

**Composite Brief – Energy Sector
Subheads D1 – D5**

**Shaded Areas Contain Confidential Information – Not
For Public Release**

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2007 Outturn & 2008 Estimate

SUBHEAD	2007 Outturn €000	2008 Estimate €000
D1 – Energy Conservation	54,200	70,570
D2 – Gas Services	41	36
D3 – Energy RTDDI	479	13,159
D4 – Energy Efficiency Initiatives	4,957	2,500
D5 – Strategic Energy Infrastructure	-	1

SEI & ENERGY RESEARCH BREAKDOWN

Scheme	2007 Outturn	2008 Allocation
	€m	€m
Home Energy Rating/EPBD	1.000	2.000
House of Tomorrow	8.000	12.000
Low Income housing	2.500	2.500
Public & Commercial Sector	0.500	2.000
Insulation Programme	-	5.000
Passive Housing	-	1.000
Smart Metering	-	1.000
Microgen + PV	-	2.000
Industry/EEAP Programme	3.150	2.500
Renewable Energy R&D	1.850	2.000
Ocean Energy	-	5.500
Greener Homes	28.221	27.000
ReHeat	0.805	2.000
CHP Deployment Programme	0.531	4.000
Renewable Energy Information Office	0.643	1.000
EPSSU Modelling	-	1.000
Total	47.200	72.500



ENERGY

1. Sustainable Energy Ireland

Since its establishment in 2002, SEI has developed a range of programmes aimed at increasing market penetration of renewable energy, encouraging sustainable energy practices and in support of general Government policy objectives.

Funding is provided to support deployment of renewable technologies in line with the targets established in the White Paper "Delivering a Sustainable Energy Future for Ireland" and in the recently published Bioenergy Action Plan. The targets (% of energy generated from renewable sources and subsequent reduction in CO2 emissions) are as follows:

- | | | |
|---------------|------------------------------|--|
| • Electricity | 15% by 2010
33% by 2020 | |
| • Heat | 5% by 2010
12% by 2020 | 318k tonnes CO2 pa
636+ tonnes CO2 pa |
| • Transport | 5.75% by 2010
10% by 2020 | 250k tonnes CO2 pa
770k + tonnes CO2 pa |
| • Co-Firing | 30% by 2015 | 900k tonnes CO2 |

Greener Homes Scheme

Provision of grant aid through the Greener Homes Scheme for renewable heat technologies for the domestic sector which includes the installation of wood pellet stoves and boilers, solar panels and heat pumps. On foot of the achievement of the scheme targets a full three years ahead of schedule, Phase I of the Greener Homes Scheme was closed on 3 September 2007. Phase II of the Greener Homes Scheme opened on 1 October 2007. Over 17,000 grant applications have been received since the programme was originally launched. Continuing the scheme will help secure a range of objectives including more competitive offerings, revised product standards, improved training standards and stable growth across the renewable heating industry.

REHEAT

Rollout of a five year €26million ReHeat grant aid package for biomass boilers was launched in June 2006. The programme was expanded in March 2007 to include solar and heat pump technologies and to broaden the threshold for eligibility. The

scheme allows businesses, voluntary, community and school groups to avail of lower cost renewable heating, and will facilitate the development of renewable energy technology providers and the development of a biomass sector in Ireland, thus also providing new opportunities for farmers and foresters.

Combined Heat and Power (CHP)

Rollout of the €11million Combined Heat and Power (CHP) grants programme was launched in August 2006, aimed at assisting the commercial sector in switching to more efficient electricity and heat generation by increasing the deployment of small-scale fossil-fired and biomass CHP systems in industrial, commercial, service and public sectors. A new Biomass CHP Programme was launched in January 2008 which provides grant aid for Biomass and Anaerobic Digestion CHP.

House of Tomorrow

The House of Tomorrow programme opened in 2001 and by July 2007 had committed grants to housing developments comprising around 6,000 units. The programme closed for applications in June, arising from the Government's announcement of the proposed revision of Part L of the Building Regulations to require energy and CO² performance levels in new homes similar to those which had been demonstrated as achievable through the House of Tomorrow programme. These levels are some 40% higher than the current regulations require. The proposed revisions to the regulations, together with these new performance requirements, were published in September for consultation by the Department of the Environment, Heritage and Local Government. In light of these developments it was decided to discontinue grant aid for new projects in respect of standards that are intended to be made mandatory.

Low Income Housing

Sustainable Energy Ireland's Warmer Homes Scheme was introduced in 2003. Up to the end of 2007, some 7,652 people on low incomes benefited from substantial energy efficiency improvements to their homes under the Warmer Homes Scheme. The number of beneficiaries has been rising steadily each year. SEI's Low Income Housing Programme was in operation for many years previous to the Warmer Homes Scheme and aided many vulnerable households.

I have made available some €2.5m to SEI in 2008 to continue the very valuable work of the Warmer Homes Scheme. In the first two months of this year a further 600 families had the energy performance and comfort conditions of their homes permanently improved under the Scheme.

Home Energy Saving Scheme

Some €5 million has been made available in 2008 for a pilot grants scheme to improve the energy efficiency of older housing stock. The full €100 million scheme promised in the Programme for Government is expected to be rolled out in the following years.

The pilot scheme will test a number of different approaches to delivering the scheme, including through Local Energy Agencies. It will test the impact and effectiveness of grant aid, soft loans and information provision. The results of the pilot scheme will inform the design and content of the full scheme.

The focus of the pilot scheme will be on older homes which exhibit the poorest energy efficiency standards. Of the 1.7 million homes in Ireland, it is estimated that up to 1 million require investment to improve their energy efficiency. This is particularly true of pre-1981 private sector housing, originally built with no energy efficiency features and of which over 300,000 remain with low efficiency standards.

The pilot scheme will support investment in improved wall and roof insulation, low emissivity double glazing and heating controls. The Scheme will make use of Building Energy Rating as a measure of the energy efficiency improvement before and after works

2. National Energy Efficiency Action Plan

EU targets for energy efficiency

The Energy End Use Efficiency and Energy Services Directive (Directive 2006/32/EC) requires Member States to achieve energy efficiency savings of 9% by 2016 and to prepare an action plan setting out the measures that will be implemented to achieve this target. Ireland submitted its action plan under the Directive to the European Commission on 27 September 2007.

Separately, in October 2006 the European Commission published its "Action Plan for Energy Efficiency – Realising the Potential", with the aim of achieving energy efficiency savings across the Union of 20% by 2020.

Ireland's targets

The Irish Government has taken a leading position on energy efficiency by committing to achieving 20% energy savings across the economy by 2020 and setting a higher aim of 30%. Government has also committed to showing the way by achieving a 33% energy saving across our public sector institutions by 2020.

National Energy Efficiency Action Plan

A draft National Energy Efficiency Action Plan was published on 3 October 2007 for public consultation. The final plan will require Government approval and must first be considered by Cabinet Committee. After Cabinet Committee and Government approval, translation to Irish and printing, the Action Plan should be ready for publication in May 2008.

The draft Action Plan sets out in excess of 60 actions that Government are either already taking or will take in the period to 2020 to achieve the Government's energy efficiency targets. The final Action Plan is expected to have even more, as a result of additional measures adopted across Government since publication of the consultation document and submissions received on the consultation document. The draft Action Plan proposes action by sector – Public Sector, Residential Sector, Business Sector, Energy Supply Sector, R & D, and cross cutting actions.

The draft Action Plan has identified energy savings of 34,885 gigawatt hours that we can achieve in 2020, through the actions identified in the Plan and through the adoption of additional actions that will capture potential savings that studies commissioned by SEI have shown to be achievable. This level of energy savings equates to 22%, exceeding our 20% target and forming a good starting point to work towards our 30% target.

CO₂ emissions savings arising from energy savings of 22% have been estimated at 9.5 million tonnes a year. Every additional percentage point of energy saved may potentially mean CO₂ emission savings of over 400,000 tonnes a year.

Implementation

It is envisaged that implementation of the action plan will be overseen by a High Level inter-Departmental Group chaired by a senior official from the Department of Communications, Energy and Natural Resources. This Group would be expected to meet at least annually to formulate an annual report on progress for Government.

Public Sector

Government has set a subsidiary target for the Public Sector of 33% energy savings. Driving the achievement of this ambitious target will be an important part of the implementation process for the Action Plan. It is envisaged that a Public Sector Energy Efficiency Working Group

will be established, under the chairmanship of the Department of Communications, Energy and Natural Resources and comprising representatives of the key players in terms of energy use in the public sector, e.g. HSE, OPW, Department of Education, Department of the Environment Heritage and Local Government, and Department of Finance.

Links to Climate Change Strategy

Parties taking action on energy efficiency will likely be similarly engaged on carbon emissions reduction and the energy savings arising from the Action Plan will contribute significantly to achievement of our carbon reduction targets. The Department of Communications, Energy and Natural Resources will liaise with the Department of the Environment, Heritage and Local Government to maximise synergies, including the possibility of joint implementation groups.

3. Accelerated Capital Allowances for Energy Efficient Equipment

Section 46 of the Finance Act 2008 provides that companies may claim 100% of the capital cost of certain energy efficient plant and machinery against taxable profits in year of purchase. The scheme is expected to commence in 2008 and run for 3 years. Companies may claim the tax relief on eligible investments made after 31 January 2008.

The purpose of the scheme is to encourage businesses to purchase plant and machinery that is highly energy efficient. Such products are often more expensive than their less efficient alternatives but are significantly more economical over their lifetime. Despite their economic advantages, businesses have been slow to switch to the more energy efficient products.

The scheme will cover 5 product categories - lighting, lighting controls, motors, variable speed drives and building energy management systems. Sustainable Energy Ireland is presently drafting product efficiency criteria for the Minister's approval. Draft criteria will be published for industry consultation. The adopted criteria will be used to determine eligibility of particular products. Manufacturers or their agents will be invited to submit products that meet the criteria for assessment and approval.

The efficiency criteria and lists of products approved against those criteria will be adopted by Ministerial Order. This Order is expected to be made in Summer 2008.

4. Energy Research Strategy

The Energy Policy White Paper and the Programme for Government

underline the Government's priority commitment to energy research in line with EU priorities. The Science, Technology and Innovation Strategy and the National Development Plan both reflect the vital importance of energy research and innovation to underpin the energy sector and the imperative to deliver sustainable, competitive and secure energy supplies for the economy and society. The ambitious renewable energy and energy efficiency targets in particular require a significant ramping up of research and innovation.

The commitment to building energy research capacity has already been reflected in the provision of €20m under the Charles Parsons Awards for over 200 researchers in Irish third level institutions over the period 2006 - 2013.

The capacity building element of energy research will be augmented by the announced expansion of the remit of Science Foundation Ireland (SFI) to include energy, as provided for in the Programme for Government. This will bring the SFI's considerable experience and track record in building world class research teams and developing Strategic Research Clusters and Centres to capacity building in the energy area.

It is a key priority for the Government to accelerate Research and Development into renewable energy technologies notably ocean energy in order to realise Ireland's undoubted potential and to deliver on the national targets for renewable energy.

In this regard, on 15 January last a major programme of activity, grants and supports was announced to develop ocean energy in Ireland with significant targeted funding to go to the sector over the next three years.

The Irish Energy Council has completed its work on an Energy Research Strategy for Ireland 2008-2013, which advises on key areas of priority for energy research. The Council submitted the Strategy to Minister Ryan at the end of March 2008. Once the necessary printing etc. arrangements can be made, a public consultation process will be conducted before finalising the Strategy, following any necessary Government deliberations.

The programmes to be implemented as a result of the agreed energy research strategy will have to be costed, developed and rolled out. To the extent that Exchequer funding is required, it will be made from the provision in "Other Energy RTDDI Capital Initiatives and related Programmes".

Allocation of Current Energy RTDDDI Non Pay Expenditure

The current provision is mainly for expenditure related to:

- the Irish Energy Research Council – general expenses, such as

travel, and support and administrative costs for its activities, such as meetings, projects, conferences and events;

- the Energy Research Strategy, involving preparation, publication and the organisation of a consultation process and
- a financial contribution to the running costs of the Energy Policy Research Centre in the ESRI.

5. Energy Policy White Paper Implementation

The Energy White Paper sets out over 200 policy actions, measures, goals and targets that are designed to deliver on security of supply, sustainability and competitiveness over the period to 2020. We are making fundamental changes to the way we provide and use energy. Ireland's sustainable energy future depends on it.

The Programme for Government underlines the imperative to secure long term energy security and sustainability and a low carbon future for Ireland. The urgent and massive challenge of climate change underscores this imperative. The comprehensive policy actions under way in the White Paper, together with the additional commitments in the Programme for Government, will result in a transformed landscape for the Irish energy sector.

The ambitious policy actions and measures in the White Paper have different timelines and challenges, with work proceeding to deliver on them all in a timely manner.

Action is already under way across all the key deliverables with a range of initiatives already launched in relation to accelerating delivery of renewable energy targets, energy efficiency, distributed generation and demand side management including the National Smart Meters Programme.

The review of the all-island energy market development framework is underway with Northern Ireland colleagues following the successful launch the Single Electricity Market in November 2007.

Significant progress is being made across the measures in the Energy Policy Framework and the Programme for Government.

6. EU Climate Change Proposals of January 2008

Ireland's position on the renewables and climate change package announced in January is that we continue to be ready to play a full part in the EU's ambitious response to global warming. We see the Commission's proposal as very challenging and consider that it raises very serious economic and social issues for Ireland.

We believe that the process of determining our contribution should

- be demonstrably fair and proportionate relative to the other wealthy Member States;
- be in accordance with the Spring Council's principles of fairness and transparency and take account of Community policy objectives including sustainability, food and energy security; and
- recognise that moving to a low carbon economy must be handled in a way that is consistent with the EU's overall policy on sound and sustainable public finances and that contributes positively to broader growth objectives consistent with the Lisbon Strategy.

7. Charles Parsons Awards Scheme

The Charles Parsons Energy Research Awards was launched in September 2006 by the then Minister for Communications, Marine and Natural Resources, Noel Dempsey. These research awards are aimed at stimulating and developing Irish energy research by providing funding for research groups who wish to further develop their research groups and undertake projects in priority Energy areas.

As a key component of the Government Strategy for Science, Technology and Innovation, cutting edge research in the energy area will play a key role in the development of sustainable sources of energy, increase our energy efficiency and improve the security of our energy.

The Awards provides funding for:

- full time researchers,
- post graduate students who wish to undertake research leading to a PhD and
- undergraduate students who will be given the opportunity of working as part of a research group during their holidays, so that they can better appreciate what is involved in research.
- The aim is provide researchers with the necessary funding. This is an innovative scheme which provides up to seven years funding for the best researchers to allow them to achieve significant results.

Funding

Over the seven years of the scheme, funding will be provided in total

for 208 students and researchers with an estimated cost of €20 million.

Funding will be provided for 20 Researchers, 34 PhD studentships and 154 undergraduate placements.

Awards

Seven awards were made to four Universities in the South and two in the North. These are:

- Bioresources Research Centre (BRC), UCD [€2,956,856]
- Electrical Power & Energy Systems Research Cluster, QUB [€1,993,554]
- Hydraulics & Maritime Research Centre, UCC [€3,474,408]
- Centre for Sustainable Technologies, UU [€3,657,008]
- Electricity Research Centre (ERC), UCD [€2,426,504]
- Microbial Bioenergy Group, NUI Galway [€2,046,704]
- Charles Parsons Research Initiative & Graduate School, UL [€3,126,656]

The conduct of energy research, like all research, essentially takes place over the long-term. Accordingly, associated funding is usually provided for in a multi-annual context. For instance, in the area of energy research capacity building, the first major tranche of the total spend of c. €20m on the Charles Parsons Awards was paid out in 2006. The second and third major elements of expenditure on the awards are due in 2010 and 2013 respectively, subject to the contractual arrangements in place being fully and satisfactorily met.

The capacity building element of energy research will be augmented by the announced expansion of the remit of Science Foundation Ireland (SFI) to include energy, as provided for in the Programme for Government. This will bring the SFI's considerable experience and track record in building world class research teams and developing Strategic Research Clusters and Centres to capacity building in the energy area.

8. Power of One - National Energy Efficiency Awareness Campaign

The objectives of the campaign are to –

- Build awareness of the types and sources of energy we use and the costs and environmental impacts of their use;
- Raise awareness of the impact which inefficient use of energy has in terms of increased costs to the user, the economy and the environment;
- Inform and empower individual consumers both domestic and commercial on best practices in terms of saving energy at home and at work and to build on that by targeting individual sectors (e.g. industry, SMEs, schools, the public sector, the transport sector) with tailored messages; and

- Complement existing programmes and activities in operation on the island of Ireland and take account of relevant EU policies and initiatives.

Strands of Activity

- i) Consumer Campaign - Consumer messaging to date has focussed on 7 areas:
 - Lighting
 - Heating
 - Peak Time Usage (in partnership with EirGrid)
 - Eco Driving (In partnership with the Department of Transport)
 - Christmas Lighting
 - Appliance usage
 - Appliance purchase

As the campaign matures, the Department is seeking to use deeper, more specific messaging. Potential energy efficiency savings have been quantified in specific energy and monetary terms.

- ii) Power of One Street - The Power of One Street project was launched in March 2007 and lasted six months. Power of One Street tracked the energy efficiency of 8 families from different geographical and social backgrounds. The purpose of the project was to promote Power of One messaging by demonstrating the simple changes that can be made by real people to improve energy efficiency in the home.

Savings by residents of the Street were substantial, with one family reducing their household bills by nearly €1,000, and most of the families saving well in excess of €500. As a whole, the families saved over 22 tonnes in CO₂ emissions.

A second module - Power of One Street 2 – is set to launch in April 2008. Power of One Street 2 will extend beyond households to showcase the energy savings that are possible in a cross section of Irish society. Some 5 households have been selected, along with a GAA club, a school and a retail outlet.

- iii. Power of One at Work - Power of One at Work was launched in September 2007. This aspect of the campaign has been developed in close partnership with SEI and has seen specific communications developed for employees and business owners / managers. A “Toolkit” is being prepared to help small businesses implement a staff energy awareness campaign at work. SEI already provides a more detailed tool for employers to run an awareness campaign.

- iv. One Good Idea - School Initiative - The One Good Idea initiative was launched in November 2007. This pilot initiative focuses on

the transition year students of 22 schools throughout the country, reaching approximately 200 students. Each school is being asked to research energy use and energy inefficiencies in their everyday lives. The schools will then develop a marketing strategy to promote energy efficiency in a local primary school, to their parents and amongst their peers. A full evaluation programme has been put in place.

At the end of the school year an exhibition and an awards ceremony will be held in Croke Park to showcase the students' efforts. The ceremony will feature on RTE's Afternoon Show. A review of the pilot programme will be undertaken with a view to rolling out the One Good Idea initiative nationwide.

Already the pilot initiative has generated considerable positive press coverage, raising public awareness of the campaign's energy efficiency messages.