



Northern Periphery and
Arctic Programme
2014–2020



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Investing in your future
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GREBE

E-ZINE
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Generating Renewable Energy
Business Enterprise

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WELCOME TO GREBE PROJECT E-ZINE

Welcome to the sixth GREBE Project e-zine. Since the summer, we have continued to carry out the project activities. Action Renewables published a report based on case studies on the awareness and understanding of funding for renewable energy businesses. Details of this can be found on page 3 and can be downloaded from the GREBE website [here](#).

The Environmental Research Institute has prepared case studies of renewable energy technologies in the partner region. A summary of these can be found on page 4, and 16 case studies can be downloaded from the GREBE website.

The GREBE project studied the market access paths of renewable energy and energy storage technologies by using a case-study approach. The case studies included technology descriptions, technology demonstration and deployment issues and support systems. The case-based paths provided information on important drivers and barriers, thus providing background for the business mentoring support of the GREBE project. The summary report of key findings can be found on page 5, which the full Roadmap to Market report as available to download now from the project website [here](#).

Our Entrepreneur Enabler Scheme in Northern Ireland is complete and we have started to roll it out in Finland, Scotland and Ireland. Details can be found on page 8 and 9.





7TH PARTNER MEETING IN ENNISKILLEN



We will hold our 7th partner meeting next week in Enniskillen. This meeting will be hosted by Fermanagh & Omagh District Council and will include a networking event on Wednesday and site visits on Thursday. The aim is to highlight the benefits of renewable energy for SMEs and start-up businesses and give participants the opportunity to meet with biomass experts (Veikko Möttönen and Saija Rasis) from the Natural Resources Institute in Finland.

Veikko Möttönen's area of expertise is wood mechanical properties, drying of wood and sawn timber, further processing of sawn wood, further processing of side streams, wood modification (thermal modification - Thermowood, preservative impregnation) and Saija Rasis' area of expertise is in bioenergy production, biogas technology, gas analysis, treatment of biodegradable wastes, bio-refineries. Places are limited for one to one meetings with Veikko and Saija. Please contact paulineleonard@wdc.ie if you are interested in attending.



GREBE Project partners from Finland, Norway, Iceland and Scotland will be available to share their knowledge.

On Thursday 9th November, site visits will be held at the CREST Centre in South West College, Balcas and Ecohog (an Entrepreneur Enabler Scheme participant).

GREBE Case Studies Report on Awareness and Understanding of Funding

The GREBE Project has published a report based on case studies on the awareness and understanding of funding for renewable energy businesses. The report can be downloaded from the GREBE website [here](#).

The key objective of this report was to identify and promote opportunities for policy to provide an effective supportive framework for sustainable renewable energy business (both new and emerging). The focus of this report was on the support and benefits that each case study received, including how the supports and benefits helped each business in terms of creating employment, finance or diversifying their business. This report examines the funding mechanisms, criteria, application practicalities and business outcomes and innovations in the case studies.

When carrying out the report, the most popular funding mechanisms available to the renewable energy businesses were research & development supports and also financial supports. In Ireland one company received a support towards creating employment through the JobsPlus scheme. JobsPlus is an employer incentive which encourages and rewards employers who offer employment opportunities. On the other hand support mechanisms such as social support, were not as popular throughout the partner regions.

Through analysing the chosen case studies, Finland, Iceland and Scotland have a number of different funding mechanisms were available to companies for certain types of projects, whereas in Northern Ireland only one type of support was available for certain projects.

All of the funding supports discussed throughout this report can be found in the GREBE business support catalogue at: <http://grebeproject.eu/wp-content/uploads/2017/10/GREBE-Business-Supports-Catalogue-updated-November-2017.pdf>

The full report can be viewed at: <http://grebeproject.eu/wp-content/uploads/2017/09/GREBE-Report-on-Awareness-Understanding-of-Funding-Options-August-2017.pdf>





Report on **Technology** case studies



Many regions of the NPA have some of the best renewable energy resources; however in many cases they are not being effectively exploited. The Case Studies aim to address this by the assessment of a range of renewable energy technologies to determine the drivers and barriers for their transferability to other areas in the NPA where the same renewable energy resource are available but are not widely exploited. The Case Studies exemplify how, through the proper identification of appropriate and scaled technological solutions, renewable energy resources in each partner region, can meet the demands of energy markets. The technology case studies were informed by engagement with technology providers and other relevant stakeholders.

The focus of the case studies is on technological choices (details of how these operate, innovations etc.), funding mechanisms, processes of delivery and adaptation in different partner regions, assessment of technical and financial risks, and demonstration/piloting routines. The case study collection provides evidence and data on important drivers and barriers and an in-depth analysis of the Renewable Energy technologies feasibility prospect to be transferred across partner regions. The case studies cover technologies, market access and business growth paths. These cases studies are based on the following technologies:

Anaerobic Digestion	Energy Efficiency	Small Scale Hydro
Battery Storage	Geothermal	Small Scale Wind
Biomass	Geothermal Ground Source	Tidal Energy
Biomass CHP	Hybrid Energy Solutions	Wave Energy
Deep Geothermal	Small Scale Biomass CHP	Wind Energy

Further information can be found on the case studies section under the publications page here: <http://grebeproject.eu/publication/>

Roadmap to Market: A report on market access of renewable energy technologies

The GREBE project studied the market access paths of renewable energy and energy storage technologies by using a case-study approach. The case studies (n. 12) included technology descriptions, technology demonstration and deployment issues and support systems. The case-based paths provided information on important drivers and barriers, thus providing background for the business mentoring support of the GREBE project. The summary report of key findings, roadmap to market, is available now in [GREBE Project Publications](#).

Based on the case study findings, coordinated technology planning is an essential part of the roadmap to market, i.e. a strategy to proceed from the technology development and demonstration to its successful market deployment. Technology planning covers both planning of the new technology development, but can also be applied as a process of updating and adopting new existing technologies for the business enterprises.

The development paths of technologies included several steps building on the earlier ones, and time-span was up to 15-20 years. Without coordination and planning procedures, the market access can be very difficult to reach, and innovations can be lost. As a part of the technology planning, technology transfers can be utilised. They can include technologies (or sub-technologies) of different readiness levels, and new to area solutions. The role of technology transferring agents, i.e. persons (often multi-nationals) with experience of different industries and operational environments remains essential.

Bridging the gap between demonstration and deployment remains a key challenge. The gap between the technology demonstration and deployment can be reduced by establishing and utilising soft supports, industry clustering and partnerships in demonstration. The public sector has often an essential role in providing the supporting infrastructures (such as business and technology parks) and funding instruments.



Roadmap to market

Investigating market access paths of RE and energy storage technologies

Lasse Okkonen, Karelia UAS

August 2017

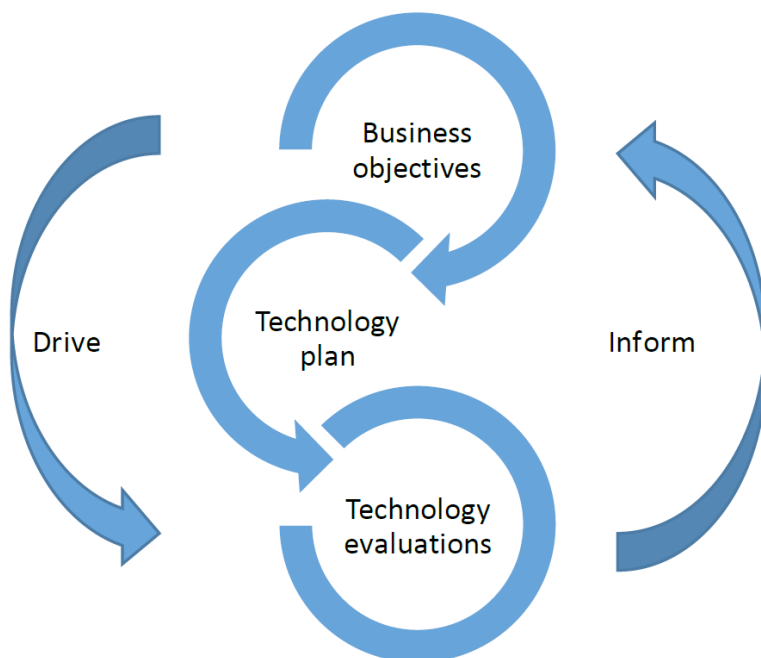




Roadmap to Market: A report on market access of renewable energy technologies

Partnerships are essential for risk sharing in long and often capital intensive processes, as well as finding suitable sites for demonstrator projects. There were several types of partnership models applied in renewable energy technology cases. They were often place-based and utilising local trust and previous experiences.

End-user support is essential part of the early deployment. Technologies typically have still improvement needs and often end-users need training and support for the deployment. This raises the importance of the development of the end-user supports along the technology development, and full availability of the service and maintenance as the technology reaches the market.



The process of technology planning, including business objectives (strategy) driving the technology needs. Technology evaluations inform the business objectives and technology planning activities to achieve the established vision. Technology plan serves as a roadmap for meeting the established long-term objectives.





GREBES FUNDING OPTIONS ONLINE TOOL

The August 2016 version of the GREBE Business Supports Catalogue has been updated following a review of funding mechanisms available to support the development of renewable businesses in the NPA region. This catalogue is also available by country (Finland, Iceland, Ireland, Northern Ireland, Norway and Scotland) and can be downloaded from the publications page of the GREBE website.

Each catalogue provides information on the funding mechanisms currently available in the partner regions (Finland, Iceland, Ireland, Northern Ireland, Norway and Scotland). The information will be useful to both funding agencies (e.g. business support agencies and municipalities) and to SMEs giving details of funding options available in their regions.

The main focus is on public support for renewable businesses but both private sector and social investment options have been included where appropriate. The supports included are for SMEs and Micro businesses but also include options for those SMEs expected to grow rapidly (e.g. High Potential Start Ups). The business support funding mechanisms considered vary from standard 'hard' business support options (e.g. loans and venture capital) to softer supports (e.g. innovation schemes, business partner search supports etc.).

The information in this catalogue has been used to create GREBEs Funding Options Tool, a web based tool allowing users to search for available funding options and to consider different types of funding available in each region. This tool is available on our <http://support.renewablebusiness.eu/> platform.





ROLLOUT OF EES IN PARTNER REGIONS

FINLAND'S ENTREPRENEUR ENABLER SCHEME



Karelia UAS has selected companies for their EES who are famous for long-term operation and innovation activities in forest energy. The EES in Finland has been started with mentoring sessions will begin in autumn 2017.

Eno Energy Cooperative has been an example of heat entrepreneurship based on local forest raw materials. The cooperative with 54 members (mostly forest owners), was rewarded in 2014 as Heat Entrepreneur/enterprise of the year. The cooperative is also famous as an active developer in the sector, and generates significant socio-economic benefits to its surrounding region.



Rajaforest Ltd. is a forest contracting company and a heat enterprise. The company supplies timber and forest fuels, operates three municipal biomass district heating plant in Tohmajärvi, and owns and operates one in Kesälahti.

Havel Ltd. is a metal and plastic products manufacturer located in Ilomantsi. The company is famous for innovative product development for forest technology and the forest energy sector, among others. The company has also significant growth potential, in which GREBE EES can provide tailored support.

IRELAND'S ENTREPRENEUR ENABLER SCHEME

The EES was launched in Ireland last week, and applications are welcomed from all small to medium renewable energy businesses, based in the Western Region (Donegal, Leitrim, Sligo, Mayo, Roscommon, Galway & Clare). Participating businesses will be matched with an appropriate mentor to meet their business needs, based on areas of specialism and scoring.

An Expression of Interest application form may be downloaded from the GREBE website [here](#) or requested by email from paulineleonard@wdc.ie

Completed applications must be returned to GREBE Project, Western Development Commission, Dillon House, Ballaghaderreen, Co. Roscommon, or alternatively via email: paulineleonard@wdc.ie not later than **12.00 Noon on Friday 17th November 2017**.



SCOTLAND ENTREPRENEUR ENABLER SCHEME

GREBE is working with small to medium renewable energy businesses throughout the Highlands and Islands Area to provide support to facilitate their growth through specialised mentoring. Applications were received from businesses based in the Highlands and Islands Area, which were interested in receiving specialised mentoring support, under the EES. Five businesses were chosen to receive mentoring support through the EES.

The participating businesses were matched with an appropriate mentor to meet their business needs. All the businesses had their first meeting with the mentors, where they developed a working plan for the time span of the mentoring.



WWW.VEENERGY.CO.UK

VE Energy is Scottish based company with a long-term vision to be a global force in fluid-power energy generation. The product they are offering is Pico turbines, which defined here as water-based generators that usually produce 10 kW or less. They must be able to operate in low head/low flow conditions and are usually placed at existing river barriers such as small waterfalls, weirs, dams, barrages and locks. There are a number of very good hydro devices in this space, but they believe that a low cost off the shelf, modular 'water to wire' package, that can provide productive levels of power at lower heads and flows and which is very easily emplaced and managed has not yet appeared on the market. This is the gap VE Energy intends to fill with its first product. They have undergone proof of concept, simulated predicted power outputs per flow/head and successfully tested a scale impeller variant at the University of Southampton in England indicating their energy predictions are realisable (circa low end 4kW at 1.5m head and 1 m³/s flow). The next stage, is identifying and attaining the right amount of funding to develop a full scale (circa 0.8m to 1.0m diameter), low-cost, device that will be installable in a wide range of river/ water step locations and which will be intended to be almost 'plug and play'.



WWW.RICRUDEN.NET

R&I Cruden are an established Renewable Heating business based in Muir of Ord. Over the last 10 they have built an exceptional reputation for high quality installations of renewable heating systems, valuing the ethos of long-term stability. R&I Cruden provide a comprehensive and professional project management service, as well as complete after sales maintenance plans. From design to commissioning it is a complete solution to identify the most suitable system for their clients.



WWW.GOWSENGINEERING.CO.UK

Gow's Engineering is a family business, based in Lybster. Gow's Engineering Services was established to expand on and benefit from the vast experience of the long established engineering and fabrication business of Gow's Lybster. They are a specialist provider of manpower solutions to the Oil and Gas, Nuclear, Rail, Construction, Renewables, Power Generation and Utilities sectors. Their expertise includes, but is not limited to: welding, fabrication, mechanical, electrical and support services, ranging from trades to supervision and management.



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Project Partners

GREBE will be operated by eight partner organisations across six regions:



About GREBE

GREBE is a €1.77m, 3-year (2015-2018) transnational project to support the renewable energy sector. It is co-funded by the EU's Northern Periphery & Arctic (NPA) Programme. It will focus on the challenges of peripheral and arctic regions as places for doing business, and help develop renewable energy business opportunities provided by extreme conditions.

