SUSTAINABLE ENERGY IRELAND
Renewable Energy Information Office

ENERGY UPDATE
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Minister Calls Time on AER - Now is the time for change

Dermot Ahern Minister for Communications Marine and Natural Resources has released details of his eagerly awaited consultation document on ' The Options for Future Renewable Energy Policy, Targets and Programmes' that lists a range of green energy penetration targets for the electricity market.

The process will shape and develop future renewable energy policy and strategy in Ireland in the coming years and follows the Minister's commitment to change.

When the Minister launched AER VI he used the competition to introduce some new elements to increase the certainty of new projects being built, adding that he "was confident that AER VI would deliver the Government's 2005 target and that AER VI would close the current chapter of support and that he then plans to set new targets for the coming decade in consultation with the industry."

The first step in the master plan is a preliminary review of the current programme and the environment in which renewable electricity operates. Announcing his plans the Minister highlighted the amount of change in less than a decade including:-

- a timetable for full liberalisation of the electricity market is in place;
- the Commission for Electricity Regulation was established and expanded into the Commission for Energy Regulation;
- Sustainable Energy Ireland has been established;
- there is greater experience of alternative support mechanisms for renewable energy;
- there is a proposed decision on trading arrangements in the open market;
- the additional costs of supporting green electricity under the AER programme are now passed transparently to final customers.

Paul Kellett (REIO) speaking with Minister for Communications Marine and Natural Resources Dermot Ahern.

The Minister said:" The next chapter of support must incorporate these changes and more besides. The consultation process is open to all, however, I particularly encourage industry representatives, potential investors and consumer representatives, to adopt a proactive stance by availing of this opportunity to help shape future policy and set challenging yet realistic targets for the long term development of the renewable energy industry and policy in Ireland.

My priority is to maintain momentum in the market segment generating electricity from renewable energy technologies."

The consultation document concentrates on a number of essential issues and takes a closer look at the key areas for the future including:

- policy goals;
- future targets;
- future support mechanisms;
- overcoming barriers to renewable energy deployment;
- administrative issues raised in the RES-E Directive.

"Bringing these essential issues into sharp focus, keeping in mind the need to seek least cost measures, will ensure the momentum is maintained " the Minister added.

"The priorities discussed are targets and support mechanisms. However, there is an overarching legitimate concern about the cost impact of any such proposals on electricity consumers. Ultimately the

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consumer is the most important party in this process, so I encourage developers in particular, therefore, to justify targets and support mechanisms proposed rather than make recommendations simply to generate the best possible business case irrespective of total final cost to consumers.
Finally I must record my appreciation for the work done by Sustainable Energy Ireland in bringing forward this document. Much of the work researching international and alternative support mechanisms was provided by SEI. This data is included to inform and stimulate debate, but is not indicative of any particular support mechanism which may ultimately be adopted." Added Minister Dermot Ahern.

A full copy of the consultation document is available on the Departments website: www.dcmnr.gov.ie

All responses are requested by Friday 27 February 2004 and comments should be returned by post to ' The Sustainable Energy Division, Department of Communications, Marine & Natural Resources, Leeson Lane, Dublin 2, Ireland' and clearly marked Consultation Responses. Alternatively email renewables.consultation@dcmnr.gov.ie

New Guidelines for Wind Farm Development

by Declan Burke - The Department of the Environment, Heritage & Local Government

The Department of the Environment, Heritage and Local Government (DoEHLG) originally issued guidelines for Planning Authorities on Wind Farm Development in September 1996.

During 2003 it was decided to review the 1996 guidelines. The purpose of the review was to update the 1996 guidelines to reflect current Government policy in relation to renewable energy generally and in particular wind energy. It was perceived that the planning system was a block on the development of Ireland's wind energy and the DoEHLG took the initiative in reviewing the guidelines to ensure that the potential of wind energy was developed in a sustainable manner.

The guidelines will provide a framework to guide both local authorities in preparing development plans and assessing applications for planning permission and developers in formulating development proposals. These guidelines are intended to ensure a consistency of approach throughout the country in the identification of suitable locations for wind farm development and the treatment of planning applications for wind farm developments.

The 1996 guidelines were seen as being dated and having limited relevance to the Planning Authorities and the wind energy industry due to the changes in technology and public perception of wind turbines. It is intended that the updated guidelines will be a positive step towards the development of wind energy and will provide a tool to Planning Authorities to assist in the processing of development applications for wind energy projects.

The development and increased penetration of renewable energy sources is a priority, nationally and at European level, for both environmental and energy policy grounds. The National Development Plan 2000-2006 provides support under the Economic and Social Infrastructure Operational Programme, for the promotion of alternative energy. In this regard, expansion in the use of renewable energy and promotion of the development of technologies, that contribute to meeting our international climate change obligations, is a prime objective.

It is vitally important that all planning authority's development plans incorporate a statement of the authority's policies and objectives in relation to wind energy related development as well as matters it will take into account in assessing planning applications for specific wind energy development proposals. The development plan must achieve a reasonable balance between responding to overall Government Policy on renewable energy, sustainable and spatial development as well as climate change and enabling the wind energy resources of the planning authority's area to be harnessed in a sustainable manner. The guidelines will assist Planning Authorities in achieving this aim.

CER Call a Sudden Halt on Wind Farm Grid Connections

Following major concerns by ESB National Grid (ESBNG) about the "security and stability of the power system," the Commission of Energy Regulation (CER) has taken unprecedented emergency measures to halt, with immediate effect the amount of wind power on the electricity grid.

ESBNG proposes limiting new wind connections and is seeking CER approval for this under Section 34(4)(a) of the Electricity Regulation Act 1999. ESBNG expressed serious concerns at the proposed scale of wind farm connections to the transmission and distribution systems highlighting the threat this poses to the reliability of power supplies.

According to the ESBNG the intermittent nature of wind power is creating some difficulties and a consultation document has been passed to the CER and the Government by ESBNG.

The ESBNG document says: "Up to quite recently, wind-generated electricity constituted a very small proportion of the total electricity generation in Ireland. Because of this, it was not necessary to impose strict technical performance standards on such plants. However, the grid says this is no longer the case and concerns have increased.

While these issues could be ignored with low levels of wind generation on the system, now that definitive plans are in place to significantly and rapidly increase the proportion of wind generation on the system, a number of complex technical issues relating to wind generation must be resolved."

The amount of wind generation currently connected to the system or holding signed connection agreements has reached over 700 MW exceeding the Government's 2005 Green Paper target of an additional 500 MW's.

ESBNG argue that the risks to system reliability are such that they warrant the Transmission System Operator and Distribution System Operator ceasing immediately issuing offers on wind connections. In light of the statutory duties of both ESBNG and CER regarding the continuity and security of supplies of electricity and the urgency of the issues raised by ESBNG, the Commission has agreed to this proposal on an exceptional and short-term basis.

More proposals are put forward by ESBNG, which would further impact on wind connections from January 2004 and could have serious implications for intending wind generators. In light of this and the CER's duty to support and promote renewable forms of energy, the CER is anxious to consult with the renewable industry and stakeholders on the ESBNG's submissions prior to making any decisions.

The relevant documents can viewed in the CER's website (http://www.cer.ie)

Arklow - Home to Ireland's First Offshore Wind Farm

Visitors to Arklow may notice something different on the horizon since erection of Ireland's first offshore wind farm was completed last October.

Located some 10 km off the Arklow coast, construction work commenced in August 2003 on the Arklow Offshore project - the world's first commercial application of offshore wind turbines over 3 MW in size. The project's seven GE Wind 3.6 MW wind turbines are currently being commissioned, and have already started producing electricity during their commissioning.

Submarine cables connect the wind farm to the shore; from the shore, grid connection to the Arklow national grid substation is via underground cables. Each turbine is supported by a steel monopile foundation that is driven into the seabed (using the same process found in bridge building) by a hydraulic hammer. The monopile and associated transition piece provide cable access to the tower from the seabed as well as boat access for maintenance workers. Once the foundations were established, the two tower sections of each turbine were then added and bolted into place. Each nacelle, which holds the main working components was then lifted to the top of each structure.

Finally, each rotor assembly was lifted from its horizontal shipping position to the vertical fixing position, and attached to the nacelle. All major components were staged and assembled at Rosslare Harbour and transported to the project site, approximately 50 miles (80 kilometres) away. Made of tubular steel each turbine weighs about 290 tonnes and stands at a height of 124 meters above water level to the blade tip. The rotor diameter of the blades is some 104 meters (about the same length as a football pitch). Despite their size, each turbine utilizes a footprint of just five meters in diameter and the turbines are spaced some 600 metres apart.

The 25 MW Arklow Bank project has been co-developed by Airtricity and GE Wind, and this first phase of the project will be owned and operated by GE Wind. Under the terms of the agreement Airtricity hold an option to purchase the project after the certification, testing and demonstration is complete. The 25 MW Arklow offshore project is expected to be the first phase of a much larger 520 MW offshore development proposed by Airtricity, which when complete will be the world's largest offshore wind farm.

Commenting on the project Airtricity CEO Eddie O'Connor said, "This is a landmark demonstration project for Airtricity, GE Wind Energy and Ireland in general. We are pleased to be working with GE Wind Energy to facilitate the commercial installation of some of the world's most advanced and powerful wind turbines at the Arklow Bank. This first phase of the project is expected to produce enough clean wind energy to serve the annual needs of about 16,000 average Irish households."

Green light for Tax Relief

Minister for Communications, Marine and Natural Resources Dermot Ahern has welcomed Minister for Finance Charlie McCreevy's decision in the recent budget to extend the tax benefits for investments in renewable energy projects until the 31st December, 2006.

Minister Ahern said the decision to extend the Business Expansion Scheme (BES) Tax Relief for renewable energy projects would help in delivering additional green energy power under the Government Alternative Energy Requirements (AER) programme.

BES relief was due to expire at the end of December 2003. The Minister added: "The BES relief, currently available to renewable energy projects, involves an upper investment limit of about €750,000 which limits its use to small scale project developers. This limit is to be raised to €1 million."

A number of small scale projects which have been offered AER contracts are relying on BES type funding to build their projects and had the BES scheme been terminated as planned at the end of the year, it could have affected the funding of these projects.

There are currently 37 successful small scale projects in various categories of technology (i.e. small scale wind, small scale hydro and various biomass applications) in the AER VI competition. This number could increase if state aids clearance is received from the EU Commission for a further 140 MW of wind energy.

For further information see: www.dcmnr.gov.ie

New Tools for the Wind Industry

Sustainable Energy Ireland's (SEI) Chief Executive Mr David Taylor recently announced details of two new initiatives to support the future development of wind energy in Ireland. He announced the results of Ireland's first-ever independent research study into public attitudes towards the development of wind energy in Ireland, and also unveiled details of a major new Wind Atlas of Ireland.

The research study was commissioned by SEI and carried out by Dublin based Lansdowne Market Research. MosArt were commissioned to advise on and develop the landscape related section of the national study. The study shows that the overall attitude to wind farms in Ireland is almost entirely positive, and that wind farms are seen in a positive light compared to other utility-type structures that could possibly be built in the landscape.

Highlights of the study included:

- Half of Irish adults are aware of the term "renewable energy", with wind energy easily the best-known type of renewable energy. However, although renewable energy sources, including wind energy are well known, awareness of their contribution to the total fuel supply in Ireland remains low.
- Support for renewable energy is higher in areas where wind farms are planned or operational.
- Significantly, those with direct experience of wind farms in their locality do not, in general, consider that they have had any adverse impact on the scenic beauty and wildlife of the area, or on tourism.
- Over 60 percent of those living in close proximity to existing wind farms would favour either an additional wind farm in the area or an addition to the existing one.
- Very few residents (less than 3%) formally objected to existing wind farms at the time that planning was being sought.
- While some developers do consult with the local community, there is room for improvement in genuine consultation with those most affected.

David Taylor (SEI Chief Executive) with Lara Liversage at SEI's recent wind conference.

The second SEI initiative, the Wind Atlas highlights the wind energy potential in terms of wind speed and power for each county in the Republic of Ireland, both for onshore and offshore areas. The Atlas will provide a basis for informed decision making in relation to the efficient development of wind farms in Ireland. SEI will update the atlas on an ongoing basis to take advantage of refinements in resource assessment tools and the increasing amount of wind measurement data that is being collected. SEI also intends to provide similar tools for other primary renewable energy sources.

Speaking at the launch David Taylor, said: "At present the Irish wind industry is in its infancy. One of the key objectives of SEI is to promote and assist the development of renewable energy. In working towards this objective we have produced the Wind Atlas and Attitudes to Wind Farms study. These tools should greatly assist local authority planners and developers in identifying effective wind sites and developing them in harmony with the local community. I am encouraged by the findings of the study which indicates that the Irish public are open to new methods of energy production, particularly wind energy. It is our vision that sustainable energy practices will become mainstream in our everyday lives."

Copies of the research study are available from SEI's Renewable Energy Information Office. Telephone 023 42193 or email renewables@reio.ie .
A downloadable version is available via SEI's website: www.sei.ie.

For information on the wind atlas please contact REIO's Wind Engineer Mark O'Donnell. Telephone 023 42193, email wind@reio.ie or log on to www.sei.ie/windmaps

Energising the Classroom – Learning in Energy Efficient Schools

The Department of Education and Science (DES) has recently designed and constructed two low energy schools, one in County Offaly, the other in County Laois and they plan to use the schools to research the performance of the latest construction techniques and systems.

To find out more about this innovative initiative Energy Update spoke with DES's Senior Project Engineer and Energy Project Manager John Dolan who advised:
" We are committed to developing low energy educational buildings and the lessons learned from the construction and monitoring of these two buildings will assist us in reducing the energy usage of future school designs."

The objectives for the completed schools were to provide quality educational facilities appropriate to their users' requirements. The project encompasses low energy design, and the buildings will provide us with information on the schools and their systems' operation. We also created the schools as life learning tools, in that they are active learning resources for energy conservation and sustainability for the pupils and teachers.

Energy Update took a closer look at the Gaelscoil An Eiscir Riada in Tullamore, Co. Offaly

The brief was to provide an eight-classroom primary school that uses considerably less energy in its operation than a traditional school, and shows an appreciation of sustainability in its construction.

"One of the key aims was to develop a low maintenance building that takes due account in the selection of sustainable materials and provides detailed monitoring opportunities. The building was designed to use 20% less energy compared to a similar school built to current good practice standards and to generate zero carbon dioxide in the operation of its services.

When designing low energy buildings, the first consideration is to ensure improved thermal insulation levels. However, there are other factors that effect energy usage significantly. Heat loss due to unwanted air leakage from a building is a major source of energy loss, for example when unoccupied overnight. In addition to heating the school during winter, water-heating and lighting are significant energy users " added John.

To reduce the energy loss, the thermal insulation levels specified were double those required by the Building Regulations.

Infiltration – is unwanted ventilation that causes heat loss from a building especially at night when outside temperatures are low. For this project the building fabric has been designed to reduce infiltration levels to 20% of those usually experienced and the building's air tightness was tested by forcing air into the school under pressure and measuring the leakage. Leakage routes were also tracked using smoke tests.

While consideration of energy use during the school's operation was vital, some consideration was also given, both to the energy used during the building's construction and to selecting sustainable materials.

The building plan used 'Passive Solar Architecture' principles to ensure maximum solar gains and to take advantage of the early morning sun to pre-heat the building.

With natural daylight in all the classrooms, it is possible that artificial lighting should not be required for at least 80% of the year during daylight hours. Also, advanced lighting controls have been installed to ensure that lights will not be left on when they are not required. Sun pipes - visually similar to a light fitting when viewed from inside the building - are used to good effect within corridor spaces to maximize daylight transmission while minimizing heat loss.

A rainwater-holding tank has been installed below the ground and gathers water from the roof of the building and

the adjacent ball court. This water is pumped into a tank within the buildings roof space and is used for the flushing of toilets. It is estimated that all of the rain falling on the building roof will be used, saving a large quantity of sanitary water that would otherwise have to be treated and pumped by the local authorities. The straining and pumping of water is an energy consuming process.

Now complete and in use, the school has installed an advanced monitoring system that will provide information vital in understanding the buildings energy performance and assist the occupants in adjusting the controls to ensure minimum energy wastage.

The project incorporates a touch screen display positioned near the schools entrance and provides the children and visitors to the building with energy and environmental information relating to the building. A cartoon character has been developed and is used on screen to encourage the children to learn about the building construction and its day-to-day energy use. The touch screen system is also connected to the ICT system and can provide live information from the energy monitoring system to any computer in the school for classroom based project work.

It is envisaged that the building will consume considerably less energy than a typical school and the energy saved will pay for all of the additional energy saving measures well within the life of the building.

Footnote: Sustainable Energy Ireland provided part funding for the buildings' additional energy saving features and the costs of monitoring the buildings.

Solar City Göteborg 2050

When it comes to energy planning, the City of Göteborg, Sweden and its surrounding regions is a shining example in Europe. With partners from universities, national departments for energy and research, as well as the local energy utility, the Göteborg region is engaged into a groundbreaking process aiming to speed up its development towards sustainability. By using visions and images of the future, the project partners developed long-term strategies for the supply and use of energy in the region.

The Solar City Göteborg 2050 vision has been established on the basis of a participative approach and a methodology called "backcasting". On the one hand, the current situation and trends in the energy sector were assessed. On the other hand, criteria for a sustainable energy society were defined and images of the future were developed. Strategic planning is then undertaken by comparing visions and the current status, leading to action plans to accelerate the process of change.
During the coming decades, the Göteborg city and its regions will be actively working to develop a sustainable energy system. The threat of climate change due to fossil fuel consumption will be challenged with progressive strategic planning, active decision-making and strong action.

The sustainable energy system envisaged include the following elements:

- Focus on the smart and efficient use of energy in order to halve the current energy use per capita. The large-scale and rapid deployment of the best technology available today will decrease the energy needed for heating, services, transportation and production;
- Shift to a 100% renewable energy supply by 2050, using biomass, wind, hydropower, marine currents as well as solar electricity and heat;
- Energy efficient urban planning concentrating urban development on nodes, will allow the creation of lively neighbourhoods and good public transportation. With work, services and leisure closer to home, citizens can reach them by foot or bicycle;
- Hydrogen will play a crucial role for energy storage in an energy supply system relying on solar and wind electricity. Hydrogen and fuel cells will be used to store and release electrical energy at all levels, from large centralised plants to smaller plants in neighbourhoods and homes. Mopeds, cars, buses and trucks will also use fuel cells.

A change in life-styles and shifts in values will underpin this process towards lower energy use. Energy will become an important decision criterion when buying food and other commodities. Personal car ownership will be a thing of the past with people joining car pools, gaining in freedom and flexibility. Overall, the people of Göteborg will leave behind their status of mere consumers to become responsible citizens living in a sustainable society.

For further information on Solar City Goteborg 2050, you can visit the website www.goteborg2050.nu (leaflet available in English). You can also contact Hans Eek, project co-ordinator at Goteborg Energy AB, by phone: +46 31 626950.

Solar Thermal - a Key Element for Sustainable Heating and Cooling

by Ole Pilgaard, ESTIF President

Approximately 40% of the energy consumed in the European Union is used to produce heat: mainly for space heating, domestic hot water and industrial process heat. Most of this energy stems from non-renewable fossil fuels or from nuclear power. Solar thermal energy has the potential to substitute significant amounts of these unsustainable energy sources.

Solar thermal offers a lot of benefits to society and the consumer for example:

- it offers CO_2 savings at a low cost;
- it helps curbing urban air pollution;
- it reduces the dependence on imported fuels;
- it creates local jobs and development;
- it substantially reduces the conventional heating bill of households;
- it increases the predictability of the heating costs;
- it is a highly reliable technology;
- it allows households to directly contribute to a sustainable energy supply.

Solar thermal is a mature technology that is able to supply clean energy for much more than domestic hot water. For example, in Austria, most of the systems installed today are so called combi-systems, which provide domestic hot water and assist conventional space heating. Across Scandinavia we see large-scale solar thermal systems, with up to several thousand square meters of collectors, which feed heat into district heating systems.

One of the most promising applications for the future is solar assisted cooling. Cooling machines using heat as the main fuel are already widely used. Using solar thermal energy to drive these cooling machines is a perfect match as the need for cooling is usually the highest in summer – parallel to the highest availability of solar irradiation. An increasing number of hotels in summer vacation resorts are therefore using solar assisted cooling. In the future we expect to see standard systems sized to fit the needs of smaller residential buildings, too.

In our recent study "Sun in Action II – a Solar Thermal Strategy for Europe" ESTIF has shown that the technical-economical potential of solar thermal in the EU of 15 Member States is in the area of 90 Mtoe (million tons of oil equivalent) – an amount of energy that is equivalent to six times Ireland's total primary energy consumption. Concerted actions are needed from the industry, political decision-makers, R&D institutes and the associations to fully realise the potential of solar thermal in Europe.
See: www.estif.org

THERMOMAX Receives First Solar Keymark For Solar Collector

Thermomax is the first company to receive the Solar Keymark, which is an EU-wide system of quality certification for solar thermal collectors and systems.

Based in Northern Ireland, Thermomax received the award for its new evacuated tube collector Solarmax 20/30-TDS300. The Keymark shows that a product complies with relevant EN standards and was developed by the European Solar Thermal Industry Federation (ESTIF), with the support of the European Commission.

Kathy McVeigh, Commercial Manager at Thermomax, said that she expects "important benefits for our global marketing activities. We will have Keymark on more products, as it indicates the quality, reliability and effectiveness of our range of products."
The introduction of the Keymark is an important avenue for the development of a large European solar market. ESTIF invites all involved actors to consider the opportunities offered by the Solar Keymark. Many benefits of Keymark are that manufacturers can gain easier and cheaper access to the markets of different European countries; certification bodies can get access to this new certification market; testing institutes can get accredited and start collaboration with the empowered certification bodies; and distributors, installers and end users can easily recognize the products complying with EN standards.

Thermomax's Award-winning evacuated tubes on a new timberframe house in Ireland

First Pellet Boiler Boost For Biomass In Ireland

Laois Sawmills, a local sawmill in Portlaoise became the first company in Ireland to install an environmentally friendly wood pellet fired boiler. The boiler will be used to heat the company's new office building.

Clean and highly efficient wood pellet boilers are fully automated just like oil and gas boilers and offer many advantages in terms of saving money and protecting the environment. Ireland has the potential to develop an indigenous fuel supply from forestry and wood industry waste for domestic, industrial and export markets. Wood fuel, and in particular wood pellets, are highly efficient sources of clean, renewable energy. Pellets made from compressed sawdust are already available in the Irish market place. Pellets are an ideal way for Ireland to use the waste from its growing 'mountain of wood' and wood is set to play a vital role in diversifying Ireland's future energy mix.

Laois Sawmills' Managing Director, Mr. Jim McNamara, said: "The old offices were heated with an oil boiler but for the six new offices we opted for wood pellets because they are a highly efficient, clean fuel from a renewable source. The fuel is delivered and stored on site, and we don't even have to handle the pellets because the boiler is fed by the automated hopper feeder system."

The 15kW pellet boiler was manufactured in Austria by the KWB group and installed by Austrian consultancy CONNESS who represent KWB in Ireland and the UK.

Jim McNamara added: "Wood in the form of pellets has many advantages in that it is more compact, clean, easy to store and has a very high energy content. At the moment an independent supplier, Galtee Fuels, supplies our pellets. However, given the huge market potential here for convenient, refined fuels such as pellets we are currently examining the feasibility of an on-site wood pellet production facility."

See: www.conness.at

Jim McNamara next to his KWB Boiler

Bioheat - A European Effort To Stimulate The Use Of Biomass For Heating Large Buildings

Major technological breakthroughs in the last decade have made the use of wood fuels as pellets (small compressed pieces of sawdust) or woodchips a viable option for supplying renewable energy for heating. State of the art automatic wood boilers can supply heat at the same degree of comfort and reliability as oil or gas heating systems. They cause very low emissions and do not contribute to the greenhouse effect. Wood that could be used as fuel is available throughout Europe in abundance.

For this reason BIOHEAT II which is being funded within the European Commission's Altener Programme and with an indicative budget of 1.8 million euro commenced in January 2003 and will run until the end of 2004.

Ten countries including Ireland are participating in the BIOHEAT II project. Bioheat is dedicated to stimulate the use of modern automatic wood boilers for heating large buildings such as schools, town halls, hospitals, retirement homes or residential blocks.

Why large buildings? The use of wood fuels is particularly economic in this sector. Modern wood boilers are more expensive than oil or gas boilers but wood fuels are significantly cheaper. If heat demand is relatively high – as in large buildings – heating with wood fuels can be considerably cheaper than heating with oil in most European countries.

If it is cheaper – why is it not more commonly used? The use of biomass for heating today is in the same situation as wind energy 10 years ago. Efficient technology is available and used in a few selected countries but is still not commonly known and accepted as a viable option. Thus BIOHEAT makes a major effort to disseminate knowledge about the option of using wood fuels to relevant target groups such as hotels, local government buildings, leisure centres, housing associations, consultants and architects.

Besides disseminating basic information BIOHEAT II will aim at involving regional energy agencies and train them to develop wood heating projects. It will implement measures to ensure that projects are of high quality as mistakes are frequent when new technologies are introduced to the market.

This will include an international training course to be held in Austria during February 2004 and detailed technical manuals explaining how to appropriately heat large buildings with wood fuels.

For further information on Bioheat II including details on the training course contact Ann Mc Carthy on the Bioheat Hotline (023) 29171. See: www.bioheat.info

Report Highlights Ireland's Rising Emissions Challenge

The Kyoto Protocol requires the European Union to reduce its emissions of greenhouse gases to 8% lower than 1990 levels by 2008-2012. The EU shared this burden amongst its member states and Ireland, because of its strong economic growth was allowed a 13% increase above 1990 levels.

However, the latest report from the European Environment Agency (EEA) indicates that EU countries are now further away from meeting their Kyoto Protocol targets than they were last year. The latest projections show that between 2000 and 2001 the 15 member nations emitted over 4% more greenhouse gases than the previous year.

With regard to Ireland, the report shows that by the deadline Ireland's carbon emissions is heading for 39.8% – three times over the agreed limit.

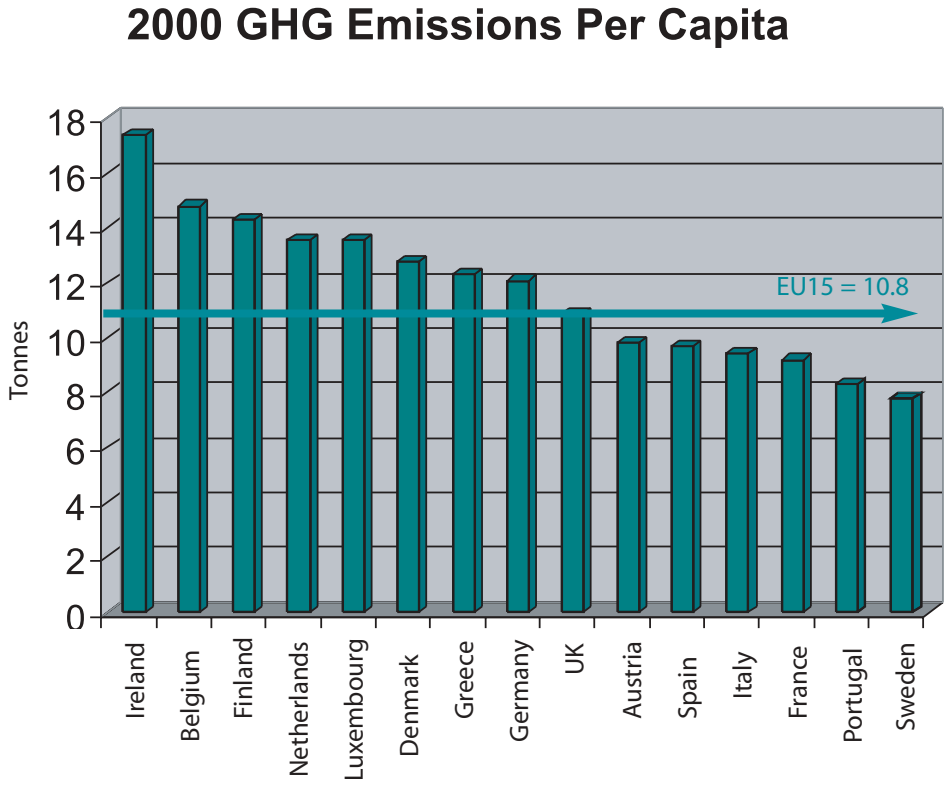
Whilst only Spain and Portugal perform worse than Ireland, the position for the rest of the EU is not much better. The EEA reports that the latest projections show that existing domestic policies and measures – the concrete initiatives already being implemented at EU or national level will reduce its emissions to only 0.5% below 1990 levels in 2010 - that is significantly less than the 8% target.

The transport sector, responsible for just over one-fifth of the EU's greenhouse gases, poses the biggest challenge to the Kyoto targets, largely because of fast growing emissions from road transport.

The new predictions run contrary to a report issued earlier this year, which said the EU had so far reduced emissions to 2.3% below 1990 levels - based on available data up to 2001. The EEA's latest findings take into account existing domestic policies and measures which are already implemented at EU or national level, and comes up with a figure expected for 2010, almost 2% below the reductions achieved in 2001.
The 0.5% reduction is based on the premise that the UK and Sweden will continue to surpass their individual domestic targets as they have been doing in recent years. So far they are the only two countries on track to meet, and exceed, their Kyoto commitments. If they do not continue to produce these 'surpluses' of excess reductions, which can assist the 'deficits' of other member states under the EU burden-sharing arrangement, the EU could reduce levels to just 0.2% below the base year level.

European Environment Commissioner Margot Walstrom said: "This is serious. Time is running out. Measures that the EU and Member States have not put in place over the next two or three years will not help us to achieve our Kyoto targets. I have written to Member States to alert them to that fact."

"I propose that Member States and the EU identify in the course of next year the additional measures that are needed to meet our Kyoto targets. From the European Climate Change Programme we know that Kyoto can be implemented within existing technologies, providing we want to use them," she said.
See: www.eea.eu.int



SEI Funding Programme Starts To Deliver

Sustainable Energy Ireland's Renewable Energy Energy Research Development and Demonstration programme (RERD& D) was launched in July 2002 with an indicative budget of €16.25 million. The overall aim of the programme is to stimulate the deployment of new renewable technologies and to assess and develop technologies which have prospects for the future.

Projects supported by the programme are selected based on their innovative aspect and their potential impact on deployment levels of renewable energy. To date, a highly encouraging total of 42 projects have been approved for support funding. The total funding committed to these projects is over €5 million.

The breakdown of funding for the different renewable categories is as follows:

- Biomass € 2.8 million
- Wind € 1.3 million
- Others € 1.0 million

(including Solar, Heat Pumps, Hydro)

Programme Highlights
Below is a sample of the projects approved for funding under the RE RD&D programme.

Biomass
Grainger Sawmills and SWS Group are to form a joint venture called Independent Biomass Systems (IBS) to construct and operate Ireland's first wood fired CHP power plant. The plant will be sited at Grainger Sawmills, Enniskeane, Co.Cork and will provide 1.8MW of electricity and 3.5MW of heat. The heat will be supplied to the sawmill's kilns and the electricity will be sold via an AER 6 power purchase agreement. The RE RD&D programme has awarded a grant of €732,000 to support the development of this project. *(See photo below.)*

Wind
University College Cork in collaboration with ESB National Grid are developing a new wind power prediction system which provides more accurate wind energy forecasts. Improved forecasting has the potential to reduce the amount of spinning reserve required on the electricity system and will extend the utilisation of wind energy.
SEI is funding a project to assess the impact of wind turbines on Monopulse Secondary Surveillance Radar (MSSR) at three locations in Ireland: Co. Mayo, Co. Cork and Co. Clare. The UK research company Qinetiq will perform the assessment.

Solar & Ground Source Heat Pumps
Arsenal Research (Austria) and the Danish Energy Agency are to assist with the development of training programmes and methods of stimulating the market here for ground source heat pumps and solar energy systems respectively. Relevant national contractors and suppliers are participating in both schemes.

The RERD&D programme has also supported three Irish manufacturers of ground source heat pumps with their product R&D activities. This support will help to develop Irish products for the heat pump market.

Geothermal
SEI are also funding the development of a Geothermal Map of Ireland which will show areas of geothermal heat to depths of 500m below ground level. This study will quantify the potential for Geothermal Energy in Ireland and will identify areas with good development potential.
For more details on the programme, please visit www.sei.ie and view the Funded Programmes section.

Minister for Agriculture Joe Walsh laying the foundation stone at Graingers Sawmill. L - R: Kieran Calnan (CEO SWS Group), Bill Grainger (Grainger's Sawmills), Minister Joe Walsh, Majella Kelleher (SEI) and Donal Lehane (Chairman SWS Group)

REIO Resources

New Tools for Planners, Policy Makers and Developers

Attitudes Towards The Development of Wind Farms in Ireland

Sustainable Energy Ireland have recently completed an innovative series of surveys to identify what the Irish public's attitude to wind farms is and how future energy policy as well as planning and design guidance might be directed. Results of the surveys are presented in detail in SEI's publication entitled Attitudes Towards The Development of Wind Farms in Ireland (2003), now available from the Renewable Energy Information Office. It reveals that Irish people are generally positively disposed to the introduction of wind farms but that some concerns do exist which decision makers and developers alike must take into account when considering future projects. The survey provides realistic insights for planners, policy makers and developers to assist in the planning and deployment of future wind energy projects.

REIO's Solar CD

REIO has recently published its Solar Energy CD-Rom. This CD-Rom compiles a "Best Of" selection of presentations and other information material (papers, leaflets, etc.) emerging from REIO's activities in the field of solar energy over the last three years.

The Solar CD will be an invaluable source of knowledge for professionals, decision-makers and students on:

- solar technologies and their application in Ireland and Europe;
- policies, regulations and other measures supporting the development of solar energy;
- tools for the implementation of solar energy in buildings projects.

To order your free copies of REIO's Solar CD and/or The Attitudes Towards the Development of Wind Farms in Ireland, please send an email to renewables@reio.ie or fax to 023 29154 with all your contact details.

Recommended Events for 2004 (January – June)

19-21 January
European Conference for Renewable Energy – Intelligent Policy Options
Berlin, Germany.
For further information and copies of proceedings see www.managenergy.net

22-27 February
The Development & Operation of Medium Scale Biomass Heating Projects
(EU Sponsored event) Pichl Forestry School in Mitterdorf, Austria.
See: www.bioheat.info or call Ann McCarthy 023 29171

4 March
Environmentally Friendly Integrated Buildings, Dublin. www.iei.ie

13-17 March
The Spring Homes & Garden Exhibition. The RDS, Dublin.
www.expo-events.com

21-22 April
Irish Wind Energy Association's Annual Conference, Sligo. www.iwea.com

22 April
The National Planning Conference,
For further information: www.ipi.ie

2-4 June
World Bioenergy 2004 - Conference & Exhibition on Biomass for Energy
Jönköping/Sweden.
For further information:
http://www.elmia.se/worldbioenergy

20 – 23 June
EuroSun 2004 - Freiburg, Germany
The 5th ISES Europe Solar Conference and co-ordinated with Intersolar 2004.
For further information: www.ises.org, www.pse.de , www.dgs-solar.de

The 2004 Energy Show 12 – 13 May 2004, The RDS, Dublin

Organised by SEI, the Energy Show is the perfect forum for suppliers and customers of more sustainable energy technologies and services to meet, share views, transact business and make a Low Carbon Economy part of business as usual. The combination of exhibition and workshops covering all aspects of energy efficiency and renewable energy makes it an essential showcase event. For further information and a booking form go to: www.sei.ie

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