



01 news from within the project

A Cap For Your Roof (BE)

Imog serves 230.000 inhabitants. Within this project they develop an initiative in which the inhabitants organize themselves to realize a group purchase for roof insulation material. The initiative is called 'A Cap on your Roof'.

Imog guides the process and thus supports people in buying insulation material. An external workgroup establishes the selection criteria (safety, health, ecology, price ...), it does a market research and proposes suppliers. Imog's objective is an economy of scale for the inhabitants.

Imog promotes the initiative in the energy newspaper, organizes three information workshops for inhabitants, invites the external workgroup members and also organizes practical workshops for the do-it-yourself people.

On the investment-night, the proposed suppliers explain their offer to the interested inhabitants.

Finally every citizen chooses himself whether or not he wants to buy with the proposed supplier or contractor on the basis of an individual quotation. Imog as facilitator ensures that the process is streamlined, but does not engage in the purchase.



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North Sea Sustainable Energy Planning at the GIS Academy in Oldenburg(DE)

Jürgen Knies and Hans-Peter Ratzke, both from Jade University, presented project results at the international GIS Academy in Oldenburg (January 2011) in front of participants from Belgium, the Netherlands, Scotland, Norway and Germany.

The GIS Academy was organized in line with the INTERREG IVB project "Smart Cities". Jürgen Knies presented the use of visibility

analysis as a tool for regional planning in the context of "repowering" (wind-turbine upgrading), which is an outcome of the project activity "Planning Processes by GIS Tools". He described GIS based tools to prepare resp. to accompany decision making processes for the implementation of wind farms using examples in Germany and in Scotland.



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Hans-Peter Ratzke presented the identified potential for the implementation of solar power plants based on aerial pictures in Grasberg (DE) and in Tynaarlo (NL). These studies are an example for the benefit of the project.

Both presentations showed practical applications of GIS systems to come to decisions in the case of regional / urban planning processes.

The presentations are available at <http://www.northseasep.eu/index.php?id=84>

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Heat and the City (UK)

Major new research project exploring barriers to developing new district heating networks in European cities

The Universities of Edinburgh and Strathclyde have been awarded funding by the Research Councils UK for a four year study of the opportunities and challenges facing cities developing new district heating networks. In-depth collaborative case-studies will contribute to a blueprint for establishment of heating and cooling networks in liberalized energy markets.

The "Heat and the City" project brings together academics from the social sciences, engineering and geosciences (including Stewart Russell and Dave Hawkey from the North Sea SEP project) to work with the Scottish Government, city councils, community groups, businesses and public bodies to identify and help solve the challenges of heating buildings more efficiently and securely, while reducing carbon emissions.

The project will draw lessons from experiences in European cities where district heating is more common, and from cities such as Aberdeen which have recently been successful in initiating new heat networks in the UK. Housing tenants connected to the district heating systems in Aberdeen benefit from combined electricity and heating bills of less than £400 per year.



HEAT and the CITY

For more information, please contact dave.hawkey@ed.ac.uk or visit www.heatandthecity.org.uk



...you can become a fan on facebook by clicking <http://www.facebook.com/pages/North-Sea-Sustainable-Energy-Planning/12000841395926!>





Elaboration of a new Energy balance for the county of Kronoberg (SE)

The Energy Agency of Southeast Sweden has created an energy balance for the county of Kronoberg. It will be used as a baseline paper, together with the Climate and Energy Strategy, for the up-coming work in the network Climate Commission of Kronoberg.

The energy balance is based on statistics from 2008. The use of energy quantitatively has not changed much over the last 20 years, but the share of Renewable Energy Sources has increased and therefore the emissions of CO₂ have decreased. The share of RES is now 54% (43% 1990). The CO₂-emissions is now 3.3 tons per inhabitant (4.0 tons 1990). The most important explanation for the

positive development is the decrease of the use of different types of oil for heating. Instead the use of biomass, most of all wood, has increased. The reason for this change is the extension of the district heating systems. The use of diesel has increased, but for petrol it is decreasing. According to the challenge with the transport sector, one of the other items in the action plan for the network is to arrange seminars and workshops on transports, on passenger traffic as well as on goods traffic.

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...you can follow North Sea - SEP on Twitter:

<http://twitter.com/northseasep>

North Sea-SEP Midterm Conference in Assen (NL)

The North Sea-SEP Midterm Conference will take place in the Netherlands hosted by the project partner Province of Drenthe.

On 14 April, the conference will be open to the interested public. Political representatives and external experts from the partner regions will give their views on the future prospects for energy planning. Topics will include economics, climate, and European, regional and local goals for innovation in sustainability and energy planning. There will also be ample opportunity for discussion and the exchange of knowledge and ideas.

For further information:

<http://www.northseasep.eu/index.php?id=88>

The conference is one of the Energy Days in Europe during the EU Sustainable Energy Week (EUSEW) 2011 from 11 to 15 April. For further information please have a look at www.eusew.eu





Activities in the Osterholz region (DE)

The "Energy u-turn Osterholz 2030" is stepping forward.

The fire station in Lilienthal produces electricity. A photovoltaic plant with 33 kwp has been installed and feeds the public grid. Another public roof is let for PV use, 20 kwp are the output of the kindergarten. Both projects produce enough electricity for 20 household.

Not implemented but in the planning process is the retrofitting of the hospital in Osterholz-Scharmbeck. The building with its flat roof is about 30 years old and the boiler more than 40 years with a loss of about 50%. The REON AG and John Becker engineers developed an energy concept, which served at the same

time as an application for the funding programme "Energy efficiency guideline for Lower Saxony".

The idea is to save 90% energy by using geothermal and solar thermal energy for heating.

Further information about these projects is available in the download section but only in German.

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North Sea SEP Think Tank Member Prof. Dr. Schneidewind appointed as member of the Club of Rome

The Club of Rome has been founded in 1968 and is an international non-profit organization with the goal to push a global sustainable development based on worldwide exchange of knowledge and experience.

Prof. Dr. Uwe Schneidewind, representative of the Jade Hochschule in the Think Tank of the North Sea Sustainable Energy Planning project, has been appointed as one of the members of the Club of Rome, who is limited to 100 selected personalities from economy, science and public.

It is a great honour for all project partners to have Dr. Schneidewind in the Think Tank and to benefit from his experience in modelling a sustainable future.



Prof. Dr. Schneidewind (Foto: A. Fischer)

For more information please follow the link:
www.clubofrome.org/eng/featured_new_members/



02 external research news

Abandoned mines can be used as geothermal energy source

Scientists have reviewed the potential for development of geothermal energy systems in old, unused mines.

The technology is proven in many sites and could therefore help increase the share of renewable energy sources in the energy mix, offering sustainability and job creation, which may make mining operations more appealing to investors, communities and policymakers.

Mines could be used post-closure for energy generation (heating and cooling) using the natural heat contained in the mine water. Geothermal energy systems could be implemented to extract this heat using heat pumps, from both closed and potentially working mines. This would offer local employment and energy resilience to the surrounding communities. Other uses of the energy may include melting snow on icy roads or supplying heat for fish farms and greenhouses.

The study shows examples of operational systems worldwide, including:

- a district heating system at Heerlen, Netherlands, with multiple heat pumps, built as part of regeneration scheme for an area devastated by the closure of coal mines;
- a Norwegian copper/zinc mine providing heat since 1998 to an underground cavern used for concerts and banquets;
- small coal mines heating a few tens of houses in Scotland, UK.

Source: Hall, A., Scott, J.A. & Shang, H. (2011) Geothermal energy recovery from underground mines. *Renewable and Sustainable Energy Reviews*. 15: 916-924.

Denmark Energy Strategy 2050 - from coal, oil and gas to green Energy

Recently the Danish Government presented its "Energy Strategy 2050", which describes how the country can achieve its independence from coal, oil and gas by 2050 and significantly reduce its greenhouse gas emissions.

The energy strategy contains a raft of initiatives that will reduce the energy industry's use of fossil fuels by 33% in 2020, compared with 2009. The reduction will put Denmark well on its way to complete independence of fossil fuels by 2050.

By 2020, construction of new offshore wind turbines at the Kriegers Flak wind farm, coastal wind turbines and land-based turbines will approximately double the wind power production in Denmark. Wind power alone is expected to cover more than 40% of overall electricity consumption by 2020, compared with about 20% today. By 2020 more than 60% of electricity consumption will be covered by renewable energy. The strategy aims to make establishing biogas plants more financially attractive by granting subsidies for biogas production, infrastructure and use in industrial processes. It would replace coal



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with biomass by allowing producers and consumers of district heat freedom of contract, in order to make it more advantageous for both sides to convert to biomass.

Additionally, strengthened energy efficiency efforts will reduce gross energy use by 6% in 2020, compared with 2006 levels.

Please have closer look at <http://www.kemin.dk/en-us/newsandpress/news/2011/sider/energystategy2050.aspx>

Energy Efficiency Plan 2011: Europe gears up for more savings with renovation and smart meters

Energy efficiency is one of the most cost effective ways to enhance security of energy supply, and to reduce emissions of greenhouse gases and other pollutants. Therefore energy efficiency is at the heart of the EU's Europe 2020 Strategy for smart, sustainable and inclusive growth and of the transition to a resource efficient economy. New opportunities for energy agencies, local and regional authorities and energy actors from across Europe have been created by the European Commission through the adoption of a plan for saving more energy through concrete measures.

The measures proposed in this Plan – which was adopted on 8 March 2011 – aim to create substantial benefits for households, businesses and public authorities.

They should transform our daily lives and generate financial savings of up to 1000 per household every year. They are designed to improve the EU's industrial competitiveness, and have the potential to create up to 2 million jobs.

The Energy Efficiency Plan proposes several new actions which can be seen:

www.managenergy.net/newsletter_2011_03.html#7

http://ec.europa.eu/energy/intelligent/library/newsreview_en.htm

03 Imprint

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European Union



The European Regional Development Fund