

Norrbotten Observatory Energy Loupe [SE]

Key Achievements

- Creation of Energy Loupe, the online energy observatory for Norrbotten and Västerbotten
- Aim: to provide reliable energy data on energy demand, consumption and CO² emissions
- Target groups: politicians, technical staff from local and regional authorities, Covenant of Mayors Coordinators/Supporters, energy experts.

Context & Rationale

Reliable energy data are indispensable for developing realistic but ambitious local and regional energy and climate strategies as well as action plans. To be able to monitor progress and to evaluate policies and measures, even a continuous follow-up of data is necessary. Especially for small and medium-sized municipalities, this is not an easy thing to do due to the lack of time, money and educated staff. A regional energy observatory is therefore an important tool to support municipalities.

Description

In strong collaboration with regional and local stakeholders and research institutions, the following tasks were defined for a regional GHG observatory for the two northernmost counties in Sweden (Norrbotten and Västerbotten):

- Provide energy and GHG data on local and regional level;



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- Can be used for follow-up on local and regional energy and climate policies and measures;
- Is a support for local stakeholders in defining climate and energy strategies and measures;
- Is embedded and supported in the region, and becomes an important contribution to a successful regional development.

This resulted in the so-called “Energy Loupe”, which is an online energy observatory for the counties Norrbotten and Västerbotten with their 29 municipalities, providing local and regional authorities as well as energy experts with reliable local and regional energy data. It covers final energy use and direct CO² emissions for all relevant sectors and is available for free on the website of the regional energy agency Energikontor Norr (former Nenet).

Main Results

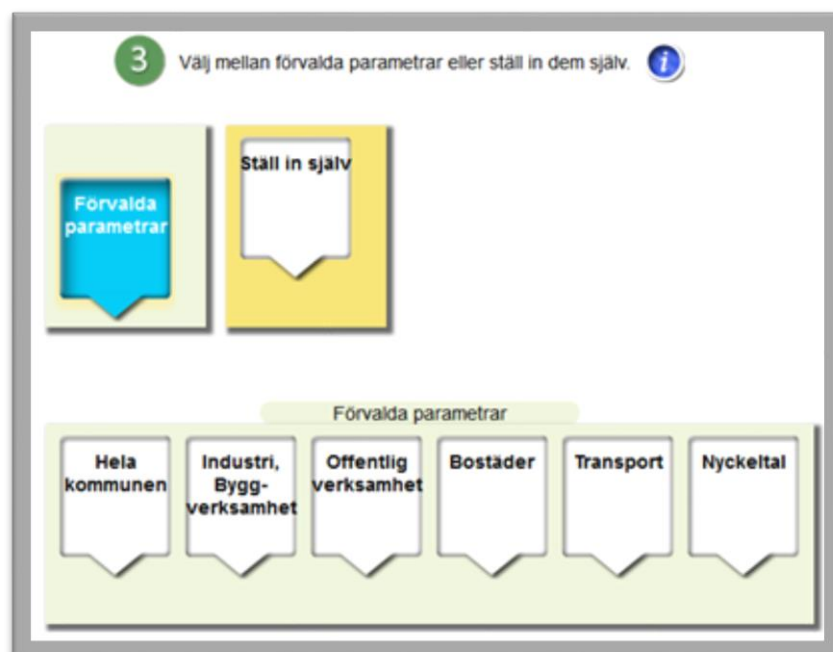
The main input data are energy demand data for the years 1990, 1995 and from the year 2000 until today, based on national statistics from Statistics Sweden, which have been broken down to local and regional data. Energikontor Norr, the owner of the Energy Loupe observatory, is adjusting and complementing these data with local data from energy providers (district heating) and further data set mainly regarding the industrial, agricultural and the transport sector.

Energikontor Norr works also for filling data gaps, e.g. by direct collaboration with energy providers and energy consumers or by interpolation of data if possible.

IPCC standard emission factors are used to calculate CO² emissions, for electricity the Scandinavian electricity mix is the basis for calculation.

The system provides guidance by providing default settings for parameter and indicator, but users can even choose their own set of data. As output Energy Loupe delivers:

- Total energy demand and CO² emissions per municipality;



- Total energy demand and CO² emissions per county;
- Energy consumption and CO² emissions for the following sectors: agriculture and forestry, industry, service, public, transport, households per sector CO² emissions per municipality;
- Share of the following fuel types on energy use: coal, coke, petrol, diesel, heavy and light oil, LPG, natural gas, peat, wood fuels, liquid by-products from pulp, waste, district heating, electricity and others;
- Further indicators, as energy demand per capita, number of low-emission cars compared to total number of cars etc.;
- Benchmarking possibility between municipalities and/or counties;
- Under development: building scenarios on future energy use and resulting CO² emissions;
- Possibility to export data in various formats (graph, excel file etc.).

Lessons Learned & Success Factor

The limiting factors for the Energy Loupe tool are:

- Delay in data availability with up to 2 years;
- Secrecy (access to data can be restricted for confidentiality reasons. This restriction concerns personal and commercial data): especially for small and medium-sized municipalities, not all data are published due to secrecy. This can lead to essential data gaps;
- Level of reliability of data, especially data from transport sector as well as from households' energy consumption have still a relatively low reliability;
- Energy Loupe covers only energy which has been sold and bought on the energy market, but does not cover e.g. burning wood from own forests.

Therefore, the tool will be further developed.

Scope for Improvement

Improving governance structures in a regional GHG Observatory structure:

- Further develop and extend partnership for energy Loupe to improve data quality by filling data gaps through direct contact with energy providers;
- Creating an effective working structure by introducing a Steering Group and a Working Group with defined roles of all stakeholders;
- Signing a Memorandum of Understanding between partners which follows the principles of open access to information, participation, effectiveness, clearness and fair collaboration;
- Defined methods of evaluation of both technical and organizational questions in the process;
- Discuss how to improve and ensure GHG observatory interlinkages to local and regional energy and climate strategies and measures.

Improving regional GHG observatory technically:

- Improving technical applications;
- Start series of trainings for users of Energy Loupe;
- Continuously exchange of experience with national and international partners, not at least in the EnergEEWatch network and the new IEE project Data4Action in the context of the Covenant of Mayors;
- Analyse local and regional energy and GHG data on a yearly basis by Energikontor Norr's experts and providing decision makers with more details if requested;
- Outreach activities (website, press release) incl. publishing results of analysis as a support for local and regional policy development.

Contacts & Links

Energikontor Norr AB
Kungsgatan 46,
SE - 972 41 Luleå

Contact: Wolfgang Mehl

wolfgang@energikontornorr.se

Sophie Forsberg

Mail: sophie@energikontornorr.se

Observatory website: <http://stats.nenet.se/>

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ENERGee Watch

European Network of Regional GHG Emissions and Energy Watch

DAT4ACTION