

**Response to Department of Communications,
Energy and Natural Resources in relation to the
Green Paper on Energy Policy in Ireland**

For the attention of:

**The Energy Policy and Planning Unit,
Department of Communications, Energy
and Natural Resources,
29-31 Adelaide Road,
Dublin 2.**

Date Issued:

23 July 2014

Prepared by:

Rory O'Grady
Market Intelligence manager
Kore Energy
Unit 4, Ballisk Business Park
Donabate, County Dublin
Ireland

Tel: +353 (0)1 808 5555
Fax: +353 (0)1 808 5554
Mobile: +353 (0) 87 2020 011
Website: www.kore.ie

Registered Number 403186 (Ireland)
Registered for VAT: IE6423186E

Introduction

Kore Energy provides energy procurement and energy price risk management services to a significant number of large energy users in Ireland and currently manages circa 2,400 GWh of electricity on behalf of large electricity users. Our clients include 5 of the country's top ten energy users and global leaders in the pharmaceutical, IT and Food sectors.

We welcome the opportunity to contribute to the public discussion on future energy policy and, in particular, we welcome the opportunity to present the experience of large energy users of the policy measures introduced following the last White Paper on Energy Policy in 2007 and the priorities which might be addressed in the next White Paper.

While our submission is presented with particular emphasis on the needs of large energy users, our views on energy policy development within the framework of the six themes presented in the Green Paper may also address issues of a broader nature such as; Energy Citizenship, Markets and Regulation, Infrastructural Issues, Security and Sustainability and Competitiveness.

The three key pillars of Irish energy policy are all addressed to a greater or lesser extent in the Green Paper. The one which has received least attention in the Green Paper is Competitiveness and it is this, above all, which has emerged as the single most important issue for large energy users. This is, in part, due to the success of existing policy measures in the areas of Sustainability and Environmental responsibility. According to official figures, energy prices in Ireland have risen more than 29% in real terms since 2007. The increase for our large energy user clients over this period is closer to 80% in real terms for both electricity and natural gas.

The Green Paper comparison with OECD – Europe, which has experienced an average 20% increase in energy prices since 2007 is valid for residential and small commercial enterprises. For large energy users however, the comparison should be expanded to include the United States, where significant inward investment in industrial development in this country originates and where energy prices have actually fallen since 2007.

Finally, it would be our contention that the White Paper on Energy Policy should inform the energy industry and the energy user of the proposed measures, including regulatory measures, which will provide direction to Energy Policy over the next five to ten years. Of particular importance to large energy users would be clear definition of the ongoing requirement for support schemes such as the Capacity Remuneration Mechanism for electricity generators, the Public Service Obligation levy and Renewable Energy Feed-In Tariff (REFIT). These support measures, which were seen as necessary in the context of energy policy direction in 2007 and have largely achieved their objectives in the intervening period, should be subject to review in the context of the dramatically changed energy environment and the disproportionate burden which they impose on large energy users.

Response

The Green Paper has developed six themes to assist in framing the discussion and our response is constructed in as much as possible within this framework. It is not our intention to comment in detail on the two overarching policy frameworks which are already in place (the National Energy Efficiency Action Plan – NEEAP and the National Renewable Energy Action Plan – NREAP). These existing policy frameworks are helping towards the achievement Ireland’s renewable energy and energy efficiency targets and our comments in these areas will be limited to adjuncts to the existing measures which may help to re-distribute the cost burden more evenly across user sectors and appear under several of the Priority headings.

Before addressing these various priorities however it is crucial to recognise the cost burden which some of the energy market support mechanisms place on large energy users in particular. The dis-proportionality of these measures can be seen in the increase in the PSO levy in recent years where large energy users have seen increase far in excess of those levied on domestic and small commercial users as demonstrated in the table below.

Cumulative impact of PSO levy increases on electricity users in Ireland since 2010

Source / driver of annual PSO levy charges 2010-11 to 2014-15

| | 2010/11 € million | 2011/12 € million | Percentage increase | 2012/13 € million | Percentage increase | 2013/14 € million | Percentage increase | 2014/15 € million | Percentage increase | 4 year increase |
|-----------------------------------|----------------------|----------------------|------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|------------------------|--------------------|
| Renewables | 29.73 | 35.78 | 20.37% | 47.46 | 32.62% | 51.07 | 7.62% | 87.80 | 71.92% | 195% |
| AERs | 13.50 | 0.67 | -95.07% | 7.13 | | -7.98 | | | | |
| Peat | 78.20 | 40.61 | -48.07% | 51.94 | 27.91% | 74.86 | 44.13% | 114.70 | 53.22% | 47% |
| Tynagh / Aughinish | 14.00 | 30.75 | 119.64% | 25.45 | -17.22% | 48.17 | 89.26% | 107.90 | 123.99% | 671% |
| PSO CfDs | -0.52 | | | 0.00 | | 0.00 | | 5.60 | | |
| Other costs | 21.73 | -15.68 | -172.17% | -0.74 | -95.29% | 44.81 | | 11.60 | -74.11% | -47% |
| Annual levy & year on year change | 156.63 | 92.12 | -41.18% | 131.24 | 42.46% | 210.93 | 60.72% | 327.60 | 55.31% | 109% |

| Monthly charges (Monthly standing charge for domestic and small commercial users. Charge per kVA of MIC per month for medium and large users) | | | | | | | | | | |
|---|----------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|--------------------|
| | 2010/11 Monthly rate | 2011/12 Monthly rate | Percentage increase | 2012/13 Monthly rate | Percentage increase | 2013/14 Monthly rate | Percentage increase | 2014/15 Monthly rate | Percentage increase | 4 year increase |
| Domestic Customers | € 2.73 | € 1.61 | -41.03% | € 2.32 | 44.10% | € 3.57 | 53.88% | € 5.25 | 47.06% | 92% |
| Small commercial (MIC < 30 kVA) | € 8.25 | € 4.77 | -42.18% | € 7.14 | 49.69% | € 10.82 | 51.54% | € 18.00 | 66.36% | 118% |
| Medium and large energy users | € 1.15 | € 0.71 | -38.26% | € 0.99 | 39.44% | € 1.54 | 55.56% | € 2.78 | 80.52% | 142% |

Currently, the total cost of the three main support elements within the SEM is circa €1.08 billion per annum with the capacity payment mechanism at €570 million, the PSO levy at €328 million (proposed) and the imperfections charge at €182 million (proposed for 2014/15). Based on the CER’s projected demand of 33,220 GWh for 2014, these elements account for an average of 3.25 c/kWh of the electricity price paid by customers, excluding distribution losses. This is a matter of the gravest concern to large energy users in Ireland and we would suggest that the White Paper should direct the Regulatory Authorities to bring the cost/benefit structure for power generators in Ireland, particularly the Capacity Payments Mechanism, into line with our European neighbours prior to our entry to the single European Energy Market.

Priority 1: Empowering Energy Citizens

One of the key elements of empowerment is ownership. This concept has been largely lost on the Irish citizen since market opening has brought many new suppliers with whom citizens will not have the same relationship or sense of ownership which they had with the former semi-state monopoly suppliers. Obviously we are not talking about physical ownership of assets, although this was sometimes a perception of citizens as taxpayers who partly funded the semi-state entities. In the context of empowerment, ownership is conferred by consultation and influence in decision making.

Citizen's influence in decision making can be steered in a positive direction by demonstrating the benefits of particular policy measures to the end user directly. Such benefits are not always apparent to the end user unless directly reflected in price. The debate on renewable energy in Ireland has largely ignored the end user benefits, except in the broad context of climate change abatement. More direct benefit in terms of energy prices could be demonstrated to users who, for instance, contract directly for renewable energy with their suppliers. Such benefits could be transferred via fiscal measures such as reduced VAT on renewable energy for domestic consumers and proportionate rebates for large energy users as was the case up to 2012.

Any such benefits could be balanced by a requirement on the end user who opts for renewable electricity supply to implement measures in the home or in industry to provide a proportion or all heating requirements from renewable sources. Example of such a balanced benefit approach could be for home owners who contract for renewable electricity being required to heat the home by wood-pellet boilers or water heating by solar panels.

The balancing of benefits through use of renewable energy in industry may not be as straightforward given the need for higher grade heat for instance. In certain circumstances, this balance may be achieved through on-site generation of heat and power via CHP where base electricity and heat requirements can be generated on-site and top up requirements provided via supply of renewable power from the grid. Indeed full site requirements could be supplied from the grid at times of high wind availability.

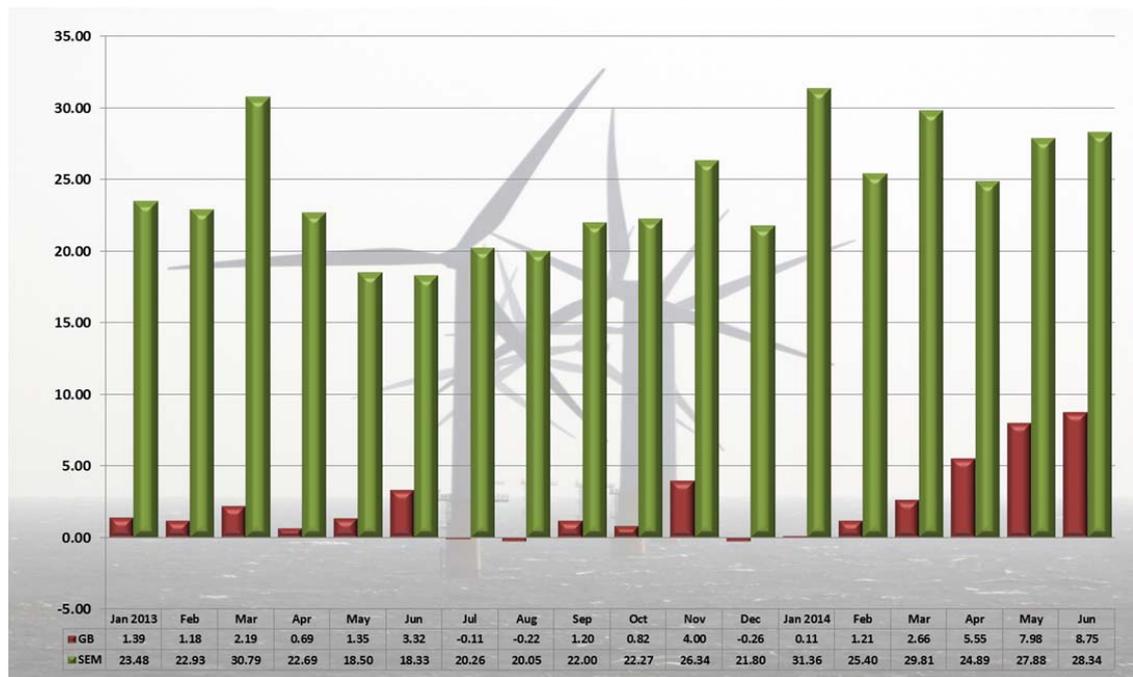
Such measures could have beneficial effects in load balancing at National level but could have the added benefits of allowing both individual and corporate energy citizens an increased sense of ownership and empowerment through tangible price benefits. A further benefit of such measures could be an improved perception and acceptance of renewable energy generation in rural areas where the main heating fuel displaced would be oil.

Priority 2: Markets and Regulation

The Green Paper poses the question of what long-term approach we should take to electricity and gas market integration after 2016 in the context of the EU Target Model for market integration. As the all-island market for electricity, the SEM, has been in existence for almost seven years now, much progress has been made in terms of providing a transparent single market pricing mechanism and the integration of the hitherto separate electricity transmission systems. The advent of an integrated EU electricity market presents further opportunity for Ireland (North and South) to benefit from integration with more diverse and generally lower cost electricity sources from our near neighbours in Europe.

With the commissioning of the East-West power interconnector in 2012, the island of Ireland doubled its connectivity with the UK but the expected benefits in terms of a reduction of Irish spark spreads was short-lived as can be seen in the graph below comparing SEM and UK spark spreads. Irish spark spreads remain grossly inflated by comparison with the UK and Western European markets and further inter-connection is required to bring Irish spark spreads and the overall delivered price of power to Irish users closer to the EU average.

Ireland (SEM) and UK (GB Beta) clean spark spread comparison post East-West interconnector



The failure of the negotiations between Ireland and the United Kingdom in relation to export of renewable power generated in Ireland, which would have required further interconnection between the two islands, suggests that Ireland should perhaps look beyond the UK to inter-connection with France for instance. The cost of such interconnection is obviously higher by a

factor of distance but is not unrealistic, particularly given the ongoing cost of Capacity Payments to Irish generators which, if even partly redirected to interconnection, would improve not only the comparative cost of electricity available to the Irish market but also improve security of supply.

Further interconnection with the UK or Western Europe is clearly necessary to allow more competitive electricity prices in Ireland. Physical interconnection must be accompanied by market integration as envisaged in the EU Target Model and while this is being addressed by the I-SEM committee and the Regulatory Authorities, Irish government policy must give direction in this matter and the Green Paper fails to provide any specific directional signals in this regard.

While the Irish Regulatory Authorities are immersed in the task of rendering the SEM fit for purpose within the framework of the EU's Internal Energy Market, the CER also has the task of continuing to provide the necessary supports for Ireland to meet its commitments under the EU's Renewable Energy Directive and Energy Efficiency Directive.

There are elements of Ireland's support mechanisms for Renewable Energy which would appear to be leading to a disparity in regulated costs when compared with other EU countries. This may be seen as the price to be paid if Ireland is to achieve its 2020 targets for renewable energy. It could also be argued that some EU countries are not affording the same priority to achieving these targets but whatever the view taken, the reality is that Irish power prices remain seriously out of line with those of our European neighbours.

In this context, and as mentioned in our introduction, we would call for an urgent review of the ongoing necessity for and levels of imposition of both the Capacity Payments Mechanism, the Public Service Obligation levy and the Imperfections Charging mechanism in the SEM.

Priority 3: Essential Energy Infrastructure

The rapid advance of renewable electricity generation as a percentage of the Irish generation stock requires infrastructural support and planning, not only on the island of Ireland but in the context of the European Energy Market. In the European context, as an island, Ireland is reasonably well served in terms of gas system integration with the UK and continental Europe via the UK.

Given the downturn in energy demand since 2008, there is currently a degree of redundancy on the gas interconnectors which will increase when Corrib gas comes on stream. In the long term this may be welcome but in the short term, it could be argued that too much of our interconnection capacity originates from a single point on the UK system. Any restrictions on the UK system at or upstream of that point could be disastrous for Ireland.

Corrib gas will relieve the impact of any major interconnector restrictions but will not supply Ireland's full requirements in such an event. Additional supply capacity is needed to ensure security of gas supply (and by extension power supply). Any additional sources of indigenous gas are at least ten years down the line and additional interconnection or other means of importation such as Liquefied Natural Gas (LNG) should be given more urgent consideration at this stage.

The west coast of Ireland has suitable deepwater locations for reception of the largest LNG carriers, e.g. the Shannon Estuary or Bantry Bay. These are also among the best locations on the island to provide gas network re-inforcement and improve network balance. The strategic importance of such LNG cannot be over-stated as, apart from supply diversification and network re-inforcement, an LNG storage facility capable of receiving large LNG carriers can also provide a readily available storage reserve of two to three weeks of Ireland's natural gas needs.

The strategic importance of such a storage facility suggests that its development should not be determined in commercial terms alone and that the interest of the country would be best served by the involvement of the gas network owners or operators in such a development. The question of whether the development and operation of a strategic LNG storage and distribution facility should be burdened with the cost of compensation for stranded assets in the existing interconnector system should be re-examined. The involvement of the network owner, perhaps in Public-Private-Partnership could help allay this burden.

Priority 4: Ensuring a Balanced and Secure Energy Mix

Over the past thirty-five years, Ireland's primary energy use has changed fundamentally, thanks to the advent of natural gas. The position of natural gas in the electricity generation fuel mix is almost on a par with oil in the early 1970's. The oil shocks of the 70's and early 80's forced a rethink on the wisdom of over-reliance on a single fuel source and led to diversification in generation fuel sources, initially through coal in Moneypoint and more recently through renewables. The end of the useful life of Moneypoint is likely to come within the next decade and of course we are well aware that every MW of renewable power which is considered an integral part of baseload generation must be backed up by readily available conventional generation.

While the shift in power generating fuel sources has been dramatic, there is an inherent danger in the fact that we are now bordering on an over-dependence on natural gas. This is all the more critical for the fact that natural gas provides the single heating source for almost half the housing stock in Ireland. This does not give rise to a need to switch fuels rather than a need for improved security of supply via some of the measures suggested in Priority 3 above.

While the fuel mix in power generation and home heating has changed significantly, transport remains pre-dominantly dependent on oil and overall, oil makes up almost 50% of Ireland's

primary energy use. Alternatives to oil as a transport fuel are now commercially available in the form of Electric vehicles, Natural Gas (CNG) and LPG fuelled vehicles and the application of the gaseous fuel options, particularly for fleet use, could be greatly accelerated through fiscal intervention.

In terms of the broader fuel mix, the demise of Moneypoint will again skew the balance of fuel use unless early planning identifies an appropriate alternative such as clean coal, nuclear or an indigenous source such as bio-mass. Any move to facilitate an indigenous source would require an almost immediate commitment to promoting the cultivation of suitable short-rotation crops as a fuel source.

In the context of energy security, the increasing dependence on natural gas highlights the extent to which Ireland is dependent on single point interconnection on the UK system and the inherent risk in this dependence. The need for readily available storage capacity on the gas network is therefore an issue of high importance in the context of the first key pillar of Irish energy policy; Security, Self-sufficiency, Reliability. In this context additional gas system interconnection, possibly with France should be given consideration.

Priority 5: Sustainable Energy Pathways

The Green Paper emphasises the economic and environmental imperatives for Ireland to shift from our predominant dependence on imported fossil fuels to more indigenous low-carbon fuel sources. Recognising that the high dependence on natural gas for industrial process use and residential heating (in urban areas at least) is likely to continue for many decades to come, the focus on fuel switching is best directed to transport and residential heating in rural areas. For improvement in energy efficiency however, there should be no such delineation, although many in industry would argue that they are doing all that is commercially feasible in this regard.

Measures to upscale the use of renewable energy across sectors are mentioned in the Priority 1 response and these include;

-  Incentivising the direct uptake of renewable electricity in homes and industry
-  Promoting renewable sources for home heating and hot water – Fossil Free Homes
-  Promotion of a Grow Your Own Fuel programme to increase indigenous fuel production
-  Ongoing education on the issues of climate change and the importance of local response

Maximising the job creation opportunities in such energy transformation and switching programmes will depend on the availability of educated and trained personnel locally. Already Ireland has well developed educational programmes in renewable energy technologies and is well positioned to benefit from the employment opportunities that the development of these technologies will present. In the area of wave power, Ireland has some of the leading edge

professionals and in this, as well as in wind power technology, we should intensify our efforts to ensure we share the manufacturing opportunities.

The SEAI has played a vital role in promoting and incentivising renewable energy and energy efficiency in Ireland in recent decades as evidenced by the statistics presented in the Green Paper. The Authority is readily accessible to those already involved in the energy industry but is perhaps less familiar to the general citizen. Awareness of the various programmes and promotional mechanisms which the SEAI operates could be improved by more direct media exposure and links to energy efficient product and technology websites. On-line access to information on energy and environmental issues could also improve the uptake on SEAI programmes and help present renewable and indigenous energy development more positively in terms of job creation, environmental benefit and the improvement in our balance of payments through reduction of the €6.5 billion per annum cost of imported energy.

Conclusion

The development of Ireland's Energy Policy is an ongoing and necessarily fluid process. The rate of change in energy policy at EU level and the increased urgency of response to climate change would suggest that the frequency at which policy is fundamentally reviewed should be increased, perhaps to five instead of seven years.

Given Ireland's heavy dependence on imported fossil fuels, which may reduce but is not going to become insignificant, it is essential that we look to developments in global energy availability and use both in the short and long term. Some developments have taken place with a rapidity that requires constant re-thinking of policy. The advent of shale gas and oil is one such example which has changed the balance of energy supply in the United States in the period since the last White Paper.

The development of shale gas has implications for Irish Energy policy in terms of its possible replication in Europe and the possibility of exports of U.S. natural gas in liquid form being available within the coming five years. The United Kingdom has already contracted with a U.S. LNG shipper for delivery of U.S. gas to the UK within this period. Given the policy pillars of Security and Reliability, this option could be attractive to Ireland also.

The EU's stated desire to reduce dependence on Russian gas raises further issues for consideration in the short term. Any such reduction will place additional pressure and cost on the share of Norwegian gas to Western European countries. Again LNG presents a possible alternative source of supply but development of LNG facilities has a lead time of around 5 years (not including for any difficulties in planning approvals). Provision for such development should logically therefore be included in the White Paper.

As with gas, oil remains a dominant component of the Irish energy mix and will remain so in the short to medium term. Some of the same issues apply to the availability and source of oil supply as apply to gas. With the U.S. likely to become a net exporter of oil in the coming decade, dependence on oil from more volatile geographical regions may reduce. The need for strategic storage will remain and indeed upgraded storage may well be required and it is understood that the National Oil Reserves Agency is currently addressing this issue.

In summary, we would again highlight the issues which we see as critical to the competitiveness of large energy users in Ireland from an energy perspective and which should be included in the White Paper;

1. Adjustment of support mechanisms for electricity generation to European norms
2. Clear direction on the basis for and level of such supports on a rolling 5 year horizon
3. Clear direction on the opportunity and means by which energy can be traded within the Single European Energy Market
4. Statement of intent as to improvement of security of supply and greater access to the Single European market for both electricity and gas

As stated at the outset, it would be our contention that the White Paper on Energy Policy should inform the energy industry and the energy user of the proposed measures, including regulatory measures, which will provide direction to Energy Policy over the next five to ten years. We welcome this opportunity to express our views on the Green Paper and hope that in some way these views may be helpful in the formation of policy for the coming period.

End