



# FREED

Funding Resources for Innovation  
in Energy Enterprise Development

*FREED  
Newsletter 1 & 2  
Volume 1, Issue 1*

## What is FREED?

FREED is a transnational partnership project part-funded by the Northern Periphery and Arctic programme to stimulate energy innovation in the Northern Periphery region. It is a three-year project which started in January 2016, and will end in December 2018.

FREED is an acronym for Funding Resources for innovation in Energy Enterprise Development. In its application, the project is described as follows: "FREED will develop a service, by means of which SME's in the region can access innovation in energy technologies otherwise not available within the NPA region. FREED will also facilitate the transfer of technology innovations to SME's across the area, so that the outputs of the project will widely benefit the region. It will achieve this because it provides a unique access to private investment, which is the key determinant of success in stimulating innovation."

The project is a response to the growing need in the whole of Europe for technology innovation in the use of energy, its generation, storage, management and



distribution. The problems that are now well known concerning carbon emissions and climate change require different and more efficient methods of energy use. These will not be possible without innovation in technology and process concerning the way we use energy.

Nowhere are these problems felt more than in the harsh, cold and remote Northern regions of Europe, for which the Northern Periphery and Arctic programme is intended. So the FREED programme for energy innovation is designed to work with innovation leaders in the region, in other words those most concerned with energy innovation and those with the programmes and initiatives already in progress. FREED activity is designed to integrate its resources in such a way as to enhance, accelerate and extend the impact of existing programmes to the benefit of

rural communities in the NPA area. The Lead Partner is the University of Oulu. The partners in the FREED project are as follows:

**University of Oulu** (Lead Partner) – Finland

**South West College** – N Ireland  
Western Development Commission – Ireland

**Green Angel Syndicate** – Scotland

**Narvik Science Park** – Norway

**Limerick Institute of Technology** – Ireland

**European Institute for Innovation** – Germany (Outside the region)



# Energy Innovation and the NPA Region

## Republic of Ireland

### Energy Profile - Background

The energy profile of the NPA region (the western starboard) is characterized by a dependency on fossil fuels and grid electricity for most building and industrial energy needs and petrol and diesel for transport and mobile machinery including agriculture. Wood fuels such as pellets is used as fuel for solid fuel stoves but mainly in a supplementary heating context. The uptake of automated wood fuelled heating and power generating systems such as CHP is modest at best where the perception exists that payback is long and capital costs are high. The deployment of solar and wind technologies is quite low (even where there is an abundant wind resource). The recent collapse in oil prices has created a dramatic slow-down in investment in large-scale wind farms. There is a lack of incentive to invest in micro-renewables caused primarily by a lack of feed-in-tariffs and not helped by a scarcity of energy storage options (on macro and micro levels). Solar thermal is quite prevalent in new homes as it is seen as the most expedient way of meeting the renewables requirement (10 kwh/m2/yr) in the current building regulations (2011). However, there has been virtually no new build since the property market collapsed in 2010. SEAI (Sustainable Energy Authority Ireland) has been busy awarding grants to householders to retrofit their homes with energy saving technologies as a way for Ireland to meet its 2020 EU Energy Targets and to act as a stimulus for the construction industry. Unfortunately, the take-up has not been as widespread as hoped due mainly to the low-levels of grants available. One major criticism

of these schemes is that the emphasis to date has been on shallow retrofit rather than deep.



### Support for Energy Innovation – SMEs

SMEs can apply for funding to over 80 different sources of government finance and support. Over €2 billion of government aid, grants and support are available. These business funding initiatives are managed through 29 government departments, state agencies and joint ventures with third parties. The main players include: Enterprise Ireland, Local Enterprise Offices, Údarás na Gaeltachta and SEAI.

**Enterprise Ireland** is the government organization with the responsibility for the growth and development of Irish enterprises in world markets.

**Local Enterprise Offices** (31 no. in total) provide a range of financial supports designed to assist with the establishment and/or growth of local businesses employing up to 10 people.

**Údarás na Gaeltachta** is the regional development authority funded by Government to promote the economic, social and cultural development of the Gaeltacht, with the overall objective of maintaining Irish as the main communal language of the region.

**Sustainable Energy Authority of**

**Ireland** funds projects to increase the deployment of carbon technologies

Some examples and locations of where Energy Technology Innovations are being developed in the Irish NPA Region

**Kerry** – Ireland’s first biomass power plant using anaerobic digestion is currently being developed in Causeway County Kerry

**Limerick** – West Limerick company BHSL have recently developed a method for using poultry manure as a fuel for energy generation

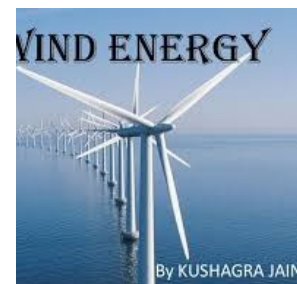
**Clare** – The semi-state Electricity Supply Board has announced plans to build a wave energy farm off the coast of Doonbeg by 2018.

**Cork** – The National Ocean Test Facility offers testing at the Hydraulics and Maritime Research Centre (University College Cork).

**Mayo** – Advanced battery technology currently being tested in the Údarás Enterprise Centre in Éachléim, Belmullet.

**Galway** – A quarter scale off-shore test site and demonstration facility has been provided in Galway Bay and managed by the Marine Institute.

**Sligo** – Institute of Technology Sligo are involved with SMEs in developing ICT based BMS technologies.



# Energy Innovation and the NPA Region

## Scotland

In Scotland, Green Angel Syndicate concentrated on the energy innovation programmes already established and in progress in order to ensure FREED is of maximum benefit to their work, and that it does not duplicate or complicate existing initiatives. Green Angel Syndicate itself is investing in energy innovation, but not within the NPA region. The organisations consulted in the FREED programme for WP3, Activity 3.3 covered the public sector Economic Development agencies, the Health service, Scottish Government, the water utility and the community energy sector. In the private sector, Green Angel Syndicate also consulted with companies based in Scotland working on energy innovations



In addition, during the period of the project, Green Angel Syndicate has reviewed at least 20 energy innovations outside the NPA region, aiming to introduce technology to the sector.

This revealed a range of activity in energy innovation in the different sectors, in particular within the innovation programmes run by Wave Energy Scotland and by Local Energy Scotland. Although there is a very evident need for energy innovation generally, and energy innovation specifically for Scottish needs, the

innovation programmes are quite unimaginative in their engagement with the market potential represented in Scotland.

In terms of the needs the most notable are:

- 1) Local Energy distribution technologies** to reduce the cost of energy in remote regions
- 2) Energy storage technologies** for remote regions
- 3) Energy cost reduction technologies** for water treatment in remote regions
- 4) Wave and tidal technologies** to reduce the LCOE (levelised cost of energy) for both technologies to become competitive with other methodologies

In other sectors, the sector needs did not relate to innovation, but to the use of established means for cheaper or de-carbonized energy production.

## Norway

### Renewable Energy Profile

The Norwegian Government's vision is that Norway shall be an environmentally friendly energy nation, and a leader in renewable energy. We still develop considerable amounts of hydropower, but we also promote other types of renewable energy production. And we promote energy efficiency through general and specific measures.



### Support for Renewable Energy Innovations

There are a number of different agencies which support renewable energy businesses in Norway. The business support system is largely funded and organized through public funding:

- 1) Local offices (Municipality)**
- 2) Innovation Norway**
- 3) ENNOVA** – Specialist instrument on RE innovations (National Agency)
- 4) Norwegian Research Council**

**ENNOVA** - Several years ago, the Norwegian Government established Enova, a public agency.

The Ministry of Energy (OED) has evaluated ENNOVA- and concluded that it has been a good reminder of the long-term character of promoting renewable energy and energy efficiency. It has been a challenge

# Energy Innovation and the NPA Region

## Norway (ctnd.)

for the agency to develop good support-schemes, to recruit projects and after that to avoid cancellations. And it takes time before the solar system, or the wind mill, produces energy – sometimes as much as five years. This reminds us that promoting the development towards a more environmentally friendly energy sector requires long term policies and a predictable framework.

**Researchers** - The Research Council of Norway's programme on Commercialising R&D Results (FORNY2020) promotes innovation based on research results. The programme facilitates the commercialisation of results from projects conducted at publicly-funded research institutions and helps to bring the products and services to the market.



The FORNY2020 programme is designed to trigger the value-creating potential of projects conducted at publicly-funded research institutions. The programme provides funding to newly-established companies based on these projects as well as to Technology Transfer Offices (TTOs) affiliated with the research institutions. The programme seeks to:

- promote the establishment

of new companies based on research results

- generate growth in existing



companies by providing funding to projects based on research results.

- enhance the professionalism and efficacy of the TTOs affiliated with universities, university colleges, hospitals and independent research institutes in their respective fields.

**Entrepreneurs – Innovation Norway** create value by stimulating to profitable business development throughout Norway. IN programmes and services are intended to create more successful entrepreneurs, more enterprises with capacity for growth and more innovative business clusters. Innovation Norway contributes to:

- 1) Enhancing innovation in Norwegian enterprises and industry
- 2) Building competitive Norwegian enterprises at both domestic and international markets
- 3) Promoting Norwegian enterprises
- 4) Securing development in rural areas

- 5) Transforming ideas into successful business cases
- 6) Promote interaction between enterprises, knowledge communities and R&D institutions

### Innovation Priority Areas in Norway

The Norwegian Government has given priority to 8 renewable energy areas establishing 8 new centres for environment-friendly energy research. The funding from the Research Council – is a long-term initiative to generate solutions to climate and energy related challenges, and to promote industrial development:

- 1) Norwegian CCS Research Centre – Co2 Capture, transport and storage
- 2) Norwegian Research Centre for Hydropower Technology
- 3) Norwegian centre for Sustainable Bio-based fuel and energy
- 4) Centre for Intelligent Electricity Distribution – modernisation of the electricity grid
- 5) Centre for Energy Efficiency – Energy efficiency in industry
- 6) Research Centre for Solar cell technology
- 7) Mobility Zero Emission Energy systems – Hydrogen/batteries
- 8) The Research Centre for Smart Cities – RE benefit for local environment

# Energy Innovation and the NPA Region

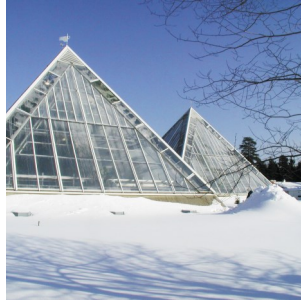
## Finland

### Energy Profile – Background

The Energy policy in the Oulu region is implemented in two distinct ways. In the urban areas of the city of Oulu and in the local centres of the rural areas, centralised energy policies are implemented. These densely populated areas are served with *centralised energy solutions*, whereas in the rural areas, with sparser populations, *decentralised solutions* are utilised. Both rely on local energy sources to some degree, even more so in the urban areas. Local wood, peat and hydro are utilised, but these are supplemented also by imported fossil fuels. Municipally owned energy companies provide either just heat or even electricity to their customers in densely populated areas, which have been produced with local resources.

Central district heating networks cover most of the urban and semi-urban areas, but on the rural areas most of the buildings have their own heating units and it is wood and oil that keeps the houses and other buildings warm. The buildings are connected to the national grid and the customers can purchase their electricity from outside of their own area, in fact from any electric company in the country. In 2015 45 % of total electricity production in the whole of Finland was produced by renewables, so depending on the compa-

ny, the customer can purchase energy made either by nuclear, fossil or local renewables.



Introduction of energy innovation is not easy either in the Oulu region, as the municipal energy companies, which dominate the scene, tend to be quite reluctant to shift from the existing energy production methods to renewables. There is focus on development of the existing systems and the requirements that emerge from this, for instance; the need for centralised long term heat storage. Energy companies themselves might be a bit slow to grasp the opportunities of energy innovations, but the municipalities have set ambitious targets for themselves. The city of Oulu, for instance, wants to be carbon neutral by 2050, and solar and wind energy are firmly on the agenda and making their way into the municipal energy companies. In rural areas, where decentralised solutions are most common, the trend is to switch from oil to local fuels (wood chips and peat) and to solar/geothermal solutions. A great challenge for the whole of Northern Finland is to decrease the dependence on

petrol and diesel in transportation. Electric vehicles (whilst gaining momentum everywhere) is not the solution in Northern Finland with its cold, long winter climate and long distances...



### Business support organisations

SMEs can apply for funding and government aid and support. These business funding initiatives are managed through government departments, state agencies and joint ventures with third parties. The main players in Oulu area are:

**Council of Oulu Region.** The Council of Oulu Region is a regional, politically guided, municipal coalition for the development and interest supervision in the county. It is responsible for regional planning and general coordination of regional development programs related to national and EU structural funds.

**TeKes** – the Finnish Funding Agency for Innovation. TeKes is the most important publicly funded expert organisation for financing research, development and innovation in Finland. Every year TeKes finances some 1,500 business research and development projects, and almost 600 public research projects at universities, re-

# Energy Innovation and the NPA Region

## Finland (ctnd.)

search institutes and universities of applied sciences.

**Centre for Economy, Transport and Environment.** The regional branch of the government, grants subsidies to SMEs for implementation of energy efficiency and energy innovation measures.



### Needs Analysis of Oulu Region

University of Oulu has reviewed at least 20 energy innovations in Northern Finland during the opening phase of the project. The discussions with the local stakeholders revealed a wide range of activities and needs in different sectors regarding energy innovations. The topics can be divided roughly into 7 specific issues. Some of the needs are purely specific for Northern Finland, others are present also in other corners of the NPA programme area and some are more global in their nature. A detailed listing of the encountered innovation needs for Northern Finland is as follow:

- 1) Smart illumination and HVAC systems in building and renovations
- 2) Decentralised electricity gen-

eration and storage for solar and wind energy production

- 3) Decentralised heating, heat storage and emission control

- 4) Centralized heat storage for district heating, utilisation of industrial overflow of energy and materials (waste) in the nearby municipalities

- 5) Use of large-scale biomass sources, replacement of oil heating with renewable ones

- 6) Traffic, meeting the emission targets with usage of biogas as a traffic fuel

- 7) Smart distribution and measurement of energy



## Rural Europe

Being Rural does not exclude you from Innovation.

Rural areas such as those in the Northern Periphery and Arctic (NPA) area are actively contributing to the development of new products, new technologies, and new policy approaches with respect to energy. It is within the NPA that many new technologies have been tested, challenges first appeared, and new policy approaches are verified in real-life situations. It is true to say that many remote rural areas in the NPA must import expensive fuel or electricity and so therefore have a large motivation to find more sustainable and cheaper local energy sources, hence the need to harness its natural resources.



The FREED project is developing a service where SME's and entrepreneurs can access innovation for energy technologies. This service will stimulate and assist many new concepts currently being

# Energy Innovation and the NPA Region

## Rural Europe (ctnd.)

developed. Some of these concepts might well be outside of the NPA but economic benefit could be gained by transferring into the NPA.



Across the EU28 many innovations in the energy sector struggle or indeed fail. Many promising innovations for example, do not penetrate markets of low-carbon technologies, such as electric vehicles. Without a comprehensive innovation and competitiveness strategy, bringing together supply, demand and regulatory aspects, the EU risks losing its comparative advantage to Asian and American competitors. This is true in both Europe's supply of innovation, and in the deployment taking place in Europe. This is already the case with some specific technologies such as solar photovoltaics (PV). In 2013 alone, the EU-28 lost 50,000 jobs in renewable energy, mainly in solar PV. The EU faces similar risks in other areas such as in battery storage and in electric, hybrid and hydrogen mobility. The FREED project partnership recognises and understands that success in the innovations

that the project FREED brings forward will only be effective where the entire network of actors is brought together. FREED has engaged with already existing agencies in the energy landscape, and will seek to identify new interventions that supports these innovations.



Across the FREED project partnership and indeed across the EU28 we are observing the emergence of new technologies and services, such as energy storage, demand side management and electric vehicles, all of which are disrupting the traditional restrictions of the energy sector. The 'prosumer' is now an established feature of the energy system, and growing in importance. For instance, private citizens and farmers now own almost half of Germany's renewable energy installed capacity, while in Denmark, private individuals own 85% of its wind turbines. Similarly, crowdsourcing and crowdfunding are enabling citizens to actively participate in financing the deployment of renewable innovations and projects.

What has emerged from initial research conducted across the FREED project partnership is that energy innovation cannot be understood or nurtured by an attention to a single actor. Instead, it results from contributions from a wide range of stakeholders from various spheres, be they driven and stimulated by regions and/or end-users, initiated by non-energy sector companies which disrupt the traditional value chains. What is obvious is that the next great energy innovation does not need to come from the established routes, such as the urban areas of Europe such as the standard concentration of innovation in urban areas. The NPA has a relatively strong offer, it has physical strengths that it can build on to do this, including the geographical locations, part of the European market, the skills of its workforce and its research institutes equip it to be at the forefront of energy innovation, one in which puts the consumer at the centre.

# Energy Innovation and the NPA Region

## Northern Ireland

Northern Ireland relies heavily on imported fossil fuels for over 70% of its generation capacity, with three fossil fuel power stations generating about 1.6GW of electricity. Northern Ireland as a whole has a target to generate 40 % of its electricity from renewable sources by 2020. Interest is starting to build for large scale investment projects, such as solar PV and wind that will begin to compete without subsidies.



There is a general consensus and recognition that there is a strong regional requirement for solutions that can address the issue of connecting renewable energy generators onto an electrical grid system that is already performing beyond its original design envelope. Previous work has concluded that such Intelligent Energy Systems will incorporate technologies that can meas-

ure, analyse, communicate and control the multi-directional flow of energy at a variety of scales (MATRIX Sustainable Energy Horizon Panel Report, Market Foresight Report 2013 available from [www.matrix-ni.org](http://www.matrix-ni.org)). Such innovations and technologies would be classified under the following categories:

- 1) Intelligent Energy Systems
- 2) Electrical and heat distribution networks
- Supply
- 3) Incentives to encourage uptake
- 4) Remotely controllable loads
- 5) Support for R&D
- 6) Energy Storage
- 7) Distributed Grid Management
- 8) Power electronics
- 9) "Virtual" power stations
- 10) Demand Side & Control System Management





## FREED Partners



The Western Development Commission (WDC) is a statutory body operating under the aegis of the Department of Environment, Community and Local Government. Its remit is to promote, foster and encourage economic and social development in Ireland's Western Region. The WDC has the following strategic goals:

- 1)** To encourage the development of the rural economy based on the sustainable development of the Western Region's strengths and resources.
- 2)** To provide risk capital to SMEs and social enterprises in their start-up and expansion phases through the WDC Investment Fund.
- 3)** To inform policy-making on economic and social development in the Western Region through high quality analysis.
- 4)** To promote the benefits of living, working and doing business in the Western Region.

Since 2010 the WDC has invested €13 M in regional job & enterprise growth, assisting 122 enterprises, directly employing 2,200 people. The WDC has piloted with the partners sectoral development programmes that have yielded employment, enterprise and pathways for growth e.g. The Creative economy, Regional Bio-economy, Tourism, and SME's. In Policy it has provided insight which has allowed gas to be provided to Western Towns and outlined the case for next generation Broadband use in the region.

In 2012 it supported the workings of the National Commission for Economic Development of Rural Areas (CEDRA) and in 2015 it successfully ran the international commemoration of the 150th Anniversary of the birth of WB Yeats ([www.yeats2015.com](http://www.yeats2015.com)), engaging with 20 M people internationally and offered a 10 fold return on investment to the Irish state of approximately €10 M.

In 2015 the WDC was awarded the national public sector eGov award as the best social media offering in the Irish public sector. As a progressive state organisation the WDC has fully engaged with its EU partners in accessing transnational capabilities to correctly position and realise the potential of its citizens, businesses and resources.



South West College currently has a five campus college spread over the counties Tyrone and Fermanagh in Northern Ireland. SWC has 20,000 student enrolments, has a staffing complement of some 900 staff, a budget of £40M and is involved in a number of European projects. In addition the College has direct links to business and academia, which ensures that it is ideally placed to assist with the development of a sustainable business community within Northern Ireland and beyond. The Centre for Renewable Energy and Sustainable Technologies 'CREST' is a purpose-built facility located at SWC to stimulate and facilitate new R&D projects in small businesses. CREST has dedicated facilities and staff to provide industry R&D, demonstration, prototyping and testing for new renewable energy products and sustainable technologies.

## FREED Partners



Limerick Institute of Technology (LIT) is an institution of higher education in Limerick, funded by the Government of Ireland and set up under the IOT legislation. It is one of 13 such Institutes in Ireland. The Institute has five campuses and a learning centre across Limerick City, Tipperary and Clare. Similar to the other Institutes of Technology, LIT offers courses at Level 6 (certificate) through to Level 10 (Ph.D.) whilst also catering for craft apprentices, adult and continuing education and flexible learning. The Institute is also involved in research, development, enterprise support and is very active in regional development activity. The Institute was named as The Sunday Times Institute of Technology of the Year for 2008 and 2012 as published in The Sunday Times University Guide.

Limerick Institute of Technology (LIT) has considerable experience in European projects. It was coordinator of SERVE a major sustainable energy project funded under the CONCERTO Programme. It has developed and provides specific training in the field of sustainable energy (Building Energy Rating, Renewable Energy Systems, Domestic Energy, Smart Sustainable Energy etc.) and is networked with a wide range of public and private actors in Ireland. LIT is also the coordinator of the Irish IEE BUSI Build Up Skills Project, Quali-Build, and a partner in Train to nZEB project assisting with the setting up of Business Knowledge Hubs for training and consultations. LIT was also a partner in the Atlantic Area funded REPUTE project. LIT also works with local and regional Government on a variety of projects in the planning and sustainable energy fields. In all of these activities LIT has addressed a wide range of building types including domestic, commercial and public buildings, existing and new buildings and buildings that have specific energy characteristics.



Europäisches Institut für Innovation

The European Institute for Innovation (Eifl) is an applied science organisation supporting the adaptations of regions to respond to the fast pace of development, thus making them more competitive. The Eifl through its national, regional and transnational work acts as a stimulator for economic activity with the purpose of creating new employment and business opportunities that meet the demands and desires of communities and its people. The Eifl operational team manages the delivery of project work and programmes working in partnership with national/EU agencies, learning institutions, the private sector and people – the so called “Quadruple Helix” The European Institute for Innovation (Eifl) have successfully worked on numerous European funded projects, as well as with national projects. Our experienced staff include researchers, educationalists, industrialists and IT specialists. Our activities are mainly concentrated in the following directions: Energy, Education, Resource Efficiency & ICT.



Narvik Science Park (NSP) is a non profit making body that is committed to development of new business from technological research:

- Specialist in Technological innovation
- Specialist in Business Development
- Specialist in commercialisation of research results

NSP, which was established in 2000, has competence within mergers and multi-level financing of start-ups and provides all necessary assistance and facilities for new business enterprises. Target areas:

- Arctic Technology
- Environmental Technology
- Renewable Energy

The competence and experience of NSP are aligned with the aims of FREED Project – analysing the challenges and the implications of operating conditions on technologies and business models in remote areas of the NPA region and presenting best practice solutions to address these challenges.

## FREED Partners



The University of Oulu is an international science university which creates innovation for the future, well-being, and knowledge through multidisciplinary research and education. The University is also an expert in Northern and Arctic issues. Founded in 1958, our research and education community has 16,000 students and 3,000 employees strong, and is one of the biggest and the most multi-disciplinary universities in Finland. The ten faculties, the many departments and the specialized research units of the University of Oulu create the foundation for research, innovation and training of experts for demanding professional tasks.

The FREED project is coordinated by the Energy and Environmental Engineering Research Unit at the Faculty of Technology. The main competence of Energy and Environmental Engineering is sustainable energy systems, with focus on smart grids and resource efficiency especially in the North. The unit has substantial experience in international projects and EU funding, supported by a wide and long lasting co-operation network in the Northern Periphery and Arctic and Barents regions. It is conducting several basic research and applied projects in energy technologies and innovation, and is home base for PhD, master's and bachelor students in energy and environmental engineering.

The University of Oulu is a founding member of Oulu Innovation Alliance (OIA), which is a unique co-operation of public and private actors strengthening the innovation capacity of Oulu region. Under OIA, the University is coordinating the Centre for Environment and Energy (CEE), an innovation hub whose objective is to turn innovations in the environmental, energy and clean-tech sectors into business.



The company Green Angel Syndicate (GAS) was founded in 2013 as a company limited by guarantee with two founding members, Colin Rogers and Nick Lyth. Colin's remarkable entrepreneurial career and visionary approach prompted his interest in being Lead Investor. Nick provides the specialist combination of business experience with knowledge of European research into technology innovation at the cutting edge of energy and water. This provides the basis to achieve the purposes of GAS, and identify the right investments for the syndicate.

Green Angel Syndicate specialises in investments that will make your money make more because they are the only sectors in the modern global economy that are certain to create wealth. They are:-

The sectors without which we cannot survive

Water

Energy

Sectors we know are under threat

We know global supplies of fresh water and energy are under threat. Innovations in core technologies for both sectors will make money in the coming years, regardless of global economic performance. The question is, which will be the winners? GAS offers answers you can trust.

## Partner Meeting Finland

The Project Kick-Off Meeting was held in Oulu, Finland on the 8th and 9th of March. This meeting was organized by the University of Oulu who are the lead partner on the project. Partners discussed the energy priorities of each region and agreed on the work plan progress and outreach activities. Also, a short seminar was organized on State Aid with Jeff Foot explaining when state aid applies.

Below are photos of the Partners participating in activities in Nallikari Winter Village.



## Partner Meeting Scotland

The second FREED Partner Meeting was held in Scotland. The FREED Partners met in sunny Strathpeffer for the second partner meeting on 6th June, having completed an earlier joint meeting with the GREBE project. The partner meeting took place on the 7th June and covered a lot of ground.



The partners discussed the energy innovations which will be the focus of the project. Exciting developments in energy storage, energy funding models, and the use of energy in water were all to the fore.

But the leading idea proposed by the Scottish partner is a Wave Energy International Network. This reflects the programme mounted by Highlands & Islands Enterprise, Wave Energy Scotland, which will help to create the new network.

The GREBE and FREED partners all agreed that there was mutual benefit in collaboration.

The plans were made for aligning the projects in the most effective way.

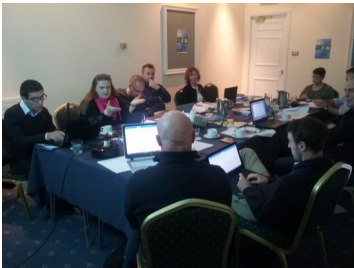
The meeting came to a close

on the morning of the 8th June, with an agreement to meet again on 11th/12th October in Galway, Ireland. This partner meeting would be hosted by Western Development Commission.



## Partner Meeting Galway

In October 2016 the project partners held their third partner meeting in sunny Galway. Hosted by The Western Development Commission, project partners attended from The University of Oulu; Finland, South West College; Northern Ireland, European Institute for Innovation; Germany, Limerick Institute of Technology; Ireland, Green Angel Syndicate; Scotland, and Narvik Science Park Norway. Meetings took place over the three days and the project partners presented on the status and implementation activities of the various work packages.



The findings of the review of Energy Innovation Needs carried out across the partner regions were analysed and common themes identified. A report on the findings of the Energy Innovation Needs Review will be published on the FREED website shortly and will be used to help FREED identify the types of energy innovations that are needed in each region. A very informative thematic seminar was hosted by Green Angel Syndicate on the subject of 'Innovation Programme De-

velopment' and next steps of the Invitation to Tender (ITT) process. All the partners had identified the needs in their regions and the FREED project will implement one energy innovation solution from each region. The project aims to deliver 6 solutions and 30 technology transfers to other regions.



In addition to the project meetings, the partners visited The Marine Institute where Dr John Breslin gave a very informative presentation on the work of the Institute. Dr Breslin, SmartBay Ireland's General Manager is responsible for the overall management of the National Research, Test and Demonstration Platform for Wave Energy Devices, Marine Sensors, Equipment and ICT Solutions.



Finally, the partners finalised details of a thematic seminar which will be held in South West College in Enniskillen on December 8th. The seminar is a pre-call for the Invitations to Tender which will open in early 2017 and will present an overview of the planned innovation investments that the FREED project aims to implement.



## Project Team Contacts

<b>Partners</b>		
<b>Finland</b>		
University of Oulu	Eva Pongrácz	<a href="mailto:eva.pongracz@oulu.fi">eva.pongracz@oulu.fi</a>
	Niko Hänninen	<a href="mailto:niko.hanninen@oulu.fi">niko.hanninen@oulu.fi</a>
	Arja Sarpola	<a href="mailto:arja.sarpola@oulu.fi">arja.sarpola@oulu.fi</a>
<b>Norway</b>		
Narvik Science Park	Fred R. Johansen	<a href="mailto:fred@fpn.no">fred@fpn.no</a>
<b>Northern Ireland</b>		
South West College	John Harrison	<a href="mailto:john.harrison@swc.ac.uk">john.harrison@swc.ac.uk</a>
	Jill Cush	<a href="mailto:jill.cush@swc.ac.uk">jill.cush@swc.ac.uk</a>
	Clodagh O'Neill	<a href="mailto:clodagh.o'neill@swc.ac.uk">clodagh.o'neill@swc.ac.uk</a>
<b>Scotland</b>		
Green Angel Syndicate	Nick Lyth	<a href="mailto:nick@greenangelsyndicate.com">nick@greenangelsyndicate.com</a>
	Steve Taylor	<a href="mailto:steve@ideeas.net">steve@ideeas.net</a>
<b>Republic of Ireland</b>		
Western Development Company	Mary Keaveney	<a href="mailto:marykeaveney@wdc.ie">marykeaveney@wdc.ie</a>
	Ian Brannigan	<a href="mailto:ianbrannigan@wdc.ie">ianbrannigan@wdc.ie</a>
Limerick Institute of Technology	Padraic Cullen	<a href="mailto:padraic.cullen@lit.ie">padraic.cullen@lit.ie</a>
	Derek Blackweir	<a href="mailto:derek.blackweir@lit.ie">derek.blackweir@lit.ie</a>
<b>Germany</b>		
European Institute of Innovation	Chris Ashe	<a href="mailto:c.ashe@eifi.eu">c.ashe@eifi.eu</a>
	Benjamin Daumiller	<a href="mailto:b.daumiller@eifi.eu">b.daumiller@eifi.eu</a>



<http://freedproject.eu>



[@freedproject](https://twitter.com/freedproject)



<https://www.facebook.com/FREEDproject/>



[www.linkedin.com/company/freed-project](https://www.linkedin.com/company/freed-project)



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



**EUROPEAN UNION**

Investing in your future  
European Regional Development Fund