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Response to Energy Research, Development and Demonstration Consultation Paper

The Time is Short Cleland McVeigh**

The title of my response is taken from the introduction to my book “Sun Power”, first published in 1977, where I warned that this was the only message I could give to those who were in a position to influence national energy policies towards an increasing use of solar energy. The time is even shorter today.

Summary

This paper is a very welcome initiative from the DCMNR. Their Chief Technical Advisor (Energy) has laid the foundations for a meaningful dialogue.

Comments on the Consultation Paper refer to the references in the text.

The Appendices cited in the comments should enable the reader to appreciate why the various groups, organisations and institutions noted in this DCMNR paper are working with the wrong energy model. This could have extremely serious consequences for Ireland.

Introduction section 1.3 A more co-ordinated and structured approach

This need is highlighted and has my full support. An extract from my paper pointing out that the era of cheap oil is over –so get used to it –is in Appendix 1.

Policy Context section 2.3 IEA World Alternative Policy Scenario 2004

The Press Release for the IEA World Energy Outlook 2004, from which this section is cited, warns about ***Deeply Troubling Trends in World Energy Outlook.***

I have studied this in some detail and the picture is bleak.

All the various groups, organisation and institutions cited in the DCMNR paper are working with the wrong energy model. Models are useless unless the basic assumptions are realistic.

The basic assumption in Ireland that does not seem to have been seriously questioned is as follows -

“We must have growth in the economy – we need more roads for infrastructure, we need more airports for air traffic, we must have an enhanced electricity grid to meet the ever increasing demand – this is needed to sustain our progress and keep our place in Global Markets”

This basic assumption is deeply flawed as the underlying belief in ever-expanding oil supplies is not correct, as the IEA themselves point out. [see Appendix 2]. An increasing number of serious oil analysts warn today that known proved reserves plus possible future discoveries are very unlikely to be greater than about 900 Gb. Appendix 2 highlights some of the very serious problems that the IEA have identified.

Institutional and Governance options Section 3.1 Central Body to oversee and coordinate energy R, D & D and 3.3.2 Energy Research Coordination Council to meet on a quarterly basis.

These are sensible and have my full support.

Section 3.6 I am very concerned that the ESRI does not seem to have an experienced energy resources analyst. Therefore I fully support the Department's preference for the single co-ordinating body

4. The All-Ireland Perspective.

I fully support this section

6 Links with the Environment.

It is essential that closer links be established, especially in view of Ireland's very weak record on Environmental Issues with the EU.

I have helped to develop two Master's courses on Energy, Economics and the Environment. These three topics cannot be studied in isolation. While deep single discipline studies are essential to develop new concepts, this can no longer be done without the broader understanding of rather more than the simple basic elements of the other two disciplines.

7. Long-term vs. short-term goals.

Long-term issues do not appear to have been considered by the Irish Government.

This is not sensible. An essential on-going objective should be for everyone – public at large, government, state and semi-state bodies, industry and Commerce, to have a greater understanding of what the IEA are warning us all about [see Appendix 2] and how to prepare for it.

8. Funding.

There should be funding for the essential understanding and analysis of the Peak Oil problem see, for example, <http://www.asponews.org> or <http://www.energiekrise.de>

This is unlikely to attract private funding.

9. Capacity Building. Very important. This work has been done elsewhere and Ireland could benefit from studying other approaches.

APPENDICES

1. Edited extract from Village, 16-22 October 2004

The era of cheap oil is finally over J.C.McVeigh

We live in a finite world with limited resources. It is impossible keep on using a resource that is being used up or depleted at an ever-increasing rate. But the world is trying to do just that.

In his keynote address last month's National Transport Summit, the Minister, Seamus Brennan, warned that the dependence of the Transport Sector on one source of fuel – oil – exposed it to more and more risks in the event of problems in supply and increased prices.

The life cycle or S-curve is well known in business to forecast how the market for a product might develop. By the time the halfway point is reached a new product or products must be launched, otherwise the business will fail. A mathematical model called the logistic equation is used to develop the theoretical S-curve.

The same life cycle applies to oil. The modern oil era dates from 1859 with Edwin L. Drake's initial discovery in Pennsylvania. This encouraged greater exploration and the establishment of mining and production facilities. Within a year 175 wells were drilled nearby and since then the curve has risen at an increasing rate until today, when the new reserves found during the year are less than the annual production. This is the halfway point. The amount of oil produced over the next few years can no longer meet all the demand. In theory the price of any resource rises as production levels start to fall. This should reduce demand, reduce prices and lengthen the probable lifetime of the resource. But demand is forecast to continue to rise.

Oil data from most Companies and Countries is not reliable, especially on the reserves position e.g. Shell's recent fiasco. Most will still deny that we have used up half of the oil that can be extracted. But climate change is happening. There will be more and worse storms

and floods, sea levels will rise and hurricanes will increasingly disrupt oil supplies to the USA in the Caribbean. This is quite apart from the political instability of the Middle East.

All assumptions of future growth in Ireland's oil consumption, especially in the transport sector, must be re-examined.

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2. The International Energy Agency [IEA]

Six years ago the IEA predicted Total Oil Demand in 2020 would be 111.5 million barrels per day. But the future World Oil Supply was estimated to be only 92.3 million barrels per day in 2020. The difference was made up with a "Balancing Item" entitled Unidentified Unconventional Oil.

Comment: It is unrealistic to base national energy policy on a mythical resource.

The IEA 2004 World Energy Outlook

The Executive Director of the International Energy Agency, Claude Mandil, released the 2004 World Energy Outlook on the 26th October. He pointed out that the central message of the WEO remains an optimistic one. "The Earth contains more than enough energy resources to meet demand for many decades to come. The world is not running out of oil just yet. Moreover, there is more than enough money globally to finance the large expansion of energy infrastructure that will be needed."

This was the message that the G7 countries wanted to see. What they did NOT want to see was the real message. It was contained in the rest of the press statement. The IEA decided not to issue their 2204 World Energy Outlook in the following form:

IEA Warn about Deeply Troubling Trends in World Energy Outlook

The Executive Director of the International Energy Agency, Claude Mandil, released the 2004 World Energy Outlook on the 26th October. He pointed out that our continuing heavy reliance on carbon-emitting fossil fuels and the predicted inexorable increases in global energy demand from now till 2030 is "deeply troubling". He also pointed out that current energy trends "Call for Urgent and Decisive Policy Responses"

Ever-increasing emissions of climate-destabilising carbon dioxide are just one symptom of the considerable malaise in the world of energy that Governments are not heading seriously.

Other symptoms include the following:

1. Soaring oil and gas prices and
2. The increasing vulnerability of energy supply routes

The full press release from the IEA is available on their web site

Extracts and further comments

p.47 We do not expect large divergences from the assumed price paths US\$22 per barrel in year 2000 [at 2000 dollars] will stay flat until 2010.

Comment: This forecast looks very unlikely. Professor McVeigh's recent publications have warned that the era of cheap oil is over –so get used to it. The IEA need to revise their ideas on pricing.

p.89 Recent announcements by major oil and gas companies of steep cuts in their reserves estimates and differences in estimates by different companies with interests in the same field have raised questions about the reliability and comparability of industrial data on reserves. They have also drawn attention to the lack of transparency in the reporting of reserves

data.....**The reliability of reserves estimates reported by national oil companies has long been a matter of great concern.**

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Major challenges have arisen in recent years to the compiling of reliable energy statistics....Nowhere are the difficulties felt more sharply than in the IEA's Energy Statistics Division. Recently, however, maintaining the very high calibre of IEA Statistics has become increasingly difficult because national administrations have faced growing problems in maintaining the quality of their own statistics. Breaks in time series and missing data have become frequent in some countries. These lapses compromise the completeness of our statistics. They could seriously affect any type of analysis, including modelling and forecasting.

The IEA in co-operation with Eurostat has prepared an Energy Statistics Manual.....**We feel more members of the energy community –especially policy-makers and legislators – should be aware of a looming crisis.**

3. IEA Press Release: Saving Oil in a Hurry. Extract: 28th April 2005 Paris

Today the IEA has issued a new analysis of measures that governments can use to “save oil in a hurry”. There are many possible reasons why governments might want to save oil quickly; an obvious one is to cope with oil supply disruptions.

“Our study shows that a number of measures could provide substantial reductions in transport oil use quickly and cheaply – if countries are well-prepared and act aggressively during an emergency”, said Claude Mandil, the Executive Director of the International Energy Agency (IEA) at the launch of Saving Oil in a Hurry.

This book provides an assessment of the potential oil savings and implementation costs of rapid oil demand restraint measures for transport. This tool box of measures includes new approaches towards telecommuting, car-pooling, transit use and “ecodriving” (fuel efficient driving styles), among other measures.

Comment: Ireland must prepare for inevitable supply disruptions..

**Cleland McVeigh has been a consultant for UNESCO, UNDP and the European Union in Energy Studies, Forecasting and Planning. He is an Irish National, lives in West Cork and is a Special Professor at the University of Nottingham.

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