



### Lead Partner Update

#### Project Objectives:

*To increase the capacity of communities to develop their own solutions for reliable, energy efficient public infrastructure;*

*To maximise energy asset management in water services;*

*Knowledge exchange programme leading to increased awareness and sustainable public policy;*

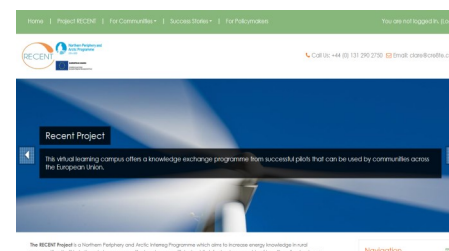
*Robust, sustainable community projects that will be self-sufficient post NPA funding.*

RECENT participated in the Northern Periphery and Arctic's Annual Conference 2016: , titled, "Arctic Boost - Economic Development for the Peoples in the Arctic and Northern regions of Europe". The conference was held in Akureyri in Northern Iceland which was a stunning location for the conference (included in the price was some amazing sights of the Northern Lights, which were thrown in for free!!).

The event gathered approximately 95 participants from projects and other programmes, international organisations and stakeholders working with economic development in the Arctic and Northern regions of Europe. RECENT played a prominent role, looking at the "People's perspective", not only on our project but on the breadth of the programme. One of the key aims and objectives of

the RECENT project is to ensure that the outcomes benefit the people and communities in these remote, rural parts of Northern Europe, where the added value and lasting legacy of such a programme, can be of most benefit.

Copies of presentations are now online and can be found at - <http://www.interreg-npa.eu/events/npa-annual-event-2016-arctic-boost-economic-development-for-the-peoples-in-the-arctic/>



The RECENT Virtual Learning Campus is in development and we expect this to be launched with our Partners and stakeholders in the next few months. The Learning Campus is a tool that all of our stakeholders will be able to access, whether they are communities, individuals, community groups, local, regional and national governments, community renewable energy advisory organisations, municipalities, Universities or Water Utilities, there will be content of interest for you all!! This platform will provide learning materials, case studies, benchmarking studies, policy papers and information on best practice spanning the 5 regions which are involved in the project.

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### Partner Meeting—Derry~Londonderry



On Tuesday 13th September Action Renewables, welcomed members of the partnership to Derry/Londonderry for a bi-annual partner meeting.

The meeting was held in the Playhouse Theatre and several key areas of the project were discussed in great depth. This included reports on the progress each partner member has made on identifying potential pilot sites for the project, working together to develop the online virtual learning campus, and working on creating promotional videos for the project.

The partners attended a site visit at Creggan Country Park. A key

focus of Creggan Country Park is the interaction with the local community, and the way they can stimulate economic activity in what is a very marginalised area. We were given a very interesting insight to the background and history of the Park, and also to some of the issues and challenges. Many of these challenges have been met and overcome through the help of EU funding. At that point we were taken on a brief tour of the site and given a more detailed explanation of the issues by the Manager, Gerry Quinn.

One of the main reasons for holding partner meetings in each partner region is to share experience and this visit allowed us to understand what experiences with

renewable energy a community based organisation had had in Northern Ireland. It was enlightening to hear of the positive and indeed negative issues that had befallen the staff at Creggan Country Park as they added a hydro dam, wind turbine and biomass systems to the site.

One of the interesting aspects of the use of renewable energy technologies has been the linking to education both of school children and the wider local community and through these activities there is community led interest in developing a small scale solar system for use on site.

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## Renewable Community Empowerment in Northern Territories

### Feasibility study for a co-digestion plant in the municipality of Jokkmokk, Sweden.



Jokkmokk is a Swedish Eco-Municipality and a signatory of the EU Covenant of Mayors. It has developed its Sustainable Energy Action Plan

(SEAP) and committed itself to reduce its GHG (greenhouse gas) emissions on its territory by at least 20% until 2020, compared to 2005. One part of the activities planned under the SEAP is related to bioenergy, and a feasibility study shall be undertaken whether biogas

production can be economic and doable in Jokkmokk. Beyond climate protection, another incentive for a biogas production is the reduction of

the sludge volume and even the smell of aerobic treated sludge. Today, sludge is treated to become a material for restauration of industrial/mining areas or in the street building. Both, storage, treatment and transport are expensive due to high volumes.

The feedstock for a possible biogas plant would consist of sewage sludge from the Wastewater Treatment Plant and biowaste mainly, and could lead to biogas yield of 62.000 m3 and an energy yield of 60 MWh a year. A very first calculation shows that a plant with a volume of about 300m3 would be necessary if the maximum potential could be realized. Plants in this size are pretty rare in Sweden, and they are mainly existing in the context of farms which are digesting manure.

### Improvements for the district heating net in Jokkmokk, Sweden

**"The community has changed. A study on the district heating network must be carried out."**

Jokkmokk has a well-developed district heating in the central town, which runs on biomass. The main boiler is 17 MW and used for wood chips, an additional boiler of 3 MW runs on bioenergy pellets. However, for the very coldest day, there is reserve in the form of electricity and oil boilers. These ones should be replaced, but before doing so, a study on the district heating net is done. The community has changed, some quarters have been developed, some industries have closed down and energy consumers need more or less

energy compared to 10 or 20 years back in time. This changes even the pressure in the net and the possibilities to deliver heat in the most effective way. By optimizing the net the need for reserve capacity can be reduced, which is more efficient and economic.

You can see a short video in Swedish with more details at <https://youtube.com/watch?v=xM7DXzZYbP0>



### Policy Workshop in Luleå, Sweden



In May 2016, Jokkmokk organized together with the County Administrative Board a policy workshop in Luleå. The main focus of the day was on financing and funding, and which instruments are available for communities on the national and European level today and what will happen in the future. This is essential for empower communities to contribute to joint European and global climate protection strategies and targets.

The RECENT project aims at giving Northern community a voice in European Policy Making. This is, because many of the communities are small, remote, and face challenges by depopulation and brain-drain as well as a general lack of resources and capacities. To become less vulnerable and more resilient, communities need to:

- Develop new fields of business and income, not at least by using renewable sources of energy within public infrastructure and by

focus on demand management

- Develop co management of resources;
- Increase knowledge and skills by capacity building and building networks;
- Implement long-term strategic policies and measures.

## Issue 2

### Pilot status in Sodankylä, Finland

Work with potential pilots has kept the partners busy in all the corners of the project during the past months, and that has been the case also in Northern Finland. The University of Oulu has been assessing several potential pilots, and the most promising of them has proven to be the one situated in the municipality of Sodankylä in the Finnish Lapland. But what are challenges here, 100 km north of the Arctic Circle that convinced the locals that RECENT could offer them something useful? After all, the municipality uses already renewable energies, such as hydropower and bioenergy, and wind power is gaining slowly a foothold there as well.

“There is a need for synergistic solutions, which can produce both energy and solve some other issues, such as treatment of waste water sludge and bio-waste”, says Jukka Lokka, development director at the municipality, whom the Oulu team met in June. The waste water treatment plant, which is operated by the municipality, stores the waste water sludge nowadays in the backyard of the facility, but this could be used to produce biogas with a digester.

Bio-waste is currently not collected separately and, since its landfilling is prohibited, mixed waste would have to be transported back to Oulu for incineration.

Separate collection and local utilization would be preferred, as this small community is committed to a bioenergy programme. Solving waste related issues and, at the same time, getting biogas which could be used as a transportation fuel, is an interesting combination, especially as there is also a need to move towards the use of renewables in transportation. This would also allow the Municipality of Sodankylä to do its part in building an alternative fuel infrastructure. According to the results provided by RECENT, a co-digester, which could utilize wastewater sludge, separately collected bio-waste and also offal from a local slaughterhouse would be an ideal solution for Sodankylä. The energy assessment report concluded that the municipality could generate 188 000 m<sup>3</sup> of biomethane, which could fuel 130 cars annually.

***“There is a need for solutions that both produce energy and solve some other issues”***



Joonas Alaraudanjoki interviewing Jukka Lokka



Visiting the wastewater treatment plant of Sodankylä

### RECENT Workshop—Irvinestown, Co Fermanagh Northern Ireland

On Tuesday 28th June 2016 Action Renewables, in conjunction with Fermanagh and Omagh District Council and the Fermanagh Trust, with support from Northern Ireland Community Energy and the NI Housing Executive hosted a workshop and information evening in the Bawnacre Centre in Irvinestown, County Fermanagh, Northern Ireland.

The workshop was attended by a range of people from various backgrounds in the area including

community groups, farm owners, the academic sector, private enterprise and others. The evening was opened by Councillor Mary Garrity who spoke of her delight that the potential of the region for Renewable Energy development was being recognised.

There followed several presentations from the Fermanagh Trust who described what they understood Community Energy was and what Community Energy Projects entailed, Terry Waugh of Action Renewables who gave some insight into who Action Renewables

are and background to European projects and applying for funding. Aaron Kernohan of Action Renewables then followed describing the RECENT project looking at the background of the project and how it had developed out of the WARES project.

Next several presentations were given in relation to specific technologies that provided talking points for those in attendance. These included a presentation on biogas and anaerobic digestion from Bernadette Convery of Action Renewables and information

on the Share Your Roof programme by Karen Arbuckle of NI Community Energy. This provided a great example of an existing community led project that could be used as a model for other projects and finally a discussion on energy recovery from water assets, primarily in the form of hydro turbines, delivered by Alex Bookless of Action Renewables.



## Renewable Community Empowerment in Northern Territories

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**KEEP IN TOUCH WITH INFORMATION ON NORTHERN PERIPHERY ENERGY  
ISSUES, FOLLOW THE RECENT SOCIAL MEDIA CHANNELS!**

The European North is one of the areas that will undergo significant changes in the coming decades due to climate change. Climate change is likely to challenge the provision of water services and local water and energy infrastructure. Projected challenges include precipitation induced flood events and increased run-off especially in winter and spring months and, in the summer, increased competition for water.

The impacts of climate change may also open new possibilities for the remote NPA regions that could make the region become a major energy producer. The 5 partner countries are some of the top regions of the world as regards the amount and quality of water. While water is abundant, providing water services in these regions is energy intensive. To become more efficient and smart in this area is therefore a significant objective.

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