buildings
 - local climate & energy plans required in each municipality
- Energy act
 - energy suppliers shall describe status on energy use and sources, including renewable energy
- Funding from ENOVA (public enterprises owned by Ministry)



- ENOVA also supports public awareness, i.e. the “Rain maker” information program and web site including activities for schools

Current state of sustainable energy planning and management

- Climate & Energy plans passed in most municipalities
 - planning processes have resulted in political awareness locally and cooperation with citizens & stakeholders
 - electronic planning tool KOMPLETT, developed by KS
 - climate and energy data including historical data om municipal level provided by Statistics Norway



Barriers and challenges

- Turning plans into action, and revising them
 - many plans are descriptive rather than action programmes
 - plans decoupled from local budget processes
- Municipalities with different roles
 - as authorities, i.e. local planning and building authority
 - ordinary energy users, among all others
- Sparse funding for other purposes than energy use in buildings, i.e. water supply and wastewater treatment
- Sparse funding for climate measures without stationary energy relevance, i.e. transport, waste and agriculture
 - municipalities potential actions not recognised in international carbon emission trade

Drivers, needs and trends

- Oil heating prohibited in Norway by 2020
- Many types of biofuels available
 - may reduce waste treatment costs
 - organizing and wide cooperation needed, i.e. district heating
- Low electricity prices in Norway
 - Approximately 99% is renewable (hydropower)
- More awareness among young people
 - more environmentalists (“greens”) within local politics this election period (2015-19)

Sources of inspiration

- Climate & energy experience and planning tools
- Systematic work with climate adaptation
 - systematic risk & vulnerability analyses
- Energy Performance Contracting (EPC) in municipalities' projects; energy measures paid by reduced energy costs
- Transport and land use related projects and methods
 - electrifying, less energy use, more renewables (i.e. biofuel)
 - less carbon emission and better local air quality
 - reduction in car use, including methods to quantify effect from local land use and transport measures
- Awareness raising and school projects



Best practices



Åsveien School, including local sports and community centre, Trondheim

- GHG emissions 50 per cent down
- Energy use minimised
- Wooden constructions that bind CO₂
- Optimised light and ventilation
- Waste recycling
- Planned for minimised car use



Photo: Trondheim municipality

Oseana Arts & Cultural Centre, Os municipality

- Covered with solar panels
- Water source heat pumps
- Minimised energy use and environmental friendly materials
- Pattern for cultural buildings



Photo: Tove Heggø

«Power House» Kjørbo, Baerum

- The Worlds first rehabilitated office building that produces more energy than it uses
- Solar energy and Water source heat pumps



Photo: FutureBuilt

«The Tree», Bergen

- The Worlds tallest wooden building
- 62 flats, 14 stories, 51 metres tall
- Wood in the whole constructions binds CO2 through the building's life time
- “Passive house” with minimised energy use



Photo: BOB

All public transport in the Oslo area fossil-free by 2020

- Trams and metro already there, networks are now expanded
- Introduction of electric busses
- Biofuel busses incl. household waste as source
- Low emission boat technology



Photo: Ruter#



Thanks for the attention!

