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Energy Action Ltd.,
Newmarket,
Dublin 8



Northern Periphery and
Arctic Programme
2014-2020



EUROPEAN UNION
Investing in your future
European Regional Development Fund



MICRO COMBINED HEAT AND POWER SYSTEM FOR HOUSEHOLDS (H-CHP)

The purpose of the H-CHP -project is to promote the uptake of Combined Heating and Power systems (CHP) in the region using solid renewable biomass and gasification methods that will be for remote households.



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**Energy
Action**
THE WARM CHARITY



Oilthigh na Gàidhealtachd
agus nan Eilean
Colaisde a' Chaisteil



Three-year project budget is 1.99 M€
start 1.8.2017 end 31.7.2020

Consortium

Finland

University of Oulu – Kerttu Saalasti
Institute – Future Manufacturing
Technologies (FMT) research group
Oulu university of applied sciences –
Energy and automation unit

Sweden

Lulea Technical University –
Department of Engineering Sciences
and Mathematics

Ireland

Energy Action Ireland

Iceland

University of Iceland

Scotland

University of the Highlands and Islands
– Lews Castle College
Tighean Innse Gall

Associate partners

Point & Sandwick Trust, Scotland

The Woodland Trust Scotland

Vuolux Oy, Finland

Suomen Omakotiliitto / Finnish House Owners' Association





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Why is there a need for H-CHP?

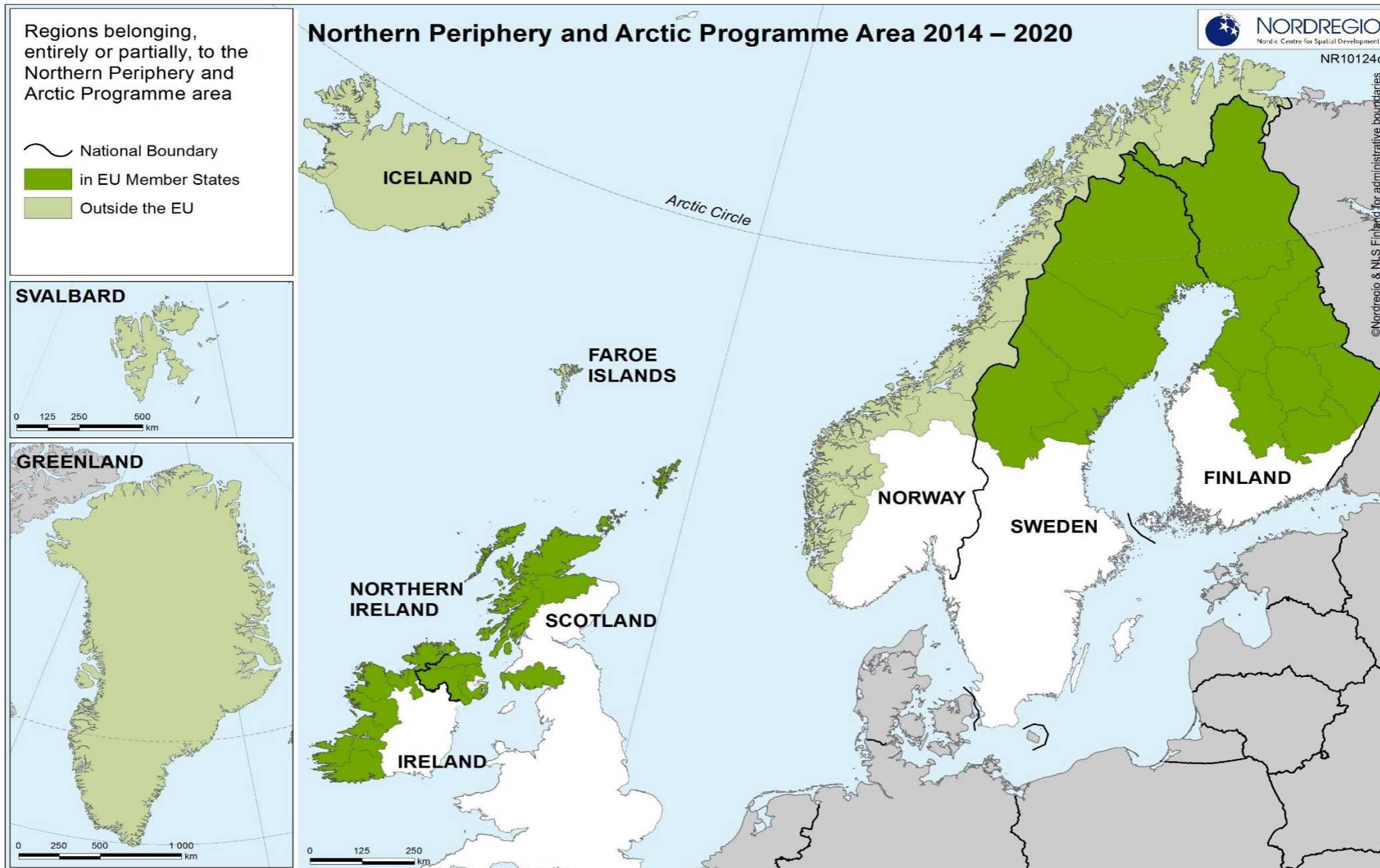
Power Failures in Ireland as a result of:

- Increase in storms with climate change.
- In 2018, we had the heaviest snow storms in 2nd March, - snow burden on trees causes short circuits when top of trees drop on air grid lines losing power in remote areas off for weeks especially islands, as ESB networks cannot repair, because of impossible roads. – more than 83,00 households has been without power
- Storm Ali left 140,000 houses and business without power on 19th September.
- High seas cuts off islands.



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Output 1. The Open Source development of Combined Heat and Power plants using Solid Fuel renewables (SF-CHP)

Promote and optimize reliable, sustainable and affordable small-scale heat and power supply solutions for households in remote and low population density areas with extreme climates.

Output 2. Alternative Fuels and Gasification Small scale CHP can be run on solid fuel by first converting the solid fuel into combustible gas so called syngas. Syngas is generated by a gasification process where the solid fuel like wood and paper waste is heated up ($>700^{\circ}\text{C}$). (Iceland only)

Output 3. Increased use of renewable energy in housing... ...in the remote and sparsely populated areas.

Output 4. Increased awareness of the small-scale renewable energy solutions...



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Targeted outputs for Energy Action

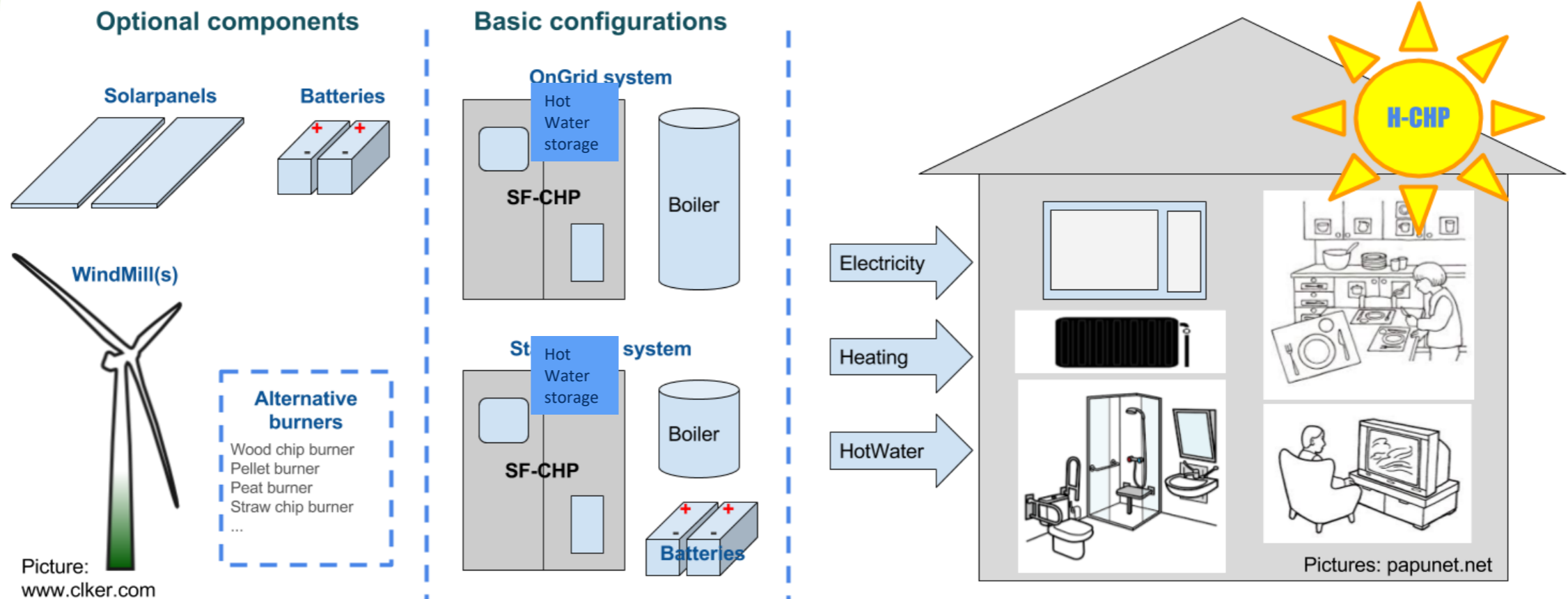
- Output 3 – Increased use of Renewable Energy in remote housing.
- Output 4 - Increased awareness of the small-scale renewable energy solutions...



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Output 3. Increased use renewable energy in housing...





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Output 4

Increased awareness of the small-scale renewable energy solutions...suitable for the program area H-CHP is principally promotes biomass heat and power system for the NPA area. The project develops forums, tools and mechanisms to increase awareness of small scale renewable energy potential solutions across the programme area and beyond.



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TARGET CBOs

- Donegal
- Sligo
- Leitrim
- Mayo
- Galway
- Clare
- Kerry
- Cork



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Arranmore Is. Co. Donegal Jan '18 Meeting





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Arranmore Is. Meeting Aug 2018





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CLARICH Co. Mayo Meeting Sept 2018



Clarich is a Community based coo that services rural Mayo including Islands



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Louisburgh Community Futures Co. Mayo





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Why CBOs become involved!

- Several CBOs are already partners in the Northern Periphery & Arctic Programmes.
- networking with new Partners
- New funding Source
- Job creation
- Renewable energy to support SEAI SECs
- Innovative actions for remote areas



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***Thank you for your
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***Thank you for your
kind attention!***