Energy Security
Ireland on the Edge

Ireland's recent period of prosperity led to the country's energy demand and usage surging upwards. Now the boom has evaporated, but the voracious appetite for energy that it spawned remains. These energy demands are being met but, with an extreme reliance on imported fossil fuels, the question is: for how long? And at what cost, both financially and environmentally?

Solving the energy security crisis is a complex and difficult challenge that has been building for decades. In recent years, this issue has been recognised and taken on by all responsible governments, including Ireland's. However an analysis of the current facts provides some alarming insights:

Facts and Figures

- 90% of Ireland's energy mix is comprised of three fossil fuels – oil, gas and coal
- Ireland has the 4th highest dependency in Europe on imported fuels
- Imported fuels cost Ireland over €6 billion per annum
- We import all of our oil and coal and over 95% of our gas
- 55% of our electricity is generated from that gas
- Ireland has just 11 days gas supply storage compared against 92 days in France and 84 days in Germany. We are meant to have 60 days.

The facts and figures above illustrate how vulnerable Ireland's position is should there be any interruption to gas flow from the UK. Potential consequences could be mild i.e. shortages in some goods and the localised risk of sewage treatment failure or could be more serious and lead to the cancellation of surgical procedures as hospitals are forced to generate their own power.

The issue of energy security must be addressed urgently, because Ireland's energy security is on the edge.

1

Ireland's Energy Dependency

From 1990 to 2007, Ireland's energy imports increased by 108%, while since 1995 production of the country's only indigenous fossil fuel supply – gas from the Kinsale Head field – has decreased by 75%. The net effect is that Ireland is now in the unenviable position of having the fourth highest fuel import dependency in Europe – and much of this dependence is ultimately on countries not noted for their political stability.

2

The Need to Diversify

Increased energy demands brought about by advancements in transport, industry and commerce since the early nineties have highlighted the severe limitations of our domestic energy production and the strategic importance of diversifying our energy mix. Our reliance on imported fossil fuels is no longer sustainable, due to environmental concerns, increasingly volatile energy prices and declining reserves. Collectively, these factors have put Ireland in a position where the development and deployment of renewable and other domestic sources of energy is no longer desirable but imperative.

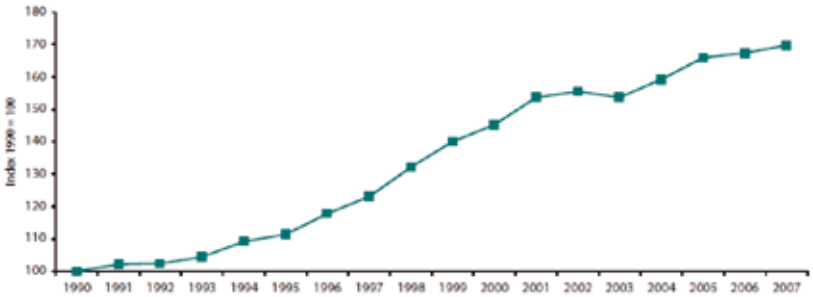

Figure 3.1 Ireland's Primary Energy Growth from 1990 to 2007, expressed in a percentage of 1990 levels

(Source: 'Energy in Ireland 1990 -2007 / 2008 Report', SEI, Dec 2008)

3

Low-Carbon Economy – Renewables are the future

A low-carbon economy is the long-term solution to the twin threats of climate change and security of energy supply. The development of a low-carbon economy means the implementation of government policies that reduce Ireland's greenhouse gas emissions, by replacing fossil fuel-based products and services with low-carbon alternatives. Ultimately, this will mean the development of a strong and robust renewable energy industry in Ireland, – along with a major shift in public attitudes to energy usage.

4

Gas as the Bridging Solution

While Ireland's low-carbon vision is being developed and implemented, an interim solution is required to bridge the gap to renewables and ensure our energy supply is secure in the meantime.
From an environmental perspective, natural gas is the obvious bridging solution. Of the fossil fuels available, natural gas is the cleanest: burning natural gas produces 43% less CO2 per kWh than coal and 28% less than fuel oil. In addition, oil and coal have higher nitrogen and sulphur contents and release ash into the atmosphere when burned.

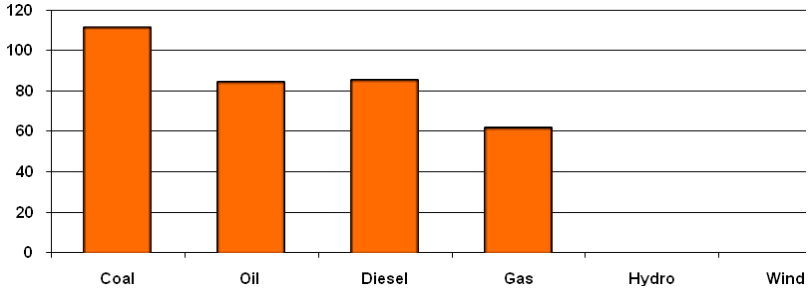

Figure 4.1 Carbon intensity of different fuels in generating electricity

(Source: UK Department of Transport, 'Carbon and Sustainability Reporting within the renewable transport Fuel Obligation'

The recently introduced carbon tax also makes gas an attractive option from a financial standpoint, due to its lower carbon intensity. And, most critically of all, gas offers the only opportunity of a 15- to 20-year indigenous fuel supply, capable of meeting 17% of Ireland's total energy needs at peak production and 60% of the country's gas needs. This opportunity lies in Corrib Natural Gas, which is due to come on stream later this year or early next year. With gas now accounting for almost 55% of Ireland's electricity generation, the need for the security that an indigenous supply could offer has never been greater.