



LECO

Local Energy Communities



**Northern Periphery and
Arctic Programme**
2014-2020




EUROPEAN UNION
Investing in your future
European Regional Development Fund

Innovative Energy Service: Local Solar Communities in Northern Sweden

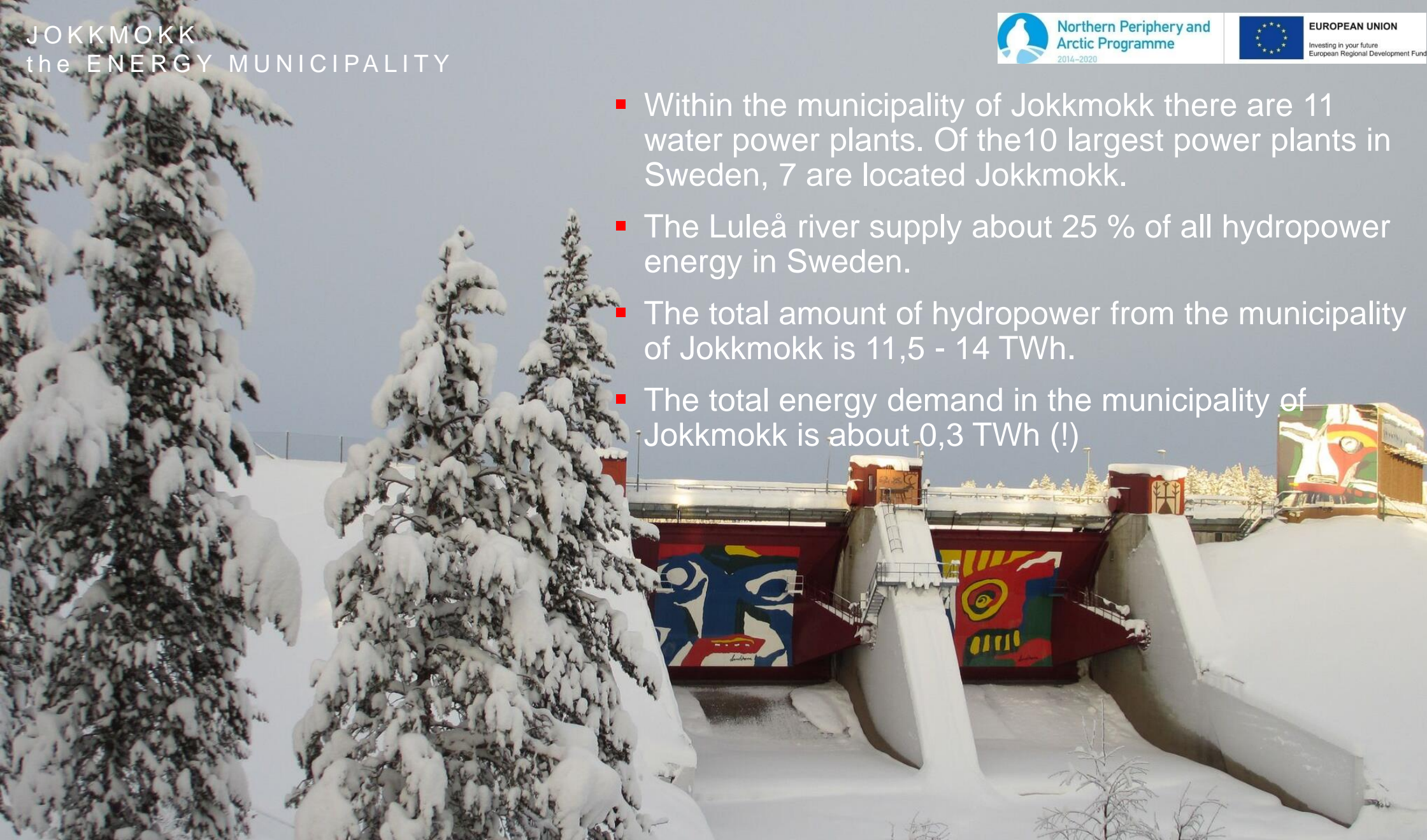
Silva Herrmann, energy expert and project manager

- About 19 500 m²
- 5074 inhabitants
- About 0,3 inhabitants per km²
(according to EU:s statistics we are no inhabitants at all..)



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- About 56 % is protected area (The county 25 %)
 - 4 national parks – Sarek, Padjelanta, Stora Sjöfallet, Muddus
 - 49 nature reserves
 - World heritage Laponia – combined nature- and culture heritage

- Within the municipality of Jokkmokk there are 11 water power plants. Of the 10 largest power plants in Sweden, 7 are located Jokkmokk.
- The Luleå river supply about 25 % of all hydropower energy in Sweden.
- The total amount of hydropower from the municipality of Jokkmokk is 11,5 - 14 TWh.
- The total energy demand in the municipality of Jokkmokk is about 0,3 TWh (!)





Jokkmokk district heating

- 522 costumers, of which 332 are households.
- 99% bioenergy (wood chips and pellets)



Jokkmokk PV

- Very little, only a small one owned by the municipality
- Some more private initiatives



Jokkmokk community energy service

2 pilots: Korpilombolo and Vuollerim

- Analysis of total final energy need and RES potentials
- Training, education and study trips
- Support in developing business models
- Creating a free information hub
- Collaboration with the municipal energy counselling service



Ska Vuollerim bli pilotby för smarta nya energilösningar?

Vill ni vara med och hitta smarta energilösningar för er by? Stort som smått - Local Energy Communities (LECO) är ett projekt som erbjuder skräddarsydda lösningar för er by.

Som pilotby får ni en kostnadsfri förstudie på vilka ekonomisk lönsamma möjligheter det kan finnas att energieffektivisera fastigheterna och att producera förnybar energi.

Pilotbyar har också möjlighet att skicka en person till en kostnadsfri studieresa till Tyskland för att titta på goda exempel för kooperativa energiföretag. Datum: 11-14 november.

Vill du veta mer? Kom på möte!

**Onsdag 17 oktober kl 17:00,
Folkets hus Vuollerim. Vi bjuder på fika**

Har du frågor eller är du intresserad men har inte tid att vara med nu?

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Example: Pilot Vuollerim energy analysis

Vuollerim. Calculated annual consumption by energy carrier

Energy carrier	MWh (2016)	Energy efficiency scenario
Oil	12	11
Biomass	1561	1342
Electric heating	4425	3588
Electricity (other than heating)	4077	3276
District heating	1500	1053
Sum	11575	9270

Vuollerim. Calculated annual energy consumption of different users

Facility	MWh (2016)	Energy efficiency scenario
Public buildings	3418	2400
Private homes	5350	4600
Apartment houses and others	557	470
Private companies	2250	1800
Sum	11575	9270





- Geography: Midnight Sun & Polar Night
- Low value for house
- High prices for PV installation
- Lack of experience from buyers, lack of good practice
- Very small numbers of qualified regional sellers
- Lack of economic feasibility due to low prices for electricity
- Legal barriers for selling electricity for a better price

Results from LECO pilots Korpilombolo and Vuollerim

PV plant on the roof of community building in Korpilombolo

Several private owners invested in PV in both

A concept for a cooperative plant in Vuollerim

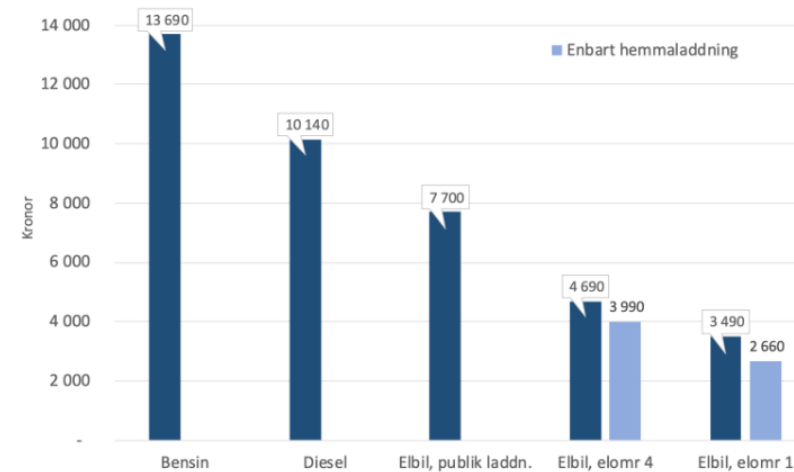
An online information hub



Outlook: a new energy future

- Higher energy prices after pandemic and due to war in Ukraine.
- Energy security high on agenda which should help local RES production
- New legislation allowing transport of solar electricity to neighbouring buildings.
- More electric cars need to be charged.
- New possibilities to combine PV service with smart metering and demand side management.

Diagram 1. Jämförelse av drivmedelskostnaden mellan bensin-, diesel- och elbil 2021, vid en körsträcka på 1100 mil



Source: Elprisanalys Bil Sweden 2022



Thank you for your interest!

