

## Solutions for Microgeneration to Allow Energy Saving Technology Northern Periphery Programme 2007-2013

### Welcome from IRRI

The past few months have seen SMALLEST partners hard at work, continuing to push forward with renewable energy projects across Europe. In addition to celebrating the project achievements to date, we would like to introduce and offer a warm welcome to the new project members: Charlotta Nääs, Philip Munro, Amy Clarke and Stuart Thompson. We also congratulate Enok Jóhannsson who recently wed and Eleonore Hedman on the arrival of the new smallest member of the SMALLEST project, Saga Hedman. We wish both them and their families all the happiness for the future.

### NPP Renewable energy experts gather in Joensuu

North Karelia University of Applied Sciences, Finland

The Sustainable Energy Systems 2010 conference took place in Joensuu, capital of the North Karelia region of Finland, on 24-25 November 2010. It was hosted by the North Karelia University of Applied Sciences (NKUAS) and brought together 120 international visitors from four NPP funded projects: SMALLEST, MicrE, PELLETime and RASLRES.

On the first day of the conference, the project partners took part in an Energy Cluster workshop held by the NPP Programme Manager for Project Development Support, Mr. Christopher Parker, and Mr. Lasse Okkonen from NKUAS. The workshop addressed development opportunities and gaps in renewable energy across the northern periphery region and aimed to assist the NPP Secretariat in forming the Terms of Reference for the next project call in early 2011.

Topics covered on the second day of the

conference included "Energy technologies for sparsely populated areas", "Upgrading of biomasses" and "Renewable energy business and policies". The partners also took a study tour of the local area which started with a SMALLEST press conference in which the Joensuu city mayor and local politicians participated. They then continued to visit the Centre for Economic Development, Transport and the Environment, Forestry Centre of North Karelia and the Joensuu Regional Development Company JOSEK Ltd.

Throughout the conference, visitors experienced traditional Finnish food and music. At the official partner's dinner, which was held in the nearby Finnish Forest Research Institute, visitors enjoyed Karelian pasties with egg-butter, elk venison, reindeer meat, fish from local lakes, berries and forest mushrooms. To complete the evening, NKUAS students provided traditional music played on the zither.



## Working towards a sustainable future

Action Renewables, Northern Ireland

Northern Ireland is a small country located in the Northern Periphery Region with a population of approximately 1.75 million inhabitants on an area roughly 5345 sq miles. The country is heavily reliant on fossil fuels and currently imports 90% of its primary energy requirements.

Like many parts of Europe, Northern Ireland has committed to achieving a proportion of its energy demands from renewable sources. Current targets of 40% electricity and 10% heat from renewable sources by 2020 have been set. At present, only 9% of our electricity and 1.5% of our heat is generated sustainably, so we really have to work hard to meet our ambitious 2020 targets.

A large proportion of renewable energy in Northern Ireland comes from on-shore wind farms owned by large private development companies. Through participation in SMALLEST, Action Renewables hopes to support rural communities in developing their own renewable energy projects. Such projects ensure that the social, economic and financial benefits of a renewable energy initiative stay within the local area and are enjoyed by local people.

During 2010, Action Renewables travelled around Northern Ireland meeting with communities and providing them with information on renewable energy technologies, installers, available funding and local advisory services. Eight of the community groups we visited hope to start developing a project in 2011 with the help of SMALLEST.



## Launch of SEAM Centre

Inverness College UHI, Scotland

Inverness College recently launched the SEAM Centre (Sustainable Energy And Micro-renewables), a specialist training facility for micro-renewables which plans to deliver a range of training courses, activities and events. The centre is equipped with demonstration solar PV, a heat pump and biomass boiler installations, enabling the college to extend their training provision beyond the solar thermal installation course offered previously. With all the technology in one place, students, installers, professionals and members of the public are able to access a wide range of renewable energy systems and get a better understanding of how they might meet their requirements.

The SEAM Centre held the first new course, a three day solar PV course accredited by BPEC (British Plumbing Employers Council), in November 2010 and there is interest in future courses. The skills and materials being developed to deliver this training incorporates

knowledge from the SMALLEST project partners and will be shared around them to improve training in the project regions. The centre also plans to provide renewable energy awareness training to apprentices, which will allow them to take additional skills into their workplaces.

Most recently, the SEAM Centre has delivered renewable energy focussed workshops to interested homeowners. Flow charts have been used to help participants decide what technology might be best for them, and the SEAM Centre renewable energy dolls house has been used to examine the practicalities of possible energy solutions to different domestic scenarios. The materials for these workshops have been developed through the SMALLEST project and will lead to a workshop package of material being available throughout partner regions to be used by communities and advisory agencies.

## Pure Energy Centre advises on renewable energy

Pure Energy Centre,  
The Shetland Isles

Pure Energy Centre (PEC) has been engaging many communities and schools with SMALLEST in recent months.

Community groups were invited to the official launch of the £4.7 million Hydrogen Office which was opened by the First Minister for Scotland Alex Salmond MSP ([www.hydrogenoffice.com](http://www.hydrogenoffice.com)). This aimed to show the communities an operating system using wind and hydrogen technologies to power a building. The First Minister said: 'The Hydrogen Office is playing a leading role in the development of a range of carbon-cutting technologies – from the provision of clean energy for electricity, heat and transport to storing renewable power from other sources such as wind, as demonstrated at the site. [www.hydrogenoffice.com](http://www.hydrogenoffice.com)

SMALLEST has visited many RNLI (Royal National Lifeboat Institution) sites to assess the potential for renewable energy generation and has also been working in collaboration with Unst Partnership (UP) and a local Heritage Centre to help enhance the income from their existing renewable energy projects. In further community engagement, community members continue to come forward to learn about all renewable technology and Pure Energy Centre has both visited and hosted several schools in the Shetland Isles to teach about renewable energy.



## SMALLEST thriving community engagement

Municipality of Norsjö, Sweden

The Municipality of Norsjö has made great progress with SMALLEST in winter 2010. Work on a pilot central district heating network is currently underway and a study regarding the insulation and heating of a community building has recently been completed.

In September, the Municipality of Norsjö visited the region of Güssing in Austria to study the renewable energy developments which have transformed the area into a model of sustainable energy supply. As a result of the trip, a decision-makers seminar is being planned for spring 2011. Throughout



October and November, four community meetings were held to discuss information regarding Renewable Energy Solutions. Meetings were also held with energy advisors from two counties in northern Sweden who are interested in looking into future collaborations and pilot studies. In December, the Municipality of Norsjö met with a large mining company and local entrepreneurs to discuss a potential pilot with Renewable Energy Solutions for an industrial building. Current work includes planning for the Swedish partners meeting in March 2011.



## International recognition for Faroese Kindergarten

Fuglafjørður Municipality, Faroe Islands

The Faroes recently had cause for celebration as the Kindergarten in Miðvágur won a competition in the USA, sponsored by the ICF Building Magazine. The Kindergarten was the only winning participant outside of North America and was awarded the best 'Light Commercial Building'. This has brought focus to the developments in low energy buildings, especially the use of Insulated Concrete Forms.

The Kindergarten will have solar thermal heating in addition to other renewable energy technologies. SMALLEST is currently advising

the Kindergarten on renewable energy solutions to help develop the plans further. The project shows that low energy houses can be made architecturally interesting and will form a showcase on the Faroes. Due to Miðvágur's proximity to the Airport, the project also has the potential to be a visitors site of interest and contribute towards tourism developments in the area.

More information can be found at ICF Magazines website: [www.icfmag.com/builder\\_awards](http://www.icfmag.com/builder_awards).

## SMALLEST scopes the energy needs of East-Iceland

Development Centre of East Iceland, Iceland

In recent months, the Development Centre of East Iceland (DCEI) has focused on strengthening SMALLEST's relationship with the advisory service in Iceland. Many aspects of SMALLEST relate directly to the advisory service area of expertise and the advisory service has provided both the DCEI and the municipalities of East Iceland with valuable expertise in renewable energy. DCEI has also been engaging with municipalities and their leaders, resulting in growing enthusiasm and interest in SMALLEST.

In December 2010, the DCEI and the general manager of the Energy Agency in Iceland (EAI) visited all 8 municipalities in East-Iceland. They met with municipality representatives and visited municipality owned establishments, such as schools and community centers, in need of energy saving solutions. The trip was a positive experience and many new ideas were discussed which will hopefully develop into successful pilot projects that SMALLEST can monitor in the future. As follow up to this trip, a meeting will take place with municipality leaders to provide feedback from the findings, including suggestions for improvements and technical solutions, and advice on the next steps to be taken.



# SMALLEST Community Engagement

University of Ulster, Northern Ireland

Understanding how to get communities to engage in the opportunities and challenges of renewable energy is one of the major tasks facing the SMALLEST team.

The Ulster Business School team has been attempting to address community engagement through various activities. The team has been marketing the SMALLEST

project at various community events using different approaches at each event. In addition, the team has been conducting a series of in-depth case studies with local communities trying to understand their motivations for becoming involved in renewable energy.

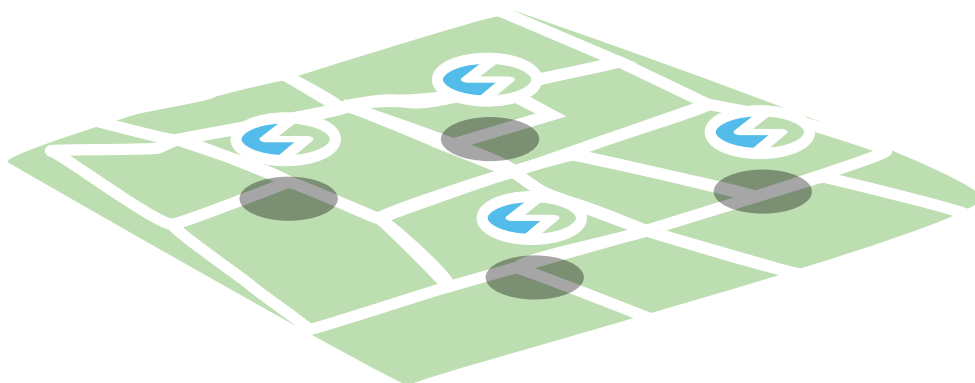
Whilst it is still too early to give definite results,

Dr Norry McBride explained that a key area appears to be that of knowledge transfer. Far too often it is assumed that communities are better informed about the technologies, funding sources and business cases than they actually are. Leader of the case study research, Dr Elaine Ramsey, highlighted that such findings are crucial to the development of the final SMALLEST service.

## Contact us

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The contact details of partners from other countries are listed below.



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### Associate Partners

Quequatta Municipality, Greenland

Runde Environmental Centre, Norway

Upper Eskdale Development Group, Scotland

Moffat CAN, Scotland

Association of Faroese Municipalities, Faroe Islands