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Jokkmokk municipality: SEAP and BEI

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SEAP PLUS – Adding to SEAP: more participants more content across Europe
IEE/11/978/SI2.61950

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5200 inhabitants

20.000 km2 area

65% protected nature

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World Heritage Laponia

”Laponia process”
Steering sctructure and administration based on basic-democratic approach with indigenous majority

JOKKMOKKS KOMMUN

Covenant of Mayors
Committed to local sustainable energy

Jokkmokk was the first municipality in Northern Sweden that signed the CoM on 12 October 2009!

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Jokkmokk –
Basic energy data

Overall energy use:
0,27 TWh per year

Overall electricity production
hydro plants Lule river:
12,5 TWh per year

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Jokkmokk's SEAP: long term climate and energy vision

- An energy system based on the efficient use of renewable energy sources from the region, being part of a concept of sustainable use of raw materials.

- Developing Jokkmokk to a national and international well-known best practice example on sustainable energy.

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Leading SEAP principles

1. Reduce energy demand (e.g. insulation of houses)
2. More efficient use of energy (e.g. more efficient appliances).
3. Increase share of renewables (e.g. biomass instead of electricity)

- Energy savings and increased use of regional energy sources supports the local economy.

- Investments in renewable sources of energy have a big potential for regional economic development in the future.

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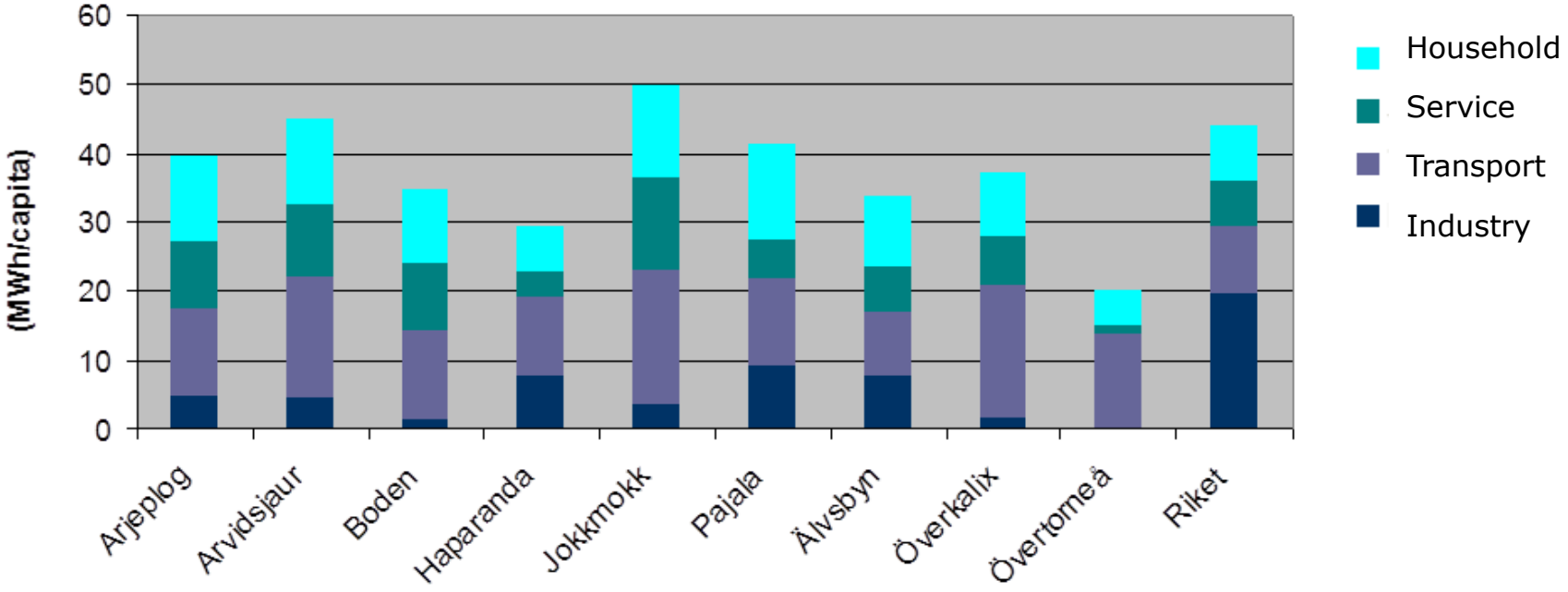
energy demand per capita compared with neighbouring municipalities (2007)



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Local renewable energy potentials

- Hydro power

Today: 12 500 000 MWh/year

Potential: 2 400 000 MWh/year

- Bioenergy:

Today: Forest 60 000 MWh/year

Potential: Forest 500 000 MWh/year plus 25 000 MWh agricultural products

- Wind Power:

Today: 1 800 MWh/year

Potential: 20 000 000 MWh/year

- Big potential from waste heat, geothermal and solar

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Jokkmokk's internal "SEAP Organigram"

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Jokkmokk SEAP: fields of action

1. Energy and CO_2 inventory (on a yearly basis)
2. Energy efficiency strategy for municipal buildings
3. Awareness raising and information for schools
4. Awareness raising, information and consultancy for citizens and SMEs
5. Energy efficiency strategy for municipal housing association
6. Extension of municipal district heating
7. Green procurement
8. Energy efficiency strategy for transport sector
9. Strategy for increased use of alternative efficient fuels in transport
10. Making local conditions more attractive for pedestrians, cyclists etc
11. Improving public transport
12. Energy efficiency strategy for local SMEs
13. Increasing use of new renewable sources of energy (e.g. wind power)
14. Strengthening and developing local sustainable biomass production
15. Capacity training and cooperation with partners

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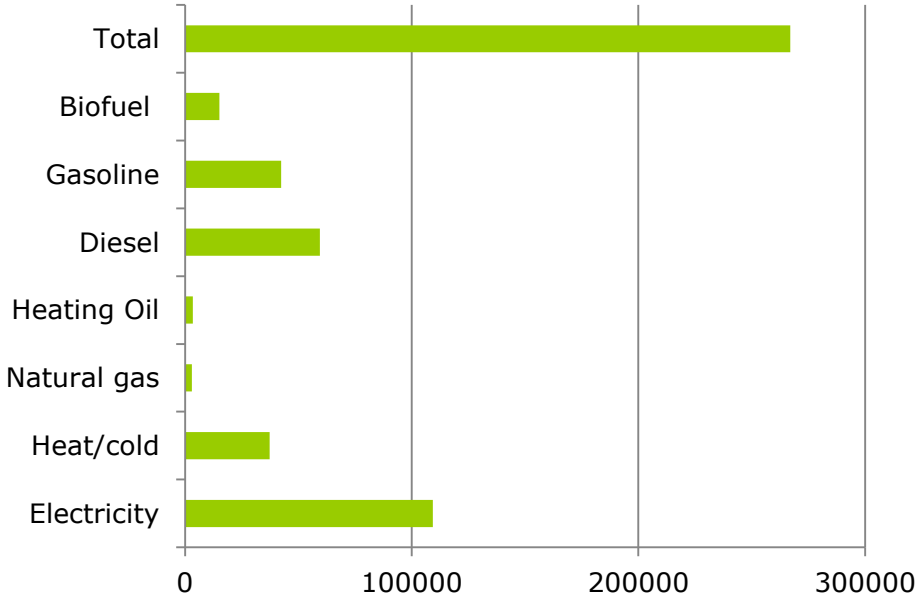
Jokkmokk BEI
Final energy consumption 2005 MWh



- Electricity 109 374 Mwh
- Heat/Cold 37 310 MWh
- Natural Gas 2 960 MWh
- Heating Oil 3 397 MWh
- Diesel 59 427 MWh
- Gasoline 42 463 MWh
- Biofuel 15 109 MWh

Total 270 093 MWh

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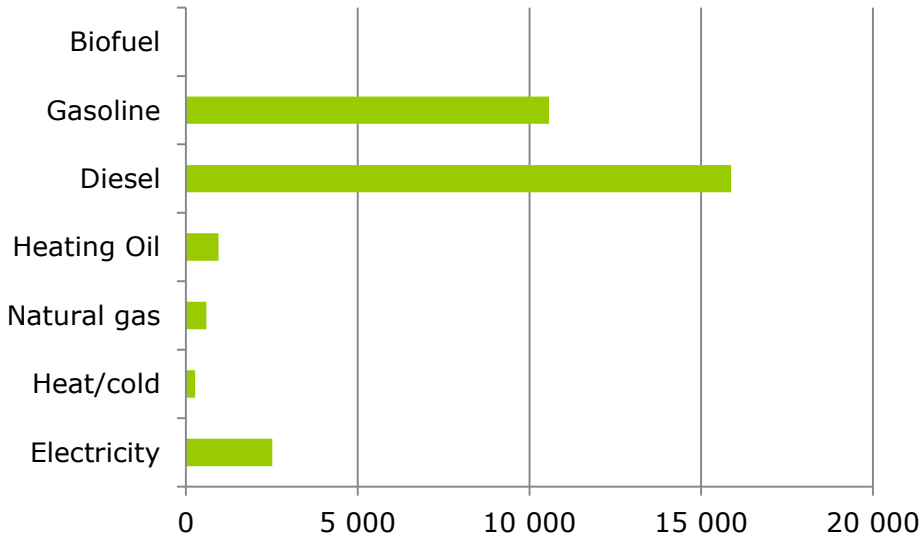
Jokkmokk BEI
CO2 emissions 2005 [t]



- Electricity 2516 t
- Heat/Cold 273 t
- Natural Gas 598 t
- Heating Oil 948 t
- Diesel 15867 t
- Gasoline 10 573
- Biofuel 0

Buildings, industry:	4 334 t
Transport:	26 440 t
Total	30 774 t

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Jokkmokk SEAP CO2 reduction targets until 2020

Buildings, equipment, facilities: 3100 ton

- Technical: Improvement insulation, energy efficient systems (heating, ventilation, lighting) phasing out of electric heating, increasing share of biomass-based district-heating, procurement of energy efficient applications
- Method: own investments/EPC; awareness-raising, consultancy

Transport: 1800 ton

- Municipal: climate-friendly cars; alternative fuel; increasing car-sharing and improved coordination of travel
- Improving infrastructure (public, cycling, walking); participation in the European Mobility Week; school projects

Local energy production: 1300 ton

- Investigation local renewable energy production (wind)
- Heat recovery from waste heat of smoke gas; converting till CHP

Working with citizens and stakeholders

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Jokkmokk SEAP First Results (examples)

Final energy demand Jokkmokk		2005	2010
Electricity	MWh/år	109 374	100 373
District heating	MWh/år	37 310	40 500
Fossile (gas and oil)	MWh/år	6 357	2
Non renewable fuels (bensin and diesel)	MWh/år	101 889	97 493
Biomass	MWh/år	15 109	15 249
Final energy total	MWh/år	270 039	258 031

Municipal Buildings/lightning

- Start EPC project, target: -21% heat demand and -13% electricity
- Change of windows, switching from electricity to district heating incl. improvement of steering systems of heating in apartment houses;
- Training of staff on energy efficiency
- Energy efficient street lightning

District heating

- Investment in heat recovery

Transport

- Eco-driving trainings for municipal staff
- Green procurement for cars for municipal fleets

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Jokkmokk SEAP first results (examples)

Involving schools, citizens and SME

- 2 Covenant of Mayors Action days
- 5 Trainings for teacher and pupils on energy efficiency in three schools in Jokkmokk
- Benefit sharing model for behaviour related energy savings in school + visualisation of energy use in real time.
- Participation of schools in ”In town without my car” campaign.
- Energy advice service for citizens and SME’s without costs.
- 3 Energy and climate trainings for politicians, municipal staff and SME’s.
- 3 international conferences (Jokkmokk Winter Conference)

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