

Commission for
Energy Regulation

CER Response to Government Consultation on Green Paper on Energy Policy in Ireland



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

Regulating Water, Energy
& Safety in the Public
Interest

The CER welcomes an opportunity to comment on the green paper, which we consider a pivotal document in defining Ireland’s future energy policy. We note that the energy sector has an annual turnover of €8 billion and while it is an important industry in its own right, the revenue for this industry is paid by energy consumers. We consider the efficient continuing investment and cost reduction in the energy industry as being very important to ensuring security of supply and reasonable costs for consumers, and as a significant contributor to the overall cost competitiveness of the Irish Economy. In this response we have set out where Government energy policy could help to improve competitiveness of energy prices, address future security of supply challenges and assess adequacy of current regulatory institutional arrangements.

A. Competitiveness

Ireland has a challenge to make energy costs competitive relative to our European counterparts.

Our current position is that for the most representative band of Irish domestic electricity customers (band DD in Eurostat classifications) we are 9% higher than the European average. This comparison includes all member states in the EU and applies exchange rates for those countries with different currencies. If we compare Ireland with other member states within the Euro currency, i.e. the Eurozone, then we are broadly at the European average for this class of customer.

For the most representative industrial electricity customers in Ireland (band IB in Eurostat classifications), Irish prices are 13% higher than the European average, or 6% higher when compared to the Eurozone average.

Irish domestic gas prices (band D2 in Eurostat classifications) are 2% higher than the European average and 8% lower when compared to the Euro area. Irish industrial gas prices (band IB) are 6% higher than the European average and 3% higher than the Eurozone average.

See appendix I for details on our price relative to other member states in the EU.

Prices	Most representative Eurostat Band	Difference from EU average	Difference from Euro area average
Domestic Electricity	DD	+9%	0
Industrial Electricity	IB	+13%	+6%
Domestic Gas	D2	+2%	-8%
Industrial Gas	I4	+6%	+3%

While historic costs can be instructive, as regulator we are concerned that future development of costs improves our energy price competitiveness. We set out below what we consider to be key drivers in future costs and suggest areas where Government policy may assist the improvement in the competitiveness of Irish energy.

Electricity costs on a consumer’s bill stem from three areas of underlying cost:

- i. Market costs
- ii. Network costs
- iii. Levies and taxes

Considering each of these areas in turn:

i. Market Costs

Ireland is part of an all-island competitive single electricity market (SEM), where outturn wholesale prices closely track underlying fuel prices, particularly natural gas. Suppliers purchase electricity in this wholesale market, and generally fix the volatile wholesale price using open market hedging instruments, and add a supplier margin to cover their own costs. The market is currently being redesigned to achieve compliance with the European target model and ensure more efficient use of interconnectors, which should provide increased access to lower cost generation, and facilitate increased exports. This new market is called the Integrated Single Electricity Market or I-SEM.

The primary regulatory tool to ensure competitiveness of market costs is to set efficient market rules that facilitate competition between generators and suppliers. The CER is working closely with the Utility Regulator to develop rules for the new market, in close co-operation with respective departments for any necessary legislative changes. The implementation of this new market by the end of 2016 is challenging and will need significant effort from all stakeholders, including system and market operators and industry, if this timeline is to be met.

While vigorous competition and new entry has been in evidence in retail markets in Ireland recently, and there has also been new entry into SEM by independent generators since it went live in November 2007, the market as a whole still has significant market power issues due primarily to the size of the ESB group. Please see Appendix II for information on the relatively high SEM market share held by ESB. In our view the exercise of market power is detrimental for customers in terms of short and long run prices, and can also deter investors from the market.

This was recognised at the time of the original SEM development. CER continues to consider a structural solution to ESB's market power to be a preferred option over a regulatory approach, but in the absence of any structural solution we will continue to work to implement regulatory solutions to mitigate the impact of market power on customers in the I-SEM.

The advent of a significant volume of renewable energy, mainly wind, in the SEM has had the benefit of driving down wholesale prices but has also raised challenges, in particular owing to the intermittent nature of the wind energy resource. With growing levels of wind energy on the power system, CER is keen to ensure that renewable energy is integrated into the system at minimum cost to consumers. Increasing the flexibility of generation and demand resources is a key driver to minimising renewable integration costs. We are keen that all options for flexibility are explored to ensure the lowest costs options can be identified. This should not, in our view, be limited to increasing the

flexibility of thermal generation on the power system, but should also consider demand side flexibility, storage, flexibility from renewable generators, and options for further interconnection. CER is working, as part of the all-island arrangements, to design flexibility tools under the DS3 programme. Government may need to consider policy options such as R&D support to also encourage the development of flexible energy technologies.

Ireland's wholesale gas costs are driven by our direct access, through gas interconnectors, to the UK natural gas hub, called the National Balancing Point (NBP). This is the largest gas hub in Europe and facilitates access to a competitive and liquid market where gas is sourced from North Sea fields, Norway, continental Europe and a worldwide market in Liquid Natural Gas (LNG). With gas a direct fuel for many domestic and industrial customers, and a key input cost for many electricity generators, we are significantly exposed to price shocks that could result from geopolitical events such as the current situation in Ukraine. Our growing renewable capacity gives us some mitigation to these potential shocks. CER develop market rules to encourage the most cost efficient generation, and in our view the best outcome for consumers is when the market decides the optimum fuel mix; policy interventions in the market need to be very carefully considered to ensure that they do not damage the competitiveness of the Irish economy.

ii. Network Costs

Ireland has a cost disadvantage for both transmission and distribution networks, relative to other European countries, in that we have a relatively small population for our land area, and a diffuse population spread. The recent electricity and gas demand reduction of 9% and 11.5% respectively since 2008 has put further pressure on network unit costs. Energy policy initiatives that support increased load, particularly new loads with a flatter load profile such as data centres, or load that may currently be met by more emissions intensive energy sources (such as transportation and space heating), may help to ameliorate the cost of the overall network, provided they do not trigger significant extra network build. For example initiatives to support electric vehicles, compressed natural gas for transport or flexible electrical space heating (e.g. using smart storage heaters or heat pumps) are welcome if they increase the efficient use of existing electricity and gas networks and do not raise the overall cost to energy consumers.

Ireland has a relatively congested electricity network, and this is raising wholesale costs by not allowing the cheapest generators to meet demand. The level of congestion is highest between Ireland and Northern Ireland where delays in the implementation of the North South Interconnector are not only adding significantly to wholesale costs in Ireland but also increasing the risk to security of supply in Northern Ireland.

We are concerned at the difficulties that EirGrid is experiencing in developing new transmission lines and urge that Government energy policy is supportive of efficient consenting and development of new infrastructure such as transmission lines, bearing in mind that customers must ultimately bear the cost in this process, either through higher infrastructure costs or higher energy costs arising from the delay. In this context we urge

that very expensive underground transmission lines are only contemplated as a last resort and that energy competitiveness is kept in mind when considering options; in our view energy competitiveness is important for stimulating employment as well as supporting a more efficient economy. We note that the European process of Projects of Common Interest (PCI) is intended to streamline the consent process for new infrastructure and we look forward to seeing evidence of this in Ireland.

We oversee the capital spend by the network companies to seek to minimise capital investment to those projects that are only necessary, and we will continue to encourage the companies to use the latest technologies and techniques in seeking to further reduce costs. In this context we see potentially significant merit in smart grid technologies provided that they are supported by robust cost benefit analysis. Further we will continue to seek improved efficiency and productivity gains in the operation of the network companies in order to deliver further value for money for customers, even as the challenges of operating and maintaining the networks change with higher renewable penetration. These objectives will be achieved through best practice regulatory price control mechanisms but there may be opportunities for Government to support smart grid technologies or other innovations through R&D programs or other policy considerations.

A new major project in the networks area is the implementation of a national smart meter programme. The CER considers this programme to be a key enabler to empowering energy citizens to reduce their electricity and gas bills.

The recognition within the Green Paper of the central importance of the National Smart Metering Programme (NSMP) to the Government strategy *to radically enhance management of energy demand, deliver smart networks and enable greater energy efficiency through the use of cutting-edge technology and consumer empowerment* is strongly endorsed by the CER.

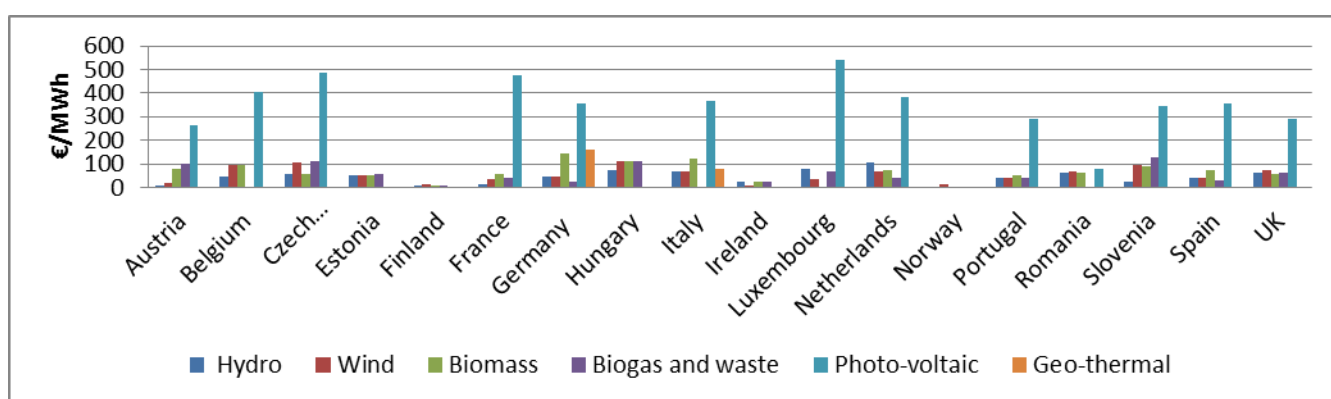
The successful implementation of the NSMP will be a critical enabler to realising Government policy outcomes. It will empower energy citizens to make better decisions regarding their energy use. It will promote greater competition in the sector by enabling more innovative, flexible and diverse products and services to be offered to consumers. It will support the development of integrated energy infrastructure systems (i.e. smart grids) which will contribute to the delivery of secure, reliable and competitive energy supplies. It will assist Ireland in achieving national targets for renewable electricity generation by facilitating demand response solutions (see Appendix III on details of how new demand side response could benefit consumers) and the wider take up of micro generation. More broadly it will drive economic opportunities in Ireland, as an enabler of energy sector innovation in research and the creation of new products and services.

In summary the NSMP is a programme of strategic national importance which will underpin Irish energy policy post 2020, on the assumption that the final cost benefit analysis is positive. In keeping with the Government commitment to the NSMP since 2007, the Energy White Paper should recognise the strategic importance of the NSMP and reaffirm the Government's strong and ongoing commitment to the successful

rollout of smart meters across the state by 2020. In line with this commitment, any legislative change required to ensure that the full benefits of smart meters are maximised and the strategic objectives of the NSMP¹ are realised must be prioritised.

iii. Levies and Taxes

We note that Ireland has achieved 20% renewables in the electricity system, while retaining relative competitiveness compared to other EU countries because we have avoided some of the expensive renewable decisions taken by other member states in Europe (see indicative graph below based on 2011 data for out of market costs²). We note that all of the non-renewable elements of the current PSO levy are based on legacy contracts which sunset in the next period of years, so that they will have been completely removed from the levy by 2020.



To maintain competitiveness in this area, it is important that Ireland considers the dynamic and static costs of integrating renewable generators into the electricity system, including the cost of new transmission infrastructure and system services needed to deliver the renewable resources. We favour an approach that looks at a diversity of renewable sources, including say solar energy, with a view to minimising the total cost of implementation to the consumer. The objective, in our view, should be to achieve our renewable energy targets at least total cost to the consumer. We think that new innovative approaches and new technology may help to minimise cost.

The CER does not favour the use of the PSO as a mechanism for delivery of policy objectives except where there is clear evidence that these policy objectives cannot be met by market mechanisms. Where a PSO mechanism is necessary we suggest that the policy objective promotes the lowest cost technology to meet that objective – e.g. why

¹ The 5 strategic objectives of NSMP are to:

- Encourage energy efficiency;
- Facilitate peak load management;
- Support renewable and micro generation;
- Enhance competition and improve consumer experience; and
- Improve network services.

² Note that this comparison is being revised by European regulators this year with more accurate and up to date information

use high costs renewable generators if there are lower cost renewable technologies available to meet renewable targets.

B. Institutional Regulatory Arrangements

CER

The CER welcomes the green paper proposal for a review of its regulatory mandate, even if this has limited scope, and we suggest that this could include the following areas:

- Review of our consumer engagement and empowerment mandate that would assess whether legislative responsibilities for consumer complaints handling and general consumer protection are sufficient
- Assessment of whether our powers, including administrative sanctions, are sufficient, and in-line with best international regulatory practice
- Analysis of our human resources to assess whether our current constraints from central Government on our total number of employees is consistent with efficient resourcing levels, using international comparisons, and minimises our use of external consultancy support
- Consideration of the embedded regulatory impact assessment in CER's current consultation processes and including recommendation, if any, on how this could be enhanced, particularly using improved structures and processes, to ensure that regulatory policy formation is in-line with best practice
- Review of the functions of the CER, including significant recent functions, and the resource implications of these functions for the organisation

CER has been given a range of new functions over the last four years, including safety for oil and gas upstream industry, and more recently as economic water regulator. In general our activities are funded on an enduring basis by levies on industry. We are, however, still subject to the various strictures of central Government in terms of an overall headcount limit, and with salary levels linked to equivalent positions in the civil service. While we understand the rationale for applying these constraints to independent regulatory bodies such as ourselves, we urge for greater flexibility for us to manage within these constraints without requiring each new hiring decision to be subject to further sanction from central Government. This, in our view, reduces the efficiency of our organisation and limits our ability to respond quickly to staff turnover. We have a well-educated and strongly motivated staff who are attractive to industry in a more buoyant economy. We are subject to review annually by the Controller and Auditor General and accountable to the Oireachtas and in particular the Public Accounts Committee where we attend to account for the operation and finances of our organisation.

Certification of TSO Independence

The EU, through Council and Parliament Directive 2009/72/EC has determined that TSO independence is in the long term interests of consumers and has placed legally binding requirements on Member States. As required by the Directive the legal responsibility for

assessing and ensuring TSO independence rests with the CER. In 2013, the SEM Committee submitted its preliminary decision on TSO Certification to the European Commission. On foot of this, the European Commission's decision provided for the Directive 2009/72/EC "Article 9,9" certification of EirGrid as TSO, with a number of measures to be taken. CER subsequently issued its formal certification of EirGrid. The European Commission's decision noted that the implementation of the measures set out in its decision must take account of the need for legislative change and the difficult financial situation. The CER will continue to monitor the implementation of the measures required under CER's certification of EirGrid as TSO and looks forward to guidance from Government in relation to those areas where legislative change may be required. The CER is currently awaiting an application from EirGrid for the certification of the East West Interconnector. Separately CER will be reviewing the certification of the main natural gas networks in response to changes in the company structure.

C. Security of Supply

Ireland has had a track record over the last number of decades of having avoided any major blackouts on the electricity system or disruptions on the main gas transmission system.

There are, however, many potential diverse risks to security of supply and the chain of infrastructure and systems delivering security of supply.

We are confident that the new I-SEM market will encourage sufficient investment when needed to maintain generator adequacy and that our network regulation maintains adequate certainty to ensure sufficient network investment. Further potential interconnection would have a positive influence on security of supply, albeit at a cost to network customers. While we encourage the TSO to consider options, we will subject any further interconnector proposals to rigorous cost benefit analysis.

CER would also welcome further consideration of improving resilience of the energy systems to the wide range of potential events that may arise during the period from now until 2030. In our view this consideration of resilience should include topics such as cyber security, avoiding exposure to single points of failure, and consideration of common mode events such as extreme weather conditions. While we will seek to enhance resilience of energy systems cost effectively as part of our regulation of networks and markets, there may be a role for government policy to intervene where market failures are in evidence.

Within the context of our statutory safety role we welcome a discussion of how Ireland can deliver safety systems to best international practice to protect the public, with the ancillary benefits of maintaining Ireland's excellent track record in energy security of supply.

Appendix I Average Prices for Domestic and Industrial Consumers, Eurostat bands
Representative bands in Ireland

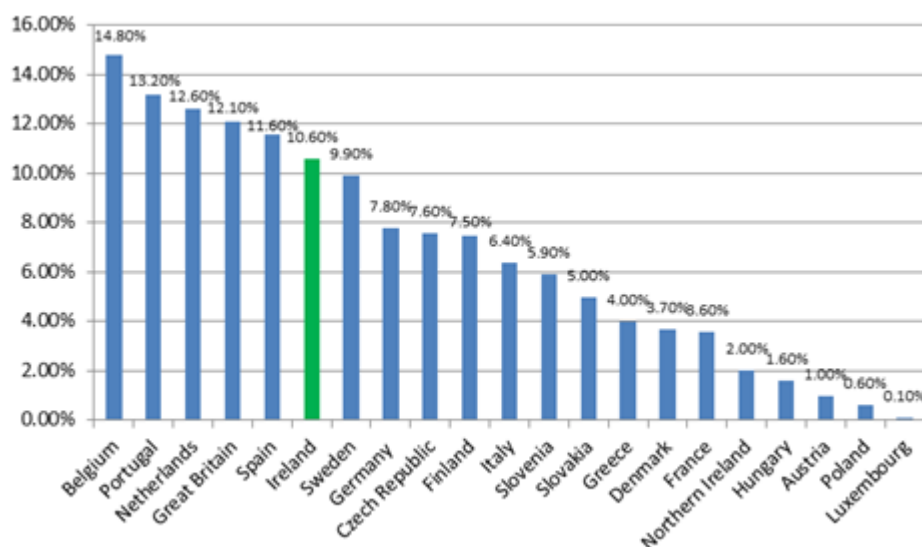
The SEAI gathers and publishes data on average prices in Ireland for domestic and industrial customers for various bands as defined by Eurostat. Each band is defined in terms of consumption. The representative bands for Ireland are those that contribute most to consumption in Ireland and those that were identified by SEAI as dominant in the period S2 (July-December) 2013 are identified in the table below. The table also shows the share of Irish domestic and business consumption for each of the dominant consumption bands.

Market	Band	Definition Annual Consumption Between:	Share of Consumption for Market in Ireland
Domestic Electricity	Band DD	5,000kWh < consumption < 15,000kWh	48.3%
Business Electricity	Band IB	20MWh < consumption < 50MWh	33.7%
Domestic Gas	Band D2	20GJ < consumption < 199GJ	93.6%
Business Gas	Band I4	100,000GJ < consumption < 1,000,000GJ	37.1%

Source: SEAI.

Below is data on the rate of switching in Ireland for 2012:

Figure : Switching rates for domestic customers in various European countries, 2012



Source: ACER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2012.

Average prices relative to other EU countries

Table 1: Average Prices for each Band across EU countries in S2 2013 (domestic prices include all taxes and non-domestic exclude VAT and other recoverable taxes)

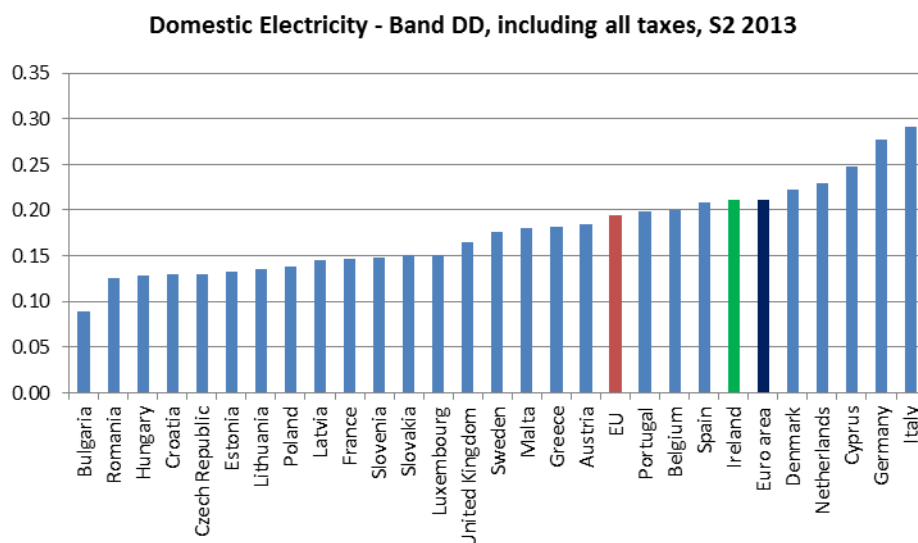


Figure Average domestic electricity price across EU countries, band DD, S2 2013, including all taxes

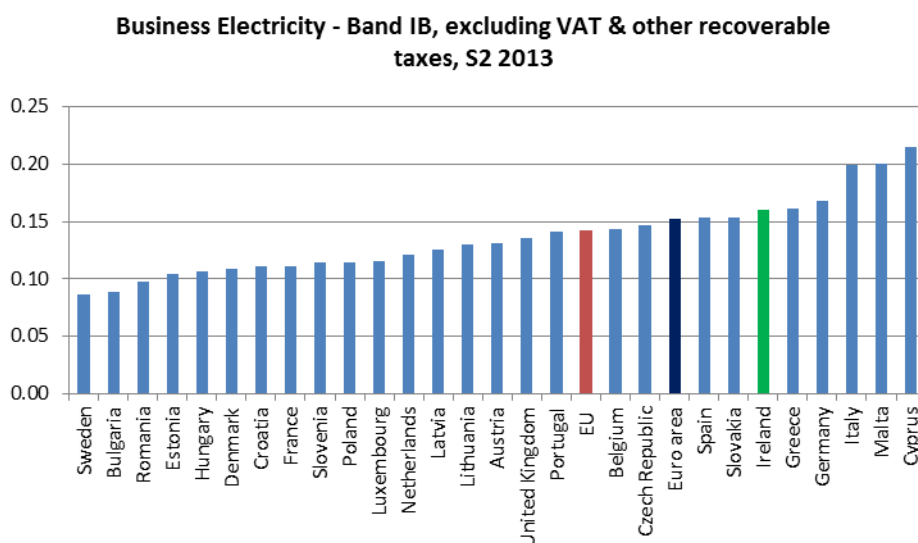


Figure Average business electricity price across EU countries, band IB, S2 2013, excluding VAT and other recoverable taxes

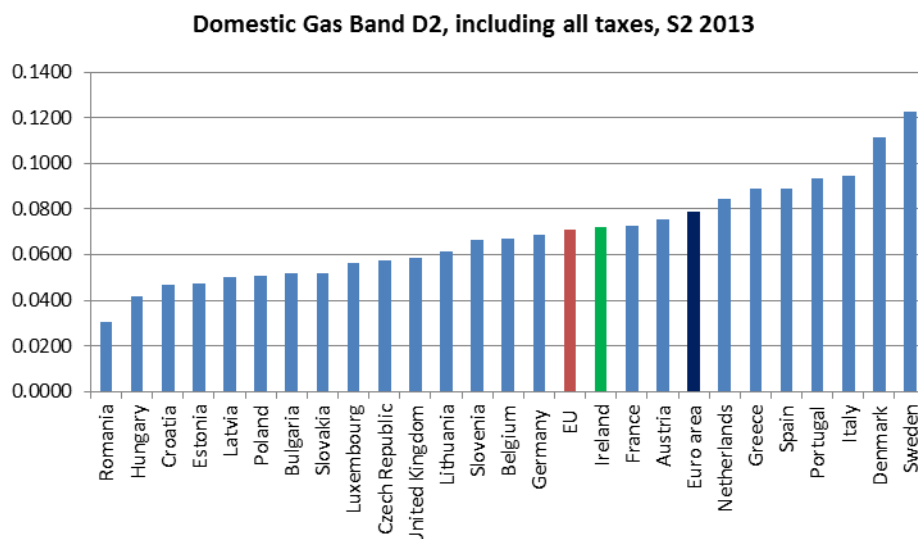


Figure Average domestic gas price across EU countries, band D2, S2 2013, including all taxes

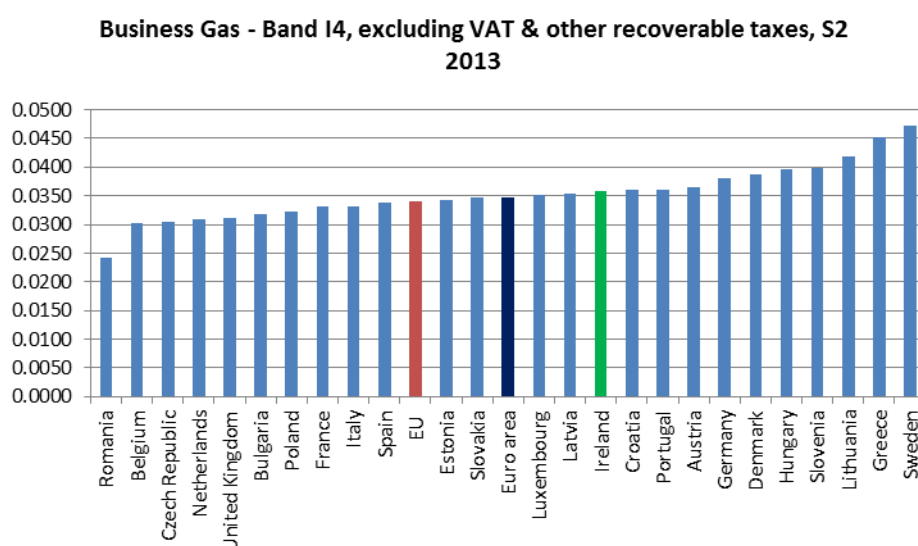
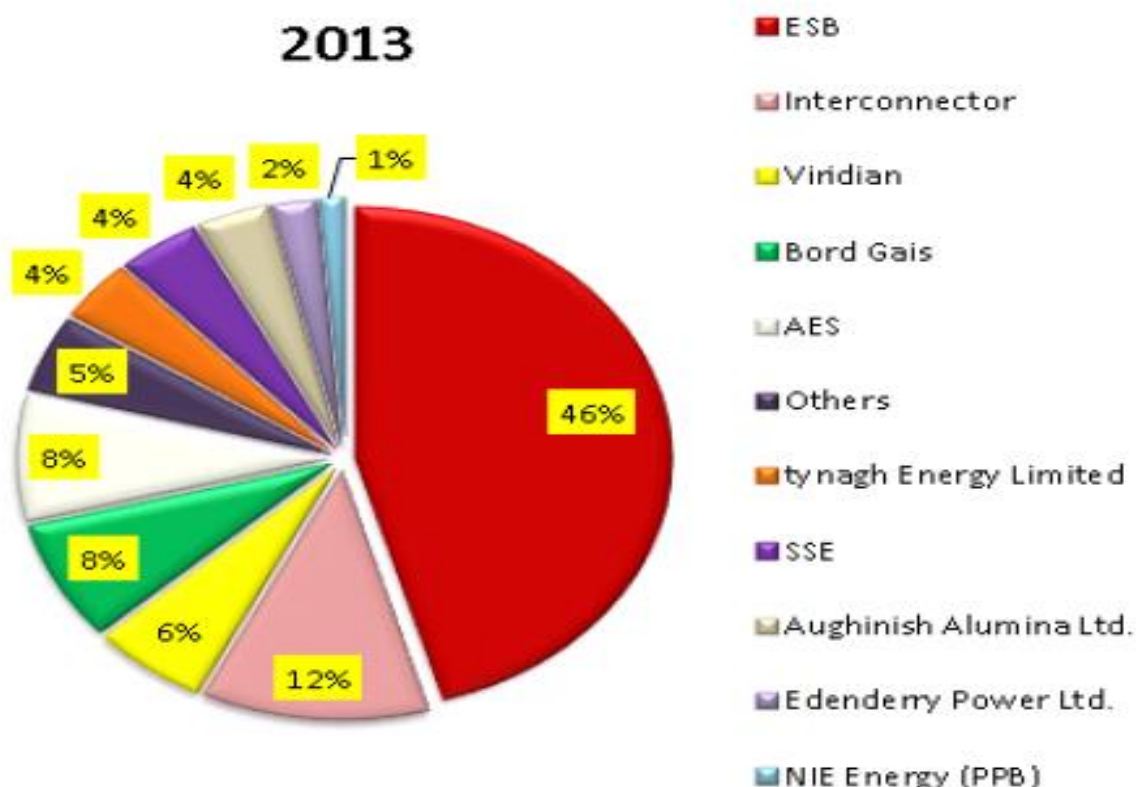


Figure Average business gas price across EU countries, band I4, S2 2013, excluding VAT and other recoverable taxes

Source: extracted from Eurostat statistical database.

Appendix II Market Share in SEM

The following shows the relatively concentrated nature of the SEM that still exists, despite the entry of new generation since SEM go-live in November 2007. ESB still has a relatively high generation market share - for 2013 as a whole ESB had circa 46% of the generation market and this trend has broadly continued in 2014. The graph below shows the percentage of total MWhs scheduled in the market per market participant:



The continuing concentrated nature of the SEM necessitates the need for regulatory market power mitigation measures, in the absence of a structural solution to significantly reduce ESB's market share.

Another metric for measuring ESB's market power is the % of the time ESB's generating plants are marginal in the electricity system and hence directly set the wholesale price in SEM. Analysis has shown, as an example, that in the month of July 2014 this varied considerably from day-to-day, with ESB's plants being price-setting in SEM circa 32% of the time.

Appendix III Demand Side Response

One major innovation that is enabled by smart meters is Demand Side Response (DSR).

The benefits of DSR has been extolled for several decades and yet its ubiquitous deployment is as elusive as ever. The need for DSR deployment has strengthened in the last five years with the significant penetration of renewable energy on European power systems – without DSR the cost of moving to renewables is higher and the benefits to consumers are significantly reduced. As an isolated island system with a relatively high level of current and projected renewables penetration, Ireland is well placed to lead in implementing new innovative DSR solutions. CER contends that two key drivers are needed if the full benefits of DSR are to be realised:

1. The commercial prize for DSR needs to be clearly enunciated to potential DSR product and service providers. The value is an aggregate of the benefit to wholesale markets, network positive impacts and the direct consumer advantages.
2. Current barriers to DSR need to be removed: these barriers include limited access to wholesale markets, diverse and inconsistent approaches by network operators and the need for smart meters, profile removal and dynamic tariffs at the consumer end.

CER prefers an approach to DSR that converges across Europe in wholesale markets, networks and retail market design. This will create a larger pan-European market for DSR product and service providers and potentially introduce further competition into Irish and European energy markets.

Considering each area in turn:

- Wholesale markets – The adoption of an EU wide target model sets a clear common commercial driver for DSR. It is important in the implementation of the Internal Energy Market (IEM) that DSR is afforded equal treatment with generation, storage and interconnection solutions. This is certainly being considered in the I-SEM all-island electricity market.
- Network use, and in particular the regulatory treatment of Distribution System Operators (DSOs), is an important element of future DSR facilitation. Where network investments can be avoided using DSR solutions, or local ancillary services provided by these solutions, then a convergence of approach from DSOs across the EU will speed up DSR deployment. The DSO needs to value the benefits of DSR to its network operation and share some of this value with DSR service providers through arms-length transparent mechanisms.
- Retail Markets – Smart meters, removal of standard customer profiles, and introduction of dynamic tariffs are some of the changes in retail market design necessary to enable wide scale DSR use.

