

To: Commissioner for Environmental Information

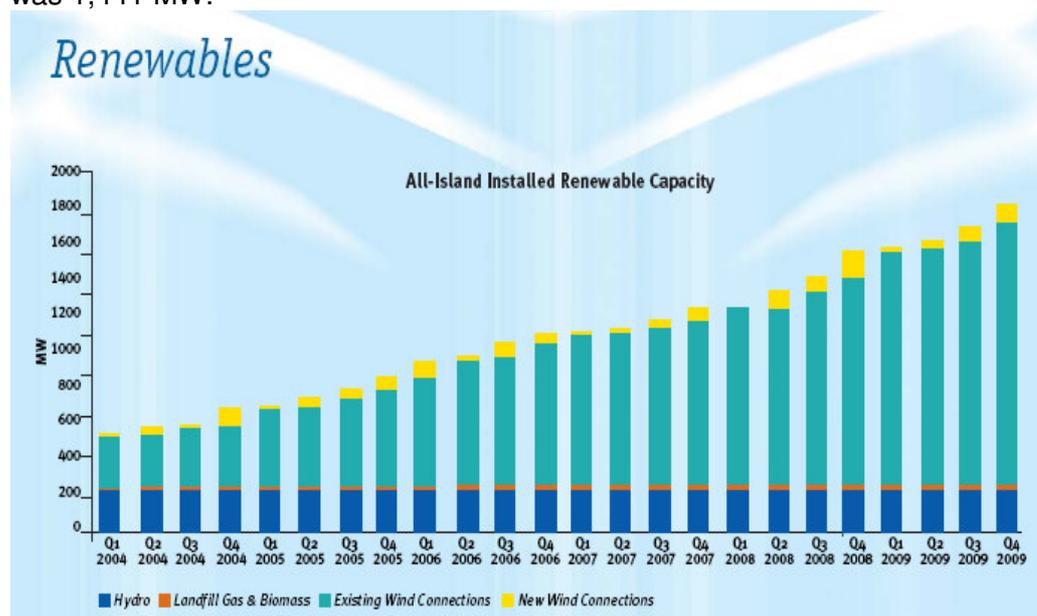
From: Pat Swords

Date: 20th May 2010

Re: CEI/09/0016 Update on Appeal from 11th May

Item 1. Strategic Environmental Assessment for the Renewable Energy Programme

According to Eirgrid installed renewable capacity on the grid on 31st December 2009 was 1,441 MW.



All-Ireland Installed Renewable Capacity 2004 to 2009 – Source Eirgrid Quarterly Review 2009.

The implementation of Directive 2001/77/EC on electricity from renewable sources has been nothing but a complete Wind Energy programme. According to EirGrid chief executive Dermot Byrne in March 2010 “there were currently 1,260 MW of wind energy connected to the Irish grid. In addition, there are 1,300 MW under construction and a further 3,990 MW would be sanctioned under the next round of allocations”.

The Department of the Environment’s own website is clear about Strategic Environmental Assessment (SEA) (<http://www.environ.ie/en/DevelopmentandHousing/PlanningDevelopment/EnvironmentalAssessment/>) and the implementation of Directive 2001/42/EC in Ireland under the 2004 Regulations. The Directive applies across a wide range of sectors, including energy. Furthermore wind energy developments are listed in the Directive on Environmental Impact Assessment (85/337/EEC as amended) as requiring environmental impact assessment. So a programme above of such comprehensive installation of wind energy is subject to the requirements of a Strategic Environmental Assessment.

I accept your conclusion at this stage that this SEA has not been done. That it has not been done is part of my complaint to the EU Ombudsman (2587/2009/JF), as the

Commission approved the REFIT I programme without this necessary documentation, which must address the alternatives and the significant impact on the population, among others.

Item 2: What was the pricing basis and justification (e.g. CO2 pre cent) for the renewable tariffs (14 cent per kWh for offshore wind etc,) costs, benefits, alternatives, principle of proportionality.

As regards the documents referenced by DCENR, which are available on their website:

- In the Notification Document to the EU for REFIT 1 it is clear in Section 2.2 that the primary objective is 'environmental protection' and the secondary objective is 'energy saving'. Furthermore there is a statement in Section 12 that the proposed measure is the 'least cost solution' in meeting Ireland's obligations for RES-E (Renewable Energy Sources – Electricity) under Directive 2001/77/EC.
- In the Part III Supplementary Information it is stated in Section 1.1 that wind energy will be the dominant technology and projected savings in carbon dioxide, sulphur dioxide and nitrogen dioxide are given. In Attachment 4 of this Document it is stated that: "The aid levels are dictated by the permitted upper reference prices. These are cost oriented prices adjusted from prices bid in a preceding tendering programme and generating costs interpreted from "COMMUNICATION FROM THE COMMISSION – The support of electricity from renewable energy sources" (EU Commission 2005), "Future Energy Policy in Ireland" (Irish Academy of Engineering 2006) and "The Cost of Generating Electricity" (Royal Academy of Engineering 2004)"
- In the Reply to the EU Commission's first query in January 2007 State Aid for Environmental Protection rules were quoted in which "the aid may also cover a fair return on capital if member States can show that this is indispensable given the poor competitiveness of certain renewable energy sources". It was also clearly stated that: "A primary concern in developing the Refit model was therefore to deliver a business case acceptable to investors". The aim of the programme was to bridge the gap between the market price and averaged production costs in each RES-E technology to ensure a fair return on capital in order to deliver investors.

If we consider the recital to Directive 2001/77/EC it states:

- "The Community recognises the need to promote renewable energy sources as a priority measure given their exploitation contributes to environmental protection and sustainable development. In addition this can also create local employment, have a positive impact on social cohesion, contribute to security of supply and make it possible to meet Kyoto targets more quickly".

It is therefore would appear logical in terms of implementing the Directive, to compare the various technologies for generation of electricity from renewable sources against the criteria above, and develop supporting mechanisms based on the performance criteria of the different technical solutions. Note there are now eleven different sources listed as 'energy from renewable sources' in Directive 2009/28/EC on the promotion of the use of energy from renewable sources.

- Wind
- Solar

- Aerothermal
- Geothermal
- Hydrothermal
- Ocean Energy
- Hydropower
- Biomass
- Landfill gas
- Sewage treatment gas and;
- Biogases.

The ExternE (External costs of Energy) European Research Network is a project that has been underway from the beginning of the nineties, to determine the external costs caused by energy production and consumption, i.e. the monetary quantification of its socio-environmental damage. By quantifying external costs through a scientific and rigorous analysis, information can be provided to policy makers to assess renewable electricity targets, energy taxes, quantified objectives to reduce greenhouse gases emissions, state aid exception for clean energies, energy efficiency standards, etc. The current EU 6th Action Plan on the Environment is clear in that it requires “*those who cause injury to human health or cause damage to the environment are held responsible for their actions*”. In other words these external costs need to be internalised to lead to more sustainable practices in energy, transportation, agriculture, etc.

The Community (EU) guidelines on state aid for environmental protection – OJ C 37 (2001) state:

- “The principle of prices to reflect costs states that the prices of goods or services should incorporate the external costs”
- “Member States may grant operating aid to new plants that will be calculated on the basis of the external costs avoided (...). The amount of aid thus granted to renewable energy producer must not exceed 5 eurocents / kWh”.

These guidelines were updated in 2008 in which it was made clear in that the aid is considered to be proportional only if the same result could not be achieved with less aid and the amount must be limited to the minimum needed to achieve the environmental protection sought.

Therefore technologies which provide compliance with the aims of Directive 2001/77/EC, see recital above, at lower a lower cost basis should be prioritised in terms of support mechanisms at Member State level. If we consider the main external cost factor in power generation, i.e. the emissions of carbon dioxide, then it would be obvious to compare the various solutions available to us for reducing carbon dioxide emissions and implement the ‘low hanging fruit’ first. Particularly if some of the technologies also provide us with additional benefits in relation to environmental protection and sustainable development, such as meeting environmental directives related to landfills and water quality. The table overleaf therefore presents a guide to the relative costs of carbon dioxide reduction.

Measure	€ per tonne of Carbon Dioxide ⁽¹⁾ avoided
Nuclear energy	7
EU ExternE Research – damage cost	9
EU Emissions trading – energy efficiency	13.5
Shadow price for Kyoto implementation	20
Carbon Capture and Storage (CCS)	30 to 50
Waste biomass	40
Solar – thermal heating	75
Wind	120 to 150
Biomass	160
Biogas	270
Solar photo voltaic	600

It is clear therefore that a MW of renewable energy from one source is not the same as a MW of renewable energy from another source, in terms of meeting one of the primary aims of the Directive, i.e. carbon dioxide reduction. Furthermore wind energy is also an unreliable and intermittent source. It requires full back-up and results in inefficient operation and increased fuel burn on the other generators on the grid. While waste biomass, biomass and biogas solutions provide a continuous flow of electricity that does not require extensive grid connections or full back-up. When a MW from these sources is compared against a MW from wind energy using the criteria in the recital of Directive 2001/77/EC, it is clear that they score much higher and should therefore be considered as the 'low hanging fruit', which should receive Government support first. Note: The Commission have been clear in their documentation that not enough measures were being implemented in Ireland to encourage biomass related RES-E.

If we consider the reply to my information request from DCENR, it is clear that there is no published justification for the tariffs announced under REFIT II (14 cent per kWh for offshore wind and 22 cent per kWh for ocean energy). It has been clearly stated that the primary purpose of REFIT I is environmental protection. Yet there is not a single piece of information that relates the development of the tariffs in REFIT I to the specified goals in the recital of Directive 2001/77/EC. Unless there is additional information relating the criteria of environmental protection, sustainable development, local employment, social cohesion, security of supply and meeting Kyoto targets quickly to the development of the tariffs, it is clear it that the only justification was the business case to achieve a quota of MWs of RES-E on the grid.

¹ These are approximate costs. One must always consider local conditions and for instance with waste biomass and biogas the interfaces with other environmental directives in terms of water and ground pollution.

Item 3: Specific details on other alternatives, such as generation using renewable sources like anaerobic digestion, waste to energy (incineration), heat pumps, it would be nice to have it in a format such as the ExterneE or at the least in kg CO₂ per cent per kwh.

The Renewable Energy Consultation Document of 2003 referred to in the DCENR reply refers to:

- Ireland's Green Paper on Sustainable Energy [4] identifies benefits from the use of renewables in electricity generation as:
 - ... reduces the requirement to burn fossil fuels which are a significant contributor to greenhouse gas emissions.
 - ... having the additional benefit of capturing greenhouse gas emissions from methane from waste by using the methane to generate electricity.
 - ... can contribute positively to import substitution and security of energy supply.
- The RES-E Directive [6] asserts the EU's need to promote renewables due to their contribution to:
 - ... environmental protection and sustainable development. In addition this can also create local employment, have a positive impact on social cohesion, contribute to security of supply and make it possible to meet Kyoto targets more quickly (Preamble 1).
- The most quoted current justification for supporting RE technologies has been climate change, brought to international prominence at the 1992 UN Conference on Environment and Development in Rio de Janeiro which led to the international Kyoto Protocol in 1997. In the electricity sector the focus has been on CO₂ emissions. The reduction of other pollutants has also provided a stimulus for "emission free" RES-E generation.

However, while it does examine the potential in the various sectors, the report doesn't include a ranking of the various alternatives based on the criteria identified in the Directive and as discussed in the previous item.

The SEI publication does address in € per tonne of carbon dioxide equivalent reduction the various renewable and other technical options. However, no quantification is given of the other environmental protection parameters. The only reference to jobs related to the renewable options is a quotation from the Irish Wind Energy Association.

With regard to the All Island Grid Study the Irish Academy of Engineering stated in their June 2009 Submission to the Joint Oireachtas Committee on Climate Change and Energy Security:

- "The All Island Grid Study is not a sufficient robust exercise on which to base Ireland's future energy policy".

Six portfolios were developed in this Study running from 2,000 to 8,000 MW of renewable energy. For instance for biogas it was stated that all such facilities require to successfully negotiate the planning approval process and the only projects recognised in this study are those that have already embarked on that process.

There was also a reference to the Minister signalling a shift away from thermal treatment options in 2007, so that these were no longer certain to contribute to renewable energy targets. No attempt was made to justify the development of the portfolios on the criteria developed in the Directive.

As regards the 2020 Vision for Renewable Energy this clearly states that:

- All policy initiatives will be subject to full impact analysis to ensure that they are robust, efficient and warranted.

However, this has clearly not happen and no such documentation has been produced, which would meet this criteria. Instead we have ended up with a completed wind energy dominated system that has enormous direct and indirect costs.

In conclusion, while documentation has been produced on alternatives, albeit limited in scope, there has been no effort to (a) complete a ranking system for the technology alternatives in their ability to meet the criteria set in the Directive (principally environmental) and to (b) present options to reach the objectives in the legislation. The All Island Grid Study simply presents the chosen portfolios with a very limited justification on the reasons used in their development. The question is has there been any other documentation related to (a) and (b) produced or held by DCENR?

Item 4 : The 2006 Green Paper on Energy Policy. Who wrote this, in particular the section on Nuclear Energy? What was his / her qualifications, I require the technical supporting documentation to the section on nuclear.

Jim Glennon, who served seven years in the Oireachtas as a TD and Senator before retiring in 2007, wrote in the Irish Times on the 1st April 2010:

“Most voters are, somewhat naively, of the view that government policy is developed through a process of careful analysis, comprehensive consultation, and the selection and prioritisation of initiatives based on impact and thorough cost-benefit analysis. In reality, most government policy-making is based on an ad-hoc reaction to events / media-pressure, and driven by the responsible Minister’s particular requirement to be seen to announce something which seems at least semi-sensible.

Regrettably, policy-making which is focused solely on addressing tactical issues inevitably leads to strategic mistakes. Many of the problems now being faced by the Government are the result of ad-hoc fixes of problems during the boom – got a problem, create an agency, buy-off the unions, get it off the front page”.

DCENR is clearly stating:

“Documents such as the energy policy White Paper are statements of Government proposals and/or policy on particular policy issues. The energy policy White and Green Papers were considered, deliberated on and agreed by Government. The Department states that various individuals worked on particular sections, but this does not affect the fact that they are Government statements, of proposals for energy policy in the case of the Green Paper, and of energy policy in the case of the White Paper. As such their ownership and responsibility belongs to the Government, in a process led by the Minister for Communications, Marine and Natural Resources”.

Furthermore I accept your conclusions that qualifications and identify of individual staff does not come within the definition of environmental information. However, there is still the issue of the technical supporting documentation. Nuclear energy is a core component of EU energy policy, indeed the Euratom Treaty dates to the same period as the Treaty of Rome; all Member States are signatories to this Treaty, which is still in force. The section on nuclear energy of the Irish Government's Green Paper on Energy 2006 (page 56) is technically false and in total variance to the submission of the Irish Academy of Engineering to this Green Paper. The relevant points that are false being:

- “The addition of a large baseload nuclear unit onto a small island market with limited interconnection would not be desirable from either a system reserve or running regime perspective (typical size of circa 1,600 MW)”. False: Fifteen plants of 700 MW or less are currently under construction, to be completed by 2012, which would fit the Irish grid without any integration problems. New designs of 10, 25, 165 and 335 MW are being developed. Even the implications of 1,600 MW of a base load nuclear plant on the Irish grid pale into insignificance in comparison with the integration of our current wind energy capacity.
- “The problem of nuclear waste disposal in general remains unresolved around the world”. False from a technical perspective and now also from a political perspective in Finland and other countries like Sweden.

Is there any supporting technical documentation relating to the two bullet points above?

Item 5: Who signed off on the Renewable Energy Programme both at Departmental level and at Ministerial level?

I accept that your answer to this Item in your draft reply is adequate.