

SHOULD IRELAND GO NUCLEAR?

THE CASE FOR A FRANK, OPEN AND HONEST PUBLIC DISCOURSE

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I am very pleased to have been invited to speak at this conference. It marks the culmination of an important week in the Climate Change debate.

In the earlier part of the week the Confederation of British Industry (CBI) published a policy document which, on the face of it at any rate, marks a significant and positive change in direction towards achieving a low carbon economy¹. On the same day Gordon Brown called for an acceleration of the nuclear power programme but also gave his personal endorsement to the third runway project at Heathrow².

On Wednesday the UNDP Human Development Report³, focussing on climate change was published in India and was immediately thrashed by Montek Singh Ahluwalia, Deputy Chairperson of the Indian Planning Commission for its unprecedented demand that India undertake greenhouse gas emission cuts⁴. Also on Wednesday the EU published statistics indicating that Ireland is projected to emit 5.5 million more tonnes of greenhouse gases in 2010 than it agreed to produce under the Kyoto Protocol⁵.

One good bit of news was that the election of a Labour Government in Australia last weekend means a change of policy on Climate Change by that country.

All this provides an interesting backdrop to next month's Bali conference.

However, my task today is much more focussed. It is to outline the Congress position on Nuclear Power. In shorthand our position is not pro-nuclear but, for reasons which I will outline, we believe that the nuclear option should not be excluded from a necessary debate on energy security and climate change⁶.

Twenty odd years ago an edition of *The Economist* carried a cover page story entitled "The Charm of Nuclear Power"⁷. A month later Chernobyl blew up with consequences

¹ Harvey, Fiona and Willman, John (2007) "CBI Backs New Green Taxes", *The Financial Times*, 26 November, 207, P. 5

² Wintour, Patrick and Adam, David (2007) "Brown: Nuclear Power Stations Must Be Built", *The Guardian*, 26 November, 2007, P. 1

³ UNDP Human Development Report (2007/2008), <http://www.undp.org/>

⁴ *The Times of India*, 28 November 2007

⁵ <http://www.europa.eu/rapid/pressreleaseaction>

⁶ *Towards a Sustainable Energy Future for Ireland*, ICTU Briefing Paper No. 9/Spring 2007

⁷ *The Economist*, March 1986

we are still living with today. Chernobyl, together with Three Mile Island, and the extraordinary cost overruns on nuclear power station construction put the kibosh on nuclear power for a generation. But climate change and energy security have put it back on the agenda and there is much talk of “A Nuclear Renaissance”⁸.

The International Atomic Energy Agency’s mandate to promote nuclear power was significantly strengthened at the 51st General Conference in Vienna this year although the resolution conferring this mandate was challenged clause by clause by Austria, Denmark, Luxemburg and Ireland⁹. There are about 435 reactors in operation throughout the world and 30 are under construction, mainly in Asia.

One of the most prolific commentators on energy markets, Dietir Helm, has written:

“The context for energy policy has changed so much that the change in policy objectives can be described as a genuine paradigm shift.....the full policy implications of which will take many years to work out”¹⁰.

From the viewpoint of our own country I think this is certainly true. As a nation we decided to reject the Carnsore Project 30 years ago. That project was proposed also in response to an energy security crisis but time has proved that we made the right decision. A number of things are different now. Climate change was not then an issue and on the other hand the nuclear safety record of that time was not marred by Three Mile Island or Chernobyl.

The objectives of the Irish Government’s White Paper on Energy Policy”¹¹ for the period 2007-2020 are threefold:

- Security of Supply
- Sustainability
- Competitiveness

Nuclear power is relevant to all three but has been ruled out as an option in the White Paper. While appreciating the extreme sensitivity of this issue we do not believe it is either wise or responsible to take this line without a full exploration of the implications for industrial policy, employment and lifestyle of so doing. This is not an issue just for the policy making community, it needs the engagement of the wider public as well. Our task is to try to achieve that wider debate.

⁸ “Nuclear Powers New Age”, *The Economist*, 9 August, 2007

⁹ Seneviratne, Gamini (2007) “ Conference to IAEA: Promote Nuclear Power”, *American Nuclear Society – Nuclear News*, November, 2007

¹⁰ Helm, Dieter (2005)

¹¹ *Delivering a Sustainable Energy Future for Ireland. The Energy Policy Framework 2007-2020*, <http://www.dcmnr.gov.ie>

I want to turn now to consider briefly some of the issues relative to each of these three objectives:

Security of Supply: Ireland's energy consumption is set to increase by 25 per cent between 2005 and 2013¹² Ireland has a low energy intensity¹³ but a high oil intensity of the order of 65 per cent. The "Peak Oil" factor is a key one in energy security terms and it is exacerbated by geo-political tensions in the Middle East and production/refining capacity constraints. Oil demand is set to rise from a 2005 level of 83 mb/d to 118 mb/d in 2030¹⁴. As can be seen in Table 1 on the next page Ireland's energy fuel mix is out of line with the rest of Europe. The share of electricity and renewables needs to increase and oil reduce. Uranium for nuclear power is available from secure countries such as Canada and Australia. However, there are also capacity constraints in terms of the availability of skilled labour to construct nuclear plants which will become more acute if there is, as seems likely, an upsurge in demand.

Sustainability: The accumulation of carbon in the atmosphere cannot be reversed by a policy shift. It seems that a 2 degree rise in temperature is almost certain and we are on a trajectory towards a 6 degree rise. The implications of this for agricultural production in Sub-Saharan Africa are horrendous, threatening 600 million people with malnutrition and water deprivation¹⁵. And here is an important consideration with respect to biofuels - the EU target of 10 per cent of fuel consumption from biofuels would require us to divert 72 per cent of our arable land from food to fuel. As Professor David McConnell has so eloquently pointed out¹⁶ this is neither scientifically wise nor ethically justifiable. We cannot switch huge areas of land, on a global scale, from food to biofuel without exacerbating the fragile food situation already described.

Competitiveness: As already mentioned Ireland's oil intensity leaves us in a vulnerable position, compounded by price. While economic growth has been decoupled from energy to a greater extent than in the early seventies, oil that has risen in price from \$30/ barrel in 2004 to \$100/barrel does constitute a competitiveness challenge (in the context of our high level of oil intensity). The extent of this relative to our trading partners can be gauged from Table 1 below. It is argued by the International Energy Agency that Nuclear Power is 20- 40 per cent cheaper but that has to be balanced out against the small size of the Irish Market and the economies of scale that are possible within the electricity generating system¹⁷. High oil prices also feed into inflation – directly and through second round effects¹⁸.

¹² *Aspects of Energy Policy in Ireland* (2005) ESRI

¹³ Because we have an industrial base in the high tech sector

¹⁴ *World Oil Outlook* (2007) OPEC, <http://www.opec.org>

¹⁵ UNDP Human Development Report (2007-2008)

¹⁶ Letter to *the Irish Times* in November, 2007

¹⁷ The Basic rule here is that the largest unit of generating capacity you can buy is the largest you can afford to lose. The ESB must keep "spinning reserve" on the system to cover the loss of its largest item of plant. Otherwise the system could collapse. In practice the smallest Nuclear reactor would be 800 – 1000 MWS equal to about 20 percent of system capacity. Keeping a spinning reserve of that capacity would be costly.

¹⁸ Compensating wage demands

	Ireland	EU-25
Oil	64	42
Gas	11	24
Electricity	17	20
Renewables	1	4
Coal	5	5
Derived heat	2	5

Source: ESRI “Aspects of Energy Policy in Ireland” (2005)

Taking these factors into account prompts us to ask whether the White Paper is wholly credible in excluding Nuclear Power as an option. Consider just two of the key assumptions viz;

- 1) 33 per cent of electricity will come from renewables by 2020. Is this credible if economic growth remains at 3 per cent or above in that period or for any substantial part of it? Is it credible if our population continues to increase as forecast by the CSO up to five and a half million by 2026? Is it credible, given the implications of biofuel for food security, and planning and technical constraints on wind¹⁹, that the 33 per cent target can be reached.
- 2) The EU statistics indicate that by 2010 Greenhouse Gas emissions will be 22.6 per cent above 1990 levels. This is almost 10 per cent above the Kyoto target. So far we have been dealing with this issue by buying carbon credits, this is not sustainable indefinitely and, anyway, the price is likely to rise significantly.

Given then we abandoned under pressure, the principal policy instrument that was available to us to reduce GHG emissions, viz, a Carbon Tax, in 2004, is it likely

¹⁹ The technical difficult with wind is that it doesn’t blow constantly. Using it for baseload (rather than mid-merit or peaks) is the only practical option. But this is a disincentive for other generators to enter the market. It again requires spinning reserves to cover the lost energy if the wind drops. Transmission infrastructure is also a problem.

industry will acquiesce on measures to achieve a low carbon economy which involve a threat to competitiveness?²⁰

In expressing scepticism about the *rea politif* of energy politics I do not wish to diminish the potential for energy conservation, clearly there is considerable scope for saving in respect of:

- Energy efficient buildings and appliances
- Using fiscal policy to force reductions in vehicle emissions
- Achieving a step change in the use in public transport
- Extending carbon trading to aviation
- Reducing motorway lighting

More controversially perhaps would be banning Just In Time (JIT) delivery systems which is, in effect, a system of mobile warehousing, and limiting high energy use/low employment industries. Clearly there would be an outcry from industry about measures like these. I mention them to illustrate that in the choices we face there are no easy options.

Dr Ed Walsh, in a recent address to the Institute of Engineers in Northern Ireland came out strongly in favour of nuclear power stating:

*“Rather than Mickey Mousing with wind turbines Northern Ireland should go Nuclear”*²¹

He proposed building five nuclear stations at Magilligan Point, Torr Head, Island Magee, St. John Point and Cranfield Point.

This is not our view. Indeed it is a good reason why decisions about nuclear power should not be left to engineers.

On the other hand the people at large do have to confront the hard choices involved. Can we, if we want to avoid nuclear power, accept that optimising economic growth in that context may be necessary rather than maximising it as we have been doing for the last thirteen years? Can we accept the lifestyle choices involved?

If we made a decision tomorrow to go nuclear it would probably take 10 to 15 years to accomplish it. So what we have here is a medium term issue. It is worth taking the time and effort to get the right decision. The right decision will be the one the people support and getting to that point requires a frank, open and honest public discourse.

²⁰ Coghlan , Oisín (2007) “Irish Climate Change Policy from Kyoto to the Carbon Tax: A Two-Level Game Analysis of the Interplay of Knowledge and Power” *Irish Studies in International Affairs*. Volume 18: 131-154

²¹ The Irish News, 10 October, 2007