



Northern Periphery and
Arctic Programme

2014-2020



EUROPEAN UNION

Investing in your future
European Regional Development Fund

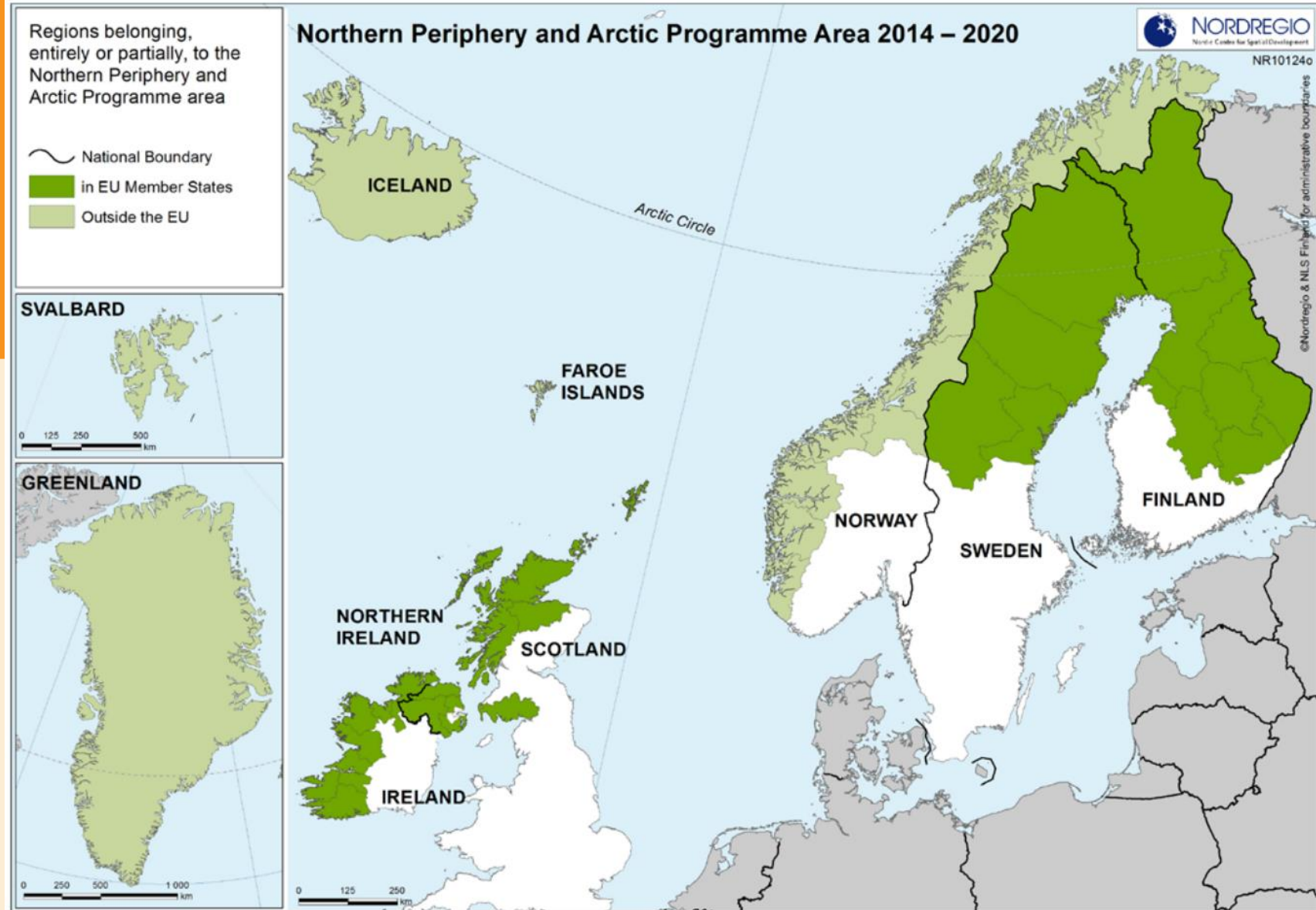
ΟΛΜΚ

Evaluation for sustainability of the H-CHP solution in NPA region

H-CHP project objectives

- Promote reliable, sustainable and affordable small-scale heat and power supply solutions for households in remote and sparsely populated areas.
- Increase use of renewable energy in housing in the remote and sparsely populated areas.
- Increased awareness of the small-scale renewable energy solutions suitable for the program area.

The Northern Periphery and Arctic Programme area



Evaluation of the Results

- The evaluation concentrate on different aspects of the project
 - Sustainability
 - Local renewable biomasses
 - Reduction of CO₂ and greenhouse gas emissions
 - Technical solutions and specifications
 - Socioeconomic aspect
- Evaluation is in progress
 - Last results are under processing

Optimal micro-CHP of the region

- Geographical location
 - Climate
 - Vegetation
- Housing diversity and age
- Local energy consumption and production
- Local legislation
- Social and cultural differences

H-CHP equipment

- Oulu University of Applied Sciences
 - Bachelor's Thesis
 - Technical and design assistance
- Normal R&D challenges
 - Legislation and standards
 - Boiler design and manufacturing
 - Steam engine design and manufacturing
 - Testing and modification
 - Suppliers: “It's just an ad”

Toolkit and Community guide

- The complexity of technical solutions
 - How not to complicate or simple instructions too much
 - Different installation locations and sites
 - Connections to existing systems
- Geographical location
 - Climate and seasonal variations
 - Available fuels
- Local energy consumption and production
 - Electricity and heat use ratios

Examples of systems available

- The suppliers of micro CHP equipment and plant
 - Lifetime of the companies
- Heat and power producing products
 - Technology reliability and efficiency
 - Price / produced energy (thermal and electricity)
- Guarantees
 - Maintenance and spare parts availability

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