



Northern Periphery and
Arctic Programme
2014–2020



EUROPEAN UNION

Investing in your future
European Regional Development Fund



GREBE

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E-ZINE

Generating Renewable Energy
Business Enterprise

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www.grebeproject.eu



GREBEs PARTNER MEETING IN FINLAND & LAUNCH OF RENEWABLEBUSINESS.EU



Welcome to the fourth e-zine for the GREBE Project. Since Christmas we have continued to carry out the project activities and meet our objectives. We held our 5th partner meeting in Joensuu, Finland where we held a joint conference with the IEA Bioenergy Task 43 group and launch our online training and networking platform renewablebusiness.eu.

Our Entrepreneur Enabler Scheme in Northern Ireland is almost complete and we have details of four more of participating businesses, MSL – McCrea Services Ltd., Moffitt & Robinson, Rowe Energy and Winters Renewables on pages 3 and 6.

Our work is continuing on other project activities. Narvik Science Park has published a report on the Influence of environmental conditions in the NPA region, details can be found on page 7.

The Environmental Research Institute has published a report identifying technologies which can be transferred from areas of best practice to areas where renewable energy uptake is low. More details of this can be found on page 8.

Karelia UAS published a report on Growth Strategy Guidelines for SMEs in renewable energy. Details of this are outlined on page 9.

Three policy workshops were held in January and February in Northern Ireland, Scotland and Finland and are summarised on page 10 and 11.





THE GREBE PROJECT MEETS IN JOENSUU FINLAND

Project Participants



Partner Meeting



Robert Prinz



Una Porteous



The GREBE project partners held their fifth partner meeting in February in a very cold (minus 25°C) Joensuu, Finland. The WDC and the Finnish partners LUKE and Karelia UAS worked together to prepare a programme to fit in as much as possible.

Our meeting was held in Metla House where LUKE are based. At this, the group discussed work package activities, including the development of a funding options decision tool for renewable energy businesses, funding case studies in each region, innovations from local technology, linking renewable energy technologies and resources, a roadmap to market for renewable energy SMEs, our virtual energy ideas hub which is hosted on the renewablebusiness.eu platform and plans for rolling out our Entrepreneur Enabler Scheme to the partner regions. This will take place in April and May.

On Thursday 9th February we held a joint seminar with IEA Bioenergy Task 43 'From Resource to Sustainable Business'. The goal of this seminar was to discuss the topics and aims of GREBE and IEA Bioenergy Task 43 presenting and elaborating key aspects and opportunities from the resource to a sustainable business for sustainable energy. The joint seminar "From resource to sustainable business" included discussions of the more than 40 participants around the topics "Biomass Feedstocks for Energy Markets", "Generating Renewable Energy business", "Mentoring & support for RE business" and "Global energy markets & opportunities for sustainable business".

Two parallel sessions took place on Thursday afternoon, and participants had the option of site visits to Kesla Forest Technology and Sirkkala Energy Park or a GREBE Policy Workshop. Details of the policy workshop can be found on page 11.

LAUNCH OF RENEWABLEBUSINESS.EU

A key milestone for GREBE was the launch of the Renewable Business Portal. Transnational sharing of knowledge is a key part of the GREBE project and therefore the portal provides a platform to demonstrate the full potential of the renewable energy (RE) sector and showcase innovations in RE technology. The Virtual Energy Ideas Hub enables connecting renewable energy businesses to develop new opportunities locally, regionally and transnationally. The GREBE Renewable Business Portal can be found under: www.renewablebusiness.eu



Entrepreneur Enable Scheme

McCrea Services Limited

McCrea Services Limited is a firm whose roots were based in firmly in the Electrical Contracting business, but who had over a number of years developed a significant line of business in Solar PV panel sales and installation. They approached the GREBE project with the stated aim of getting assistance in sales and mentoring with a view to improving the business development opportunities.

Their business split was about 60/40 in favour of contracting versus solar PV and they were keen to address a number of issues in terms of how to shift this ratio. A mentor was appointed to them whose area of expertise included marketing and market penetration. This assignment happened quite quickly and was responsive to the identified needs of the business. The mentor and business meetings over 11 sessions took place in the space of less than 8 weeks and the remaining session was help in reserve to pick up anything that might arise after the implementation of the new approach had taken place.

There were high hopes for this intervention and the business reported that the mentoring had brought a new enthusiasm to the work that was being looked at – a new financing option for the business which promised to increase the attractiveness of the offer. However, following the planned reduction in ROCs, the offering has become a harder sell than it was, and the policy framework will make it ever harder.

Happily the business has experienced a significant up-turn in the electrical contracting end of the business which has more than compensated for the contraction of the Solar PV market in Northern Ireland. They have indicated however, that should the incentive scheme for ROI come on line, they are ready and keen to implement their new financing model in that market and hope that it will be as useful as they anticipate.

EES Participant

MSL – McCrea Services Limited.





Entrepreneur Enable Scheme

Moffitt and Robinson

EES Participant



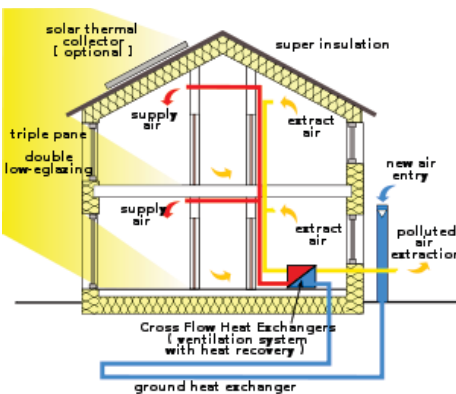
Moffitt and Robinson

Moffitt and Robinson was established in 1982 as a partnership by William Moffitt and Keith Robinson. Due to the success of the partnership the company rapidly expanded to become a Limited Company in 2007. Undertaking all types of construction projects including new build properties utilising "The Fabric First Approach", commercial premises, energy efficiency retrofit, "PassiveHaus" and Energy efficiency building consultants and a full range of building services.

Moffitt and Robinson Construction Ltd were consultants and builders of Northern Ireland's first Certified Passive Dwelling and the first Certified Passive Commercial Building, and now they offer Consultancy and Construction services to all builds and retrofits that aspire to be energy efficient buildings. Their current workforce is made up of Certified Passive House Tradesmen. The company has been involved in all aspects of construction but in more recent years the business made a decision to concentrate on offering Energy Efficient measures to all their customers.

The business owners came to the GREBE project in order to grow their business through development of the office based team, so that the owners were available to undertake more promotional activity on the energy efficiency side of their business. Initially a mentor was appointed to undertake some business planning with them including working on cashflow management. The mentor undertook a number of sessions looking at business profitability and cashflow which the business owners found useful.

A further number of sessions were facilitated by a different mentor who looked at issues around Health and Safety compliance and identified a suitable IT package which would assist the business to manage this in a more efficient manner. In addition this mentor assisted the business to look at a couple of different sources for funding assistance – through Invest NI and Intertrade Ireland. The business will require additional assistance in order to complete this process – assistance that we will seek to provide through direct help from within the Economic Development budget of Fermanagh and Omagh District Council. More details on Moffitt and Robinsons business can be found at <http://www.moffittandrobinson.co.uk>



Entrepreneur Enable Scheme

Rowe Energy

Rowe Energy began a project for a 200kW AD plant in 2015 and agreement with funders to finance the project had been almost finalised when the mentoring commenced. However, the funders needed some clarification on some aspects of the planning issues in order to release the funding. A planning consultant was identified by the mentor, briefed on the project and a letter of comfort was drawn up to address the funders' issues with the planning issues. Then a review of Heads of terms document between Rowe Energy and funders was completed by the mentor. At this stage, it was decided that it would be prudent to accurately assess feedstock cost and efficiency for when the plant becomes operational. A spreadsheet was then completed to cost alternative sources of feedstock to achieve the most cost effective blend using local waste products as well as the silage and slurry from the farm.

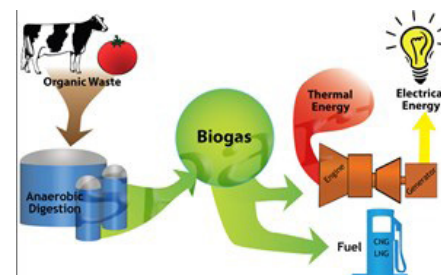
The next phase of the mentoring was to carry out feasibility studies into potential projects to utilise both the heat and electrical energy from the AD plant as well as the digestate from the plant.

Feasibility studies were then completed into the following potential projects.

1. Utilise the heat from the AD plant to develop a horticultural business. This study identified capital costs and researched the most profitable crops to grow.
2. Utilise the heat from the AD plant to develop a laundry business. Market research was completed to identify the size of this market within NI. Capital costs and product costings were completed as part of this feasibility study.
3. Production of an organic fertilizer using the digestate from the AD plant. This process involved utilising the electricity and heat from the AD plant to dry the digestate and then pelletise it into a product suitable for sale in the horticultural retail sector. Capital, running costs, product costings and profitabilities were completed for this study.
4. Utilisation of new AD technology to run on slurry only. Research into the capital costs for this new technology was completed and then 10 and 15 year profit & loss spreadsheets was drawn up for this potential project.
5. Research into the bottling and transportation of biogas produced by AD plants. This included the processes of scrubbing, compression and bottling of the biogas.

EES Participant

Rowe Energy





Entrepreneur Enable Scheme

Winters Renewables

EES Participant

WINTERS
RENEWABLES

Winters Renewables



Winters Renewables was founded in 2010 when willow was planted throughout the family farm. Initially the business was growing and supplying willow wood chip to local businesses and local government facilities. Since 2010 Winters Renewables has evolved into one of the leading suppliers of woodchip, biomass boilers and maintenance of these systems throughout the Island of Ireland marketing their products as integrated 'Biomass heating solutions'.

Winters Renewables has developed a comprehensive range of in house services and facilities in the biomass sector. These include the Ny Vraa willow harvesting system, a woodchip drying system, a woodchip screening system and woodchip storage facilities. These facilities ensure a top quality wood chip product in compliance with g30 specification and consistent moisture content between 15 – 20%. Winters Renewables now provides a Tree Clearance service for farms, building sites and plantations.

Over the last 5 years Winters Renewables has also diversified into the production of Renewable Electricity by installing both a wind turbine (250kw) and an Anaerobic Digestion Plant (500kw) on site. Winters Renewables sought the assistance of the GREBE programme to achieve a number of objectives as follows:

1. To carry out a detailed analysis of operational procedures, production cost and sustainability of the main feedstocks for the plant in the west Tyrone climate concentrating on grass silage and whole crop silage crops.
2. They wanted to optimise the feedstock blend in terms of biogas production and cost per cubic metre of biogas for the AD plant dependent on the seasonal availability, price and 'digestibility' of a range of local ingredients.
3. In addition they wanted to devise a new marketing strategy for the business relative to demand for biomass products and potential new tariffs in ROI for biomass energy and upgrade the website content imagery and layout to reflect the new marketing strategy for the business and to focus on the new products in the biomass sector such as plantation clearance, organic animal bedding and fire kindling.
4. The mentor was also charged with the co-ordination of the waste licence application to allow additional waste types from outside the farm to be accepted at the AD plant.

Completion of these objectives has ensured that the business has consolidated performance in the AD enterprise through optimising feedstock blend and minimising feedstock cost. Also the business has now repositioned itself to develop and grow its range of biomass products. Further information on Winters Renewables services can be found on their website: www.wintersrenewables.com



GREBE REPORT ON THE INFLUENCE OF ENVIRONMENTAL CONDITIONS IN NPA & ARCTIC REGIONS

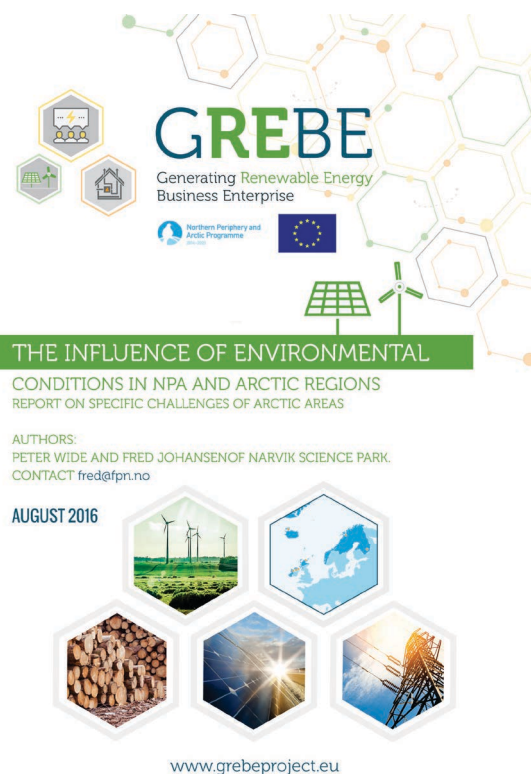
Global climate change impacts Europe in many ways, including: changes in average and extreme temperature and precipitation, warmer oceans, rising sea level and shrinking snow and ice cover on land and at sea. These weather phenomena have led to a range of impacts on ecosystems, socio-economic sectors and human health and safety.

There is no doubt that the changes in climate will have a strong impact in our daily life, whether we accept extreme weather conditions as a new phenomenon or not. Adaptation to the past history data, present observed and future predicted impacts will in the coming decades be needed, as well as be complementary to global climate mitigation actions. Narvik Science Park, with input from other GREBE project partners has produced a report examining the influence of environmental conditions in the NPA region.

The harsh climatic conditions experienced in many NPA regions, particularly high north and arctic regions, present significant challenges to SMEs and start-ups that can seriously impact on the viability of their businesses. Winter storms regularly occurring in the high north, known as polar lows or arctic weather fronts, can bring about sudden and extreme drops in temperatures, with debilitating ice and snow conditions developing quickly. Also, in the North West Europe the influence from the North Atlantic Oscillation give rise to storms, resulting in high winds and precipitations.

These conditions frequently give rise to unsafe working conditions and suspension of business operations, particular in the case of technology installations. Operational environments in these areas are often vulnerable irrespective of climatic conditions, given their isolated, remote locations, far away from technical maintenance staff, and which are often difficult to access by road, air or sea. Businesses located in these areas must compensate for fragile and less robust parameters, in order to cope with unforeseen sudden disturbances (for instance, climate change effects).

A more detailed summary of this report can be found in the news section on the GREBE website [here](#) and you can download the report from the GREBE Project website [here](#)





GREBE IDENTIFIES **TECHNOLOGIES** WHICH CAN BE TRANSFERRED FROM AREAS OF BEST PRACTICE TO AREAS WHERE **RENEWABLE ENERGY** UPTAKE IS LOW

The Northern Periphery & Arctic (NPA) area is undoubtedly rich in many renewable energy resources. However the form and extent of these resources vary considerably throughout the region. While these differences may be clear at national levels they also exist at more local levels as well and, as a result, areas within the NPA region will have very different technological requirements for the effective utilisation of renewable energy resources. The aim of this report is to link the appropriate renewable energy technologies to the available resources and corresponding demand, for every partner region participating in the GREBE Project.



Led by the Environmental Research Institute (ERI), the first step towards successful achievement of the objective was the "Report identifying technologies which can be transferred from areas of best practice to areas where renewable energy uptake is low". This report lays the foundation for linking the appropriate renewable energy (RE) technology to the specific locality, through careful analysis of the input provided by partner regions, together with, identification of similarities and transferable solutions from one partner to another.

The main aim of this report is to inform the other activities in this work package by identifying key areas and technologies with the potential to generate new business models, in areas where renewable energy is less developed. The report wishes to establish transferability of renewable energy technologies from areas of best practice to areas where RE uptake is low. In order to ensure the appropriate level of coverage across all relevant technologies and key areas, all partners provided input for their specific region regarding:

- **Areas** where non-renewable resources are meeting energy requirements, or where emerging businesses require new energy sources and are considering fossil fuel based energy systems. This was separated in three different clusters - sectors, industries and geographic areas. The commonalities across the feedback from all partners, substantiates the fact that despite the geographical differences, the NPA region is facing similar challenges, which can be best overcome and realised by transnational cooperation. After a careful review of the individual partner feedback, recurrent areas across regions were pinpointed. This generated a set of preliminary findings on transferable solutions from partners in which, areas of best practice integration of renewables were identified, to similar areas in other partner regions, where the uptake of renewables is low.
- Relevant **Renewable Energy (RE) technologies** and renewable integration enabling technologies relevant to the region, including the corresponding risk and market penetration levels. A review of the available technologies (the corresponding market penetration and risk) was undertaken, for every partner, individually. This led to the assembly of preliminary findings on RE technology transferable solutions, from regions where a given RE technology has high market penetration and low risk, to regions, where the same RE technology has low market penetration and high risk.

The findings of the report can be found on the GREBE Project website [here](http://www.grebeproject.eu)

GREBE GROWTH STRATEGY GUIDELINES FOR SMES IN RENEWABLE ENERGY

Small and medium-size enterprises (SMEs) and micro-scale enterprises (new and established) have a key role to play in generating new employment in peripheral regions. However, from knowledge of local markets it is clear that only small numbers of SMEs are consistent in generating new employment opportunities i.e. they are successful growth enterprises. SMEs that are most successful are those that successfully deployed growth strategies to optimize their business activities.

The growth strategy guideline reviews successful business growth strategies for SMEs and micro-scale enterprises in the NPA regions and analyses how these can be adapted for application to the RE sector. Business growth strategies based on new RE and energy storage technologies are identified by a case-based approach. Successful strategies allowing for business growth in current or new domestic or international market areas are available for replication across the NPA area facilitating economic growth and improved market access of new RE solutions.

The guideline report introduces firstly the contexts of business growth and main types of growth strategies. Secondly, it provides a baseline of business growth issues, preconditions of growth and support needs, basing on a transnational survey for 70 business enterprises in the NPA region. Thirdly, it provides examples of the growth strategies in renewable energy and energy storage sectors. Finally, conclusions provide more generic guidelines for the business growth strategies in the sector.

The guideline report is available for download on the GREBE website [here](#)





POLICY WORKSHOPS IN NI, SCOTLAND, FINLAND

GREBE Policy Workshops in 2017

Action Renewables are leading renewable energy policy activities in the GREBE Project and to date have participated in five policy workshops. Since the start of 2017, there have been three workshops, in Northern Ireland, Scotland and Finland. The purpose of these workshops is to involve and support stakeholders within the renewable energy sector.

During the workshops we discuss the advantages / disadvantages of local policies for that area and discuss how they can be improved to help the economy. The policy workshops involve representatives of relevant bodies and Government departments that set the renewable energy policy agendas. Each policy workshop has been different, as the conditions within each country are different and they are different policies. All of the policy workshops were chaired by Michael Doran and Mark Corrigan of Action Renewables. Our Norwegian partner Narvik Science Park will hold a policy workshop in April and it is our intention all will be completed before June 2017. We will then have a list of potential new policy mechanisms which will support different partner regions.

Northern Ireland

The Northern Ireland policy workshop was hosted by South West College at their Dungannon campus on the 11th January. For this workshop we had 10 representatives, who came from different sectors throughout Northern Ireland, including the Department of Environment, Invest NI, Fermanagh Omagh District Council, Fermanagh Enterprise and the Ulster Farmers Union.

This policy workshop focussed on the renewable energy industry in Northern Ireland and the lack of new policy development, and how this will have an impact on the economy. Northern Ireland will have no policy supports for the sector after the 31st of March 2017.

Scotland

Action Renewables chaired the Scotland policy workshop on the 26th January. This workshop was organised by the University of Highlands & Islands and was held in Inverness. For this policy workshop, we had the privilege of four guest speakers:

- HWEnergy provided an "Overview of current renewable energy policies and constraints",
- Scottish Enterprise on "The solutions that exist within Highland & Island Enterprise and Scottish Enterprise",
- Local Energy Scotland, on "Community participation in RE" and
- Community Energy Scotland on "Communities constrained by the existing policies"

Scotland are very advanced on policies that support the renewable energy sector. To date Scotland have 18 policy mechanisms, which support the sector and is a popular area for wind and hydro. Many of their support mechanisms are for SMEs looking to enter the renewable energy industry.



POLICY WORKSHOPS IN NI, SCOTLAND, FINLAND CONTINUED

Finland

Finlands policy workshop took place in Joensuu on the 9th February after the "From Resource to Renewable Business" seminar and dealt with current issues from the Finnish and North Karelian point of view. Finland is mainly focused on its forestry sector, so therefore biomass is their main focus. At the policy workshop we had 12 participants from a variety of different sectors as well as from international participants (IEA Bioenergy Task 43 & GREBE). We also had the honour of the following guest speakers:

- Regional Council of North Karelia - Presenter Anniina Kontiokorpi outlined how they are preparing an implementation plan (roadmap) for North Karelia to achieve ambitious aims established in their Climate and Energy Program.
- Mayor Asko Saatsi from the City of Nurmes - In Nurmes, bioenergy projects (bio refineries) are essential part of local development strategy.
- Mika Juvonen, CEO/Bio10 Ltd. - Mika Juvonen has established organic waste treatment/biogas plant in Kitee. He has been actively informing policies and been able to reduce barriers identified in sector.

The results of the workshop will be utilized in drafting the roadmap towards an oil-free and low-carbon North Karelia 2040.





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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.

