



Northern Periphery and
Arctic Programme
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EUROPEAN UNION

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Rekommendation for energy plan, Haparanda, Sweden

The City of Haparanda is a municipality in Norrbotten County in Northern Sweden, which has shown interest in getting support from the RECENT project in developing a strategic implementation plan on energy efficiency and renewable energy sources. Based on the plan a systematic approach on identifying the most economic and technical feasible solutions in both short-term and long-term would be possible and would have a long lasting impact.

Strategic energy planning

Jokkmokk municipality is a Swedish Ecomunicipality and a signatory of the EU Covenant of Mayors. Jokkmokk developed its own sustainable energy action plan in 2010 with a 20 percent climate target until 2020. As a result, a comprehensive energy efficiency project has been implemented for municipal building. Jokkmokk has been in continuously contact with Haparanda for experience exchange and to support the development of a strategic energy plan, mainly by telephone and email. Due to very limited staff resources at Haparanda municipality the process took longer than expected. In 2017, Jokkmokk presented on sustainability and energy efficiency gains for the executive committee of Haparanda municipality. However, again due to limited resources at Haparanda, the energy plan could not be finalized nor a pilot plant implemented during the RECENT project. However, a baseline energy inventory has been done as well as recommendations for energy efficiency projects.

Energy saving plan

Asset owner: Haparanda Municipality, Sweden

Used assets: Energy saving measures in municipal buildings

Energy savings: 506 MWh/year

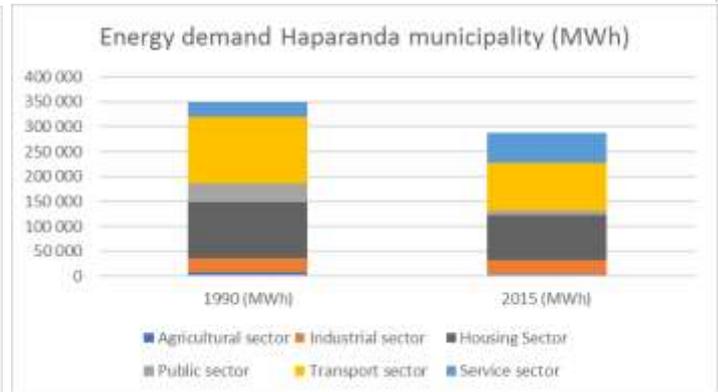
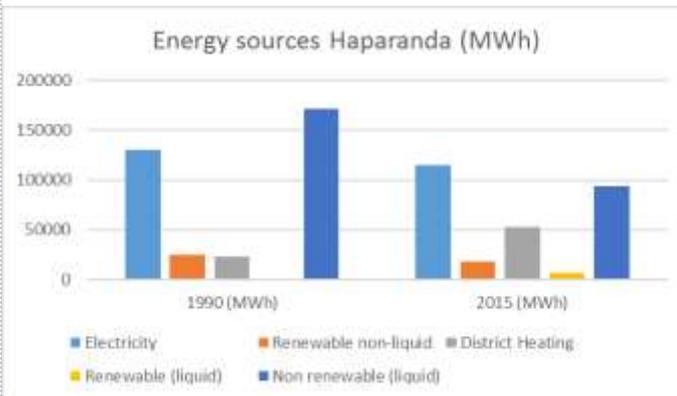
CO₂ reduction potential: 170 000 t

Investment costs: 100 000 €

Payback time: 2 years

Baseline Energy Inventory

The Baseline Energy Inventory covers the energy use within Haparanda territory. As the graph shows, the overall energy demand has decreased considerably between 1990 and 2015. The two most important sectors are transport and housing. The share of the service sector has increased over time. The public sector has been able to realise high energy efficiency gains between 1990 and 2015. The energy mix has changed. Most significant is the drop of non-renewable liquid fuels which is due to phasing out fossil oil for heating and changes of the fuel mix for transport mainly.



Public buildings in Haparanda used 5050 MWh of electricity and 5075 of district heating in 2016. The politically agreed 5 percent energy efficiency target means a saving of 506 MWh/yr. Experience shows that a 5 percent saving in existing building stocks can be realized at low costs by behavior change and optimizing existing systems of ventilation, heating systems and lighting. However, both monitoring and controlling of energy use, education in energy efficiency for users and smaller optimization of technical systems needs to be implemented, which makes it necessary to set up an energy efficiency project management with assumed staff and investment costs of 100 000 Euro.

Conclusions

Swedish local authorities are owner of many facilities which use a significant share of energy. Energy cost are a relevant burden. However, small municipalities in the NPA area often lack staff capacities and know-how about potentials and have difficulties to prioritise projects. Projects like RECENT are very well needed to support the transformation towards low-carbon municipalities, but can fail if the response capacity of possible pilot communities is too low. Three things are needed:

- Political leadership and a long-term legal framework on climate protection to make climate and energy a priority on local, national and European level.
- Experience exchange and capacity building for politicians, administrative staff and craftsmen
- EU or national funded projects which fight brain-drain in small NPA communities by capacity building of individuals.



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